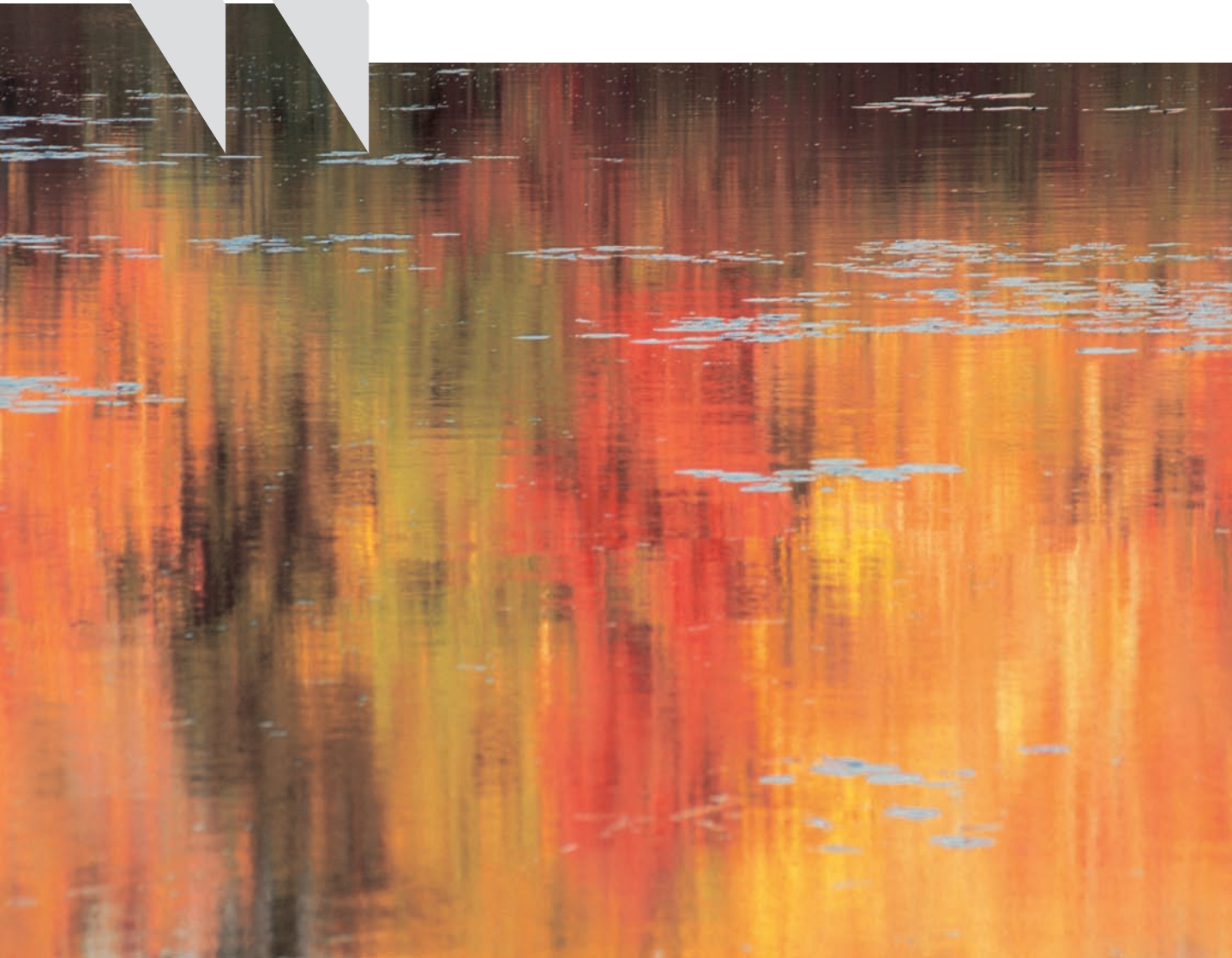




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The Secretariat's draft report was prepared for the Committee by Alexandra Bibbee and Yvan Guillemette under the supervision of Peter Jarrett. Research assistance was provided by Françoise Correia.

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BASIC STATISTICS OF CANADA, 2009

THE LAND

Area (thousand sq. km.)	9 976	Population of major cities (thousands)	
Agricultural area (2000, per cent of total area)	6.7	Montreal	3 815
		Toronto	5 624

THE PEOPLE

Population	33 689 766	Labour force	17 908 700
Number of inhabitants per sq. km	3.4	Employment in agriculture	320 375
Population, annual net natural increase (average 2004-09)	127 738	Immigration (annual average 2004-09)	250 012
Natural increase rate per 1 000 inhabitants (average 2004-09)	3.9	Average annual increase in labour force (2004-09, per cent)	1.2

THE PRODUCTION

GDP (million of Canadian dollars)	1 527 258	Origin of gross domestic product	
GDP per capita (Canadian dollars)	45 333	(per cent of total)	
Gross fixed investment per capita (Canadian dollars)	9 750	Agriculture, forestry, fishing and hunting	2.1
Gross fixed investment (per cent of GDP)	21.5	Mining and oil and gas extraction	4.3
		Manufacturing	12.6
		Finance and insurance, real estate and renting and leasing and management of companies and enterprises	21.1
		Public administration	6.1
		Other	53.8

THE GOVERNMENT

Government current expenditure on goods and services (per cent of GDP)	21.9	Composition of Parliament	Number of seats	
Government gross fixed capital formation (per cent of GDP)	3.8		House of Commons	Senate
Federal government current revenue (per cent of GDP)	14.3	Conservative Party	144	51
Federal direct and guaranteed debt (per cent of current expenditure)	205.5	Liberal Party	77	49
		Bloc Québécois	48	..
		New Democratic Party	36	..
		Independent/other	2	2
		Progressive Conservative	..	2
		Vacant	1	1

THE FOREIGN TRADE

Exports		Imports	
Exports of goods and services (per cent of GDP)	28.7	Imports of goods and services (per cent of GDP)	30.4
Main goods exports (per cent of total)		Main goods imports (per cent of total)	
Agricultural and fish products	10.2	Agricultural and fish products	8.0
Energy products	22.6	Energy products	9.4
Forestry products	5.5	Forestry products	0.7
Industrial goods and material	21.0	Industrial goods and material	20.1
Machinery and equipment	20.6	Machinery and equipment	29.6
Automotive products	11.6	Automotive products	15.2
Other goods	8.4	Other goods	17.0
Main customers (per cent of commodity exports)		Main suppliers (per cent of commodity imports)	
United States	75.0	United States	51.2
European Union	8.3	European Union	12.4
Japan	2.3	Japan	3.4

THE CURRENCY

Monetary unit: Canadian dollar		Currency units per USD	1.142
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Executive summary

Canada's inherent domestic strengths and timely policy actions ensured limited financial and economic damage from the global recession. The authorities responded aggressively to the onset of the crisis to keep credit flowing, which it did, particularly to households, making both consumer spending and housing investment remarkably resilient throughout the recession. However, the counterpart was a rapid rise in household debt. The initial rebound in activity has been very strong, helped by fiscal stimulus, but an increasing number of households may become vulnerable as interest rates increase. With the expected withdrawal of monetary stimulus, the tighter financial conditions resulting from the much stronger currency, the waning of fiscal policy measures and a likely further slowdown in household credit growth, the pace of recovery will ease somewhat in coming quarters. Once excess capacity has been worked off, the economy's trend growth rate is projected to be much lower over the medium term than it has been in the past as changing demographics slow the growth of the working-age population. Structural reforms to boost potential output growth should therefore remain at the top of the policy agenda.

The Canadian banking system weathered the crisis in exemplary fashion, thanks to effective prudential supervision and a conservative risk culture. The key global challenge, also relevant to Canada, is to deal with heightened moral hazard stemming from the henceforth more explicit promise to rescue systemically important financial institutions. Strengthened and internationally co-ordinated regulation should be balanced by market mechanisms (such as contingent capital) that provide incentives to internalise risk. Canada's banking efficiency, and hence economic productivity, would also benefit from greater contestability and a credible framework for winding down failed financial institutions. A move toward macro-prudential approaches to regulation is desirable, but policymakers should be mindful to maintain the important role of financial intermediation. The nation's capital markets should be more efficiently regulated, notably by establishing a single securities regulator.

Despite a mostly cyclically driven move into deficit, Canada's overall public finances still compare favourably with those in other OECD countries, but fiscal tightening should nevertheless begin in 2011 both at the federal level and in nearly all provinces and territories. The two largest provinces, Ontario and Quebec, face especially challenging fiscal situations. Many jurisdictions have relatively high debt levels, and their windows of opportunity to bring indebtedness down are closing as demographic pressures on public purses are set to intensify. Consolidation strategies should focus on curbing public expenditures, particularly in health care. The federal and almost all provincial and territorial governments have presented fiscal objectives and plans to return to budget balance over the medium term. They are broadly in line with the recommendations set forth in this Survey and need to be fully implemented in order to allow Canada to return to budget balance over the medium term. Transparency and public buy-in are important ingredients of a sustained fiscal effort, and these can be fostered by committing to deficit-elimination targets with detailed strategies as to how they will be met. Incentives to meet the targets are important too, calling for new or more stringent fiscal rules than in past consolidation episodes when

market discipline facing Canada was intense. Rules might also help a number of jurisdictions implement more prudent approaches to saving and reduce the pro-cyclicality of their fiscal policies.

The health-care system achieves a reasonable balance of treatment quality, cost and health outcomes, but reforms are needed to contain expenditure pressures. Meeting the demographic and fiscal challenges requires bringing down trend growth in public health spending significantly, lest other public spending is squeezed and/or taxes rise. To this end, price incentives and bottom-up accountability measures must complement the current top-down resource-allocation process, which manages to control costs through waiting lists and expanding gaps in the coverage of services. Doctors' fees should be set at the regional or institutional levels where there is accountability for performance and include at least a share based on capitation. A better information base and provincial analytical capacity are needed to allow cost-benefit analysis and derive national efficient-treatment guidelines. Regulation prohibiting both private insurance for core services and mixed public-private contracts for doctors should be eased to spur more competitive service delivery, possibly requiring clarification of the Canada Health Act.

Assessment and recommendations

Domestic strengths and policy actions helped Canada overcome an externally driven recession

The recession in Canada was mainly externally driven, the result of a high degree of openness, in particular heavy exposure to the US housing and auto sectors and to commodity prices, which declined quite sharply during the global downturn. Thanks to multiple initial strengths, such as a sounder banking system, a less leveraged corporate sector and a relatively strong fiscal position, the economy weathered the world-wide financial turmoil and the ensuing recession relatively well. The monetary and fiscal authorities coordinated their actions to help stabilise financial markets. The Bank of Canada alleviated pressures in short-term funding markets by extending exceptional term liquidity to financial institutions and, in some limited cases, to other market participants. It also lowered its main policy rate to the effective lower bound (0.25%) and committed to keeping it there until the second quarter of 2010, conditional on the inflation outlook. The federal government focused on providing longer-term liquidity to financial agents through a number of programmes, notably the purchase of insured mortgages. Federal and provincial governments jointly implemented fiscal-stimulus measures totalling about 4% of GDP, of which roughly 1.6% of GDP is to be spent over fiscal year 2010/11. Private consumption remained remarkably resilient throughout the recession, partly the result of a healthier banking sector that continued to extend ample credit to households. Upturns in residential investment, world trade and commodity prices jumpstarted a recovery in the second half of 2009, which is now well under way. The pace of expansion is projected to slow later in 2010 and in 2011 as policy stimulus is withdrawn, inventory rebuilding runs its course and household spending growth slows down. According to the latest OECD economic projections, real GDP will grow by 3½ per cent in 2010 and just over 3% in 2011.

Record-high house prices and household indebtedness pose downside risks to the outlook

Household debt as a proportion of GDP has risen significantly in Canada over the last decade. At about 90% of GDP in early 2009, it was near the OECD average. Owing to the lowering of interest rates and a still well-functioning financial system, household indebtedness continued to rise throughout the recession, the first recession in Canada's history to show an expansion in real household credit. The household debt-to-income and debt-to-assets ratios remain at or near historical highs. Most of the increase in household credit has been in mortgage debt, helping to bring about a strong revival in housing-market activity after a brief dip at the beginning of the crisis. Record-low mortgage rates are

another factor behind the housing revival. Indeed, housing looks overpriced on the basis of both price-to-rent and price-to-income measures. Rules to qualify for government-backed mortgage insurance have been tightened, and *more measures should be taken if needed to cool down the market*. Until now, despite increased debt levels, historically low borrowing rates have enabled Canadian households to reduce the share of their disposable income devoted to debt service. This situation is bound to change as the Bank of Canada withdraws monetary stimulus and longer-term rates move up in response; indeed, mortgage rates have already risen. High household indebtedness also implies a growing vulnerability to any future adverse shocks. In any case, household credit growth needs to slow down, which may well moderate private spending and residential investment in the coming quarters.

Monetary exit strategies are straightforward

The size of the Bank of Canada's balance sheet increased far less (by about 80% at the peak) as a result of exceptional liquidity measures than in the United States or the United Kingdom, and all measures to boost short-term liquidity have now expired. Consequently, unlike many other central banks in the OECD, the Bank of Canada has been able to rely on automatic reductions of its balance sheet by letting previously accumulated positions mature. Inflation pressures have been modest in recent years, but with stronger-than-expected growth in the initial quarters of the recovery and a scenario of continued moderate expansion, the monetary policy stance no longer needs to be in emergency territory. *Based on the current economic outlook, the Bank should continue to increase its policy rate, albeit with further normalisation proceeding at only a measured pace so as to approach neutral rates by end-2011*. Such a pace looks appropriate for several reasons. The strong currency and the coming withdrawal of monetary and fiscal stimulus measures in Canada and abroad will already provide some effective tightening of economic conditions. Weak consumer fundamentals, significant uncertainty about the outlook and the substantial amount of remaining slack are further justifications.

Trend economic growth will slow over the medium term

Over the medium term the potential rate of economic growth is projected to decline and to average only 1.6% annually from 2010 to 2017, more than a full percentage point less than over the past decade. This slowdown reflects primarily lower growth in the working-age population, but also likely temporary negative effects from the crisis on capital accumulation, structural unemployment and labour-force participation. Potential output growth is expected to diminish in all provinces except Alberta. Trend multifactor productivity growth could stay as weak as it has been in recent years. This outlook underlines the importance of carrying on with structural policy reforms that can boost the economy's potential rate of growth. For instance, the employment shift out of manufacturing that accelerated during the recession will have to be compensated by jobs in other sectors if the economy is to get back to full employment. This shift indeed seems to be happening, *but it can be helped by policies that enhance the flexibility of the labour market, such as ending provisions in the Employment Insurance programme that vary eligibility and benefits according to regional labour-market conditions*. Other desirable structural policy reforms

identified in the OECD's latest *Going for Growth* report that could boost potential output growth include *further reducing barriers to foreign ownership, strengthening competition in network industries and professional services, and reducing work disincentives in the income-support system*. The financial system likewise needs policy attention, the accolades that it has earned for its performance in the crisis notwithstanding.

Effective supervision: the hallmark of Canada's robust banking system

Even though substantial official liquidity support was needed as interbank markets dried up, Canadian banks maintained their ability to raise capital from the markets and needed no injections of public capital. Nor did they tap available emergency public wholesale-borrowing guarantees or require expansion of deposit-insurance limits. Robustness in the face of unprecedented turmoil reflected healthy and well-diversified balance sheets, based mainly on retail banking as opposed to investment activities, in particular a large and stable deposit base – a characteristic shared by those banks elsewhere in the OECD that emerged relatively unscathed. Much of the risk on mortgage loans and securitisations thereof is transferred to government via guarantees provided by the Canada Mortgage and Housing Corporation, though such risk is mitigated by efficient regulation and taxation of the sector. The Canadian model of risk- and principles-based prudential bank supervision encourages the adoption of sound risk-management practices, rather than mere compliance with rules. It responds pro-actively to problems as they arise and sanctions banks that raise leverage and fail to maintain high capital buffers. Banking groups, which include the major investment banks, are subject to regulation on a consolidated basis. Another key strength is good co-operation among the various regulators, which allowed them to take a systemic view and served them well in the depths of the crisis. Indeed, as the international banking system is reformed, other countries are looking to adopt many of these practices whose value was proven in the crisis.

The goal is a proper balance between regulation and competition

Globally co-ordinated reforms are necessary not only to address pre-existing structural problems but also to head off magnified moral-hazard problems following the massive public bail-outs and safety-net enhancement. Current proposals would involve higher capital requirements and taxes on banks' balance sheets, which could raise the economy-wide cost of capital. The Canadian authorities have opposed the tax idea, preferring to enlist financial-market discipline to deal with the problem by *requiring banks to issue contingent capital that would automatically switch from debt into equity when triggered by a risk-based threshold*. On top of that, banks should be required to draw up "living wills". Furthermore, aspects of the banking culture and context that proved advantageous in the crisis – its relatively closed and concentrated market structure, and a traditional and low-risk business approach, which has nonetheless been highly profitable – may reflect a lack of competitive pressure. To improve future banking-sector performance, *contestability could be enhanced by pursuing further avenues to open the market, while ensuring that any moves in this direction are considered in a macroprudential context*.

Securities-market regulation needs to be strengthened

The main manifestation of the global crisis in Canada was in the securities markets, in particular the asset-backed commercial paper (ABCP) market, which had grown rapidly as a source of short-term funding for small firms. The non-bank-sponsored portion of the ABCP market completely collapsed due to panic surrounding (suspected) contamination from US sub-prime mortgages, resulting in the biggest restructuring in Canadian history. Beyond the inherent low quality of the highly leveraged synthetic paper being used, the root problem was non-transparency and poor practices in the marketing of such paper to investors, which arose under fragmented and poorly enforced provincial regulation. *Tougher disclosure rules and better enforcement are the solution.* More generally, a broader and deeper nation-wide capital market is needed to attract foreign capital and complement bank intermediation as a basis for enterprise growth and innovation. Banks act as important market makers and are thus systemically intertwined with securities markets. *Hence, it is important to proceed with plans to establish a single national securities regulator, whether or not continued efforts to get all provinces on board succeed.*

The federal government has decided to harmonise its climate-change policy with that of the United States

Another area where progress is needed is climate-change policy. Canada has made little headway in reducing its greenhouse-gas emissions (GHGs). In 2008, they were 24% above 1990 levels, compared with Canada's Kyoto commitment to cut them by 6% by 2008-12. The federal government set some modest new targets at Copenhagen in December but has not put forward a complete set of policies to meet them. It has decided to wait and harmonise its proposed cap-and-trade scheme with the United States, assuming it goes ahead with such a measure, though Canada is already moving ahead jointly with its neighbour on sector-specific regulations such as on car emissions. Nevertheless, some provinces have implemented carbon taxes, and are developing emissions-trading schemes. Although economic integration with the United States makes harmonisation a sensible strategy, delay is costly and creates investment uncertainty. *Canada should remain fully committed to playing its part in the global effort to put in place policies to reduce greenhouse-gas emissions. In this regard, comprehensive market instruments to price carbon should be the cornerstone. Regulations are much more costly to the economy and hence should be used sparingly, namely only in situations where market incentives are inefficient or infeasible.*

Fiscal consolidation is needed at the federal level and in most provinces

Though Canada's budgetary position still compares favourably with most other OECD countries, the cyclical decline in tax revenue and the extraordinary spending measures in response to the recession have provoked a sharp turnaround in the country's fiscal situation, from a general government surplus of 1.6% of GDP in 2007 to deficits of 5.1% of GDP in 2009 and a projected 3.4% in 2010, of which half is estimated to be

structural. While relatively small at the federal level, this total government structural deficit hides significant variation at the sub-national level, with some provinces facing large structural deficits, though others are in much better shape. The federal government structural deficit is estimated to be near zero, but those of the two largest provinces, Ontario and Quebec, are estimated to be much larger (3% and 4½ per cent of provincial potential GDP, respectively). *In all jurisdictions, trend spending growth must be lowered to put the public finances on a sustainable path.* The need to consolidate fiscal positions is more apparent still when taking a long-term view that considers the serious fiscal implications of demographic change, even if the 1990s reforms to the earnings-related public pension systems, which increased contribution rates, significantly strengthened long-term finances. Large ageing-related implicit liabilities loom on governments' balance sheets, especially from health care, underscoring the desirability of eliminating deficits and reducing public debt. With the recovery solidly under way, *fiscal consolidation should proceed as planned in 2011.*

Consolidation efforts should focus on spending restraint

As a first step toward budget consolidation, governments should allow temporary stimulus measures to expire as planned. Fiscal authorities should make expenditure restraint the cornerstone of their consolidation strategies. OECD experience suggests that spending cuts tend to be more successful than tax increases in achieving sustained budgetary improvement. Restraining less-efficient expenditure can also boost economic growth, helping to create a virtuous cycle of mutually reinforcing fiscal and economic progress. For most jurisdictions, it should be possible to balance budgets without outright cuts to total spending or tax increases: restraining the growth of spending over a period of a few years would be sufficient. Examples of areas where savings should be possible without worsening outcomes include health care, public-employee compensation and agricultural/industrial subsidies.

Any revenue-increasing measures should avoid distortions

In some jurisdictions, however, significant revenue increases will be necessary for consolidation to occur over a reasonable time horizon. Yet not all taxes are created equal: which form the hikes take will make a big difference to future prosperity. Taxes on income are usually worse for growth and employment than taxes on consumption or property. Value-added taxes are a relatively efficient instrument. Two provinces (Ontario and British Columbia) are converting their retail sales taxes to value-added taxes harmonised with the federal value-added tax, a commendable move, though not one that will raise more revenue in the short term as implementation is on a revenue-neutral basis. Two other provinces (Quebec and Nova Scotia) are raising their value-added tax rates to occupy part or all of the room left by the recent cuts in the federal portion of these taxes. *Other provinces could follow suit if they need to raise taxes to balance their budgets. Having low tax rates on broad bases is preferable for minimising distortions than the contrary. Thus, to raise a given level of revenue it is better to scale back special exemptions and deductions, so-called "tax expenditures". Finally, it is preferable to levy taxes on behaviour that society wants to discourage rather than on*

those that are necessary for economic growth. Where appropriate, taxes on pollution such as carbon emissions, for instance, should be preferred over those imposed on working, saving or investing.

The federal and provincial governments have set out fiscal plans that are broadly in line with recommendations in this Survey

The federal government, along with almost all provincial and territorial governments, have committed to return to budget balance over the medium term and have begun to elaborate specific plans to achieve this objective. These plans focus primarily on expenditure-restraint measures, including for example, limits to public-sector wage growth. They are broadly in line with the recommendations set forth in this Survey and should allow the consolidated government sector to return to budget balance over the medium term. Nevertheless, some provinces need to provide more details on the specific measures to be taken and it is important that all governments follow through on their plans.

Fiscal objectives and rules can help build credibility

Well-designed fiscal rules can be useful tools in achieving fiscal consolidation, but also as part of the general fiscal framework to limit the deficit bias and counteract the tendency shown by some Canadian governments over the past two decades to run pro-cyclical fiscal policies. Even though overall fiscal management has been good, the lack of spending guidelines made it possible to treat recurrent positive revenue surprises (often related to the commodity cycle) as permanent, leading to spending increases that proved unsustainable. The federal government and some provinces managed to balance their budgets in the 1990s and 2000s without stringent fiscal rules, although in some cases these episodes were essentially forced by acute market pressures. *Jurisdictions with large deficits should establish deficit targets on a path toward a balanced budget that can then be used to guide budget decisions, to communicate with the public, to build investor confidence and to hold leaders to account. Once budget balance has been attained, they should announce medium-term goals for their debt-to-GDP ratios. Some may need to seek budget surpluses to reach these debt targets, given demographic pressures. To enhance credibility, governments should set out specific plans on how they intend to achieve their targets, including, if necessary, structural reforms. They should consider supporting this approach by enforcing and perhaps legislating spending growth caps consistent with the targets and to which they can be directly held to account.*

Provinces need sharper fiscal incentives and independent monitoring

The federal government should continue to work toward a more stable, permanent, rules-based system for determining transfers to the provinces so as to help them make medium-term fiscal plans under “harder” budget constraints. The provinces can also take steps to improve their own fiscal frameworks, perhaps by making use of new or better fiscal rules. But rules must be designed carefully. They can be unhelpful if they lead to behaviour aimed at respecting the letter but not the spirit of the rule or if they are destabilising, such as strict balanced-budget rules that force governments to cut spending when revenue falls during a

downturn. Compliance with such rules could be assessed at arms' length by an independent fiscal council. Indeed, the federal government moved to provide more fiscal transparency in 2006 by establishing the Office of the Parliamentary Budget Officer (PBO). The mandate of the PBO is to provide independent analysis to legislators on the state of the nation's finances and economy, and upon request, provide estimates of the financial cost of policy proposals. Resources permitting, provinces should consider creating a similar body, possibly reporting to the Council of the Federation.

The health-care system faces major challenges

In the longer run the soundness of Canada's public finances will likely be largely determined by the decisions taken regarding the health-care system. The Canadian system offers high-quality services to all residents, although at relatively high cost. In principle, it is also fair, as there are no financial barriers to access for hospital and physician services. Yet there is constant pressure to do better. With health already accounting for around half of total primary provincial spending, *meeting the fiscal and demographic challenges will require that the growth of public health spending be reduced from an annual rate of about 8% seen over the last decade toward the trend rate of growth of nominal income in coming years (estimated to be less than 4% per year), the only alternative being to squeeze other public spending or to raise taxes or user charges.* Tight budget control over capacity (number of hospital beds, diagnostic equipment and physicians) has allowed comparatively good cost control ever since sharp budget cuts in the 1990s. But, with rapidly growing demand, rationing has been necessary, and queues have been endemic, especially as strong concepts of fairness (enshrined in law) prohibit any use of private payment to skip queues or constrain demand. It is often difficult to find a family physician, a problem that is set to grow as doctors retire in large numbers. In non-Medicare services, the challenges are quite different. They include incomplete and employer-tied insurance coverage for the services (e.g. pharmaceuticals and long-term care) that are not publicly funded, and rapid volume growth due to the changing nature of health care. A surprisingly strong association between higher income and better health status may reflect such gaps in insurance coverage, though other factors likely to be relevant are poor health outcomes for indigenous minorities, an over-concentration of doctors in urban areas, and inadequacies in the social safety net.

There is ample scope for efficiency savings and quality improvements

All OECD countries face similar issues and are therefore seeking to boost their "value for money" in health care. In Canada, scope for efficiency gains appears at all levels. Provincial health-care budgets are topped up by federal cash transfers, but periodic bargaining over such transfers means that the provincial budget constraint can be perceived as relatively "soft". Generous accords have reduced the impetus for reform. This may well change, given the difficult fiscal picture, but in view of population ageing, *a more enduring recipe for restricting federal-transfer growth and devolving tax bases is needed for greater provincial-spending accountability.* Hospitals receive global budgets via their owners, the regional authorities, on a largely historical-cost basis, implying poor incentives for efficiency. *Hospitals should be funded on an activity and standard-cost basis to cut waiting lists and be subjected to budget caps to avoid over-supply and strategic behaviour.* Physicians represented by strong unions negotiate

their fees directly with provincial health ministries, politicising the process. *Doctors' fees should be negotiated at the regional or institutional levels where there can be clearer accountability for performance and possibly less politicisation. A portion of these fees should be based on capitation to reduce fee-for-service incentives to over-treat, with strengthened gate-keeping incentives on GPs to reduce capitation inducements to over-refer. Provincial regulations (if not the Canada Health Act) currently prohibit both private insurance for core services and mixed public-private contracts for doctors, resulting in a public monopoly on supply, notably of hospital services. Such regulations should be removed (or the Act changed) to spur more efficient service delivery and expanded capacity by way of private entry. Private health insurance should nevertheless be regulated, and even taxed, so as to control the well-known risks of adverse selection and cream-skimming. Finally, provinces should reduce high prices for generics by regulation, as Ontario plans to do and as the federal government already does for patented drugs.*

There is a dearth of good data (as in other countries) to inform resource allocation and treatment decisions. *Provincial ministries of health should be encouraged to provide relevant health-system-performance data and build up their analytical capacity, so as to establish a better information base for cost-benefit analysis, monitoring, performance benchmarking and policy evaluation. A pan-Canadian agency for health-care-quality analysis should be set up or this role given to an existing body such as the Canadian Institute for Health Information. By evaluating appropriateness and effectiveness of therapies, it would help policy makers prioritise social-insurance listings and, by promulgating best-practice guidelines, allow doctors to be more efficient and effective. Information-technology applications in health care (notably electronic patient health records) should be accelerated, though ways will have to be found to deal with legitimate concerns about patient privacy as some other OECD countries have successfully done.*

Expanded basic coverage with enhanced consumer choice is desirable

Technological advances and cost shifting have allowed pharmaceuticals, home care and therapeutic care to increasingly substitute for acute-care stays. However, most home care is informal, while out-of-pocket costs for pharmaceuticals, including for retirees, are high, despite provincial safety nets. Fragmented financing impedes a more holistic approach to health-care choices. In order to cope with rising chronic illness associated with ageing, more integrated forms of primary care, with delegation of physician tasks to nurses and other therapists, will be needed in lieu of solo doctor practices and hospital referrals – but such a development is discouraged by incentives and asymmetries in the system. *Thus, pharmaceuticals, home and therapeutic care should be integrated into the core public package (Medicare) to improve equity and enable health-care decisions to be made on the basis of system-wide costs and benefits. As the wider scope of core public benefits will involve more spending, hard choices on the depth of coverage will have to be made. Revenues could be raised and excess demand curbed by implementing some sort of capped patient co-payments and deductibles, which are totally absent at present. Equity concerns could be dealt with by levying such charges progressively through the income tax system. The level of the deductible could be varied in order to prioritise or discourage various services according to their costs and benefits. Additional revenues could be generated by abolishing the distortive tax subsidies to employer-provided health-insurance benefits.*

Chapter 1

Macro and financial-sector policies to sustain the recovery

Canada benefited from many strengths such as a less-leveraged financial sector, few subprime mortgages and sound corporate balance sheets as it weathered the global economic crisis of 2007-09. Actions by the monetary and fiscal authorities have stabilised financial markets and provided substantial support to the economy. With upturns in global trade and in commodity prices, the recovery is now well under way, but the pace of expansion is projected to slow later in 2010 and in 2011 as policy stimulus is withdrawn, inventory rebuilding runs its course and households reduce their spending growth in reaction to high indebtedness. In the longer term, Canada faces the same reform challenges that other OECD countries face to allow credible exit paths for big banks and to increase competition, contestability and shareholder oversight in this sector. International efforts to strengthen financial-system resilience should take inspiration from Canada's own model of risk-based prudential regulation, which successfully held banking risks in check. Reforms that imply large increases in bank capital should be accompanied by greater market discipline to contain moral hazard and spur efficiency. Securities markets should be better regulated in order to attract foreign capital, encourage competitive impulses and improve macro-prudential regulation.

The global economic story that led to the first significant Canadian recession since the early 1990s is by now familiar. The failure and near failure of major financial institutions in the United States and Europe, notably Lehman Brothers in September 2008, resulted in sharply rising credit spreads and a freeze in some credit markets. Growth in international trade fell dramatically toward the end of 2008, and the world economy experienced the first synchronised global recession in over 60 years.

Several factors played in Canada's favour as it weathered this global recession. Its banks and other financial institutions were less leveraged and harboured fewer toxic assets than many of their international peers. Thanks in part to better regulation and supervision, major Canadian banks had an average asset-to-capital ratio of 18, compared with more than 25 in the United States, over 30 for European banks and over 40 for some big global banks. In the corporate sector, debt-to-equity ratios were relatively low going into the recession and increased far less than in other countries. Finally, the total government net debt-to-GDP ratio was under 25% at the start of the crisis, well below most other OECD countries. Governments generally had the fiscal space to support the economy, and indeed they implemented stimulus measures worth more than the OECD average. Still, none of these economic strengths could totally shelter Canada from the global downturn and particularly from the US recession, given the high degree of economic integration between the two countries.

The economy is recovering from a mainly externally driven recession

Economic softness started to show up in late 2007 through slowing exports. The decline turned into a full-fledged recession in the fourth quarter of 2008 as weakness spread and deepened in all sectors of the economy (Table 1.1). By early 2009, output, employment and inflation were all falling sharply. The global economic slowdown, and more particularly the very weak US auto and housing sectors, led to a collapse in Canadian real exports of close to 20% over a one-year period. At the same time, the very large reversal in the terms of trade, which by early 2009 had fallen by some 14% since mid-2008, turned around a key source of previous domestic income growth. Declining consumer confidence, falling asset values and accelerating job losses undermined consumer spending, which fell but to a much lesser degree than exports. Uncertainty about the economic outlook, deteriorating profitability, tighter lending conditions and rising unused capacity depressed business investment. Residential construction also contracted sharply. Initially, goods producers were slow to adjust their production, and inventory-to-sales ratios shot up to decade highs. The subsequent inventory correction put downward pressure on output growth in early 2009. Overall, the defining characteristic of this recession compared to the last two substantial downturns, those of the early 1980s and 1990s, is that it was mainly externally driven (Box 1.1).

Table 1.1. Economic indicators
Annual percentage change, volume (chained 2002 Canadian dollars)

	2006	2007	2008	2009	2010	2011
Demand and output						
Private consumption	4.1	4.6	3.0	0.2	3.3	3.2
Government consumption	3.0	3.3	3.7	3.0	4.6	2.1
Gross fixed capital formation	6.9	3.7	0.9	-10.1	4.7	3.7
Public	5.3	6.1	12.4	13.0	10.5	-2.4
Private residential	2.1	2.8	-2.7	-7.4	12.7	4.2
Private non-residential	10.0	3.7	0.2	-17.4	-2.2	5.8
Final domestic demand	4.5	4.1	2.6	-1.7	3.8	3.0
Stockbuilding ¹	-0.2	0.2	-0.2	-1.1	1.0	0.3
Total domestic demand	4.3	4.3	2.4	-2.8	4.9	3.3
Export of goods and services	0.8	1.1	-4.7	-14.0	7.6	6.1
Imports of goods and services	4.7	5.8	0.8	-13.4	11.4	6.4
Net exports ¹	-1.3	-1.6	-1.9	-0.4	-1.3	-0.1
Statistical discrepancy ¹	0.0	0.0	0.0	0.3	-0.1	0.0
GDP at market prices	2.9	2.5	0.4	-2.7	3.6	3.2
Prices and employment						
GDP deflator	2.6	3.2	3.9	-1.9	3.5	1.8
Consumer price index	2.0	2.1	2.4	0.3	1.6	1.7
Underlying price index	1.9	2.1	1.7	1.8	1.7	1.5
Total employment	1.9	2.3	1.5	-1.6	1.7	1.8
Unemployment rate	6.3	6.0	6.2	8.3	7.9	7.2
<i>Memorandum items</i>						
General government financial balance ²	1.6	1.6	0.1	-5.1	-3.4	-2.1
General government gross debt ²	69.5	65.0	69.7	82.5	81.7	80.7
General government net debt ²	26.2	23.1	22.4	28.9	30.3	31.0
Short-term interest rate	4.1	4.6	3.5	0.8	0.9	2.9
Current account balance ²	1.4	1.0	0.5	-2.7	-1.6	-1.6
Output gap (per cent of potential GDP)	0.9	1.0	-1.0	-5.3	-3.4	-2.0

1. Contributions to changes in real GDP (percentage of real GDP in previous year).

2. As a percentage of GDP.

Source: OECD, OECD Economic Outlook 87 Database.

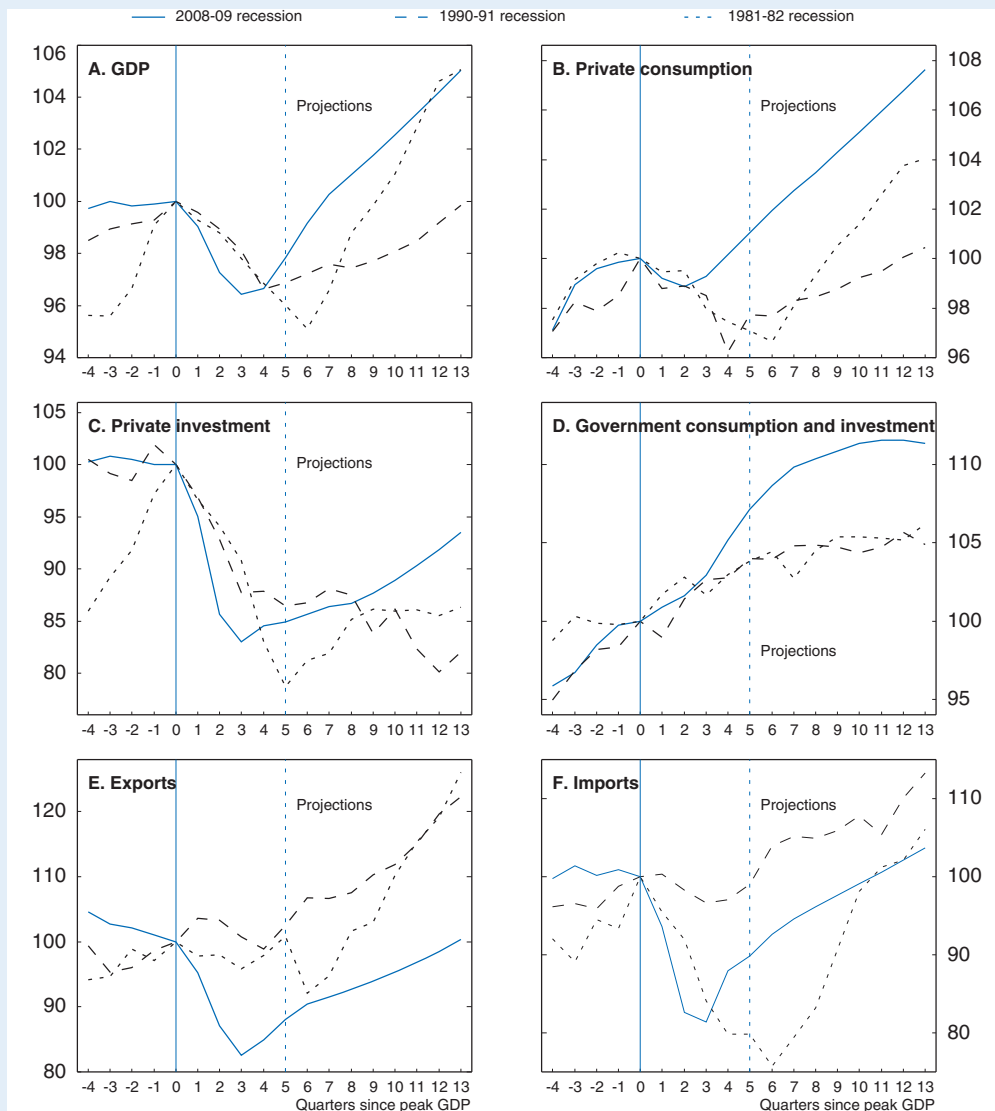
Box 1.1. Comparing the last recession to its predecessors

Compared to the two previous significant Canadian recessions in recent history, the 1981 and 1991 recessions, real output dropped more sharply at the beginning of the recent downturn but also tapered off and began growing again more quickly, so that four quarters after the start of the recession, the level of real output stood at exactly the same point relative to its peak as in the two previous recessions (Figure 1.1, Panel A). Unlike previous recessions, the recent one was clearly mostly externally driven, however. Real private consumption was remarkably resilient and had returned to its pre-recession level in 2009Q3, only four quarters after the beginning of the recession (Panel B). Real business investment fell a bit more sharply initially and remains well below its pre-recession level (Panel C). Government consumption and public investment supported the economy during the downturn (Panel D). Export volumes, however, took a substantial tumble and have remained extremely depressed relative to the two previous recessions, though they have been bouncing back (Panel E). Import volumes also declined faster than in the previous two recessions, but thanks to private consumption strength and a relatively strong Canadian currency, had bounced back somewhat after five quarters and were higher relative to their pre-recession peak than in the 1981 recession (Panel F).

Box 1.1. Comparing the last recession to its predecessors (cont.)


Figure 1.1. The 2008/09 recession compared¹

2008q3/1990q1/1981q2 = 100, chained volume indices



1. The 2001 recession is left out because of its modest depth and short duration. "Projections" refer to the 2008/09 recession only.

Source: OECD, OECD Economic Outlook 87 Database.

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Aggressive co-ordinated action helped stabilise financial-market conditions

While the financial-market reaction was milder in Canada than in many other countries, the immediate effects of the crisis were most acute in the market for short-term debt of banks and other corporations. The market for asset-backed commercial paper froze and other short-term credit markets – those for regular commercial paper, bankers' acceptances and interbank lending – experienced significant stress. The Bank of Canada had responded rapidly to the onset of stress in 2007 with its traditional liquidity tools and

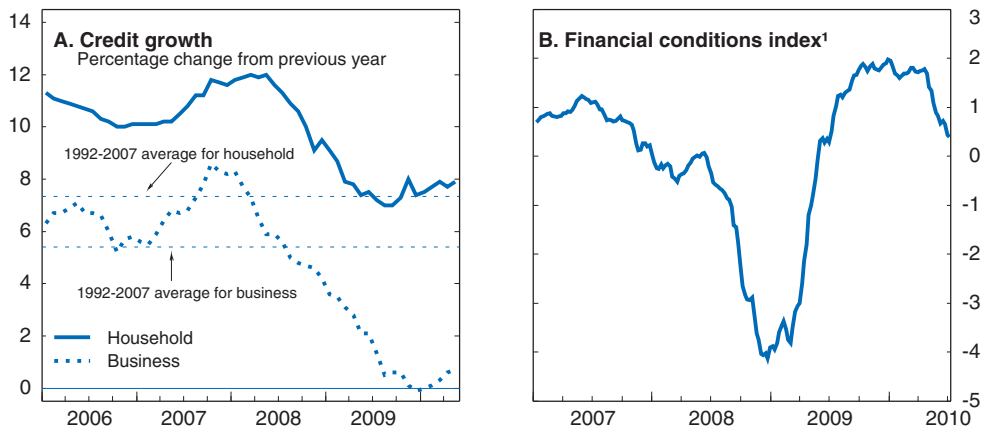
with a series of term purchase and resale agreements (PRA) against an expanded set of eligible securities and longer maturities than usual. As the situation deteriorated in the fall of 2008, the Bank again expanded its provision of liquidity to financial institutions by transacting more frequently with a broader range of counterparties, for still longer terms and against an even wider range of eligible securities. It also took a number of other measures to improve liquidity conditions, such as providing liquidity in US dollars through swap agreements with the Federal Reserve.¹ From the summer of 2007 to April 2009, the Bank lowered its policy rate from 4.5% all the way to the effective lower bound (0.25%). Furthermore, to influence market expectations and shape the yield curve at slightly longer maturities, the Bank committed to keeping its policy rate at 0.25% until the end of June 2010, conditional on the inflation outlook, though in the end it raised the rate by 25 basis points on 1 June and again by the same amount in late July. As conditions normalised in money markets, the Bank let two of its three emergency liquidity programmes – the private-sector term PRA programme and the term loan facility – expire at the end of October 2009. The regular term PRA facility conducted operations until April 2010.

While the Bank of Canada focused on alleviating stress in short-term funding markets for financial institutions, the federal government, for its part, focused on providing longer-term liquidity to financial-sector actors through a number of programmes under an umbrella initiative called the Extraordinary Financing Framework (EFF). One programme, the Insured Mortgage Purchase Program (IMPP), allowed banks to sell National Housing Act Mortgage Backed Securities to the Canada Mortgage and Housing Corporation (CMHC), a Crown corporation. A new programme, the Canadian Lenders Assurance Facility (CLAF), would have insured the wholesale borrowing of federally regulated deposit-taking institutions that demanded it, though none did. A third, the Canadian Secured Credit Facility (CSCF), supported sales of vehicles and equipment in Canada through government purchase of term asset-backed securities backed by loans and leases on such assets. Certain measures under the EFF, including the CLAF, expired at the end of December 2009. The IMPP and the CSCF ended as planned at the end of March 2010.

Given a structurally healthier banking sector and the measures taken by the Bank of Canada and the government, financial conditions were less affected by the global financial crisis in Canada than in most other countries. Wholesale bank-borrowing costs rose much less and improved faster than in other countries, while corporate bond rate spreads remained below those in the United States and Europe. All the major banks remained profitable through the crisis. As a result, credit growth remained solid, mainly due to continued strong household borrowing (Figure 1.2, Panel A). Business credit growth decelerated more significantly through 2008 and 2009 due to the greater impact of the recession on the demand for such credit, as well as tighter lending standards, but now appears to be stabilising. Overall, financial conditions have recovered and, despite some retightening following the outbreak of the European sovereign debt crisis at end-2009, are now comparable to the pre-crisis period (Figure 1.2, Panel B).


Local and global fiscal stimulus has also boosted the economy

Canada's fiscal stimulus package, most of it announced in the spring 2009 round of federal and provincial budgets, is estimated to amount to 4.1% of 2008 GDP, higher than the average OECD package (OECD, 2009a). It consists, in large part, of special federal funds for infrastructure investments in collaboration with the provinces. Real government

Figure 1.2. **Credit growth and financial conditions**

1. The Bank of Canada's Financial Conditions Index (FCI) is a weighted average of financial variables. Downward movements in the FCI capture tighter financial conditions. The FCI is normalised with an average of zero over the last ten years.

Source: Bank of Canada.

StatLink  <http://dx.doi.org/10.1787/888932319934>

investment rose from 2.7% of real GDP in 2008Q3 to 3.4% at the end of 2009, and it remains relatively high in 2010. The Bank of Canada ensured that monetary conditions remained accommodative, and it seems likely that the fiscal multiplier was stronger than it would have been in normal times.

The recovery is taking hold but will be moderate too

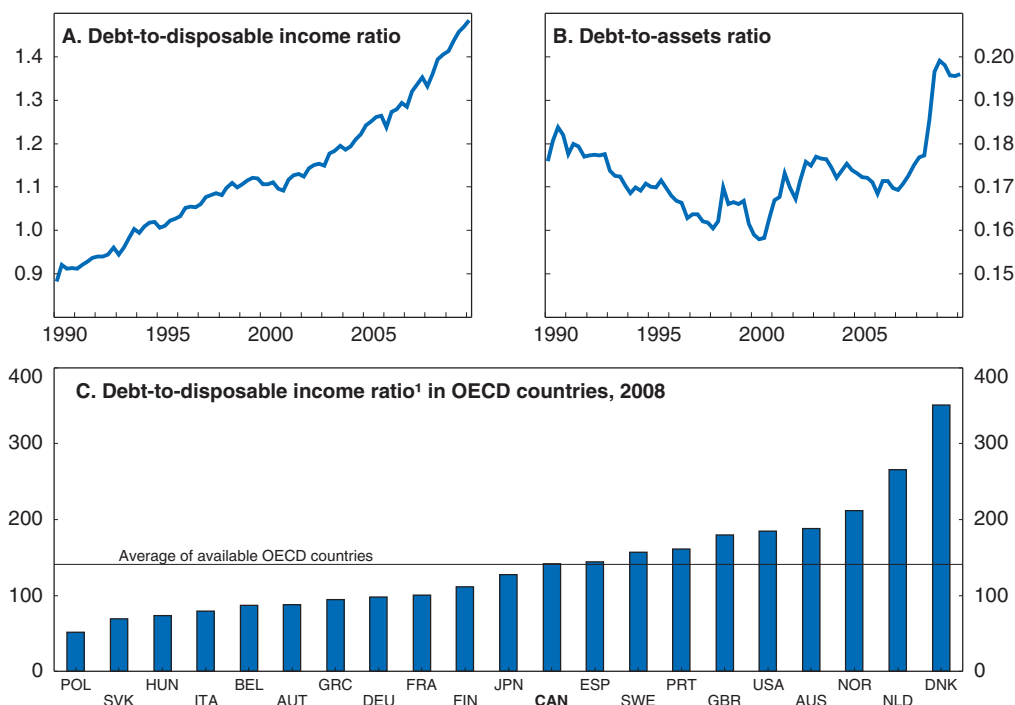
With a gradual normalisation of financial-market conditions and fiscal and monetary impetus gathering pace, activity strengthened in the last half of 2009 and into 2010. Private domestic spending, supported by significant policy stimulus and a well-functioning financial system, contributed significantly to growth. Housing investment was particularly strong, helped by low mortgage rates and the temporary federal tax credit for home renovations of 15% of eligible expenses between CAD 1 000 and CAD 10 000. After outsized leaps in the last quarter of 2009 and the first quarter of 2010, GDP growth now seems to be moderating. The expansion is projected to continue over the rest of 2010 and in 2011, but only at a moderate pace of around 3.0-3.5% per year (Table 1.1).

Household spending will keep contributing to growth, but there are vulnerabilities related to high debt

Private consumption will continue to grow on the back of an improvement in labour markets and high consumer confidence, though it will slow relative to recent quarters because households now exhibit record-high debt-to-disposable income and debt-to-assets ratios and need to reduce their spending growth (Figure 1.3, Panels A and B). Household debt as a proportion of disposable income was near the OECD average in 2008 after rising significantly over the last decade (Figure 1.3, Panel C). Household indebtedness continued to rise through the 2008-09 recession, however, the first on record to show an overall expansion in real household credit. Most of the increase has been in mortgage debt due to a strong revival in housing activity. Of course, healthy credit expansion was a goal of policy action, and, despite increased debt levels, historically low interest rates have lowered the proportion of disposable income devoted to servicing debt.


That being said, the upward trend in the debt ratios implies that households have a growing vulnerability to additional adverse shocks. For example, if households continue to borrow at the same pace as they did recently and interest rates increase as expected, by mid-2012 about 7.5% of Canadian households could have so much debt that they would be “financially vulnerable”, up from 6.1% in 2009 (Bank of Canada, 2010). This group is likely to include many young, first-time home buyers that have been profiting from low mortgage rates. A significant amount of support to the economy was indeed coming from private residential investment toward the end of 2009 and early 2010, but the housing sector has now begun to show signs of cooling and is expected to continue doing so (see the housing discussion below).

Figure 1.3. **Household debt**



1. Household and unincorporated business.

Source: Statistics Canada, OECD, OECD Economic Outlook 87 Database and OECD National Accounts Database.

StatLink  <http://dx.doi.org/10.1787/888932319953>

Business investment should pick up

Private non-residential fixed investment remained weak through the downturn because of the large and growing amount of excess capacity but should recover as needed investments that have been postponed during the contraction are undertaken. Given healthy corporate balance sheets, good profitability, low leverage ratios, high liquidity levels, low absolute borrowing costs and the lower price of imported machinery and equipment because of the strong Canadian dollar and the elimination of all remaining trade tariffs on production inputs, there should be little to hold back firms, particularly in non-tradables sectors, from modernising their capital stock. Stiffer non-price terms for borrowing have been a restraining factor, but a recent survey indicates that they are beginning to ease as the recovery takes hold. Still, low capacity utilisation and uncertainty

about the shape of the recovery may make the investment revival lacklustre initially. Stockbuilding should contribute strongly to GDP growth in 2010 as a pickup in sales has brought inventory-to-sales ratios back to their long-term averages, and inventory investment will need to keep up with rising sales.

The contribution of exports will moderate

The export sector benefited from a sharp rebound in US GDP in the second half of 2009. The bounce back in exports, though muted compared to the preceding large drop, was especially welcome, given that, aside from commodities, Canadian exports tend to be concentrated in the auto and construction-materials sectors, both of which were severely affected by the crisis. The initial rebound appears to have been driven by temporary factors such as US investment in inventories and that country's fiscal stimulus programme, however. The more moderate US growth rates projected for 2010 and 2011 and the strong Canadian dollar will temper the contribution of exports to Canadian growth.

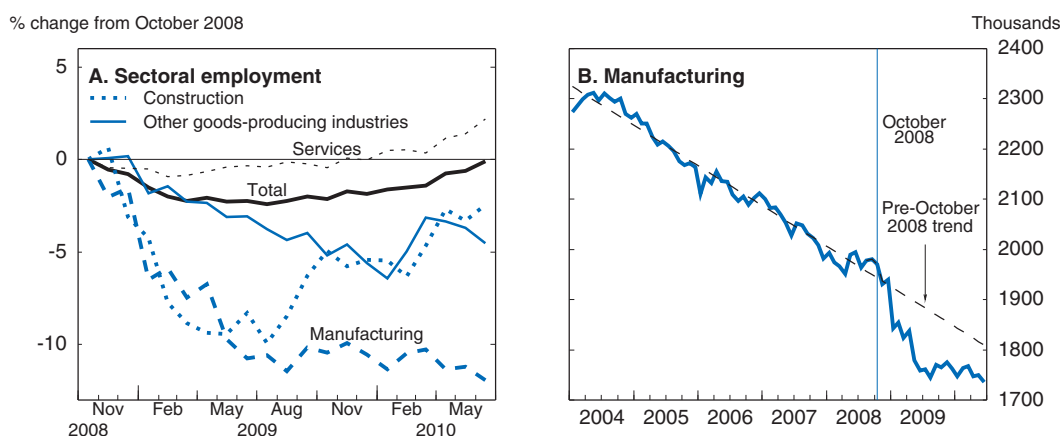
Government spending will drag down growth as stimulus measures are withdrawn

The positive impact of government stimulus spending will fade in the quarters to come. The remaining federal and provincial stimulus measures for 2010 and 2011 are estimated to amount to roughly 1.6% of GDP, and there is little appetite for fiscal support beyond what has already been announced. The focus both in Canada and in other G20 countries is now turning to fiscal consolidation (see Chapter 2 for an analysis of fiscal-consolidation strategies in Canada). The contribution of fiscal policy to growth is projected to fade in the second half of 2010 and to turn negative in 2011 as infrastructure projects are completed and other stimulus measures expire. Together with the high currency, fiscal consolidation will provide *de facto* tightening of economic policy conditions, irrespective of any Bank of Canada moves.

Job losses have been significant, but the labour market has turned around

Although employment rose until October 2008, the unemployment rate then increased sharply to 8.6% in July 2009. This increase was larger than the fall in output would have suggested. Over the 1961-to-2009 period, a 2.6% increase in output was typically associated with a one-percentage-point fall in the unemployment rate (Beaton, 2010). In the recent recession, a one-percentage-point increase in the unemployment rate was coupled with a fall of only 1.6% in output. The stronger observed co-movement between unemployment and output is consistent with evidence of asymmetric behaviour in Okun's law over the business cycle:² the unemployment rate typically increases by more during recessions than it falls during expansions.

Employment losses were not distributed equally among sectors and regions. They were largely concentrated in the construction and manufacturing sectors (Figure 1.4, Panel A). Regionally, the province of Ontario, which has a large auto manufacturing sector, absorbed a disproportionate share of the losses. It is clear that manufacturing employment had been on a downward trend for years even before the recession, and this trend will likely continue, so manufacturing employment may get back to the pre-crisis trend but not its pre-crisis level (Figure 1.4, Panel B). The employment shift out of manufacturing is consistent with trend real exchange rate appreciation and will eventually have to be compensated by jobs in other sectors if the economy is to get back to full employment. This shift indeed seems to be happening.

Figure 1.4. **Employment developments**

Source: Statistics Canada.

StatLink  <http://dx.doi.org/10.1787/888932319972>

The federal government took some exceptional policy measures to offset the economic and social consequences of rapid job dislocation. One such measure was to extend the length of work-sharing agreements, first by 14 weeks, to a maximum of 52 weeks, and subsequently by a further 26 weeks to a maximum of 78 weeks. Work-sharing avoids layoffs by offering Employment Insurance income benefits to qualifying workers willing to work a reduced work week while their employer recovers. Another measure was to increase the maximum number of weeks a claimant can receive Employment Insurance benefits, a change designed to keep individuals active in the labour market to alleviate the discouraged-worker effect and raise the participation rate (Johansson, 2002). The risk is that the longer benefit period will encourage some to stay unemployed longer than otherwise, which can lead to a deterioration of skills and higher long-term unemployment. While five weeks is a not a huge change, there is likely to be political pressures to extend the eligibility period or to make the new parameters permanent. Since the labour market has been recovering at a good pace, the federal government should resist such political pressures and let these exceptional measures expire as planned in September 2010.

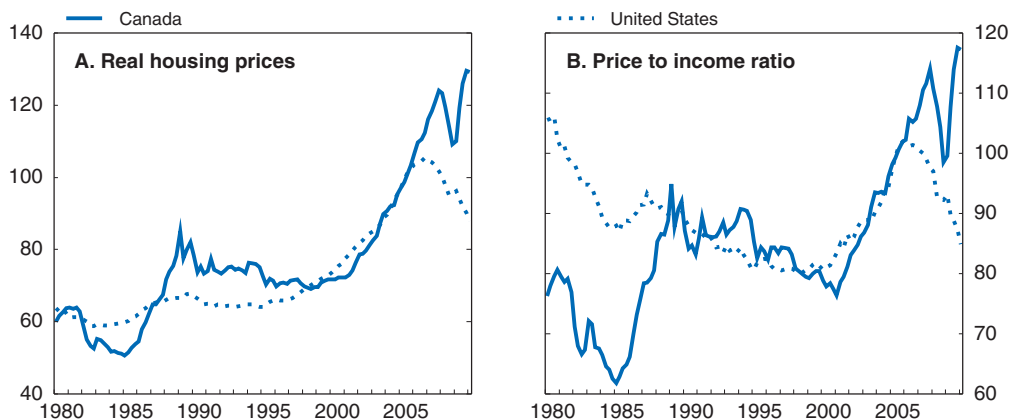
Employment has been on an upward trend since July 2009, adding 403 000 jobs between then and June 2010. This gain offsets nearly all the sharp cumulative drop of 417 000 jobs from peak to trough. However, due to a large increase in the labour force, the unemployment rate only inched down to just below 8% (see Figure 1.10, Panel B below). Even if the economy keeps adding jobs at a pace of around 25 000 a month, which is the average rate of job gains during the 2003-to-2008 jobs boom, continued growth of the labour force means that it will take some more time for the unemployment rate to return to pre-crisis levels. In fact, the unemployment rate is projected to keep falling at a modest pace and reach 7% by the end of 2011, still much higher than the 6.2% rate of October 2008, though the rate is estimated to have been modestly below its sustainable level at that point. In any case, wage inflation is projected to remain subdued for the foreseeable future.

The housing market has re-inflated but is expected to cool down soon

The cycle in Canada's housing market is different from its US counterpart, and the downturn following the crisis was short lived and not severe. Prices soon resumed their upward trend and topped their pre-crisis peak (Figure 1.5). The main reasons why Canadian households have been able to bid up the price of existing homes even in this depressed economic environment are fourfold. *First*, Canadian households entered the recession relatively less indebted than their US counterparts. Many households were thus still in a position to take on additional debt. *Second*, they had access to a relatively healthy banking sector still willing to extend credit and at very favourable mortgage rates (see below). Household credit growth remained above its historical rate of growth through the worst of the recession (see Figure 1.2, Panel A above). And though long-term rates decreased far less than their short-term counterparts as the Bank of Canada eased monetary policy, they still dropped significantly, taking mortgage rates down as well (Figure 1.6, Panel A). *Third*, as part of its fiscal stimulus measures, the federal government gave a tax credit to first-time home buyers and purchased mortgages from banks to encourage new lending. And *fourth*, subprime mortgages never made up more than 5% of new issuance, compared with 33% in the United States at the peak. As a result, mortgage delinquencies have picked up only slightly compared to the sharp increase in the United States (Figure 1.6, Panel B).

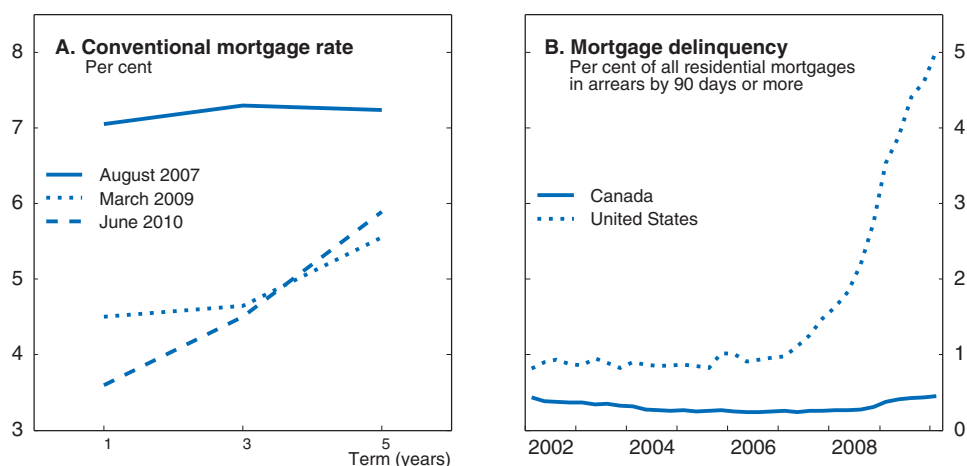
The V-shaped pattern of real house prices during the economic crisis happened at a historically high price level (Figure 1.5). Real house prices had generally been increasing along with the price-to-income ratio since the late 1990s until June 2008 when the average resale home price started falling year over year for the first time in more than nine years, but only for a brief period. The result of these trends is that Canadian house prices, or at least some regional or local housing markets, notably those of Toronto and Vancouver, may still reflect excess-demand conditions. The price of an average home recently reached five times average household after-tax income, which is 35% higher than the long-term average of 3.7 (Sauvé, 2010). One factor that may have fuelled the sustained appreciation is


Figure 1.5. **House prices**
Indices, 2005 = 100



Source: OECD, OECD Economic Outlook 87 Database, Multiple Listing Service data via Department of Finance Canada and US Office of Federal Housing Enterprise Oversight.

StatLink  <http://dx.doi.org/10.1787/888932319991>

Figure 1.6. **Housing-market drivers**

Source: Bank of Canada for Panel A; Canadian Bankers Association and US Mortgage Bankers Association for Panel B.
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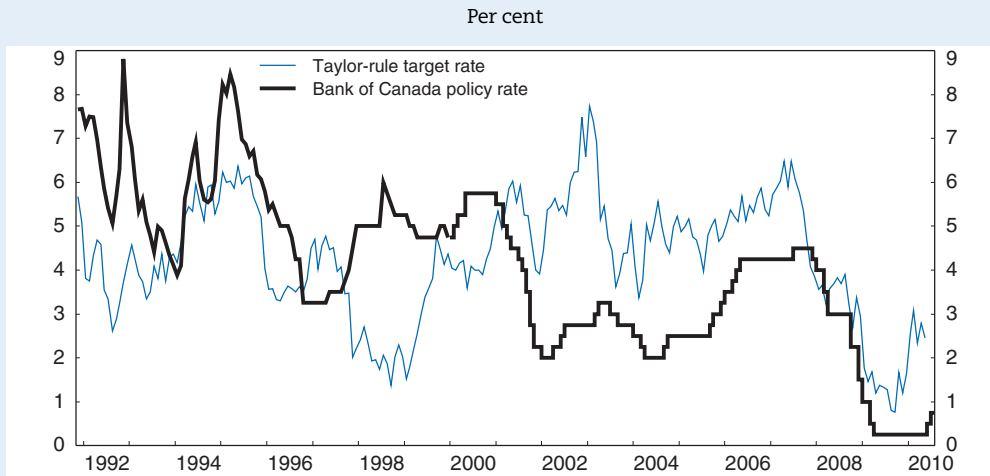
relatively loose monetary policy over the 2000s, though this hypothesis is controversial (Box 1.2). On the other hand, some studies suggest that the sustained house-price appreciation represented a catching up of prices with their long-term determinants and that they are now broadly in line with fundamentals (Tsounta, 2009).

Box 1.2. **The Taylor rule and house prices**

A Taylor-rule calculation begs the question as to whether the long period of relatively loose monetary policy over the 2000s may have contributed to the long sustained increase in house prices during this decade. OECD research has found that conventional monetary easing, when interest rates are brought well below Taylor rates and are maintained there for an extended period of time, is frequently followed by the build-up of financial imbalances in housing markets (Ahrend, Cournède and Price, 2008). Had monetary policy reaction functions followed a traditional Taylor rule based on the output gap and inflation with standard weights, short-term interest rates would indeed have been kept higher through most of the 2000s in both the United States and Canada (Sutherland et al., 2010). To illustrate for the case of Canada, Figure 1.7 compares the actual Bank of Canada policy interest rate at a monthly frequency with the rate determined by the following Taylor rule:

$$i^{Taylor} = 2.5 + \pi^e + 0.5 \cdot GAP + 2 \cdot (\pi - 2)$$

where 2.5 is assumed to be the real neutral interest rate,* π^e is expected long-term inflation calculated as the ratio between the long-term Government of Canada benchmark bond yield and the yield on the long-term real return bond, GAP is the estimated output gap in the latest *OECD Economic Outlook* interpolated to a monthly frequency, and π is the 12-month change in the core consumer price index, the term in parentheses representing the deviation between observed core inflation and the mid-point of the Bank of Canada's inflation control range (2%). At a zero output gap and with current inflation and long-term inflation expectations stabilised at 2%, the neutral policy interest rate given by this Taylor rule is 4.5%, consistent with that used in the *OECD Economic Outlook*. The reaction function's sensitivity parameters with respect to deviations in inflation (2) and to the output gap (0.5) are standard in the economic literature and reflect the relatively high weight that an inflation-targeting central bank like the Bank of Canada would put on inflation, but using other common values would not affect the qualitative results.

Box 1.2. **The Taylor rule and house prices (cont.)**Figure 1.7. **Actual and Taylor-rule-based policy interest rates**

Source: Statistics Canada, Bank of Canada, OECD, OECD Economic Outlook 87 Database and OECD calculations.

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While the correlation is only suggestive, the time during which the Bank of Canada maintained its policy rate significantly below the Taylor-rule rate for an extended period lines up perfectly with the period of sustained real house price appreciation over the last decade (see Figure 1.5 above for house prices). It must however be noted that from 2002 to 2008, monetary conditions were tightening due to the sustained Canadian-dollar appreciation.

* For comparison, the Bank of Canada's latest quarterly projection model (Terms-of-Trade Economic Model or ToTEM) uses a higher real neutral interest rate of 3.2% (Murchison and Rennison, 2006).

Whatever the causes of the appreciation in house prices, in view of recent trends and the factors underlying them, it is reasonable to expect that house prices will come under downward pressure in the near future. *First*, mortgage rates are likely to rise as the policy rate is normalised. Canadian mortgage rates are typically reset every few years, so people who bought houses after short-term interest rates came down in response to the economic crisis will soon see rate increases. *Second*, like other OECD countries, Canada is probably entering a fairly long period of relatively slow household income growth, which will curtail housing investment. And, *third*, the supply of new housing appears to be catching up to demand, which should eventually slow or even depress prices for existing homes. Canadian housing starts were very strong through the second half of 2009 and early 2010, though the construction and renovation market is now cooling down. The market has almost certainly been boosted by the rush to beat the new harmonised sales taxes in Ontario and British Columbia, which came into effect on 1 July 2010, raising the price of new homes as well as that of resale transactions in these two provinces. Adjustments to the mortgage insurance guarantee framework that came into force in April 2010 are also likely to have boosted the housing market as home buyers pushed to beat them before they took effect.

Policy measures were taken to slow the mortgage market

Indeed, policy measures have appropriately been taken to cool down the mortgage market, and more measures could still be taken if these do not turn out to be sufficient. In

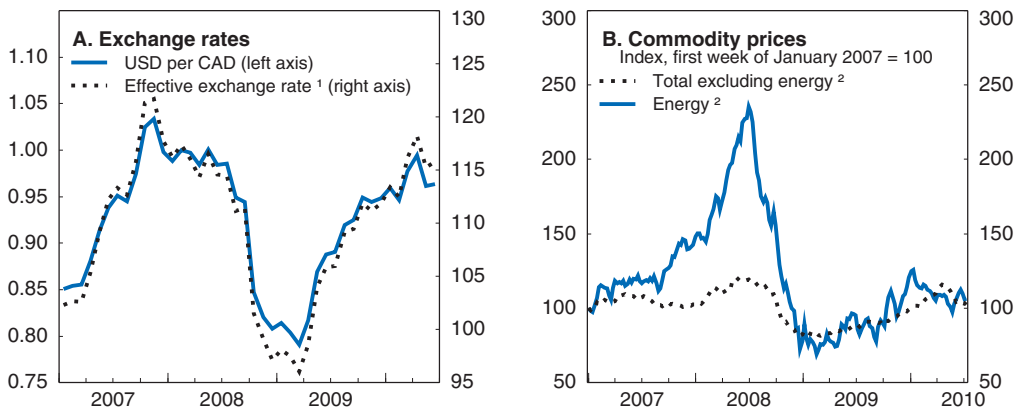
Canada, the federal government provides financial guarantees for the provision of default insurance on high-leverage mortgages, that is, mortgage loans at 80% or greater of the value of the property. The insurance is provided by the Canadian Mortgage and Housing Corporation (CMHC), which has a 100% guarantee from the federal government on the insured mortgages, or by private insurers, which have a 90% guarantee from the federal government (see further below). These guarantees come with certain conditions, which can be changed over time.³ In February 2010, the federal government adjusted the rules to qualify for government-backed insured mortgages as follows:

- Require that all borrowers meet the standards for a five-year fixed-rate mortgage even if they choose a mortgage with a lower interest rate and shorter term. This initiative will help home buyers prepare for higher interest rates in the future.
- Lower the maximum amount Canadians can withdraw in refinancing their mortgages to 90% from 95% of the value of their homes. This will help ensure home ownership is a more effective way to save.
- Require a minimum down payment of 20% for government-backed mortgage insurance on non-owner-occupied properties.

The government could require banks to show the sensitivity of mortgage payments to interest-rate increases; some banks have already started to provide information along these lines. It could also require larger down payments for all federally insured mortgages, not only those for non-owner-occupied properties. The recent global crisis has shown the importance of housing-market bubbles and busts for broader economic activity. Lending standards and the framework for mortgage insurance are the right tools to contain this cycle.

The Canada-US exchange rate has fluctuated a great deal


Given the Canadian economy's large exposure to the United States – about three quarters of Canadian exports go to the United States – bilateral movements in the exchange rate can have substantial impacts. The exchange rate has fluctuated significantly in recent times, practically in tandem with commodity prices (Figure 1.8). Relative public debt-to-GDP ratios also affect the Canada-US real exchange rate, with a fall in the Canadian ratio relative to the US driving up the exchange rate. Commodity prices and relative debt-to-GDP ratios together explain about 46% of the long-run variance in the Canada-US real exchange rate, with Canada-specific factors accounting for the remaining 54% and interest-rate differentials being important in the short run (Cayen *et al.*, 2010). As regards the long period of general appreciation between 2002 and 2007, these two factors together explain more than 60% of the increase in the Canada-US real exchange rate, each with an equal share. Since 2007, the Canadian currency has reached and then breached parity with the US dollar for the first time since 1976, then depreciated by about 20%, and then strengthened all the way back to US-dollar parity again, hovering near this level since April 2010. It is clear, therefore, that Canada's flexible-exchange-rate regime acts as an important shock absorber for the country's economy, though exchange-rate volatility does create uncertainty for trade-intensive industries and regions. However, the exchange rate in itself is, rightly, not a focus of monetary policy. The Bank of Canada keeps a close eye on exchange-rate gyrations, and, consistent with its mandate, focuses on them only to the extent they affect the outlook for consumer price inflation.

Figure 1.8. **Exchange rates and commodity prices**

1. Nominal effective (trade-weighted) exchange rate, index 2005 = 100.

2. In US-dollar terms based on Canadian production.

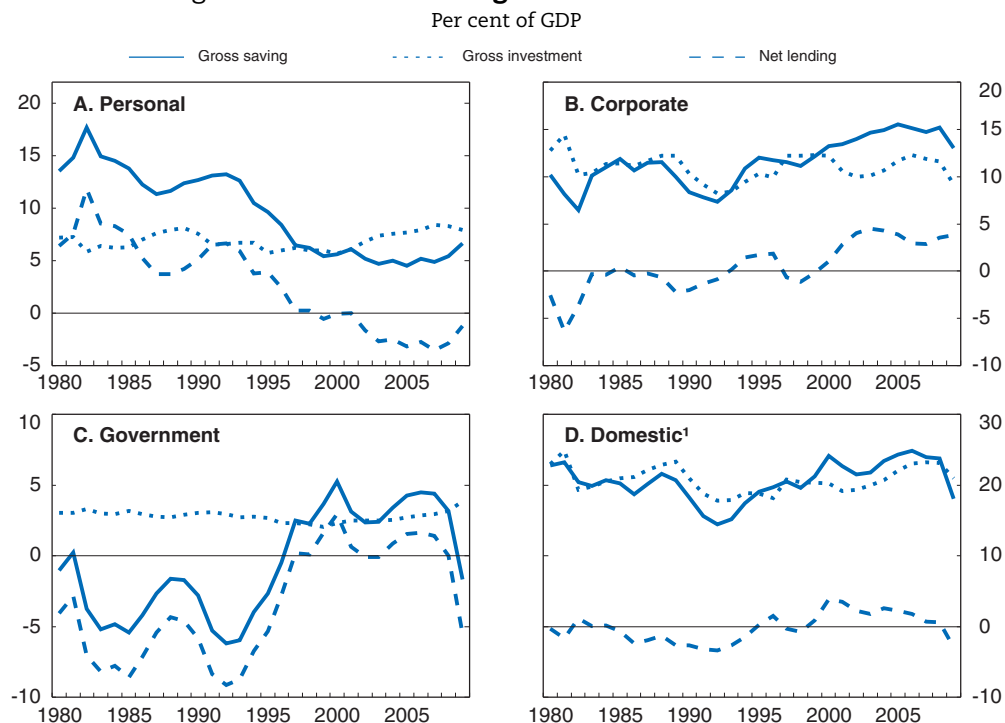
Source: Statistics Canada and OECD, *OECD Economic Outlook 87 Database*.

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Canada is not a significant contributor to global saving-investment imbalances

Throughout the last 30 years, Canada's overall net borrowing or net lending from the rest of the world has never been extreme, and as such the country has never been an important contributor to the much-discussed global imbalances that played a role in the economic crisis (e.g. Obstfeld and Rogoff, 2009). In terms of saving, up until the start of the recession the government and corporate sectors' net saving more than compensated for personal sector net borrowing, and the country had moved from a small net borrowing position relative to the rest of the world in most of the 1980s and early 1990s to a small net lending position (Figure 1.9). Recently, however, the situation has turned around. With the government's fiscal position rapidly deteriorating in 2008 and 2009, the government sector has become a net borrower again for the first time in more than a decade, bringing the domestic sector as a whole into a small net borrowing position. In terms of stocks, total public- and private-sector debt as a proportion of GDP was lower in Canada before the crisis and in early 2009 than in any other G7 country (McKinsey Global Institute, 2010). Since the early 1990s and leading up to the financial crisis, this proportion had been stable in Canada at roughly 220% of GDP, unlike for all other G7 countries where it had generally been rising, reaching over 400% of GDP in the United Kingdom and Japan. The foreign-owned share of total debt was also lower in Canada (14%) than in every other G7 country, except Japan (7%). Overall, this saving-investment-balance analysis reveals no serious vulnerability, though, as pointed out earlier, a non-negligible share of households will be vulnerable to rising interest rates, given their high indebtedness.

A falling trade surplus and weakening commodity markets throughout the recession led the current account balance to turn negative in 2009 for the first time in 11 years. Commodity prices have now reversed some of their decline, and global demand is recovering, helping to bring about a reduction of the deficit in 2010, but the current account balance is projected to remain in deficit in the short term. The strong currency (relative to the US dollar) will make exports less competitive, boost foreign tourism by Canadians and discourage foreign travellers from visiting Canada. Despite the recovery, demand from the United States will also remain relatively weak in level terms. The aging of the population will put further downward pressure on personal saving rates, as pensioners draw down

Figure 1.9. **Sectoral saving and investment balances**

1. The sum of the personal, corporate and government sectors, which corresponds to the inverse of the non-resident sector. Net lending for the domestic sector, calculated here on a national accounts basis, corresponds conceptually to the current account balance in the balance of payments.

Source: OECD, Quarterly National Accounts Database.

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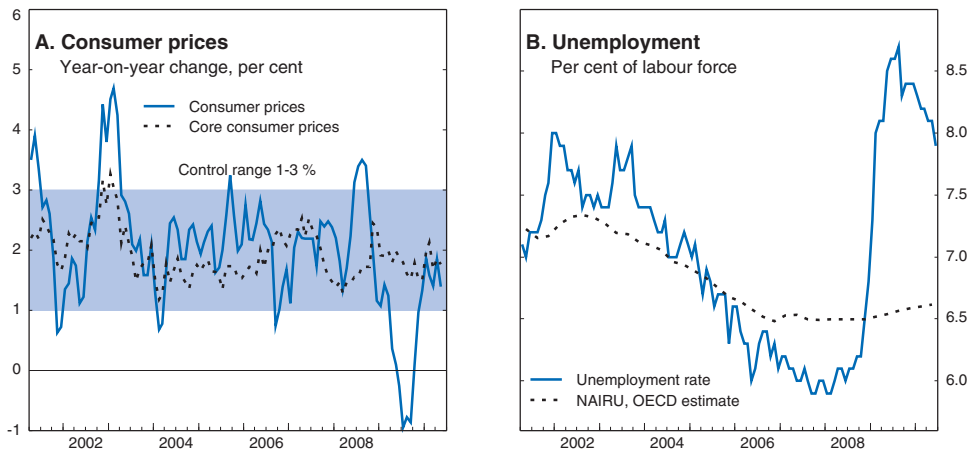
assets to pay for current consumption rather than save out of current income. Nonetheless, over the long term, Canada is not expected to remain a net borrower from the rest of the world. If governments can gradually return to balanced budgets, and with many countries such as China expected to become increasingly important buyers of Canadian natural resources, Canada is expected to return to being a net exporter and a net lender to the rest of the world.

Monetary policy needs to withdraw extraordinary stimulus


Headline inflation has been muted, but core measures have been surprisingly strong

Headline inflation has been quite muted against the backdrop of substantial slack in the economy (Figure 1.10, Panel A). Consumer prices fell in year-on-year terms between June and September 2009, but this was largely attributable to fluctuations in world energy prices. Prices started to rise again late in 2009 as the base effect from high commodity prices in 2008 started to fade. Core inflation has surprised on the upside through the recession, however, in part the result of a slower-than-anticipated deceleration in wages despite the large amount of excess supply. It remains to be seen whether this is due to firm anchoring of inflation expectations or to stronger price and/or wage rigidities at very low inflation rates.

The high unemployment rate will largely contain wage pressures, and producer pricing power should remain weak for a while (Figure 1.10, Panel B). The renewed strength

Figure 1.10. **Inflation and unemployment**

Source: Statistics Canada and OECD estimates from OECD, *OECD Economic Outlook 87 Database*.

StatLink  <http://dx.doi.org/10.1787/888932320086>

of the Canadian dollar will also dampen inflation. As a result, core inflation is projected to remain muted for some time. Headline inflation will pick up temporarily in the middle of 2010 and again in early 2011 due to sales tax changes. Ontario and British Columbia are introducing their Harmonised Sales Taxes (HSTs) on 1 July 2010 – switching to such a tax increases the price of many services by including them in the tax base – and Nova Scotia is raising its HST rate on the same date. Quebec is raising its sales tax rate on 1 January 2011. Nevertheless, both headline and core inflation are projected to remain comfortably below 2% over the course of 2011, taking into account a gradual, steady tightening of monetary policy by the Bank of Canada from the middle of 2010.

The Bank of Canada's exit strategy is relatively straightforward

The impact of unprecedented monetary policy measures on the size of the Bank of Canada's balance sheet was relatively small compared to actions in other countries. During the global financial crisis, the extraordinary liquidity provided by the Bank peaked at roughly CAD 40 billion in December 2008, or about 80% of the average size of its balance sheet over the pre-crisis period. By December 2009, the size of the monetary base in Canada was roughly 25% larger than it was in the pre-crisis period. The comparable figure was 150% in the United States and over 200% in the United Kingdom (Minegishi and Cournède, 2010). That is partly because the Bank of Canada took fewer and smaller exceptional steps than many other central banks – for instance, it did not purchase long-term assets outright from the private sector – and partly because it sterilised most of the expansionary effect of extra liquidity provision on the monetary base through an increase in government deposits and through the sale of Treasury bills. As a result, the Bank's strategy to withdraw excess liquidity from the money market has been relatively straightforward. It has relied on automatic reductions of its balance sheet by letting previously accumulated positions mature.

The Bank's current monetary stance is still extremely expansionary. Thanks to the Bank's history of focusing on the inflation target, expectations for inflation have remained within the 1-3% control range throughout the financial crisis, so the real Treasury bill rate has averaged around -1.75% over the past year. By any standard, this is an enormous

amount of monetary stimulus. In addition, low interest rates have been effective at stimulating credit growth because of a relatively healthy banking system. If the economy continues to recover along the path currently projected, then the output gap will shrink to the point where such an exceptionally accommodative monetary policy is no longer appropriate. The latest *OECD Economic Outlook* estimates that the (negative) output gap is in the 3-3.5% range as of mid-2010 and projects that it will narrow to the 1-1.5% range at the end of 2011. Based on these figures, on projections of trend growth over the medium term, and on a scenario of continued moderate expansion after 2011, the output gap would be expected to close around the last quarter of 2012. Accordingly, gradual normalisation of the policy rate, following the first rate increase in June 2010, would be desirable. Of course, this assessment will be revised in the light of incoming economic data. The Bank could pause the tightening cycle at any time if the projected strength of the recovery does not materialise and inflation sags, or accelerate it in the opposite scenario.

Several factors militate for a moderate normalisation pace. *First*, the confidence bands around the economic projection are unusually large, and the sustainability of the recovery is still in some doubt. Indeed, the Bank has warned that risks to the global recovery and financial markets have intensified since end-2009, reflecting factors such as the European sovereign debt crisis and persisting global imbalances (Bank of Canada, 2010). In this context of uncertainty, it makes more sense to err on the side of caution and risk a little more inflation than to tighten too soon and risk taking momentum out of the recovery. *Second*, the expiration of temporary stimulus measures in late 2010 and through 2011 and the beginning of fiscal consolidation at both the federal and provincial levels will already take some of the steam out of the recovery and reduce inflation pressures in industries (such as construction) that benefited from stimulus spending. Moreover, the speed of monetary tightening must take into account the synchronicity of exit measures, both fiscal and monetary, around the world. *Third*, given weak consumer fundamentals – a record-high household debt ratio, a loss of net worth and relatively soft income growth – and the likely fall of house prices ahead, even a moderate monetary squeeze should be sufficient to drive a material deceleration in consumer spending. And, *fourth*, the strength of the Canadian dollar already provides some considerable effective tightening to financial conditions.

The current inflation-targeting agreement should be renewed without change

In November 2006, the Bank of Canada and the federal government renewed their joint inflation-targeting agreement for another five years. At the same time, the Bank launched a concerted research programme regarding the costs and benefits of an inflation target lower than 2%, and the costs and benefits of replacing the current inflation target with a longer-term price-level target. The Bank has been carrying out internal research and encouraging external research on these questions to prepare for the next renewal of the inflation-targeting agreement at the end of 2011. The 2008 *OECD Economic Survey of Canada* argued on the basis of research available at the time that the current regime had yielded significant benefits to the Canadian economy, and that no compelling argument supported the view that changes to the current inflation-targeting regime would generate benefits that would outweigh the possible costs of getting the new policy wrong, or undermining the credibility that the Bank has accumulated over the past two decades under the current regime. It also argued that further research was necessary to make an informed decision in 2011.

Reviewing existing research with the benefit of one more year of studies,⁴ Amano, Carter and Coletti (2009) conclude that an inflation target below 2% is likely preferable to

the status quo, though it is unclear how much lower policy makers should aim nor how much Canadians would benefit from a shift. Their evidence suggests that lowering the mid-point of the inflation target range, say from 2% to 1%, would be unlikely to do much damage, and might offer some economic benefits, while at the same time strengthening the Bank's commitment to price stability. With regard to the price-level target, they find that the evidence is more mixed, with a need for further study concerning: i) the target's influence on contracting behaviour and inflation expectations; ii) strategies for ensuring credibility in the commitment to price-level targeting; and iii) the Canadian economy's vulnerability to shocks that the literature identifies as particularly detrimental to the target's performance. Reviewing the same evidence, former Bank of Canada governor David Dodge concludes that "... there is still no clear evidence that a lower inflation target would yield economic performance *significantly* better than that achieved with the 2% target, although there are some indications that it might do so" (Dodge, 2010). If these two reviews can agree on anything, it is for the need to continue the research programme and attempt to answer the remaining questions before the inflation-targeting agreement has to be renewed. Given that conclusions so far are still tentative, however, it seems unlikely that uncertainty will dissipate and that an evidence base solid enough to convince the authorities to modify the current agreement will be available by mid-2011 when the renewal decision will have to be made. In its absence, the government should probably err on the side of caution and stick with a tried-and-trusted regime to which both central bankers and market participants have adapted well. With governments taking on large amounts of debt, 2011/12 would be a particularly bad time for a significant change in the inflation regime that may upset market expectations.

While the economic crisis has brought back to the fore arguments for a generally higher average rate of inflation, these arguments are not persuasive. One such argument is that higher inflation reduces the risk of hitting the zero lower bound if highly stimulative monetary policy becomes needed. In many countries higher inflation and thus higher nominal interest rates at the beginning of the financial crisis would have made it possible to cut interest rates more, thereby probably reducing the drop in output and the deterioration of fiscal positions, or helping to bring output, employment and inflation more quickly back to steady-state values (Blanchard, Dell'Ariccia and Mauro, 2010). But as noted above, now is not an auspicious time to be destabilising inflation expectations. Moreover, this argument ignores the significant costs that inflation imposes, often on the most vulnerable members of society. Another argument is that high inflation facilitates adjustments in the labour market by making real wages more flexible. With low inflation, getting relative wages right would require that a significant number of workers take wage cuts, an unlikely occurrence given well-documented nominal wage rigidity. In this case, a somewhat higher inflation rate would lead to lower unemployment, not just temporarily, but on a sustained basis (Akerlof, Dickens and Perry, 2000). However, the available evidence suggests that this is not the case for Canada.

The global financial crisis has also raised a number of questions about the conduct of monetary policy with regards to financial-market developments. For instance, the crisis has reopened the debate on what to do in the presence of asset-price booms and increases in leverage. Co-ordinating the actions of the central bank and of the regulator is another matter for reflexion. The crisis has provided examples from many countries of the difficult co-ordination between separate agencies, which has led to a debate about the pre-crisis trend toward separation of monetary and regulatory authorities. No consensus seems to

have emerged in either of these debates. Regarding the second one, in Canada's case, the absence of co-ordination failures between different agencies and the seemingly good processes in place for sharing information argue once again against trying to fix what does not appear to be broken.

In the medium term, trend output growth will slow

Recent empirical work suggests that economic downturns tend to result in sizeable and permanent output losses, and that such losses generally increase when they are associated with financial crises. Furceri and Mourougane (2009) estimate that financial crises permanently lower the level of potential output by 1.5% to 2.4% on average for OECD countries, and by up to 4% for severe crises, and some other studies estimate even larger effects.⁵ Forward-looking OECD work estimates that the level of potential output in Canada as a whole may be 3.5% lower than it would have been over the medium term without the recent economic crisis, with most of the decline due to a higher cost of capital (OECD, 2010c). The second-largest adjustment to potential stems from the discouraged-worker effect on the participation rate. Severe downturns – where the change in the output gap is at least six percentage points from peak to trough – have statistically and economically significant adverse effects on labour-force participation that more moderate downturns do not. Canada is estimated to have had just such a downturn, from a peak output gap of 1.2% in 2007Q2 to a trough of -5.9% in 2009Q3, for a total change of seven percentage points (OECD, 2010a). A severe downturn typically reduces the aggregate labour-force participation rate by about 1.5 percentage points five years after the preceding cyclical high, with the effect concentrated on younger and older age groups.

The *OECD Economic Outlook 87* medium-term baseline projects that Canada-wide potential real GDP will grow at a 1.6% average annual rate from 2010 to 2017, more than a full percentage point less than over the 1998-to-2008 decade (OECD, 2010a).⁶ This projection takes into account the estimated likely effects of the crisis on the level of potential output, but it reflects primarily a slowdown in the growth of the working-age population that was projected to occur even without the crisis. Using an approach similar to that used in the *OECD Economic Outlook* to project potential output growth by province in a way consistent with the *Outlook's* country-wide projection reveals that potential output growth is expected to slow in every province (Table 1.2).⁷ And since the just-mentioned demographic trend is more pronounced in Quebec and in eastern provinces than in the west, trend GDP growth rates are expected to slow more significantly east of Ontario. Projected differences between the levels of potential GDP in 2017 relative to their pre-crisis trends again take into account both the level effect of the crisis on potential output and the growth effect of demographic trends. In the two largest provinces (Ontario and Quebec) and all the eastern provinces the level of potential GDP in 2017 is projected to be 10% or more below its pre-crisis trend.

The long period over which the possible negative effect of the crisis on labour-force participation would occur means that there is still time for policy to at least partly offset it. The size of the effect indeed depends on institutional factors that affect the degree of labour-market flexibility, such as the structure of benefit replacement when workers lose their jobs. In this regard, the long-standing OECD recommendation that the federal government reform the Employment Insurance programme to eliminate automatic variations in eligibility and benefits according to labour-market conditions appears especially timely as these features reduce labour mobility across regions. More generally,

Table 1.2. Estimates and projections of potential output growth
Per cent or percentage points

	Average 1998-2008 (1)	2009	2010	Average 2010-17 (2)	Difference (2) – (1)	2017 level <i>versus</i> precrisis trend ¹
Newfoundland and Labrador	4.0	1.7	1.1	1.0	-3.0	-22.5
Prince Edward Island	2.2	1.1	0.8	0.8	-1.4	-11.7
Nova Scotia	2.1	0.9	0.8	0.6	-1.6	-12.4
New Brunswick	2.4	1.3	1.1	0.9	-1.5	-12.1
Quebec	2.4	1.6	0.7	0.6	-1.8	-13.9
Ontario	3.0	1.7	1.7	1.6	-1.3	-11.0
Manitoba	2.4	2.4	1.4	1.3	-1.0	-7.7
Saskatchewan	2.2	3.6	1.5	1.5	-0.7	-4.1
Alberta	3.7	2.7	3.3	3.3	-0.4	-4.1
British Columbia	2.9	2.0	1.3	1.1	-1.7	-13.1
Canada	2.9	1.9	1.6	1.6	-1.3	-10.5
<i>Memo.: Canada (Outlook 87)</i>	2.9	1.8	1.6	1.6	-1.3	-10.4

1. Calculated as the per cent difference between the projected level of potential output in 2017 and an alternative projection in which potential keeps growing at its average 1998-2008 growth rate from 2008 on.

the projected slowdown in the trend rate of growth in most provinces underlines the importance of carrying on with structural policy reforms that can boost the economy's potential rate of growth. To their credit, even during the crisis, Canadian governments carried through with structural reforms. Important recent pro-growth reforms include tax reductions (continued gradual elimination of federal and provincial capital taxes), the relaxing of restrictions on foreign ownership (on Canadian broadcasting satellites), the harmonisation of some provincial retail sales taxes with the federal value-added tax (Ontario and British Columbia), the introduction of a new tax-free savings account, and the elimination of all remaining tariffs on imported capital goods. The latter initiative is particularly noteworthy in light of the feared resurgence of protectionist instincts during the crisis. Annex 1.A1 reviews recent progress in implementing structural policy recommendations from past *Surveys*. The OECD places a high priority as well on the quality of growth, particularly in the dimensions of environmental cleanliness ("green growth") and social fairness, to make it strong on a sustainable, long-run basis. Box 1.3 discusses progress in the critical area of policies to address climate change.

Box 1.3. Canada's climate-change policy

A *greenhouse-gas (GHG) emissions-intensive economy*. Canada is among the most resource-rich countries of the OECD, particularly in energy raw materials such as crude oil, bitumen, natural gas, coal and uranium. It is also the OECD's largest energy exporter, with the United States its main foreign market. The extraction industries are relatively more carbon intensive than in competitor countries, in part reflecting the rising weight of Alberta's northern oil-sands fields, estimated to be the second largest petroleum reserves in the world. The current processes by which bitumen (tar) is extracted from the sand or clay and then processed into synthetic crude is exceptionally intensive in the use of gas and water. High oil prices have made the development of oil sands extremely profitable. The sector has been growing rapidly and is an important source of income and employment generation for Canada, but at a high environmental cost. By 2008, GHG emissions were 24% above 1990 levels, compared with Canada's Kyoto commitment to cut them by 6%, although less than 10% of the increase is attributable to oil-sands development.

Box 1.3. Canada's climate-change policy (cont.)

Energy is used primarily for transport, electricity generation and heating (residential, commercial and industrial processes). Moderate fuel excise taxes, though not as low as in the United States, make transport carbon intensive relative to OECD countries in Europe. A significant share of manufacturing industries is resource based and energy intensive (*e.g.* aluminium smelting and cement) and therefore carbon intensive in international comparative terms. Electricity generation is relatively “clean” on the other hand, with 75% produced from non-emitting sources, notably hydro and nuclear energy. As a consequence the household sector exhibits relatively low emission intensity despite the severe climate. In summary, most Canadian industries are slightly less carbon intensive than their international counterparts, but the energy-intensive industries are more so, and they have a relatively high economic weight, rendering the Canadian economy the most carbon intensive in the OECD apart from Australia and New Zealand (Figure 1.11), and Canada is the fourth-largest emitter of GHGs in the OECD, after the United States, Japan and Germany.

Political economy. The federal and provincial governments are fully cognisant of the need to develop resources in an environmentally responsible manner. In its 2007 environmental strategy document, *Turning the Corner*, the federal government put forward the objective of cutting 2006-level emissions by 20% by 2020 and 50% by 2050, moving away from the (unrealistic) commitment made by a previous government in Kyoto. Public opinion supports green growth in principle, though its willingness to pay has wavered in the wake of the economic downturn and in reaction to doubts aired by climate-change sceptics. In the federal and provincial elections in late 2008, the parties that had the most ambitious climate-change policies invariably lost. In 2009, the changed economic environment and increased likelihood of comprehensive climate change policy in the United States, combined with the recognition of the inextricable linkages between the Canadian and US economies, led the federal government to harmonise policy with the United States. The new US administration is committed to passing climate-change legislation, though it faces major hurdles in Congress. Some sector-specific regulations, *e.g.* car emissions standards, will in the meantime be jointly implemented by the two governments. At the Copenhagen climate-change conference, Canada aligned its commitment with the United States, *i.e.* to reduce GHG emissions by 17% below 2005 levels by 2020, but has yet to lay out a plan on how this will be achieved. While the reasoning underlying the Government of Canada's policy shift to harmonise with the United States has been generally understood and accepted by many Canadians, it sends a confusing and perhaps negative signal to Canada's other industrialised partners (IEA, 2010). US environmental groups have called for sanctions on oil-sands (“dirty oil”) imports from Canada.

Federalism issues. According to the Constitution, provinces own the resources on their land and have a major say in resource management, though federal powers are granted with respect to international agreements and national strategic interests. Provinces differ greatly in GHG-emissions intensities, with energy-rich Alberta and Saskatchewan being among the most intensive, and Quebec the least. Given their constitutional role in resource management and electricity generation and partly in response to a perceived lack of leadership from the federal government, a number of provinces are implementing noteworthy and progressive policies, *e.g.*: Ontario's feed-in tariffs for renewable electricity; British Columbia's and Quebec's (initially modest) carbon taxes; Alberta's CAD 2 billion carbon capture and storage (CCS) fund; and the Western Climate Initiative, a collaboration of seven US states and four Canadian provinces (though not including fossil-fuel-dependent Alberta and Saskatchewan) working to develop an integrated emissions-trading scheme. In 2009, Alberta substantially raised its resource royalties to reduce the net subsidisation of fossil fuels (as recommended in OECD, 2008, Chapter 4), although more recently, in response to competitive pressure from neighbouring provinces, it sharply cut royalty rates for costly non-conventional gas extraction and development, and significantly reduced maximum rates for conventional oil and gas as well. It will be important that the federal government regain the initiative in matters related to climate change (IEA, 2010). It should provide leadership and facilitate dialogue with provinces and territories to achieve a clear, harmonised Canadian climate-change policy.

Box 1.3. Canada's climate-change policy (cont.)

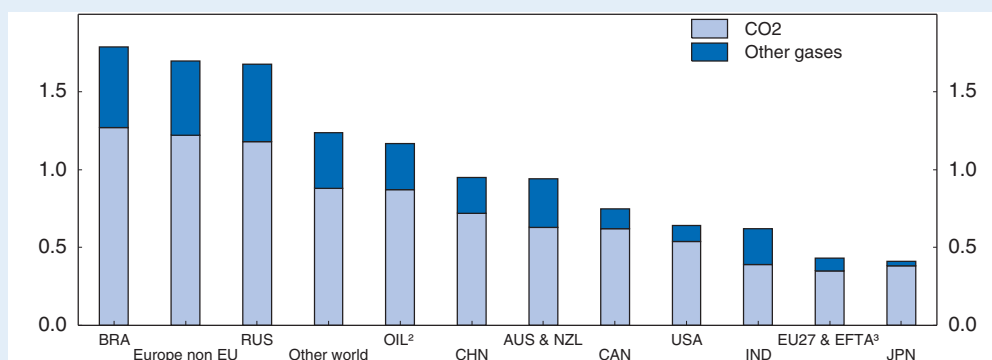
Innovation. Federal and provincial policies to cut GHG emissions still rest heavily on regulation and incentives to support technological innovation in the fields of renewable energy, energy efficiency and carbon storage. The federal government has set an objective that 90 per cent of Canada's electricity needs be provided by non-emitting sources such as hydro, nuclear, clean coal or wind power by 2020 and provinces have followed suit with supporting policies. The federal government has proposed regulation that will require five per cent renewable content of gasoline (biofuels) by 2010. Since 2006, the Government of Canada has invested more than CAD 10 billion to reduce greenhouse gas emissions and build a more sustainable environment through investments in green infrastructure, energy efficiency and clean-energy technologies. Some CAD 2.3 billion of this spending supports biofuels where the returns in terms of GHG-emissions reductions are low relative to energy-efficiency measures or other renewable-energy generation, especially once account is taken of the GHG impacts of land clearing and the use of nitrous fertilisers for crops (nitrous oxide is 300 times more harmful to the environment than CO₂). Upward pressure on food prices is yet another hidden cost. Conversely, in areas where the potential for emissions reductions is high and cost effective, e.g. solar, wind or biomass, incentives have generally been more modest. One study concludes that the cost per tonne of GHG emissions saved is CAD 300-450 for ethanol, versus CAD 20-50 for retrofits and renewable energies (Samson and Stamler, 2009). This suggests huge waste in the form of a new type of agricultural support. It would be much more efficient to give a fixed bounty for each tonne of GHG emissions saved, allowing producers to find the least-cost solution. Better yet would be to eliminate such subsidies and rather price emissions (see below). Governments are also investing heavily in CCS technology to reduce GHG emissions. While commendable, capturing and storing carbon does not mitigate behaviours at the source of emissions; rather it only attempts to control damage. It will be important to diversify funding, given high uncertainty around the success and the commercial viability of any given technology. Finally, there should be a focus on translating substantial R&D funding and support into commercial applications (and productivity growth).

The need for market instruments to price carbon. Numerous studies have shown that by far the most efficient way to achieve GHG-emissions reductions, i.e. at least cost to the economy, is to set a price on carbon by means of market instruments, either a carbon tax or trading in emissions permits, supplemented by a cap on emissions, price floors and ceilings, and banking (trading through time). About 80% of the Canadian economy is sufficiently price sensitive to be amenable to permit trading. The remaining 20% would continue to reach objectives via regulation. One study (by M.K. Jaccard and Associates for the Pembina Institute and David Suzuki Foundation, 2009) has assumed that in order to meet its (former) target of reducing emissions by 20% from 2006 levels by 2020, the government implements a trading scheme immediately (by 2011) and lets the effective carbon price rise to CAD 100 per tonne of CO₂-equivalent by 2020 (to CAD 200 in order to reach the more ambitious target of a 25% cut from 1990 levels as advocated by environmental groups). Revenues from carbon trading and taxes would reach CAD 46 (71) billion per year by 2020, of which around CAD 3 (6) billion would be needed to buy offsets abroad to reach domestic targets. The remaining revenues would be split about evenly between reduction of income taxes and a broad range of public policies. Economic growth would suffer but job losses in carbon-intensive sectors would be more than compensated by new jobs elsewhere, and a large transfer of wealth from Alberta and Saskatchewan to the other provinces would occur – wherein lies the crux of the political challenge. OECD (2009b) analysis, using a dynamic global model, finds substantially lower carbon prices for such policies, however: 33 USD/tCO₂-equivalent to meet the target of -20% from 2006. The OECD analysis also notes the challenge Canada faces as one of the five countries or regions worldwide with the highest cost per tonne of reducing emissions. In any case, without a broadly-based carbon tax or cap-and-trade system, it will prove difficult for Canada to achieve its 2020 target, and even if it does, this will in all likelihood come at a higher – albeit perhaps less visible – economic cost.

Box 1.3. Canada's climate-change policy (cont.)

Competitiveness concerns. Market-based carbon policies put an effective price on carbon emissions by business that if unilaterally applied might severely cut into Canada's international competitiveness given its high degree of economic integration with the United States. Bataille, Dachis and Rivers (2009) find that Canada would experience some output losses from moving in isolation (*i.e.* GDP is forecast to fall by 1.5% in 2020 relative to a business-as-usual scenario), with impacts concentrated in energy-intensive sectors, while harmonisation within the OECD would halve the most severe losses, *i.e.* those incurred by industrial minerals (notably cement and lime production); competitiveness mechanisms like border adjustments and free permits to vulnerable industries would be largely ineffective and inefficient. The federal government's intention to link its climate policy with the possible cap-and-trade system in the United States is understandable and sensible. However, acting unilaterally would result in domestic and international credibility gains. In fact, uncertainty as to future regulation is becoming a major barrier to investment in nonconventional oil and natural gas industries (IEA, 2010). Canada should thus remain vigilant and not import avoidable climate-policy uncertainty from its neighbour. Over the medium term, it should strive to meet efficiency levels comparable to international best practices.

Figure 1.11. **GHG-emissions intensity of output**¹
Per unit of GDP (2000 USD PPP) in 2005



1. From fuel combustion.

2. Indonesia, Venezuela, rest of Middle East, Islamic Republic of Iran, rest of North Africa and Nigeria.

3. EU27, Iceland, Norway and Switzerland.

Source: OECD, *Environmental Database*.

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Financial-market reform is appropriately on the agenda

In the wake of the global financial crisis OECD and other market economies are entering a learning and re-adaptation process, whose point of departure is that current macro policy tools, *i.e.* conventional monetary and fiscal policies, while highly successful in anchoring inflation and exchange-rate expectations, have not been sufficient to guarantee financial and hence ultimately macroeconomic stability. Notwithstanding the good performance of its banking sector in the crisis, the inter-connectedness of banking systems means that Canada has a stake in developing tools to better target financial stability in a world of intense banking moral hazard. Furthermore, it must avoid the risk that an excessive focus on stability might impair the efficiency and adaptability of the financial system as a driver of productivity growth, and so should continue to encourage

contestability in banking and proceed with seeking more efficient public policies in securities markets.

The banking system withstood global shocks remarkably well

Canada's banks emerged from the global financial crisis in relatively good shape. Unlike troubled US and European banks, they did not require injections of public capital, expansions of deposit-insurance limits, or wholesale-funding guarantees. They were able to raise capital from the markets even in the depths of the crisis, which reflected a high degree of market confidence (as well as a need for even more capital to maintain it). More modest losses than incurred by many of the top global banks have pushed Canada's five main banks into the top 15 in North America. As a result of their demonstrated resilience, Canadian banks have earned high regard worldwide, and the Canadian regulatory and supervisory framework is increasingly looked to for good practices in the world's search for a better banking model. For example, a recent IMF (2008) assessment concluded that financial stability in Canada is underpinned by sound macroeconomic policies and strong prudential regulation and supervision, with well-designed arrangements for crisis management and failure resolution. Indeed, a recent survey of enterprise chiefs carried out by the World Economic Forum voted Canadian banks as the most stable in the world.

Traditional banking activities

A conservative banking culture based on more traditional concepts of what banks should do turned out to be a key source of stability in the crisis. A strong retail-deposit base and greater reliance on traditional and well-diversified lending, as opposed to participating heavily in markets for high-return new exotic instruments, limited the banks' exposure to roll-over and market risks and therefore to capital-base erosion in the crisis (Box 1.4). Nevertheless, they still depended heavily (as do banks everywhere) on wholesale funding, for which international markets seized up, and were to that extent vulnerable to cross-border contagion. This in turn necessitated sizeable government intervention in the form of asset purchases, facilities and guarantees to provide term funding, liquidity and improved market access (see above). In particular, the government purchased CAD 69 billion of Canadian government-insured mortgages – a huge support given that the top five Canadian banks have less than CAD 100 billion in equity capital. Following

Box 1.4. Bank balance sheets and riskiness

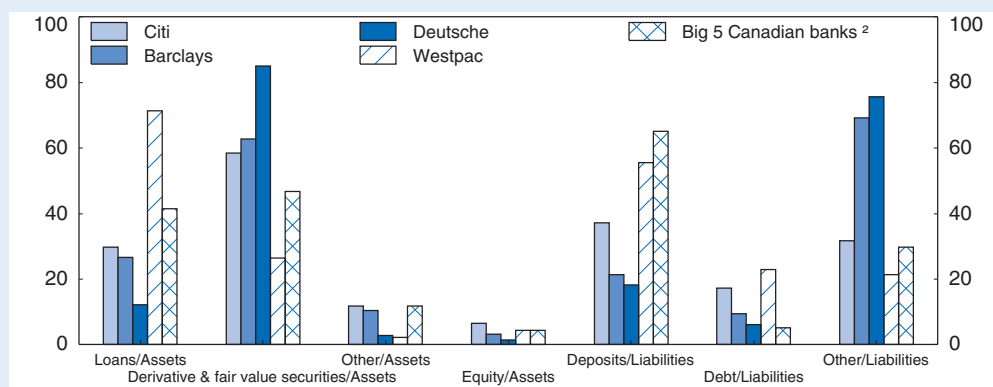
The composition of bank (consolidated group) balance sheets, as well as their less transparent off-budget exposures, was a key factor in determining which banks succumbed to the worst effects of the 2007-09 financial crisis. Ratnovski and Huang (2009) point to ample retail depository funding as the key factor behind the relative resilience of Canadian banks. Based on end-2006 balance sheets, they measure deposits (including both retail and wholesale) for the five largest Canadian banks at the internationally high end of 65-70% of total assets. However, according to a more refined breakdown by Northcott, Paulin and White (2009), wholesale funding, retail deposits and securitisations/repos respectively accounted for 50%, 30% and 20% of total funding of the major Canadian banks by end-2008. Canadian bank assets were more weighted in stable loans and less so in securities and derivatives than US and European banks, though the advantage of Australia's banks in this respect was greater (Figure 1.12). Canadian authorities adopted a conservative position on securitisations and did not allow capital relief on bank purchases of credit default swaps.

Box 1.4. Bank balance sheets and riskiness (cont.)

Interestingly, Citibank had a very stable funding base as well (50% deposits, 20% long-term wholesale borrowing and 20% securitisations/repos), and (unlike European banks) was endowed with apparently high capital and liquidity ratios. Yet, it suffered crippling losses in the crisis because the asset side of its balance sheet was heavily overweight in high-risk structured-investment vehicles based on non-prime US mortgages (Blundell-Wignall, Wehinger and Slovik, 2009). Falsely favourable ratings were given to these assets due to the skewed incentives faced by rating agencies as clients of the big banks, which artificially held down their capital requirements and permitted *de facto* leverage ratios far in excess of regulatory standards. Markets vastly underpriced the risks of these products, partly in anticipation of taxpayer bail-outs in case of trouble, and partly due to the use of inadequate risk-assessment tools by institutions. Thus, the big banks could “hedge” these unacknowledged risks quite cheaply and without much concern for counterparty risk, via derivatives contracts (*e.g.* credit default swaps) which, according to accounting rules, had to be put back on the balance sheet only in case of losses. Such moral hazard reflected repeated US-government salvaging actions in the wake of earlier mini-crises, plus the simple fact that the banking system is essential to the good functioning and health of the economy (Goodhart, 2010). The same factors suggest that markets are also the solution to the problem, as they, unlike regulators, have the resources and first-hand expertise to find and assess information. All that needs to change are their incentives, though regulators also will have to do a better job in eliciting information to help re-establish confidence in the system. More rigorous accounting with derivatives exchanges, central counterparties, and/or trade repositories, are essential components of an enhanced regulatory approach to clarify how much risk is being transferred and to increase certainty. This is all the more critical as massive bank bail-outs by a number of OECD governments have greatly increased moral hazard and therefore sown the seeds of a potential future crisis.

Figure 1.12. Consolidated balance sheet structure of conglomerates

Percentage, 31 December 2008¹



1. Mid-2009 for Barclays, 30 September 2008 for Westpac.

2. Big five Canadian banks are Toronto Dominion, Canadian Imperial Bank of Commerce, Bank of Montreal, Royal Bank of Canada, and Bank of Nova Scotia.

Source: OSFI and OECD calculations from bank annual reports.

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changes to the US GAAP, Canadian authorities also made beneficial changes to the treatment of debt securities in Canadian accounting standards. Continuing strong deposit inflows in the crisis also helped with funding, while a shift of credit demand from businesses toward households further boosted bank capital ratios (given lower risk weights applied to residential mortgages than to corporate loans under the Basel II rules). Though

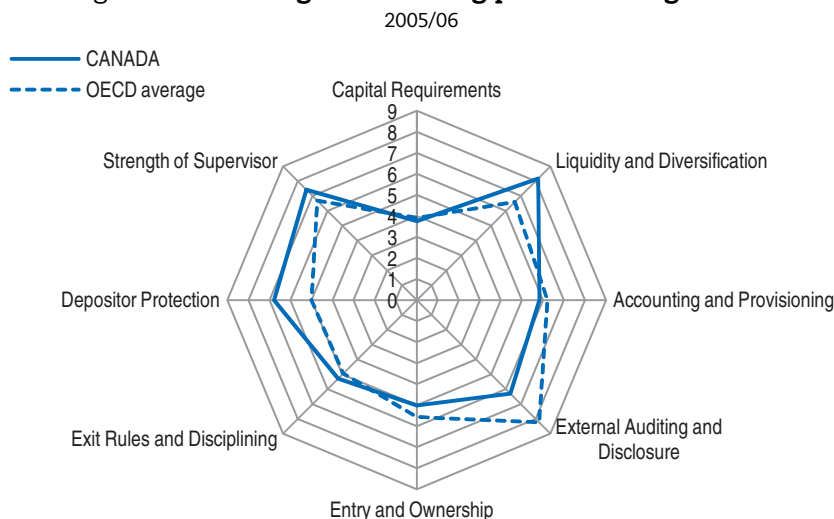
losses from both recession-hit domestic loans and still-deteriorating US-asset holdings may be in the pipeline, robust bank capital positions have lessened the need for deleveraging in Canada, helping to cushion the recession and support the recovery. The banks are now awash in capital, and bank profitability (as elsewhere) is again booming in response to extraordinary macro-policy ease, so that they would seem well poised to meet an expansion of business credit demand when it comes – so long as financial-market uncertainty has diminished sufficiently to justify lower capital buffers.

Rigorous supervision

Conservative risk appetites are to a large extent the product of the prevailing regulatory and structural incentives. A rigorous and credible regulatory and supervisory regime is a very important feature of the Canadian system. This regime is principles rather than rules based (the US system is rules based) and therefore harder to circumvent via accounting or other loophole-seeking strategies. There is a clear demarcation of objectives across the various financial-system regulators to ensure single-minded focus, and minimal compromises with competing objectives, in the pursuit of each target. The Department of Finance is responsible for overall federal financial policy; the Bank of Canada for inflation; the Office of the Superintendent of Financial Institutions (OSFI) for prudential regulation of banks and other financial institutions such as federally regulated insurance companies; the Canada Deposit Insurance Corporation for deposit insurance in federal financial institutions; and the Financial Consumer Agency of Canada for protecting and educating financial consumers by focusing on market-conduct issues (*e.g.* mortgage and consumer loans).

At the same time, close collaboration among regulators was assured through various collaborative fora at the federal level, notably the Financial Institution Supervisory Committee (FISC). During the crisis, meetings of the FISC were held far more frequently and essentially embodied a macro-prudential approach taking into account systemic risks and regulatory spillovers. Thirteen provincial and territorial securities commissions regulate capital markets, though they do not participate in the FISC. Frequent review of regulatory legislation is intended to make the financial system nimble in adapting to rapidly changing technology and global context. According to recent OECD analysis, the quality of Canadian bank regulation compares favourably with that found in the OECD at large in three key areas: strength of supervisor, depositor protection and liquidity and diversification (Figure 1.13).

Risk-based prudential supervision is conducted by OSFI in an effective way. Canadian bank capital-adequacy requirements are well in excess of the Basel II Tier 1 and 2 standards: 7% and 10%, versus Basel minima of 4% and 8%. The quality of Tier 1 capital is enforced by a 75% minimum common equity (core capital) requirement (though this was reduced to 60% in the crisis). As an effective check on banks' self-assessed (model-based) asset risk weights for purposes of capital adequacy, there is a supplementary ceiling of normally 20 on total leverage. The latter is defined as the ratio of unweighted assets (including some off-balance-sheet items though not derivatives contracts and the like) to total (Tier 1 + Tier 2) capital. There are also limits on concentrated bank exposures. Principles and reliance (trust) seem to have encouraged good risk management as a way of doing business, not as a compliance exercise (Northcott, Paulin and White, 2009). Banks demonstrating sound risk management may be temporarily allowed higher leverage ratios of up to 23. Where the quality of risk management is in question, however, prompt

Figure 1.13. **Strength of banking prudential regulation**

Source: Ahrend, Arnold and Murtin (2009).

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corrective action backed up by sanctions indicates a pro-active approach. Once regulatory limits are breached, sharp penalties are imposed, typically a lower leverage ceiling or higher minimum capital ratio for a number of years.⁸ The desire to avoid ever getting into such a position has led the major Canadian banks to hold ample buffers so as to be able to withstand unforeseen shocks. The regulator also promotes a forward-looking approach to loan-loss provisioning, rather than the usual (pro-cyclical) static accounting approach, on a voluntary basis. Significantly, these very methods are being discussed in the G20 reform process as forming part of the new regulatory architecture.

Wider scope of regulation

Another advantage, which in hindsight seems particularly critical, has been a relatively broad scope of regulation. Large Canadian investment dealers have been bank-owned since the early 1990s, and so are subject to prudential regulation as applied to the bank group on a consolidated basis, including all bank subsidiaries in Canada and abroad. There are alternative ways of achieving broad-based supervision, nevertheless. Australian bank groups, for example, are subject to “Chinese walls” between commercial and investment banking activities, allowing for separate regulation tailored to businesses with distinct risk profiles within the group. Both the Canadian and Australian models contrast with those in countries where large “shadow banking systems” were created by highly non-transparent corporate structures, e.g. US bank holding companies that enabled commercial banks to leverage far beyond regulatory limits via off-balance-sheet transactions with unregulated investment-banking arms (so-called double gearing). When the highly leveraged and unstable shadow banking system suffered a run, and material risks transferred back onto commercial-bank balance sheets, the entire bank group ultimately benefited from public guarantees.

Heavy government intervention and efficient tax policy in the mortgage market

Substantial public protections and efficient policies underpin the stability of the mortgage market and hence of the entire financial system. Mortgage debt is not tax

deductible (though capital gains on principal homes are exempted from tax) and mortgagors are personally liable for loans, while mortgages with insufficient (normally less than 20%) equity backing must be insured. Mortgage insurance is available from Canada Mortgage and Housing Corporation (CMHC), a Crown corporation, and from private mortgage insurers.⁹ Such standards have recently been tightened to forestall housing-market overheating under prolonged monetary-policy ease (see above). Thanks to these policies, households in Canada have smaller mortgages relative to the value of their homes, and the sub-prime loan market is much smaller than in the United States, with rarer housing bubbles, yet the rate of home ownership in the two countries is similar (around 70%). Bank securitisation of mortgage assets is normally undertaken for liquidity rather than risk-transfer purposes (Northcott, Paulin and White, 2009), and such securities are fully guaranteed by the CMHC. Nevertheless, as with any government intervention, there may be distortions. While CMHC, as a government-owned-and-controlled corporation, avoids the exploitation of the government guarantee for private profits that ultimately bankrupted the US mortgage giants Fannie Mae and Freddie Mac (government-sponsored enterprises, or GSEs), the result of public guarantees on a large portion of bank assets (mortgages) is a lower bank risk premium and hence cost of capital – an implicit subsidy to mortgages. A potential downside is contingent liabilities of government through the CMHC, although according to the Canadian government, house prices would have to fall drastically in order for such risks to materialise. The CMHC has recently doubled its reserves (to CAD 1.3 billion), apparently in order to provision for potential losses linked to forthcoming Bank of Canada interest-rate normalisation.

Post-crisis challenges loom large

Macro-prudential (counter-cyclical) regulation

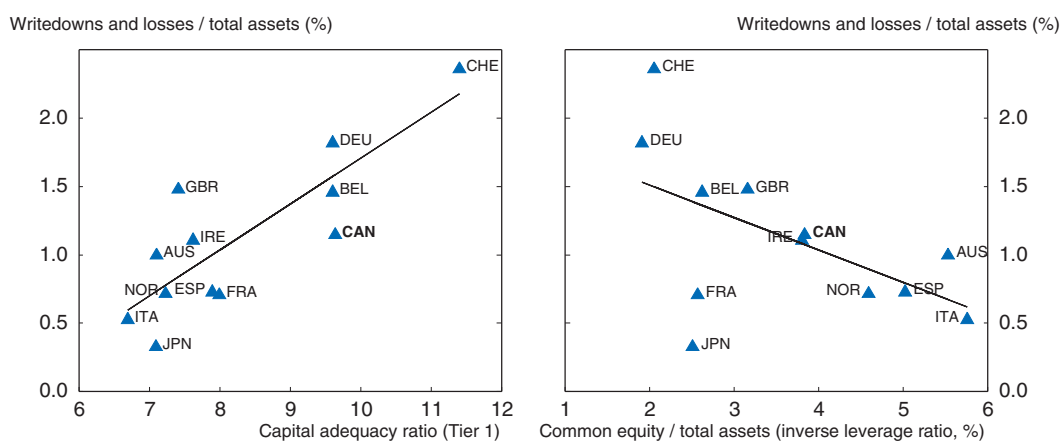
Given the unprecedented magnitude and public costs of the 2007-09 financial crisis, the moral hazards these imply and the increasingly global dimension of bank activity, the Canadian authorities are working closely with the international community (Basel Committee on Banking Supervision of the BIS, Financial Stability Board of the G20, surveillance by the IMF) to reduce interconnected banking-system fragility and therefore systemic national and global risks arising from modern banking activity. They, as others, are also hoping to influence the direction of reform in ways consistent with particular national banking situations and interests.

A principal common objective in the G20/BIS discussions will be to design and implement a “macro-prudential” regulatory approach. Close collaboration among regulators both within and across national borders by means of harmonised policies, information sharing and strategic co-ordination is a vital component of this approach. It would take into account systemic risks posed by banks in the setting of their capital adequacy and other standards, *i.e.* not just idiosyncratic bank risks as under micro-prudential supervision. This leads naturally to a focus on procyclical bank behaviour under present regulatory settings, *i.e.* where internal models or ratings used to set risk weights for minimum capital holdings under Basel II are overly influenced by the macro environment, exacerbating the credit cycle. Key proposals would apply to all banking systems, including Canada’s, in order to discourage regulatory arbitrage. These are to: raise the quality of Tier 1 capital; expand the risk coverage of capital to trading-book and counterparty-risk exposures; promote the buildup of counter-cyclical capital buffers that can be drawn down in an economic downturn; and introduce harmonised leverage ratios, a global minimum

liquidity standard for international banks, and possibly systemic-risk-adjusted capital or liquidity ratios for systemically important banks, prefunded levies on riskier portfolios and penalties on short-term (under 2 years) wholesale funding.¹⁰ Anticipatory (dynamic) provisioning is also being considered, so as to smooth out provisioning, hence capital, over the cycle, as are qualitative standards on liquidity.

While capital and liquidity requirements surely need to better reflect banking risks, potentially large increases in capital requirements could harm bank productivity if they lead to excessive focus on high-quality assets, notably government bonds and mortgages, and end up shutting out credit to smaller and innovative firms that are critical to growth. Moreover, countercyclical capital buffers – built up in the upswing to be drawn down in the ensuing slump – may, on their own, fail to curb the deterioration of loan quality during bubbles and not work well in a future crisis, when markets are likely to demand that more, not less, capital be held.¹¹ Indeed, an ample capital buffer was by itself not a very good predictor of country vulnerability in the last crisis: a perverse correlation between crisis-induced write-downs and pre-crisis regulatory-capital ratios can be observed (Figure 1.14). By contrast, the leverage ratio (total assets to core capital, a more restrictive definition than used in Canada) was a much better predictor of vulnerability (even though US commercial banks, not shown in the Figure, are likewise subject to leverage ceilings). It may be inferred that the quality of bank capital and of banks' self assessments of asset-risk weights for purposes of the Basel II capital requirements may have been particularly deficient in the case of weak banks and ultimately did not provide much protection under duress, rendering the rules useless.

Figure 1.14. **Capital adequacy and leverage vs. losses**¹



1. Writedowns and losses are accumulated from January 2007 until mid-2009; Tier 1 ratio, total assets and common equity are averages of 2006-08 end-of-year data (2007-08 for Japan Tier 1 ratio).

Source: Blundell-Wignall, Wehinger and Slovik (2009).

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As Canadian banks held fewer exotic instruments, they were less prone to distortions on the asset side. However, the quality of capital may have been watered down even in Canada. This is suggested by the fact that the draft revised capital-adequacy rules (Basel Committee on Banking Supervision, 2009) would cut Canadian banks' Tier 1 capital ratios nearly in half due to stricter requirements for core capital. This would force the banks to raise much more capital, cutting severely into their profitability if the recommendations

were to be adopted. Canada's banks find this result particularly unfair, given that they were neither the instigators nor the perpetrators of the crisis, and they have warned of harmful effects on the economy as well.¹² High uncertainty while the proposals are merely being discussed could also cause banks to hold excessive buffers, "just in case", putting a brake on the strength of the recovery, in particular of business investment. Because of such concerns, the G20 has moved toward granting banks longer transitions to the new rules, with greater national flexibility and somewhat less onerous requirements than earlier envisaged.¹³

Market mechanisms to impose discipline on banks

A promising alternative, or at least an important counterweight, to heavy regulation is to rely on market incentives to discipline banks more effectively. As such an approach would harness the knowledge and resources of markets in assessing risks (which, according to its proponents, no government regulator could hope to match), it may be more efficient. A further argument is that regulation is static, whereas markets are dynamic, so that by the time a regulation is developed it may be out of date, or the market will have found ways to circumvent it, *e.g.* by shifting activity to less-regulated institutions or geographical areas. At its core, the market approach seeks to revert to the classic banking principle, whereby the authorities act as lenders of last resort to illiquid banks, but insolvent banks must be allowed to fail, no matter their size; hence, market mechanisms to encourage banks to self-insure are imperative. By contrast, the regulatory approach accepts the new (post-Lehman) reality that authorities must act as insurers of large insolvent and illiquid banks, but uses regulations to try to stop them from ever becoming insolvent (Goodhart, 2010).¹⁴

A relatively simple example of the market approach is the issuance of bank insurance bonds. The above-mentioned proposal by international partners to levy a tax on banks in order to pre-fund safety nets has been opposed by the Canadian authorities on the grounds that their banks did not need bail outs. Canada has instead come out in support of the market-based idea of contingent capital.¹⁵ This is a kind of insurance mechanism whereby banks are required to issue debt which under crisis conditions automatically converts into equity, even in the absence of government intervention. This would give both holders of such debt and shareholders (whose stakes would be diluted under such a conversion) strong incentives to monitor the bank for excessive risk exposure and to provide other observers with a transparent reading on how it is doing in that regard. The main sticking point for such a plan seems to be what the threshold for crisis conditions should be, and who would decide when it is reached without fear of provoking market mayhem.

Another critical aspect of self-insurance is good governance, whereby directors have the motivation and expertise to take into account the long-term health of the bank in their actions, as a check on short-termist executive incentives embedded in compensation structures. In this respect, Canada's bank supervisor has stated that Canada's governance model could be improved by allowing more bankers with experience of real-life banking problems to sit on bank boards,¹⁶ which accords with OECD best practices. The big banks might also be required to draw up living wills (blueprints for orderly wind-downs in case of failure), to make their exits credible. The market approach in other words should rest on a credible threat to make banks, their shareholders and creditors (rather than taxpayers) accountable for losses arising from their own highly profitable activities on the upside.

Research at the OECD has suggested that member countries adopt a non-operating holding company (NOHC) arrangement for their large financial conglomerates, similar to that found in Australia as discussed above: commercial and investment banking arms are strictly separated in their capital structures, with each subject to separate regulation and respective risks made transparent, while still being allowed to share technology, staff and cross-selling to boost the group's efficiency (Blundell-Wignall, Wehinger and Slovik, 2009). Such regulatory firewalling of activities would be an important complement to leverage-ratio restraints (since the same leverage can be respected with a variety of risk positions), by making very clear what capital is available for risky business, to which deposit insurance and other guarantees need not apply. It is in this sense a key, market-based structural reform to tackle "too big to fail" moral hazards in a fundamental way, making living wills and other voluntary solutions redundant. This is actually less radical than some US proposals to revert to Glass-Steagall-type strict separation between commercial and investment banking, as bank conglomerates would continue to exist and enjoy full economies of scale and scope. Nonetheless, banks (including Canadian ones) are expected to oppose such a solution as it cuts into their profitability by raising the cost of capital for high-risk activities.

Competition should be further encouraged

The above reforms to tackle big-bank moral hazard are an essential start to ensuring more vibrant bank contestability, efficiency and competition, so long as they avoid overly constraining banks' productive activities. Some remaining scope for structural improvement in the Canadian financial and capital markets will be considered in this section.

Competition versus stability – is there a trade-off?

The financial system plays a central role in economic growth, ensuring that firms have the financing to grow and innovate, and that capital is channelled to its most productive uses. A competitive banking environment promotes allocative efficiency by facilitating the greatest supply of credit at the lowest price (Northcott, 2004). Boosting sluggish national productivity growth is a major policy goal in Canada, making it important that bank stability does not come at the expense of bank competition and efficiency – as a trade-off is traditionally thought to exist. However, domestic and international evidence suggests that this is not necessarily so. In the banking sector, concentration is not a very good indicator of competition, which itself is very hard to measure. Economies of scale seem to be important in banking, so that concentration with good prudential regulation could be optimal. A degree of market power is furthermore conducive to relationship banking and gives banks incentives to monitor creditors, potentially improving the allocation of credit. Therefore, the goal may be not to eliminate market power but to facilitate an environment that promotes competitive behaviour (contestability) (Northcott, 2004).

The OECD (2010b) has found that strong regulation characterised by credible exit can go some way to ease the trade-off between banking-system stability and competition. This should hold for Canada, given the generally high quality of its regulation, though it is also true that very few Canadian banks have ever failed (compared with hundreds of mostly small bank failures in the United States). It may be that the cosy, if not oligopolistic nature of Canadian banking has enabled high franchise value and therefore profitability without the need for competition based on risky activities. While obviously stable, the contribution

to economic efficiency of this banking model could be improved. Indeed, Canada stands out among OECD countries (along with the Czech Republic, Greece, Hungary, Korea, Mexico, Poland, Portugal and Turkey) as showing a clear above-average reliance on competition-adverse prudential regulation (Ahrend, Cournède and Price, 2009, Figure A12). Contestability, as defined by ease of entry and restrictions on ownership, is below the OECD average (Figure 1.13).

Banks and other financial intermediaries

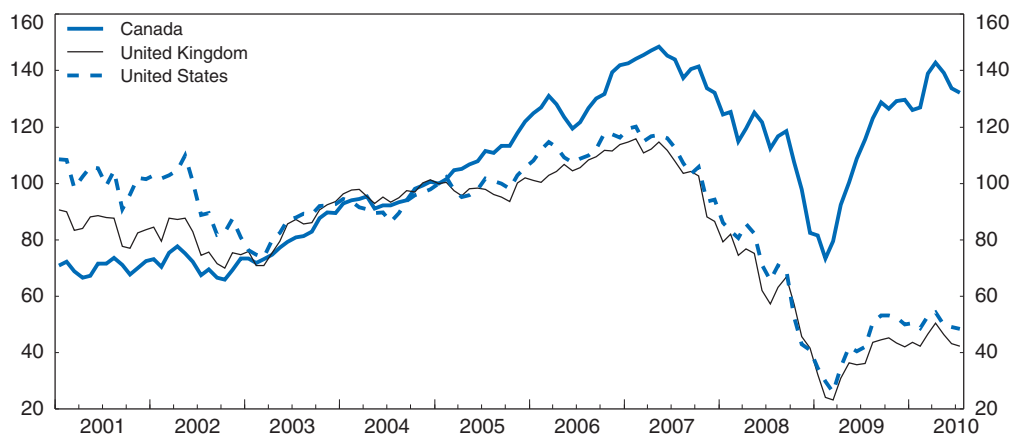
Canada's banking system is highly concentrated: in all, there are 69 banks, of which the five largest own nearly 90% of banking system assets. In the United States, with an economy about 10 times the size of Canada's, there are around 8 000 banks, while the five largest owned only about 20% of total bank assets prior to the crisis. As noted, high concentration creates a suspicion that oligopoly has been the price of stability in Canada. However, empirical studies suggest that the five-bank-dominated system in Canada is monopolistically competitive, rather than collusively oligopolistic, although virtually all OECD banking systems fit this description (Allen and Engert, 2007). This reflects that contestability essentially substitutes for competition in the sector. In Canada, economies of scale and scope and ease of entry are attained by virtually unrestricted flow of investments across provincial borders, and by bank ownership of investment banks and insurance subsidiaries (following liberalisation in the 1990s). Having five national banks competing in any given town is certainly more competitive than having one dominant bank in each town or region. Being well diversified across geographical and product lines likewise provides some protection against economic shocks. The big banks face competition not only from the 64 other domestic and foreign banks but also from 30 independent trust companies and about 1 100 credit unions and *caisses populaires* (Laidler, 2006). Thus, competition tends to occur at the periphery, within markets and product lines rather than across institutions.

The insurance sector, which is about as concentrated and as large as the banking sector, is more insulated from competition by prohibition on bank sales of non-authorised insurance products (life, property and casualty insurance), recently extended to bank websites, on the argument that banks' superior information about, and close relationships with, their clients could pose unfair competition in the market. Disclosure and transparency can increase bank contestability, for example via credit bureaus, by reducing the information asymmetries that give relationship banking its advantage (Northcott, 2004). External auditing and disclosure, and to a lesser extent accounting and provisioning, are low in Canada (Figure 1.13), impeding this channel of contestability. Also, contestability by the securities market is weak. Indeed, Canada's branch-banking model traditionally had greater lending capacity than US banking, which long suffered from restrictions on branch banking across state lines; to compensate for this deficiency, the United States developed more open and deep capital markets (Bordo, Rockoff and Redish, 1993).

Despite elements of market contestability, the big banks engage in price discrimination which would not be possible without some degree of monopoly power – so that banks capture a share of consumers' surplus, lowering their welfare. Banks' hegemony in retail banking helps to explain higher bank profitability, despite lower asset riskiness, than in comparator countries, even prior to the crisis (at least, after around 2003 when individual price discrimination came into practice; Figure 1.15). Customers are loyal to their banks and tolerate the relatively high margins that banks impose on them. The same

Figure 1.15. Bank sector performance

Total returns to shareholders, FTSE world indices, January 2005 = 100



Source: Thomson, Datastream and OECD calculations.

StatLink  <http://dx.doi.org/10.1787/888932320181>

could be said for small and medium-sized firms, which depend on local banks for funding, though less so than their US counterparts as family financing is apparently significant in Canada. Big banks exercise much less pricing power with respect to large corporations who have access to international syndicated loans and capital markets, where they can often get better terms than available from domestic banks. The big banks also enjoy a capital-cost advantage vis-à-vis their smaller counterparts in terms of the implicit government guarantee (“too big to fail”). A US-Canada comparative study found that the Canadian reputation for stability confers on banks a cost-of-capital reduction (Bordo, Rockoff and Redish, 1993). High profitability could also reflect extra efficiency, resulting in part from heavy concentration and extensive branching as argued above. However, net interest margins, a common indicator of profitability, are not especially high because of a significant difference between actual and posted lending rates.

All that said, there exist some features of the policy landscape that may, at least potentially, run counter to bank contestability. Canadian banks have maintained in the past that they are prevented from growing to optimal size in order to face international competition,¹⁷ but have been refused permission for proposed mergers.¹⁸ The Minister of Finance makes the final decision on mergers and ensures that all relevant public policy considerations are taken into account and weighed accordingly, which include the views of the Competition Bureau and OSFI. The Minister must consider all matters relevant to the transaction, including the best interests of the financial system. Quite apart from the issue of whether more concentration is advisable on efficiency and/or macro-stability grounds (the latter is debatable in the aftermath of the crisis), this creates uncertainty, which discourages merger proposals from being formulated, much less submitted for approval, removing the discipline that might be imposed by the market for corporate control. Furthermore, despite significantly reduced barriers to foreign entry by the mid-2000s, notably permission of foreign branch banking, the foreign-bank share of deposit taking in Canada has barely grown and is still one of the smallest in the OECD. The remaining barrier seems to be a high minimum-deposit requirement on foreign branches that effectively excludes retail deposit banking. Another barrier to fuller contestability is the “widely-held rule”, which prohibits any single entity from owning more than 20% (formerly 10%) of any

large Canadian bank. This helps to insulate banks from the discipline that large shareholders are able to exert and from takeover by buyers who might be able to run them more efficiently. The widely-held rule may also discourage foreign entry insofar as likely bidders for Canadian banks may include large foreign (mainly US) financial-services' firms. However, the government's rationale for this rule is that it actually improves shareholder oversight by imposing a high degree of transparency, thereby facilitating market scrutiny of an institution. Information technology (e-banking) could be harnessed more effectively to improve information and contestability. Likewise, the use of external auditors should be increased and accounting rules strengthened, and this may be a likely result of ongoing international reform efforts.

Contestability and therefore efficiency in banking could be further enhanced by relaxing these remaining protective barriers. As in most countries (bar New Zealand), however, there is a potential conflict between the pursuit of domestic policy objectives in financial markets and substantial foreign entry into the banking system. That is, foreign-controlled banks might be less responsive to directives from the central bank to promote stability or transmit monetary policy actions. However, such fears are often overblown and may be not worth paying the price of lost bank efficiency and economic productivity.

Capital markets

Securities. Securities markets are highly fragmented, with 13 provincial and territorial regulators responsible for only loosely co-ordinated supervision. The hodge-podge of regulations, along with serious failures in enforcement, severely limits the desirability of listing in Canada by foreign firms (Laidler, 2006). Domestic firms, by the same token, find it increasingly attractive to list abroad. A single national regulator and enforcement body would greatly increase the attractiveness of listing in Canada by both foreign and domestic firms, helping to deepen the capital market, which is an important source of investment-risk diffusion and financing for firm growth. On 26 May 2010, the Government of Canada released the proposed *Canadian Securities Act*, marking a key step towards a long-standing commitment to establish a Canadian securities regulator. There has been some difficulty in getting all of the provinces to sign up. This problem could be addressed by devising incentives to help the recalcitrant provinces to come on board along with careful institutional design to give every province an equal say. Once formed, it would be important that the single regulator fully participate in the macro-prudential process.

Small firms have increasingly turned to asset securitisation to raise short-term finance as a convenient alternative to bank loans. The asset-backed commercial-paper (ABCP) market in Canada grew exponentially over the decade to 2007. In late 2007, that market became severely destabilised as a breaking down of confidence in US sub-prime mortgage-backed securities was quickly transmitted across the border. That is, investors holding Canadian ABCP feared (usually erroneously) that they were somehow contaminated by the presence of US sub-prime mortgages in their underlying asset mix. This reaction reflected a lack of transparency and disclosure about the ultimate issuers, mix of assets and their riskiness. Notably, there were no prospectuses, and the ratings given to the paper were suspect: US rating agencies refused to rate Canadian ABCP because of restrictive provisions for liquidity support, so that only a single rating was provided by a Canadian rating agency. In the end, banks chose to provide liquidity to the bank-sponsored portion of the market in order to protect their own reputations. However, the non-bank sponsored portion suffered a CAD 32 billion restructuring, the largest in Canadian history

(the Montreal Accord was a 10-year, largely industry-led, restructuring process). It will be important to improve transparency in this market by better disclosure requirements and framework conditions. These reforms have begun, but would doubtlessly gain considerable traction if a national securities regulator were in place, as envisaged under the proposed *Canadian Securities Act*.

Private equity (venture capital). Canada spends relatively large sums on public R&D support, either directly to universities and research institutions (hospitals) or indirectly to firms via tax credits. The standard of basic research generated by these institutions is world class. Yet, the translation of such funding and research into commercial applications and innovation is puzzlingly weak. One reason appears to be an underdeveloped venture-capital market. The US venture-capital industry is a major source of private-equity funding and associated human capital. It should be looking to invest in Canada due to the attractiveness of its bright ideas, abundant talent and public support. However, Canada's share in the North American venture-capital market – both fund-raising and investments – is far inferior to its economic weight. In the mean time, rising stars such as India, China and Israel are capturing a larger share of that same market. US firms often snap up promising young Canadian firms with bright ideas and strong public support quite cheaply, because for lack of funding the firm was never able to grow to the requisite size for market leadership. These firms often migrate to the United States altogether. Because US and Canadian firms compete with each other in an integrated market, the lack of capital for venture-backed Canadian companies is a serious handicap (Hurwitz and Marett, 2007).

Canada's cross-border tax laws have been cited in surveys as the main impediment to the cross-border flow of private-equity capital. Commentators have typically identified two aspects of Canada's tax system as creating impediments to private equity flows, in particular from the United States: i) the tax treatment of taxable Canadian property, which subjected foreign investors to an onerous administrative procedure in order to benefit from tax-treaty exemptions; and ii) the tax treatment of limited-liability corporations, which were not recognised as tax-paying entities and hence were unable to benefit from the provisions of the treaty at all. However, both these aspects have been addressed in recent policy changes. *First*, the Fifth Protocol to the *Canada-US Tax Treaty*, ratified in 2008, introduced rules designed to ensure that income that the residents of one country (the residence country) earn through a hybrid entity (such as a limited liability corporation) will, in certain cases, be treated by the other country (the source country) as having been earned by a resident of the residence country for purposes of the treaty, thereby ensuring that treaty benefits are granted in such cases. *Second*, Budget 2010 announced a narrowing of the definition of taxable Canadian property under the *Income Tax Act*, thereby eliminating the need for tax reporting of dispositions by non-residents of many equity investments and bringing Canada's domestic tax rules more in line with its tax treaties and the tax laws of its major trading partners. Stakeholders' reactions to the changes and their potential impact on venture capital flows have been positive.

Box 1.5. Recommendations for stabilisation policies and financial-market reform

- Continue on the path of tightening, but proceed at a measured pace, conditional on the effect on inflation of the likely domestic and worldwide synchronicity in fiscal and monetary tightening measures, and of persisting global financial risks.
- If it becomes necessary to further restrain the build-up of mortgage debt, extend tightened access rules for mortgage insurance to owner-occupied homes.
- Renew the current inflation-targeting agreement without change when it expires at the end of 2011.
- Fully co-operate with international reforms to improve and co-ordinate financial-market regulation.
- Balance strengthened bank regulation with market-based incentives to signal true bank risks and to address the moral hazard of “too big to fail” (e.g. well-designed contingent capital instruments, strict capital separation between commercial banks and their investment bank subsidiaries).
- Enhance banking contestability by considering opening further avenues for entry, while ensuring that all changes are considered in a macroprudential context.
- Establish a national securities regulator, as planned, with strengthened efforts to get all provinces on board.

Notes

1. See Zorn, Wilkins and Engert (2009) for more details on the Bank of Canada’s liquidity actions in response to financial-market turmoil.
2. Okun’s law describes a more or less stable relationship between output growth and unemployment growth over the business cycle.
3. Since 2008, amortisation periods have been limited to 35 years and loan insurance is offered only up to 95% of a loan’s value. Before then, mortgage insurance was offered on loans worth as much as 100% of the purchase price and amortisation periods as long as 40 years.
4. For a summary of the research done until spring 2009 on the desirability of switching to a lower inflation target or to price-level targeting, see the special issue of the *Bank of Canada Review* at www.bankofcanada.ca/en/review/spring09/review_spring09.pdf.
5. See OECD (2010d) for other estimates and references therein.
6. Potential real GDP growth is a measure of the sustainable rate of growth of productive capacity. The growth rate of the economy over the long run is determined by its supply-side components, which include working-age population, labour force participation, structural unemployment, the length of the workweek, and labour productivity. Correspondingly, the level of potential GDP trends upward at a relatively steady rate. Real GDP fluctuates around this potential level.
7. See Annex 2.A1 in Chapter 2 for an overview of the methodology used to estimate and project potential output by province, and see Guillemette (2010) for more details.
8. One widely acknowledged defect of the Basel rules was that the international agreement lacked any system of sanctions to enforce capital rules.
9. Private mortgage insurance contracts are a small part of the market and are themselves 90% insured by the CMHC. To make it possible for private insurers to compete effectively with CMHC, the Government also backs private mortgage insurers’ obligations to lenders through guarantee agreements that protect lenders in the event of default by the insurer. The Government’s backing of private insurers’ business that is eligible for the guarantee is subject to a deductible equal to 10% of the original principal amount of the mortgage loan.

10. New Zealand has imposed a restriction on the share of short term funding by its banks in wholesale markets. This has been costly for banks but deemed to be highly protective against liquidity risk in the next crisis (Reserve Bank of New Zealand, 2010).
11. In Spain, countercyclical buffering in the form of dynamic loan provisioning has been in place since 2000. Spanish banks appeared to have fared much better in the crisis than many of their European counterparts, as they were less exposed to the US subprime market. In part this may reflect that authorities have discouraged off-balance-sheet securitisations, as in Canada. However, dynamic provisioning failed to prevent a housing bubble in the run-up to the crisis (Caprio, 2009). Nonetheless, it is likely to have slowed excessive lending growth in the boom period, while also creating an additional buffer that provided some protection against deteriorating solvency ratios as the bubble unravelled.
12. See S.B. Pasternak, "Canada Banks May Be Weakened by Regulatory Reforms, Waugh Says", *www.bloomberg.com*, 8 April 2010.
13. See "Shares bounce as rules are softened", *Financial Times*, 28 July 2010.
14. European officials have tended to push counter-cyclical regulations, along with greater powers to be given to regulatory authorities. The United States has tended very much toward market-insurance mechanisms.
15. See J. Dickson, "Protecting banks is best done by market discipline", *Financial Times*, 9 April 2010.
16. See D. Alexander, "Boards Need More Bankers on Boards, Dickson Says", *Bloomberg.com*, 18 November 2009.
17. There is some evidence of economies of scale in Canadian banking that even the largest banks are too small to exploit (Allen and Liu, 2005), though this may be out of date.
18. This is the legacy of applications having been made in the 1990s by two pairs of the big banks who each wanted to merge. The banks mishandled the affair, and the Minister ultimately decided to reject the proposal.

Bibliography

- Ahrend, R., B. Cournède and R. Price (2008), "Monetary policy, market excesses and financial turmoil", *OECD Economics Department Working Papers*, No. 597, OECD, Paris.
- Ahrend, R., J. Arnold and F. Murtin (2009), "Prudential regulation and competition in financial markets", *OECD Economics Department Working Papers*, No. 735, OECD, Paris, December.
- Akerlof, G.A., W.T. Dickens and G.L. Perry (2000), "Near-Rational Wage and Price Setting and the Long-Run Phillips Curve", in W.C. Brainard and G.L. Perry (eds.), *Brookings Papers on Economic Activity*, Vol. 2000, No. 1, pp. 1-60.
- Allen, J. and Y. Liu (2005), "Efficiency and Economies of Scale of Large Canadian Banks", *Bank of Canada Working Paper*, No. 2005-13, Bank of Canada, Ottawa.
- Allen, J. and W. Engert (2007), "Efficiency and Competition in Canadian Banking", *Bank of Canada Review*, Summer, Bank of Canada, Ottawa.
- Amano, R., T. Carter and D. Coletti (2009), "Next Steps for Canadian Monetary Policy", *Bank of Canada Review*, Spring – Special Issue: Research on Inflation Targeting, Bank of Canada, Ottawa, www.bankofcanada.ca/en/review/spring09/amano.pdf.
- Bank of Canada (2010), *Financial System Review*, June, Bank of Canada, Ottawa, www.bankofcanada.ca/en/fsr/2010/fsr_0610.pdf.
- Basel Committee on Banking Supervision (2009), "Strengthening the resilience of the banking sector", *Consultative document*, December, Bank for International Settlements, Basel.
- Bataille, C., B. Dachis and N. Rivers (2009), "Pricing Greenhouse Gas Emissions: The Impact on Canada's Competitiveness", *C.D. Howe Institute Commentary*, No. 280, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/Commentary_280.pdf.
- Beaton, K. (2010), "Time Variation in Okun's Law: A Canada and US Comparison", *Bank of Canada Working Paper*, No. 2010-7, Bank of Canada, Ottawa, www.bankofcanada.ca/en/res/wp/2010/wp10-7.pdf.
- Blanchard, O., G. Dell'Ariccia and P. Mauro (2010), "Rethinking Macroeconomic Policy", *IMF Staff Position Note*, No. SPN/10/03, IMF, Washington, www.imf.org/external/pubs/ft/spn/2010/spn1003.pdf.

- Blundell-Wignall, A., G. Wehinger and P. Slovik (2009), "The Elephant in the Room: The Need to Deal with What Banks Do", *Financial Market Trends*, Vol. 2009, Issue 2, OECD, Paris.
- Bordo, M.D., H. Rockoff and A. Redish (1993), "A Comparison of the United States and Canadian Banking Systems in the Twentieth Century: Stability vs. Efficiency?", *NBER Working Paper*, No. 4546, National Bureau of Economic Research, Cambridge, MA.
- Caprio, G. Jr. (2009), "Safe and Sound Banking: A Role for Countercyclical Regulatory Requirements?", paper prepared for the World Bank, December, <http://ssrn.com/abstract=1545870>.
- Cayen, J.P., D. Coletti, R. Lalonde and P. Maier (2010), "What Drives Exchange Rates? New Evidence from a Panel of US Dollar Bilateral Exchange Rates", *Bank of Canada Working Papers*, No. 2010-5, Bank of Canada, Ottawa, www.bankofcanada.ca/en/res/wp/2010/wp10-5.pdf.
- Dodge, D. (2010), "Reflections on the conduct of monetary and financial stability policy", *Canadian Journal of Economics*, Vol. 43, No. 1, pp. 29-40.
- Furceri, D. and A. Mourougane (2009), "The effect of financial crises on potential output: new empirical evidence from OECD countries", *OECD Economics Department Working Papers*, No. 699, OECD, Paris.
- Goodhart, C. (2010), "How May the New Architecture of Financial Regulations Develop?", in *Reserve Bank of New Zealand Bulletin*, Vol. 73, No. 1 (March), Reserve Bank of New Zealand, Wellington.
- Guillemette, Y. (2010), "A simulation model of federal, provincial and territorial government accounts for the analysis of fiscal-consolidation strategies in Canada", *OECD Economics Department Working Papers*, No. 800, OECD, Paris.
- Hurwitz, S.A. and L.J. Marett (2007), "Financing Canadian Innovation: Why Canada Should End Roadblocks to Foreign Private Equity", *C.D. Howe Institute Commentary*, No. 244, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/Commentary_244.pdf.
- IMF (2008), *Financial System Assessment Review: Update*, IMF, Washington, DC.
- International Energy Agency (2010), *Energy Policies of IEA Countries: Canada 2009 Review*, OECD/IEA, Paris.
- Johansson, K. (2002), "Labor Market Programs, the Discouraged-Worker Effect, and Labor Force Participation", *IFAU – Institute for Labour Market Policy Evaluation Working Papers*, No. 2002:9, IFAU – Office of Labour Market Policy Evaluation, Uppsala.
- Laidler, D. (2006), "Grasping the Nettles: Clearing the Path to Financial Services Reform in Canada", *C.D. Howe Institute Commentary*, No. 238, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/Commentary_238.pdf.
- McKinsey Global Institute (2010), *Debt and deleveraging: The global credit bubble and its economic consequences*, McKinsey Global Institute.
- Minegishi, M. and B. Cournède (2010), "Monetary policy responses to the crisis and exit strategies", *OECD Economics Department Working Papers*, No. 753, OECD, Paris.
- Murchison, S. and A. Rennison (2006), "ToTEM: The Bank of Canada's New Quarterly Projection Model", *Bank of Canada Technical Report*, No. 97, Bank of Canada, Ottawa, www.bankofcanada.ca/en/res/tr/2006/tr97.pdf.
- Northcott, C.A. (2004), "Competition in Banking: A Review of the Literature", *Bank of Canada Working Paper*, No. 2004-24, Bank of Canada, Ottawa.
- Northcott, C.A., G. Paulin and M. White (2009), "Lessons for banking reform: A Canadian perspective", *Central Banking*, Vol. 19, No. 4, pp. 41-53.
- Obstfeld, M. and K. Rogoff (2009), "Global imbalances and the financial crisis: Products of common causes", *CEPR Discussion Paper Series*, No. 7606, Centre for Economic Policy Research, London.
- OECD (2006), *OECD Economic Surveys: Canada*, OECD, Paris.
- OECD (2008), *OECD Economic Surveys: Canada*, OECD, Paris.
- OECD (2009a), *OECD Economic Outlook*, Vol. 2009/1, No. 85 (June), OECD, Paris.
- OECD (2009b), *The Economics of Climate Change Mitigation: Policies and Options for Global Action Beyond 2012*, OECD, Paris.
- OECD (2010a), *OECD Economic Outlook*, Vol. 2010/1, No. 87 (May), OECD, Paris.
- OECD (2010b), *Economic Policy Reforms: Going for Growth*, OECD, Paris.

- OECD (2010c), "The response of labour force participation to severe downturns", Working Party No. 1 on Macroeconomic and Structural Policy Analysis, OECD, Paris.
- OECD (2010d), "The impact of the economic crisis on potential output", Working Party No. 1 on Macroeconomic and Structural Policy Analysis, OECD, Paris.
- Pembina Institute and the David Suzuki Foundation (2009), *Climate Leadership, Economic Prosperity: Final report on an economic study of greenhouse gas targets and policies for Canada*, <http://pubs.pembina.org/reports/climate-leadership-report-en.pdf>.
- Ratnovski, L. and R. Huang (2009), "Why are Canadian Banks More Resilient?", *IMF Working Paper*, No. WP/09/152 (July), IMF, Washington, DC.
- Samson, R.A. and S.B. Stamler (2009), "Going Green for Less: Cost-Effective Alternative Energy Sources", *C.D. Howe Institute Commentary*, No. 282, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/Commentary_282.pdf.
- Sauvé, R. (2010), *The Current State of Canadian Family Finances – 2009 Report*, The Vanier Institute of the Family, Ottawa.
- Sutherland, D., P. Hoeller, B. Égert and O. Röhn (2010), "Counter-cyclical economic policy", *OECD Economics Department Working Papers*, No. 760, OECD, Paris.
- Tsounta, E. (2009), "Is the Canadian Housing Market Overvalued? A Post-crisis Assessment", *IMF Working Paper*, No. WP/09/235, IMF, Washington, DC, www.imf.org/external/pubs/ft/wp/2009/wp09235.pdf
- Zorn, L., C. Wilkins and W. Engert (2009), "Bank of Canada Liquidity Actions in Response to the Financial Market Turmoil", *Bank of Canada Review*, Autumn, pp. 3-22.

ANNEX 1.A1

Progress in structural reform

This annex reviews action taken on recommendations from previous *Surveys*. Recommendations that are new in this *Survey* are listed in the relevant chapter.

Recommendations	Action taken since the previous <i>Survey</i> (June 2008)
BUSINESS TAXATION	
Abolish capital taxes as rapidly as possible.	The federal government abolished its capital tax and introduced a financial incentive to encourage provinces to eliminate theirs. All provinces plan to eliminate their general capital taxes by 2012.
Switch from provincial sales taxes to value-added taxes (VAT). Change tax mix to rely more on VAT and less on less-efficient income and profit taxes.	Ontario and British Columbia are eliminating their retail sales taxes and adopting the federal Harmonised Sales Tax framework as of 1 July 2010. As a result, the proportion of taxable commercial activity in Canada for which there is no sales tax on business inputs will increase to 94%, from approximately 40%.
Continue to rationalise the federal and provincial business tax preferences (special low rates, accelerated Capital Cost Allowances (CCA), deductibility of provincial royalty payments, etc.) to sectors like manufacturing and natural resources, and to small-scale, Canadian-owned firms.	Draft legislation has been released to phase out the accelerated CCA for oil-sands investment over the 2011-15 period. An accelerated CCA treatment will apply to computers acquired after 27 January 2009 and before February 2011, and to manufacturing and processing machinery and equipment acquired after 19 March 2007 and before 2012. Cuts in the general corporate income tax rate between 2000 and 2012 will result in a 75% fall in the differential between the general corporate income tax rate and the small business rate at the federal level.
Continue the move toward the elimination of the preferential federal tax treatment for the mining sector. Re-examine the tax treatment of exploration and development costs as well as flow-through shares. Review royalty regimes.	Alberta undertook a natural gas and conventional oil Competitiveness Review in 2009 and announced subsequent adjustments to its royalty system in March 2010, substantially reducing top rates. Quebec undertook a review of its Mining Duties Act in March 2010, which involved removing some tax preferences (accelerated depreciation) and increasing tax rates.
PERSONAL TAXATION	
Target in-work refundable credits on low-income earners while starting to phase them out earlier and more gradually to reduce high Marginal Effective Tax Rates (METR) at low to middle incomes. Co-ordinate federal and provincial benefit programmes to avoid excessive METR spiking.	In order to harmonise benefits where possible and to maximise the effectiveness of the Working Income Tax Benefit (WITB), a refundable tax credit that supplements the earnings of low-income workers, the federal government has entered into WITB reconfiguration agreements with four jurisdictions and continues to make this option available to all provinces and territories for 2010. The 2009 federal budget enhanced the tax relief provided by the WITB. Other tax relief provided by the federal government also improved work incentives for low-income Canadians.
Eliminate GST zero rating for basic groceries	No action taken.
Equalise tax across savings instruments, <i>i.e.</i> eliminate targeted tax preferences to qualifying pension plans, and capital-gains exclusions. Then tax all savings on an EET (exempt-exempt-tax) or TEE (tax-exempt-exempt) basis.	A new Tax-Free Savings Account (TFSA) became available as of January 2009. Contributions to the TFSA are made out of after-tax income, but investment income earned in a TFSA is tax-free and withdrawals are tax-free (TEE basis). The TFSA complements the Registered Retirement Savings Plan (RRSP) (EET basis) and other savings plans. As the TFSA programme matures, it is estimated that over 90% of Canadians will be able to hold all their financial assets in tax-efficient savings vehicles.

Recommendations	Action taken since the previous Survey (June 2008)
PRODUCT-MARKET COMPETITION	
Lift restrictions on foreign direct investment in airlines, telecommunications and broadcasting.	Consistent with the recommendations of the Competition Policy Review Panel, the 2010 federal budget announced the removal of existing restrictions on foreign ownership of Canadian communications satellites.
Minimise use of industrial subsidies, and scale back business-assistance programmes to those that address a real market failure, ensuring that they do so at minimum economic cost.	Support to industries adopted as part of the Economic Action Plan in the 2009 federal budget will be wound down as planned in March 2011. Other subsidies remain, however.
INNOVATION	
Examine whether the efficiency of the scientific-research and experimental-development tax credits might be improved.	The 2010 federal budget announced a comprehensive review of all federal support for research and development to improve its contribution to innovation.
Eliminate the federal and provincial tax credits for investments in Labour-Sponsored Venture Capital Corporations.	Ontario proposed to complete the phase-out of its tax credit for Labour-Sponsored Investment Funds by 2012.
FISCAL POLICY AND FISCAL FEDERALISM	
Pursue efforts for provinces to grant cities more autonomy to raise revenue.	No action taken.
Make more use of property taxes and user fees by municipalities, while easing the property-tax burden on business. As their tax base becomes more sustainable, reduce local authorities' reliance on provincial transfers.	No significant action taken.
SOCIAL AND LABOUR-MARKET POLICIES	
Ban contractual mandatory retirement.	No action taken. The federal government and New Brunswick still have no legislation banning mandatory retirement.
Adopt a more rigorous system of evaluation of active labour-market programmes. Make these programmes more effective.	Summary evaluations of employment benefits and support measures have been completed in all provinces and territories with results available for 12 of them. Results for the last are expected to be available in summer 2010.
Continue developing better procedures for assessing and recognising foreign credentials and tailor training programmes to improve immigrants' low levels of literacy and fluency in Canada's official languages.	Canada's 2009 Economic Action Plan provided CAD 50 million over two years to support the work of governments in addressing barriers to credentials recognition. In November 2009, the Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications, a joint commitment by federal, provincial and territorial governments, was announced.
Remove the differential treatment for public funding of for-profit and non-profit childcare in provinces where such differentials still exist.	No known actions taken.
Make adjustments to Canada Pension Plan (CPP) pensions actuarially neutral for workers between 60 and 65, relax restrictions on rights' accumulation and eliminate the stop-work clause.	In May 2009, joint stewards of the CPP unanimously agreed to the gradual restoration of actuarial neutrality to adjustments made to the CPP retirement benefit when taken early (ages 60-64) or late (ages 66-70). Other changes include: removing the work cessation test; expanding coverage to those otherwise eligible to receive retirement benefits who continue to work or return to work; and raising the number of low-earnings years that can be dropped from the calculation of the retirement-benefit amount.
Introduce employer experience rating into unemployment insurance, or scale back access to it for seasonal and temporary workers.	No action taken.
ENERGY AND ENVIRONMENTAL POLICIES	
Consider introduction of a (federal) GHG-emissions tax as a complement to the emissions-trading scheme. Lower levels of government could also implement more environmental excise taxes and congestion charges.	The federal government currently has no plans to introduce an emissions tax. British Columbia and Quebec have introduced levies on fossil fuels.
Regularly review water pricing and rights to ensure efficient use. Check that the Albertan water-allocation and licence-transfer processes reach conservation objectives while minimising effects on oil-sands developments.	Results from surveys and reports show that Canadian municipalities are providing more appropriate market signals, resulting in conservation of water. Water use in the oil-sands areas is regulated through a system of licensing and monitoring. The interim Water Management Framework prescribes when, and how much, water can be withdrawn from the Lower Athabasca River for oil-sands mining. Oil-sands projects in northern Alberta recycle up to 90% of the water used in their operations.

Recommendations	Action taken since the previous <i>Survey</i> (June 2008)
Continue to make more use of market instruments. Ensure compatibility of planned national emission-trading system with the United States and/or the European Union.	The federal government has committed to work to develop and implement a North America-wide cap-and-trade system for greenhouse gases. Harmonising Canada's domestic approach with that of the United States is an important objective for the federal government.
Monitor emissions in the transport sector. Introduce a (carbon) fuel tax in addition to standards.	Both federal and provincial levels of government levy excise taxes on motor fuels. Certain provinces (Quebec and British Columbia) have also introduced carbon-related taxes/levies linked to their specific environmental objectives. The federal government recently announced regulations harmonised with the United States to reduce greenhouse-gas emissions from new vehicles.
Liberalise electricity markets in provinces where they are still regulated. Liberalise trade in energy goods and services among provinces by finalising the energy chapter of the Agreement on Internal Trade.	The federal government continues to actively engage with provinces and territories to liberalise and enhance energy trade within Canada.
Review the efficiency of the policy of promoting corn and cellulosic ethanol and other biofuels. Rather than mandate use, offer increased research subsidies or prizes for technological breakthroughs if a carbon tax or permit trading are infeasible in agriculture.	The federal government continues to consider the benefits and costs of action on biofuels over time. It has provided CAD 500 million to Sustainable Development Technology Canada to create the NextGen Biofuels Fund, which will invest in innovative, large-scale demonstration projects of next-generation biofuel technologies.
Review the oil-sands tenure process regularly and remove the exploration/production requirement to make the system consistent with Alberta's sustainability objectives.	No known action taken.
AGRICULTURAL POLICIES	
Phase out the supply-management regimes by progressive introduction of market forces, in particular, by shrinking single-commodity transfers for milk and eggs.	No action taken.
Consider the use of business risk-management tools to replace government safety-net programmes that serve to build up moral hazard and place a heavy burden on the budget.	Federal, provincial and territorial governments are currently undertaking a strategic review of business risk-management programming to ensure that these programmes are meeting their objectives in helping producers manage risks to their business operations.
Implement a regular pesticide use survey, in line with foreign practices.	The Pest Management Regulatory Agency (PMRA) of Health Canada has been collecting pesticide <i>sales</i> data annually from pesticide registrants since the 2007 calendar year. The PMRA has also been collecting pesticide <i>usage</i> data from a variety of sources, both public and private, since 2002.

Chapter 2

Fiscal-consolidation strategies for Canadian governments

Although Canada remains in an advantageous fiscal position relative to many other OECD countries as the global economy recovers from the 2008/09 recession, the deterioration in the country's public finances has been substantial. Years of spending increases above trend economic growth have led to high structural levels of expenditure, and some Canadian governments are now on unsustainable fiscal paths, a diagnosis made starker when taking an even longer-term view that considers the fiscal implications of demographic change. Evidence shows that successful fiscal consolidations tend to rely on spending restraint rather than tax increases. When focused on restraining less productive expenditure, they can also boost economic growth. Fiscal rules can be useful tools in achieving budgetary consolidation, but also as part of the general fiscal framework to limit deficit bias and counteract the tendency shown by some Canadian governments over the past two decades to run pro-cyclical fiscal policies. Canadian governments with large deficits should announce deficit targets on the way to fiscal balance and should consider supporting these targets with spending-growth limits. Other governments should also limit spending growth and target reductions in debt-to-GDP ratios, perhaps supported by budget-surplus targets. Temporary fiscal-stimulus measures should be allowed to expire as planned. To date, the federal and almost all provincial/territorial governments have committed to return to budget balance over the medium term and outlined plans to do so that focus primarily on expenditure restraint. These plans are broadly in line with the recommendations set forth in this Survey and should allow Canada to return to budget balance over the medium term. Of crucial importance for the long-term success of fiscal-consolidation and debt-reduction strategies are public backing and transparency. The federal government should continue to support the Parliamentary Budget Office, and provinces should consider establishing similar independent fiscal agencies that can assess compliance relative to objectives and reinforce accountability.

In view of the significant deterioration in the fiscal positions of virtually every OECD country, including Canada, the need for credible fiscal consolidation plans has mounted. To address these near-term challenges, the federal government, along with almost all provincial and territorial governments, have committed to return to budget balance over the medium term and have begun to elaborate specific plans to meet their commitments. These plans focus primarily on expenditure restraint, including limits to public-sector wage growth. No doubt they will firm up and be adjusted as uncertainties surrounding the post-crisis economic setting dissipate. They are broadly in-line with the recommendations set forth in this *Survey* and should allow Canada to return to budget balance over the medium term. This chapter examines the sustainability of current fiscal positions, projecting their likely evolution over the medium term, and studies fiscal-consolidation strategies under various economic scenarios. These exercises serve as the basis for jurisdiction-specific recommendations on fiscal-consolidation paths to 2020. The chapter also discusses the conduct of fiscal policy across the country in recent years and how it could be improved, notably through the use of new or improved fiscal rules.

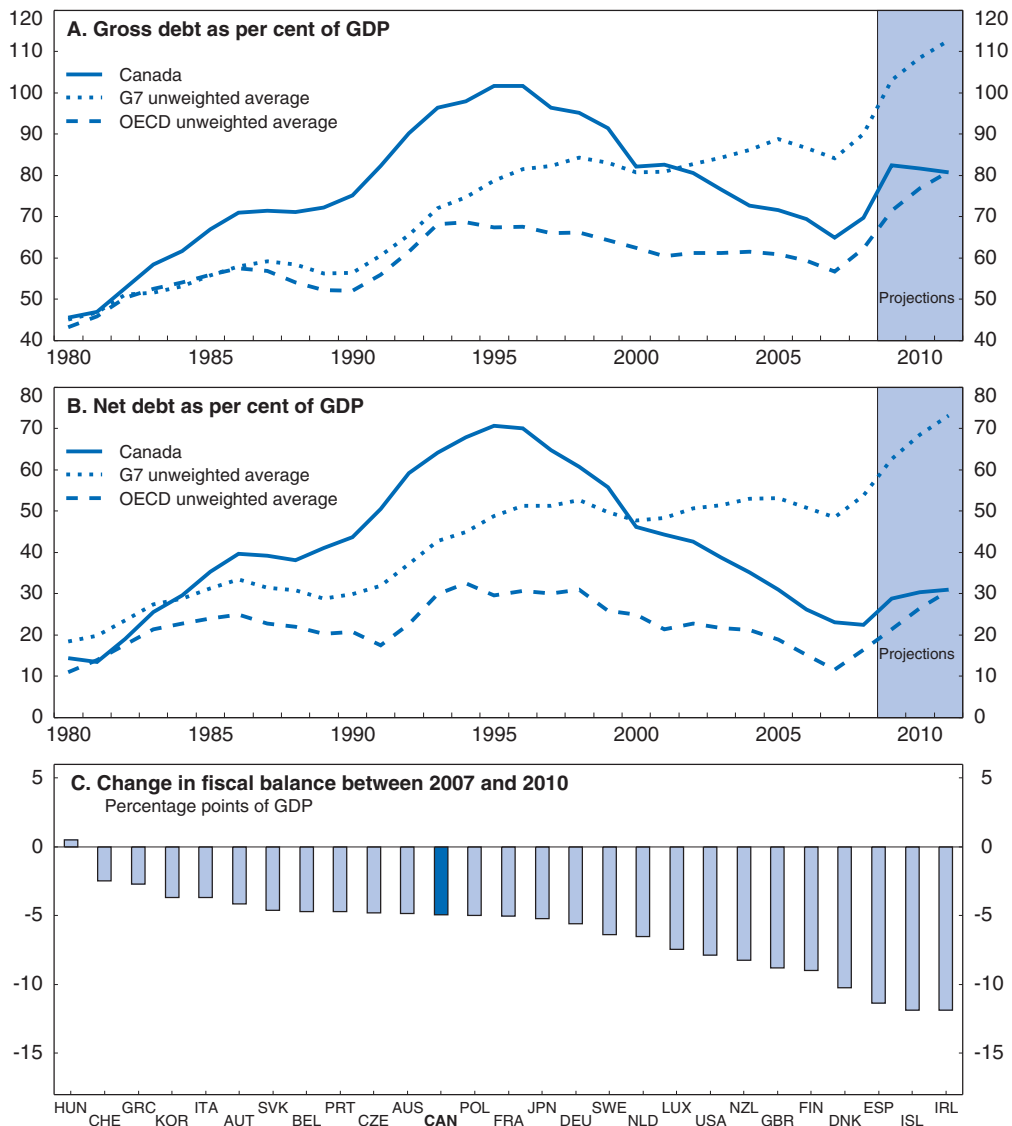
Most Canadian governments need fiscal consolidation, soon, ideally through spending restraint

The recent reversal in fiscal positions has been substantial


Before the recent global economic crisis, Canada had a total government surplus and the lowest net debt-to-GDP ratio among G7 countries, thanks in part to an important fiscal-consolidation effort in the mid-1990s at the federal level and to structural reforms to public pension plans during the same period. These reforms brought Canada's gross and net debt-to-GDP ratios from levels much higher than G7 and OECD averages in 1995 to, respectively, below G7 averages and closer to OECD averages in 2008 (Figure 2.1, Panels A and B). Entering the crisis with a relatively large budgetary margin for manoeuvre, the fiscal authorities implemented measures to support the economy during the recession. Now, in the aftermath of the crisis, and of Canada's first significant recession since the early 1990s, the cyclical decline in tax revenue and the concurrent extraordinary spending measures have provoked a sharp turnaround in the country's fiscal situation, from a total government surplus of 1.6% of GDP in 2007 to a deficit of 5.1% in 2009 and an expected deficit of 3.4% in 2010 (Figure 2.1, Panel C). Despite a substantial fiscal stimulus, the size of this turnaround is about average compared to other OECD countries, thanks to a relatively shallow recession. Together with a better starting point, this average turnaround means that Canada is expected to come out of the cyclical downturn with still the lowest net debt-to-GDP ratio in the G7, and one of the strongest fiscal balances among OECD countries.

While such international comparisons may be comforting, a medium-term fiscal-consolidation effort is nevertheless necessary. Naturally, if the economic recovery that has started is sustained, government revenue will pick up and spending on automatic fiscal stabilisers will recede. But even if the level of output returns to its pre-crisis trend within a

Figure 2.1. Fiscal indicators



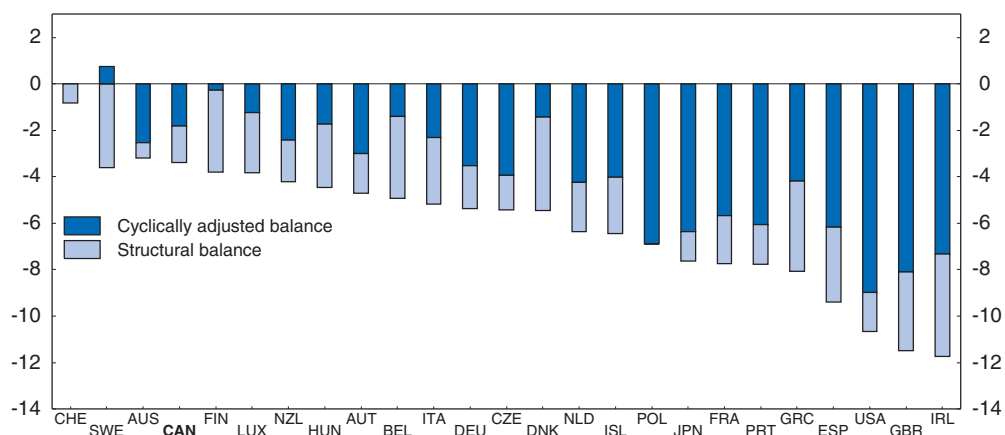
Source: OECD, OECD Economic Outlook 87 Database.

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few years, which is doubtful (see Chapter 1), cyclical effects will not be sufficient to restore a sustainable fiscal position at the total government level. That is partly because of the discretionary fiscal easing of recent years, partly because of the permanent loss in potential output due to the crisis and partly because instead of being saved (i.e. used to reduce public debt), some of the cyclical revenue strength associated with the long pre-crisis upswing was used to permanently increase spending and lower taxes. The result of these developments is a structural deficit, as shown by the projected negative cyclically adjusted fiscal balance in 2010 (Figure 2.2).¹

While relatively small at the national level, this total government structural deficit hides significant variation at the sub-national level, with some provinces facing large

Figure 2.2. **Projected fiscal balances in 2010**
Per cent of GDP



Source: OECD, OECD Economic Outlook 87 Database.

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structural deficits and others being in much better condition. Official government projections, on a public-accounts basis, show that almost all provinces/territories are expected to be in deficit in 2010, which was not the case only a few years ago (Table 2.1). The largest province, Ontario, which was particularly hard hit by the crisis because of the importance of its manufacturing sector (autos in particular), is expected to have one of the largest deficits in relation to the size of its economy.

Table 2.1. **Federal and provincial/territorial fiscal situations and projections**

	% of Canada real GDP in 2008	Budget balance (CAD million)				Budget balance (% of GDP) ¹				Net debt in 2008/09		Target year for budget balance or surplus
		2008/09	2009/10	2010/11	2011/12	2008/09	2009/10	2010/11	2011/12	CAD million	% of GDP	
Newfoundland and Labrador	1.5	2 434	-295	-194	-157	7.8	-1.3	-0.7	-0.5	7 896	25.2	None
Prince Edward Island	0.3	-41	-84	-55		-0.9	-1.8	-1.1		1 409	30.5	2013/14
Nova Scotia	2.2	20	-489	-222	-370	0.1	-1.4	-0.6	-1.0	12 324	36.0	2013/14
New Brunswick	1.8	-265	-754	-749	-681	-1.0	-2.8	-2.7	-2.3	7 388	27.0	2014/15
Quebec	20.4	0	-4 257	-4 506	-2 900	0.0	-1.4	-1.4	-0.9	128 793	42.6	2013/14
Ontario	40.3	-6 409	-21 330	-19 690	-17 300	-1.1	-3.7	-3.2	-2.7	165 864	28.2	2017/18
Manitoba	3.2	470	-555	-545	-448	0.9	-1.1	-1.0	-0.8	11 498	22.6	2014/15
Saskatchewan	3.1	2 389	425	20	50	3.8	0.7	0.0	0.1	3 848	6.1	n.a.
Alberta	14.1	-852	-3 624	-4 748	-1 135	-0.3	-1.4	-1.6	-0.4	-26 769	-9.2	2012/13
British Columbia	12.5	78	-2 775	-1 715	-945	0.0	-1.5	-0.8	-0.4	24 540	12.4	2013/14
Yukon	0.1	1	-23	3	7	0.1	-1.3	0.1	0.3	-151	-7.9	2010/11
Northwest Territories and Nunavut	0.4	-165	-153	35		-2.5	-2.5	0.5		221	3.3	2010/11
Federal government	100.0	-5 755	-46 956	-49 200	-27 600	-0.4	-3.1	-3.0	-1.6	525 213	32.8	None

1. Provincial/territorial GDP used for the provinces and territories and national GDP used for the federal government.

Source: RBC Economics Provincial Fiscal Tables (on the basis of Department of Finance Canada Fiscal Reference Tables, provincial budgets and public accounts), territorial budgets and OECD calculations. Current as of 31 May 2010.

Baseline projections for the next decade show that the recent fiscal path is unsustainable

To determine how much of a fiscal-consolidation effort would be necessary to eliminate the general government deficit, the medium-term baseline projection to 2025 in OECD *Economic Outlook 87* assumes that, starting in 2012, Canada undertakes five years of fiscal consolidation whereby the underlying primary balance is strengthened by ½ percentage point of GDP in each year. This effort, along with the natural elimination of the cyclical part of the deficit as the economy returns to its potential production level by 2015, is sufficient to generate a positive fiscal balance of 0.3% of GDP in 2016. To carry out a similar assessment for each province/territory and separately for the federal government, and to simulate fiscal outcomes by jurisdiction under a variety of economic scenarios, a new medium-term fiscal-simulation model was developed specifically for this *Survey*. It is summarised in Annex 2.A1. Using this model, baseline fiscal projections are produced with what can roughly be described as business-as-usual or extrapolation-of-recent-trends assumptions, whereby most non-cyclically sensitive expenditures are assumed to keep growing at their 1997-2007 average growth rates from 2011 on except for extraordinary stimulus outlays on fixed capital (Table 2A1.1 in Annex 2.A1). Of course, 1997-2007 was a period of generally high GDP and revenue growth. The average spending-growth rates extrapolated from this decade are of course not in line with future spending trends outlined in the latest federal and provincial/territorial budgets. But given that the objective of the simulations is to illustrate the extent to which spending growth must be restrained in the various jurisdictions to achieve fiscal-consolidation objectives, the expenditure growth rates from recent history are the natural benchmarks.² The simulation results are compared with the latest plans and projections from governments in the discussion below.

Unfortunately, economic theory does not provide a fiscal sustainability definition that is widely accepted without reservations. Different theoretical definitions and sustainability conditions have been proposed, while in practice, various indicators – not always grounded in economic theory – have been applied.³ One common condition derived from the government's inter-temporal budget constraint says that fiscal policy is sustainable if the present discounted value of all future primary surpluses is at least equal to the initial value of debt. Sustainability defined in this way is ensured even if the government debt-to-GDP ratio diverges from its initial level, as long as its growth rate is lower than the difference between the real interest rate on government debt (r) and the trend real GDP growth rate (g), in other words, if the debt-to-GDP ratio expands at a pace lower than $r - g$. The condition can be expressed in terms of a target primary balance (pb^*), the long-term primary balance as a ratio of output consistent with stabilising the long-term debt ratio at a given level, say the current level (b_0). A primary gap (pg) can then be defined as the difference between the estimated or projected primary balance (pb) and the target primary balance. If this gap is negative, the debt ratio would be expected to rise without bound, causing deleterious economic effects (Box 2.1), and fiscal policy can be qualified as unsustainable. This condition is necessary but not sufficient for fiscal sustainability as it allows an arbitrarily large initial debt ratio. It is therefore a weak test of fiscal sustainability.

This weak test is sufficient for the present exercise, because no jurisdiction has a very large net debt-to-GDP ratio. Also, even with this weak test, and using the fiscal-simulation model and baseline economic and fiscal assumptions described in Annex 2.A1, primary gaps are estimated to be significantly negative in 2010 in all jurisdictions except the federal level, Nova Scotia, Saskatchewan and British Columbia (Table 2.2).⁴ Both Saskatchewan

Box 2.1. **The undesirable economic effects of rising debt**

High deficits and debt may lower the growth rate of GDP, and thus lower the economy's capacity to service a given amount of debt, for two main reasons. The first reason is that deficits lower overall saving. To the extent that households are non-Ricardian – that is, they do not perfectly offset a decline in public saving with higher private saving, for example because of finite planning horizons, a hypothesis supported by empirical evidence (Röhn, 2010) – higher fiscal deficits lead to lower overall saving. The resulting increase in the real interest rate crowds out investment in physical capital and therefore real output. The second reason is the existence of distortionary taxes. In the long run, unless higher debt-service costs crowd out other expenditure in government budgets, servicing a larger stock of public debt that carries a higher real interest rate means that taxes must eventually rise to maintain the same level of programme spending. The disincentive effects of higher taxes reduce the rate of output growth, with the size of the loss depending on the distortionary effects of the fiscal instrument used. Nations typically see growth slow when gross public debt reaches 90% of GDP (Reinhart and Rogoff, 2010). The median growth rate falls by one percentage point and average growth falls even more.

and British Columbia are projected to have negative primary gaps within a few years, however. Although most jurisdictions are projected to see an improvement in their primary gaps in 2011, when stimulus spending on capital expenditure is assumed to be withdrawn, projected gaps grow again under baseline assumptions as the projection horizon lengthens. Only the federal government and Nova Scotia remain near their target primary balance over the entire projection period.

Implicit demographic liabilities beyond 2020 add to the urgency of consolidation

Even a zero or a small positive primary gap does not necessarily signify that fiscal policy is sustainable without any need for future adjustment. After 2020, government spending as a percentage of GDP is set to increase, and trend growth to decline, as a result of ageing. Maintaining the primary deficit at the sustainable level (pb^*) would then require further adjustments to revenue or expenditure. Implicit demographic liabilities, which take into account health care, education, transfers to the elderly and children's benefits, amount to close to 100% of 2007 GDP for the country as a whole (Robson, 2009) (Table 2.3).⁵ They are particularly large for provinces, as they have the main responsibility for the delivery of health-care services, even more so for the Atlantic Provinces and Quebec, where population ageing is expected to be particularly pronounced (Bélanger, Martel and Caron-Malenfant, 2005). Unfortunately, most provinces already show wide primary gaps, underscoring the urgency of attending to fiscal consolidation. Even for other jurisdictions, significant implicit demographic liabilities call for running budget surpluses and paying down debt over the next decade, thus helping to free up fiscal room, which is equivalent to pre-funding future obligations. For resource-rich Alberta and other provinces with relatively little debt, these liabilities call for building up a net asset position.

Fiscal consolidation should occur soon and mainly through spending restraint

The recent empirical evidence from OECD countries, reviewed in Box 2.2, quite clearly demonstrates that fiscal consolidation based upon selective spending cuts is more likely to durably reduce deficits and debt ratios than revenue increases. Spending restraint is also

Table 2.2. **Current fiscal positions and fiscal-sustainability assessment in the baseline scenario**

		NL	PE	NS	NB	QC	ON	MB	SK	AB	BC	YT	NT&NU	Federal
Current fiscal positions (% of GDP)														
Total budget balance (net lending)		-6.0	-4.6	0.9	-1.8	-4.9	-3.7	-1.5	1.1	-1.9	-0.9	-7.3	-5.3	-0.9
Cyclically adjusted (% of potential GDP)	2010	-4.9	-4.9	0.8	-1.5	-4.6	-3.0	-1.5	1.7	-0.5	-0.7	-7.8	-4.3	-0.2
Primary budget balance	estimates	-5.1	-3.2	2.5	-1.1	-3.7	-2.7	-1.6	0.6	-3.0	-0.5	-8.2	-4.9	0.3
Cyclically adjusted (% of potential GDP)		-4.1	-3.5	2.4	-0.8	-3.5	-2.1	-1.7	1.2	-1.5	-0.4	-8.7	-4.0	0.9
Government net-debt-to-GDP ratio		30.8	35.4	29.7	24.5	41.9	25.0	23.6	9.4	-10.3	8.1	-2.5	13.8	31.7
Assumptions for fiscal sustainability assessment														
Trend real output growth rate (g) (%)	Projected average for 2010-20	1.0	0.8	0.5	0.8	0.6	1.6	1.3	1.5	3.2	1.1	3.0	4.0	1.5
Real interest rate on government debt (r) (%)	Projected for 2020	3.4	3.2	2.7	2.8	3.1	3.0	2.9	2.6	2.7	1.8	3.3	3.4	2.8
Target government net debt-to-GDP ratio (b_0)		Stabilise at 2010 level for every jurisdiction												
Fiscal sustainability indicators														
Primary balance required to reach target debt ratio (pb^*) (% of GDP)		0.7	0.9	0.7	0.5	1.1	0.3	0.4	0.1	0.1	0.1	0.0	-0.1	0.4
	2010	-5.8	-4.1	1.8	-1.6	-4.8	-3.1	-2.0	0.5	-3.1	-0.6	-8.2	-4.8	-0.1
	2011	-4.4	-2.4	2.4	-0.9	-2.5	-2.4	-0.1	0.2	-3.2	0.2	-6.1	-7.2	0.2
	2012	-5.1	-3.2	2.3	-1.2	-2.3	-2.8	-0.4	-0.1	-3.6	0.1	-6.7	-7.5	0.4
	2013	-5.9	-4.0	1.9	-1.5	-3.0	-3.1	-0.9	-0.4	-3.9	-0.1	-7.3	-7.8	0.5
	2014	-6.8	-4.8	1.4	-1.8	-3.7	-3.4	-1.3	-0.7	-4.3	-0.3	-7.9	-8.0	0.6
Primary gap (pg) (% of GDP)	2015	-7.8	-5.7	1.0	-2.1	-4.5	-3.8	-1.7	-0.8	-4.5	-0.5	-8.6	-8.2	0.6
	2016	-8.9	-6.4	0.7	-2.4	-5.2	-4.2	-2.2	-1.0	-5.1	-0.6	-9.2	-8.7	0.5
	2017	-10.1	-7.2	0.4	-2.8	-6.0	-4.7	-2.6	-1.3	-5.8	-0.8	-9.7	-9.2	0.4
	2018	-11.4	-8.0	0.1	-3.1	-6.7	-5.2	-3.0	-1.4	-6.4	-1.1	-10.3	-9.7	0.3
	2019	-12.8	-8.8	-0.2	-3.5	-7.6	-5.7	-3.5	-1.8	-7.3	-1.3	-10.8	-10.2	0.2
	2020	-14.3	-9.7	-0.6	-3.9	-8.4	-6.3	-4.0	-2.1	-8.3	-1.6	-11.4	-10.7	0.0

Table 2.3. **Demographically driven implicit assets and liabilities**

CAD billion except as noted

	Health	Education	Elderly benefits	Child/family benefits	All programmes	All programmes as % of 2007 GDP
Newfoundland and Labrador	-40.9	1.9	-0.1	0.1	-39.0	-131
Prince Edward Island	-6.9	0.4	n.a.	n.a.	-6.6	-140
Nova Scotia	-55.7	3.3	n.a.	0.2	-52.2	-152
New Brunswick	-44.8	2.1	-0.1	0.1	-42.6	-156
Quebec	-431.5	-17.4	n.a.	n.a.	-448.9	-145
Ontario	-726.3	67.5	0.1	5.3	-653.3	-107
Manitoba	-44.4	-2.1	0.0	0.1	-46.3	-92
Saskatchewan	-31.7	-0.9	0.0	n.a.	-32.6	-61
Alberta	-222.2	-16.1	0.8	0.9	-236.7	-86
British Columbia	-234.5	13.6	0.0	0.4	-220.5	-111
Yukon	-5.4	0.0	n.a.	n.a.	-5.4	-307
Northwest Territories and Nunavut	-14.3	0.6	n.a.	n.a.	-13.6	-220
Provincial/territorial total	-1 858.6	53.0	0.8	7.1	-1 797.8	-112
Federal government	n.a.	14.6	64.0	222.9	301.5	19
Canada total	-1 858.6	67.6	64.8	229.9	-1 496.3	-94

Source: Robson, W.B.P. (2009), "Boomer Bulge: Dealing with the Stress of Demographic Change on Government Budgets in Canada", C.D. Howe Institute e-brief, No. 71, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/ebrief_71.pdf.

Box 2.2. **Fiscal consolidation: Spending restraint or revenue enhancement?**

A number of theoretical and empirical studies suggest that spending restraint, notably with respect to government consumption and transfers, is more likely to generate lasting fiscal consolidation and better economic performance than measures to raise more revenue. For instance, OECD research shows that an emphasis on cutting current expenditure has been associated with larger consolidation results in the past than strategies based on increasing revenue (Guichard et al. 2007):

- *The higher the initial primary deficit, the larger was the overall consolidation that was achieved over a consolidation episode.* This finding likely means that jurisdictions facing a bigger fiscal problem are able to garner more public support for their fiscal-consolidation efforts. It underlines the importance of being fully transparent about the size and negative consequences of future deficits, thereby bolstering public support.
- *Large fiscal adjustments are associated with restraint in primary current expenditures (public consumption and social transfers).* This finding argues for concentrating fiscal-consolidation efforts on reducing the growth of public consumption and transfers, rather than of other types of expenditure (e.g. capital expenditure) or on tax increases.
- *The probability of a consolidation period lasting longer was higher if it was initiated at the time of a large negative output gap.* This finding argues for not waiting for normal economic conditions before beginning fiscal consolidation. Like the first finding, it suggests that it is easier to convince the public of the necessity of acting before the fiscal balance starts partially recovering on its own during the cyclical upturn. Furthermore, it supports the idea of pre-emptive adjustment; that is, of minimising the risk that financial markets will eventually force a hesitant government to bring in unpopular measures. A consolidation period triggered by a loss of confidence of financial-market participants is generally much more chaotic. Waiting also increases the severity of the adjustment necessary to reach a given sustainability target by a given date, as the snowballing of debt and interest payments digs a deeper structural deficit.

Box 2.2. Fiscal consolidation: Spending restraint or revenue enhancement? (cont.)

Another recent study largely confirms the findings of the OECD study. Alesina and Ardagna (2009) look at major fiscal-consolidation periods in 21 OECD countries over the period 1970 to 2007 and evaluate them according to two criteria: whether they were successful in significantly reducing deficits and debt-to-GDP ratios; and whether they were associated with a reduction in growth. On the first criterion, they define a fiscal-consolidation period as successful if the cumulative reduction of the debt-to-GDP ratio three years after the beginning of a fiscal adjustment is greater than 4.5 percentage points, which selects 17 successes among 107 fiscal-consolidation episodes. They find that in successful episodes total primary spending as a percentage of GDP falls by about two percentage points. Total revenue, for its part, declines by about half a percentage point of GDP. Thus, successful fiscal-consolidation episodes are completely based on spending cuts, accompanied by modest tax cuts (as a share of GDP). On the contrary, in unsuccessful adjustments, total revenue goes up by almost 1.5 percentage points of GDP and primary spending is cut by about 0.8 percentage points of GDP. On the second criterion, looking at all 107 fiscal-consolidation episodes, they find that the expansionary episodes are mostly characterised by spending cuts, a result consistent with theory and found in other empirical studies (e.g. Briotti, 2005). In those expansions, primary spending falls by more than two percentage points of GDP. Total revenue instead increases slightly, by about 0.3 percentage point of GDP. On the other hand, during contractionary fiscal-consolidation episodes, primary spending falls by about 0.7 percentage point of GDP, while revenue increases by about 1.2 percentage points of GDP. Thus, fiscal consolidations occurring on the spending side have superior effects on growth than those based upon increases in revenue.

Using different and multiple empirical methods – including case studies, panel regressions and simulations with a multi-country dynamic general equilibrium model – to study the effects of fiscal consolidation on economic activity in OECD countries, Kumar, Leigh and Plekhanov (2007) arrive at similar conclusions: while fiscal-consolidation episodes have tended to have short-run contractionary effects, some have had expansionary effects. The key to having long-run expansionary effects seems to reside in not relying excessively on cuts in productive government expenditure. Furthermore, there is evidence that even before fiscal consolidation begins, the anticipation of medium-term spending cuts generally enhances the expansionary effect of short-run fiscal stimulus, a conclusion that still applies when monetary policy is constrained by the zero lower bound on policy rates (Corsetti *et al.*, 2010).

less likely to provoke recessions or jeopardise recoveries, and, when anticipated, it can enhance the effectiveness of short-term fiscal stimulus. For these reasons, the fiscal-consolidation simulations in this chapter focus on spending restraint. Furthermore, to the extent that fiscal consolidation based on spending restraint can accelerate an economic expansion, the empirical evidence just reviewed suggests that the reductions in deficits and debt ratios to be simulated below should be considered worst cases, because the model used here does not build in positive effects of fiscal consolidation on the economy.

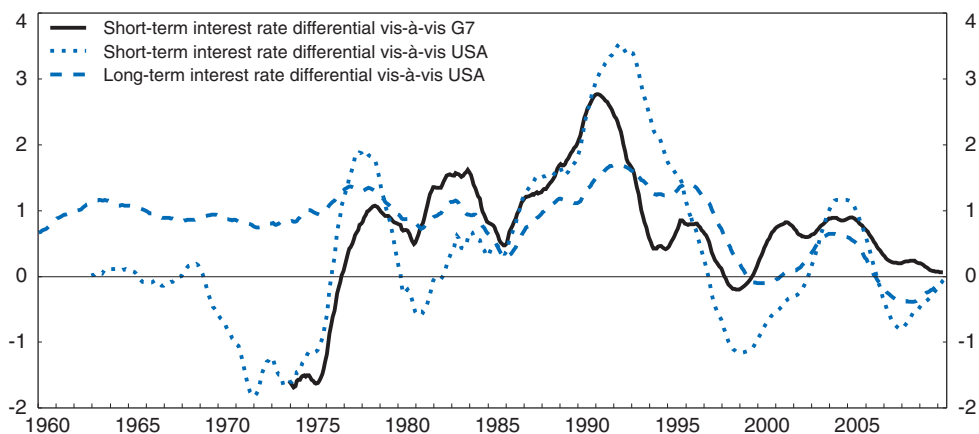
The 1990s federal government fiscal-consolidation experience points the way forward⁶

The fiscal-consolidation experience of Canada, or more precisely of the federal government, in the second half of the 1990s is often presented in international case studies as one of the most successful examples of fiscal consolidation in recent history. It is thus worth reviewing the lessons learned then that could be applied now and in the coming years.


As it entered the 1990s, Canada had to contend with a recession that threw the country's fiscal position into sharp relief. In 1992, general government gross debt exceeded 90% of GDP, higher than any other G7 country bar Italy, with the federal government accounting for just over half the total. The level of public spending appeared unsustainable in a setting of flaccid growth and high interest rates. The general government deficit was slightly above 9% of GDP in 1992, higher than any other G7 country except Italy, with the federal government accounting for about 60% of the deficit. Canadians and governments could see the link between persistently high deficits, the level of interest rates and an inevitable increase in the tax burden in the near future. Financial markets were becoming nervous as well – spreads on federal government short- and long-term debts had been rising steadily since the mid-1980s (Figure 2.3), and there was downward pressure on the Canadian currency. In response, the federal government introduced extensive reforms starting in 1993. The reforms were centred on three main strategic priorities: setting deficit targets, controlling expenditures and ensuring public buy-in.

Figure 2.3. **Interest-rate spreads of federal government debt**

36-month moving averages, per cent



Source: OECD, OECD Economic Outlook 87 Database.

StatLink  <http://dx.doi.org/10.1787/888932320238>

- **Deficit targets.** A reasonable but firm medium-term target for the federal government deficit was set, an approach deemed more effective than aiming for a zero deficit further out. In 1994, the government began setting two-year rolling deficit targets, with an ultimate goal of balancing the budget.
- **Expenditure control.** The federal government began enforcing the *Federal Spending Control Act* of 1991, which set limits on all programme spending with the exception of that under major self-financing programmes, such as Unemployment Insurance (later renamed Employment Insurance). Except in 1992-93 (when part of under-spending in the previous year was allocated to cover the excess spending) actual expenditures met the requirements of the Act until 1996 when it became no longer needed as subsequent budgets became more restrictive than the legislation. In 1995, the government introduced a contingency reserve in its budget planning to protect against adverse changes in the economy or forecasting errors. If not needed, the reserve was applied to

debt reduction. Legislated and non-legislated fiscal rules were supported by budget cuts, expenditure reviews, workforce reductions, wage freezes, labour-market reforms and other structural reforms. Budget cuts affected all spending categories, particularly transfers to provinces and social benefits. With the help of robust post-recession growth, federal government programme expenses (all budgetary expenses except debt service) fell from 17.4% of GDP in 1992-93 (on a public-accounts basis) to 13% of GDP five years later (programme expenses actually decreased in nominal terms over this period), at which time the federal deficit had been completely eliminated.

- *Public buy-in.* The third priority was to get economic stakeholders behind the reforms. Indeed, a key factor in the success of the fiscal-consolidation effort during this period appears to have been strong public support for the strategy. Media stories around government debt downgrades contributed to making the public aware of the perils of runaway deficits and debt. The government also contributed by explaining to the public that if it continued to accumulate debt, an ever-diminishing share of expenditure could be assigned to priorities such as education and health, and that the fiscal-consolidation steps taken were justified and consistent with efforts to restore growth and employment in the medium term. Large-scale pre-budget consultations helped garner support for specific budget measures. Public understanding and buy-in eventually became so strong that even after the deficit was eliminated, a *de facto* no-deficit rule prevailed as it became politically extremely difficult to run deficits. Even without a legislated fiscal rule, the federal government did not run another deficit until 2008/09 when the global economic crisis caused a recession in Canada. This episode demonstrates that public understanding and support is the most effective compliance/enforcement mechanism available. Judging by the political debate in Canada over the last several months, the public appears to favour a return to zero deficits again as long as it does not hurt growth prospects.

After eliminating the deficit, the federal government complemented the *de facto* no-deficit rule with a debt-reduction strategy. While the deficit was being reduced between 1992 and 1995, the federal government's debt continued to increase. In 1995/96 federal net debt reached a high of 68.4% of GDP. So in 1998, the federal government committed to follow the non-legislated debt-repayment plan that had prevailed since 1995, under which the contingency reserve set aside each year was devoted to debt reduction if not needed. Other commitments to accelerate debt repayment followed. As a result of these commitments and the growing economy, the ratio of net public debt to GDP was reduced to below 60% by 1999/2000. In the 2004 budget, the federal government announced an objective to reduce the debt due to accumulated deficits to 25% of GDP by 2014/15. At the time – in the spring of 2004 – this ratio stood at 40%. The target year was brought forward in subsequent budgets, and in the 2008 budget the government planned to reach the 25% debt-to-GDP ratio by 2011/12. While this target was seen by some as arbitrary, the government argued that achieving it would free up funds for priorities such as health care, education or tax cuts. It also argued that such funds would be all the more needed as the population aged and put increasing demands on the health-care system. These arguments, of course, remain just as valid today. And with less time remaining before the acceleration in retirements, the urgency of reducing the debt burden has only increased.

Today, the federal government does not have a legislated fiscal rule. But since 2006, it has had the *Federal Accountability Act*. Among its many provisions, the Act aims to increase transparency in government spending and establish clearer links between approved

expenditure and outcomes (previous legislation required linkage between expenditure and “purpose”, rather than outcomes). The Act created the Office of the Parliamentary Budget Officer (PBO), which is intended to provide Parliament with objective analysis about the estimates and projections of the government, the state of the nation’s finances and trends in the national economy. The PBO has proved useful at providing an independent, sometimes discordant, opinion on the federal government’s fiscal forecasts, which can only improve the transparency and debate around federal fiscal policy.

Budget agencies are missing at the provincial level

By contrast, one particularly glaring feature of provincial fiscal frameworks is that no external/independent bodies exist to monitor the fiscal health of provinces and the application of rules. Provincial Auditors General audit official financial statements and can give opinions on the general framework, but audits are only carried out *ex post*. The advantage of bodies like the PBO and the Congressional Budget Office in the United States is their independence, which improves transparency and credibility. Provinces should consider the creation of such provincial/territorial agencies tasked with monitoring more stringent fiscal rules as part of their strategies to update their fiscal frameworks and institutions. Concurrently or alternatively, because small provinces may not feel they have the resources needed for such an office, one agency reporting to the Council of the Federation and tasked with providing independent analysis on provincial fiscal matters could be established.

The lessons that can be drawn from the federal government’s experience of fiscal consolidation since the 1990s is that the following features can achieve significant improvement in a short period of time: i) rolling deficit targets toward a no-deficit objective, ii) legislated or *de facto* rules on spending supported by expenditure reviews and structural reforms, and iii) a good communication strategy to ensure strong public buy-in. Over a longer time frame, once consolidation has been achieved, a medium-term debt target seems useful to guide fiscal policy. These results from the Canadian federal experience align well with theoretical and empirical lessons from the economic literature on fiscal consolidation. Consequently, an approach based on these principles is recommended for the federal government as well as the provinces and territories in need of fiscal consolidation in the coming years.

This time, however, interest rates on government bonds are near historical lows, spreads are much lower than they were in the early 1990s (see Figure 2.3), and there is no downward pressure on the Canadian dollar. In Canada at least, there is not the same impetus and sense of urgency from capital markets to concentrate the minds of politicians and public alike on the need for fiscal restraint, making it less likely perhaps that the consolidation effort will be vigorous and sustained. Rather, the impetus must come from a collective realisation of the urgency of preparing fiscally for the spending pressures associated with demographic change, as demonstrated in Table 2.3 above and in other studies (*e.g.* Parliamentary Budget Office, 2010). Enshrining the fiscal plan in legislated rules and institutions may be useful this time around to ensure that consolidation efforts do not falter. Also, as noted above, a significant share of the federal consolidation effort in the 1990s was achieved by cutting transfers to the provinces. In a context where both the federal and sub-national governments are planning to consolidate at the same time, such a federal strategy this time would only increase the difficulty of consolidating at the provincial/territorial level and would be fraught with political difficulties, given delicate

intergovernmental relations on this issue. Indeed this strategy has been rejected by the current federal government. The trade-off between federal consolidation through reductions in provincial transfers and sub-national consolidation is examined further in the simulations below.

Deriving jurisdiction-specific fiscal-consolidation recommendations

Over the short term, the recommended fiscal-consolidation approach is the same for all jurisdictions currently in a significant deficit position: announce a series of deficit targets on the way to a balanced budget. The precise strategies used to reach a balanced budget will of course vary by jurisdiction, but efforts should concentrate on curbing the growth of spending, possibly by introducing spending ceilings. Once the budget has been balanced, and for provinces/territories already near fiscal balance, the fiscal strategy should focus on lowering debt-to-GDP ratios. For this purpose, a balanced-budget target, or in some jurisdictions surplus targets, consistent with achieving medium-term debt-ratio targets should be used, keeping spending-growth limits in place. A surplus target has the advantage of providing a fiscal cushion for unexpected fiscal developments, in the absence of which surpluses should be allocated to debt reduction. While not absolutely necessary, setting surplus and debt-ratio targets in law as well would make them better able to stand up to changes of government, political disputes and pressure from social groups that refuse to give up their advantages or benefits. This overall strategy would provide clear yardsticks for accountability and transparency. It should be accompanied with a public-relations campaign to explain to the public the fiscal objectives of the government and their rationale. Public buy-in would serve as the enforcement mechanism. Transparency at the provincial/territorial level should be strengthened by establishing independent fiscal agencies, which would provide similar information to legislatures as the federal PBO. With these qualitative general recommendations in mind, the next section seeks to offer quantitative suggestions for fiscal-consolidation targets tailored to each jurisdiction.

Fiscal targets should depend on the need and capacity for fiscal consolidation

What should the fiscal-consolidation targets be in the different jurisdictions? While this decision is political and depends on many factors, not all of them economic, it should be duly informed by a fiscal-sustainability assessment of the sort presented above (see Table 2.2). Jurisdictions with a large cyclically adjusted deficit, which thus cannot rely on the cyclical upturn to balance their budgets, need policy action to restrain the growth of spending and in some cases maybe even new revenue measures. Short- to medium-term deficit targets are suggested here and used for the rest of the analysis (Table 2.4). These targets take four factors into account. *First*, the greater the degree of consolidation needed, the more time is generally allowed to eliminate a deficit. *Second*, already-announced official fiscal-consolidation objectives are kept when they seem ambitious but achievable. *Third*, target consolidation paths all eliminate deficits in or before 2015, because planning to eliminate a deficit over a period longer than five years runs several risks. Economic developments, such as another recession or sharply higher interest rates, could derail the plan, public support for the fiscal-consolidation effort could falter, the government could change once or more, etc. For these reasons, distant objectives, such as Ontario's commitment to eliminate its deficit by 2017/18, lack credibility. And, *fourth*, the later the output gap in a given jurisdiction is projected to close in the baseline projections, the more time is generally allowed for consolidation. This last factor reflects the undesirability of

Table 2.4. **Suggested fiscal-consolidation objectives and consistent fiscal-balance targets**

CAD billion or per cent of GDP

Objective			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Federal government	Zero net lending by 2014	Baseline projections	-14 281	-8 999	-7 289	-6 146	-2 773	-1 679	-3 497	-5 538	-7 828	-10 378	-13 244
		Targets	n.a.	-8 000	-6 000	-3 000	0			Adopt debt reduction target			
Newfoundland and Labrador	Zero net lending by 2015	Baseline projections	-1 157	-1 359	-1 682	-2 112	-2 600	-3 154	-3 820	-4 583	-5 455	-6 448	-7 582
		Targets	n.a.	-900	-700	-500	-200	0		Adopt debt reduction target			
Prince Edward Island	Zero net lending by 2013	Baseline projections	-223	-146	-190	-245	-305	-374	-444	-522	-611	-710	-820
		Targets	n.a.	-80	-40	0			Adopt debt reduction target				
Nova Scotia	Reduce net debt to zero by 2020	Baseline projections ¹	29.7	27.7	25.5	23.4	21.8	20.4	19.4	18.5	18.0	17.7	17.7
		Targets ¹	n.a.	28.0	25.0	23.0	20.0	17.0	14.0	10.0	7.0	3.0	0.0
New Brunswick	Zero net lending by 2014	Baseline projections	-505	-199	-258	-365	-482	-613	-769	-945	-1 145	-1 370	-1 620
		Targets	n.a.	-100	-50	-25	0		Adopt debt reduction target				
Quebec	Zero net lending by 2014	Baseline projections	-15 462	-8 021	-7 500	-10 137	-13 228	-16 758	-20 664	-24 989	-29 904	-35 472	-41 745
		Targets	n.a.	-6 000	-2 000	-800	0		Adopt debt reduction target				
Ontario	Zero net lending by 2015	Baseline projections	-22 294	-19 392	-22 815	-26 963	-31 494	-36 471	-43 008	-50 257	-58 420	-67 578	-77 841
		Targets	n.a.	-15 000	-11 000	-8 000	-4 000	0		Adopt debt reduction target			
Manitoba	Reduce net debt to <10% of GDP by 2020	Baseline projections ¹	23.6	23.9	22.6	21.6	21.1	21.1	21.5	22.4	23.7	25.4	27.8
		Targets ¹	n.a.	24.0	22.0	20.0	19.0	17.0	15.0	13.0	12.0	10.0	<10.0
Saskatchewan	Reduce net debt to zero by 2020	Baseline projections ¹	9.4	7.9	6.6	5.6	5.0	4.6	4.4	4.4	4.7	5.1	5.9
		Targets ¹	n.a.	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0	0.0
Alberta	Zero net lending by 2014	Baseline projections	-5 402	-5 922	-7 722	-10 051	-12 669	-15 338	-19 547	-24 611	-29 985	-37 666	-46 566
		Targets	n.a.	-4 000	-2 500	-1 500	0		Save a fixed share of revenue				
British Columbia	Reduce net debt to zero by 2020	Baseline projections ¹	8.1	8.6	8.1	7.8	7.7	7.9	8.3	9.0	9.9	11.1	12.7
		Targets ¹	n.a.	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0	0.0
Yukon	Zero net lending by 2014	Baseline projections	-146	-114	-136	-162	-192	-226	-263	-305	-352	-404	-462
		Targets	n.a.	-80	-50	-25	0		Maintain budget balance				
Northwest Territories and Nunavut	Zero net lending by 2015	Baseline projections	-359	-562	-654	-762	-883	-1 016	-1 175	-1 355	-1 556	-1 782	-2 033
		Targets	n.a.	-400	-300	-200	-100	0		Debt reduction target			

1. Per cent of GDP.

rushing to eliminate deficits faster than the economy is expected to return to its potential productive level and in so doing remove fiscal support to the economy. The baseline provincial economic projections are made to be roughly consistent with the OECD *Economic Outlook 87* medium-term baseline, in which the Canada-wide output gap closes in 2015.⁷ For jurisdictions already near fiscal balance, the proposals are instead for debt-to-GDP-ratio targets for 2020 that take into account current debt levels. All things considered, the targets remain somewhat arbitrary, but any target is bound to be, and these are intended only as guides.

One important factor to bear in mind when comparing official fiscal-consolidation objectives (as shown in Table 2.1) and plans with the model-based simulations is the different accounting systems used. Official plans are based on public accounts systems, which differ between jurisdictions and with the national accounts system used in the simulations (see Annex 2.A1). Consequently, differences between official and simulated fiscal consolidation plans and their discussion should be interpreted with caution.

How much spending restraint would be necessary to meet these objectives?

Discretionary-spending-growth limits consistent with achieving the fiscal-consolidation targets set out in Table 2.4 are derived using the fiscal-simulation model described in Annex 2.A1. The spending categories considered discretionary include the bulk of government spending. They are “net current expenditure on goods and services”, “transfers to businesses”, “transfers to provincial/local governments” and “investment in fixed capital and inventories”. Spending in these categories is assumed to grow at the same rate starting in 2011, unlike in the baseline scenario where different, historically based growth rates, were applied to the various expenditure categories. There are two exceptions to this rule where baseline assumptions are preserved. The first is for the growth rate of “investment in fixed capital and inventories” in 2011 when, as in the baseline scenario, stimulus spending on fixed capital is assumed to be withdrawn. The second is for federal transfers to provinces/territories. For 2011 and beyond, they are assumed to grow at 4.8% per year based on a weighted average of the size of major transfers and their expected growth rates (see Annex 2.A1). The focus on discretionary expenditure is not meant to suggest that reforms to programmes that affect non-discretionary expenditure categories (e.g. transfers to persons) should not be envisaged, or that revenue-increasing measures are unnecessary. But discretionary expenditures had been growing at a fast rate before the recession (Table 2.5), certainly much faster than projected trend GDP growth over the coming decade. Therefore, restraint of such spending is undoubtedly necessary in many jurisdictions. In the first instance, discretionary expenditure growth limits that achieve the fiscal targets set out in Table 2.4 in the deterministic approach are derived (Table 2.5).

Unsurprisingly, jurisdictions where most or all the deficit is estimated to be cyclical, such as the federal government, need less spending restraint than those where most of the deficit is estimated to be structural, such as Quebec. Likewise, jurisdictions that can expect faster economic growth, because of stronger population growth or more depressed starting conditions, have an easier time consolidating. Indeed, because the stylised deterministic approach assumes that provincial/territorial output gaps close linearly from 2012 to 2015 and remain closed afterwards, jurisdictions with larger projected output gaps in 2011 are implicitly assumed to grow faster than other jurisdictions over the following years to 2015 relative to their potential rates of growth, thus making fiscal consolidation appear somewhat easier. While it is likely that jurisdictions that have suffered the most during the

Table 2.5. **Spending restraint necessary to achieve fiscal-consolidation targets**

	Nominal rate of growth of overall discretionary expenditure ¹ (%)					
	Average 1997-2007 ²	Estimates ³		Required over the 2010-to-2020 period to meet consolidation objectives ⁴		
		2008	2009	In deterministic approach	In stochastic approach on average	In stochastic approach with 80% probability
Federal government ⁵	4.5	9.6	6.5	4.5	4.0	1.5
Newfoundland and Labrador	7.4	5.7	14.5	0.5	0.5	0.0
Prince Edward Island	6.0	9.3	15.0	0.5	1.0	0.5
Nova Scotia	4.9	3.7	6.5	3.0	4.0	3.5
New Brunswick	5.0	2.5	7.9	3.5	3.5	3.0
Quebec	6.0	11.4	10.8	1.5	2.0	1.5
Ontario	6.6	4.2	14.7	0.5	0.0	-0.5
Manitoba	5.8	7.1	9.3	3.5	4.0	3.5
Saskatchewan	5.9	20.2	0.3	5.0	4.5	4.5
Alberta	9.3	13.7	1.8	2.5	1.5	1.0
British Columbia	4.3	3.5	5.8	2.5	3.0	2.5
Yukon	6.4	7.0	16.8	1.5	1.5	1.0
Northwest Territories and Nunavut	6.6	20.4	2.4	1.0	0.5	0.5

1. Discretionary expenditure is defined to include net expenditure on goods and services, provincial transfers to local governments, transfers to businesses and acquisition of non-financial capital.

2. Based on Provincial Economic Accounts.

3. Based on official budget documents for provinces/territories (direct programme spending or operating expenditure) and on National Accounts for the federal government.

4. The simulations are done in 0.5 percentage point increments.

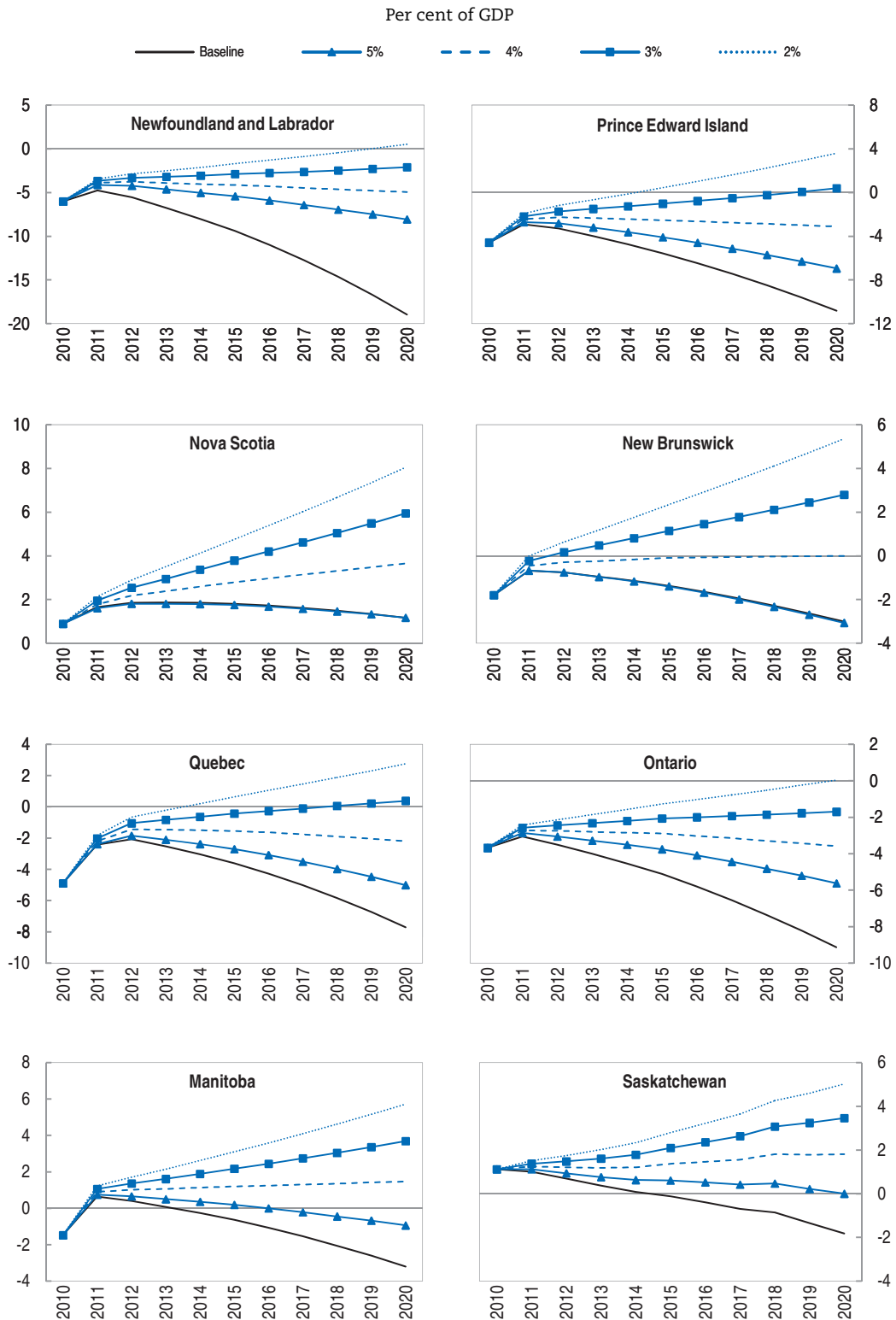
5. Federal transfers to provincial/territorial governments are not considered discretionary expenditure.

Source: Statistics Canada and OECD calculations.

recession will also bounce back the most during the recovery, it is by no means certain. The great uncertainty around how provincial/territorial economies will evolve over the decade makes it useful to also offer guidance on how much fiscal consolidation would be necessary to reach the targets set out in Table 2.4 under a wide range of plausible growth paths in a probabilistic framework. To this end, a stochastic projection approach is used (see Annex 2.A1) to trace out mean net lending paths from 2010 to 2020 across 1 000 simulations using baseline assumptions compared to consolidation scenarios where discretionary expenditure grows at 5%, 4%, 3% and 2%, respectively (Figure 2.4).

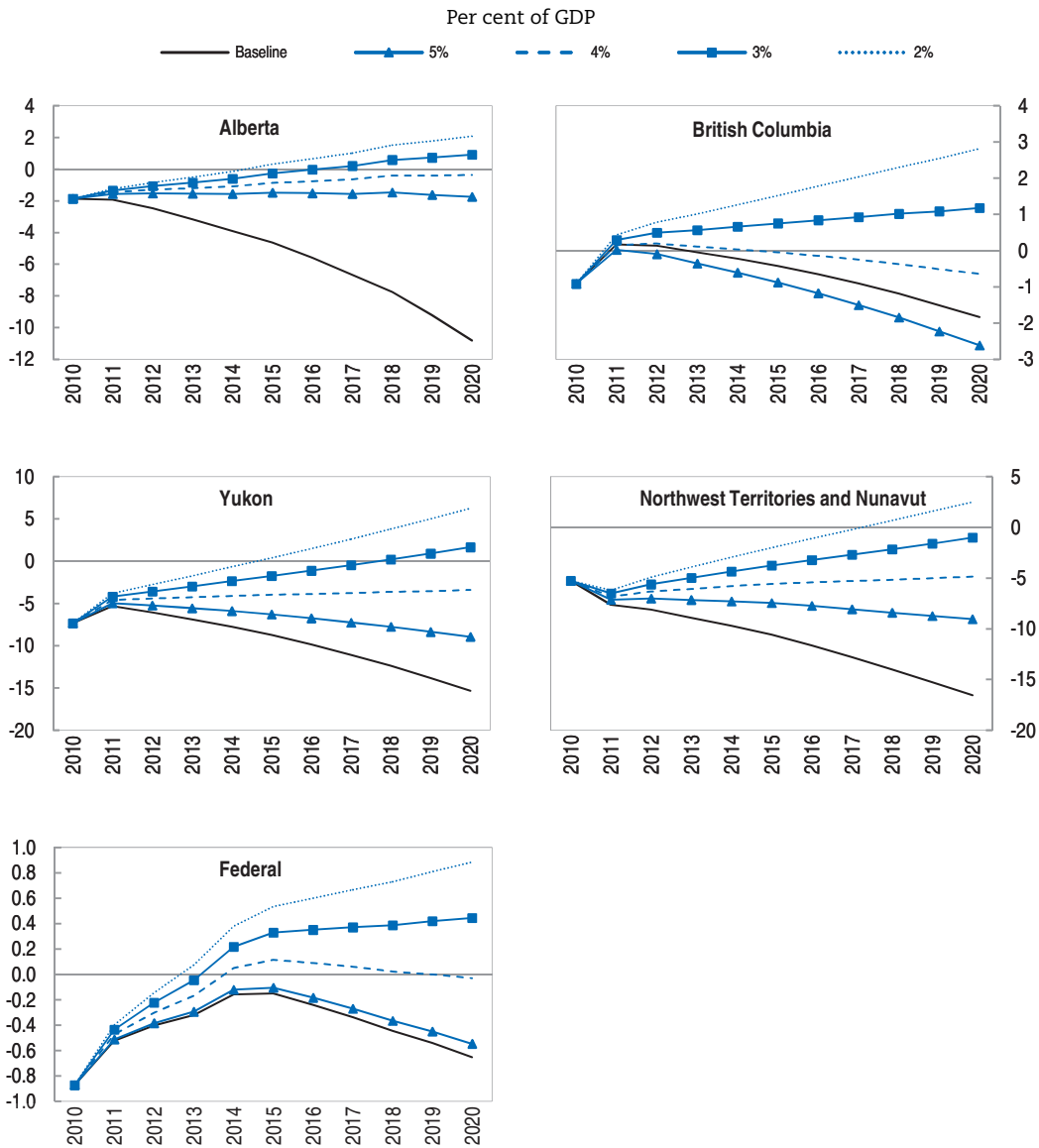
On the basis of these simulations, discretionary-expenditure-growth limits that, on average, achieve the fiscal targets set out in Table 2.4 are derived (Table 2.5). They are broadly similar to those derived using the deterministic approach. Using these to guide fiscal policy would far from guarantee that consolidation objectives would be attained, however. In fact, governments could only be about 50% certain of achieving these objectives. Many jurisdictions, especially those concerned about debt-rating downgrades, will want to be more certain of achieving objectives in the time span promised. To illustrate the difference in the required stringency of spending-growth paths to raise the likelihood of achieving fiscal-consolidation objectives, discretionary-expenditure-growth guidelines consistent with an 80% probability of reaching the deficit and/or debt-ratio targets under the stochastic projection approach are also derived (Table 2.5). In most cases, an extra 0.5 percentage point of restraint in the growth of discretionary spending is necessary. The simulation exercises demonstrate that jurisdictions starting from large cyclically adjusted

Figure 2.4. Mean net lending in stochastic approach under baseline and consolidation scenarios¹




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Figure 2.4. Mean net lending in stochastic approach under baseline and consolidation scenarios¹ (cont.)



1. The consolidation scenarios use the same nominal growth rate, given in the legend, for all discretionary expenditure categories. See Annex 2.A1 for more details.

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deficits, such as Ontario, need more stringent consolidation strategies over a longer time span than those in better fiscal health.

Curbing federal transfers to provinces would make provincial fiscal consolidation significantly tougher

Current legislation on federal-provincial transfers expires in 2013/14. In all simulations reported so far, transfers to provinces are assumed to grow at a rate of 4.8% per year until 2020. The federal government has promised not to cut provincial transfers to eliminate its deficit, as it did in the mid-1990s. But if it were merely to lower the growth rate of these transfers starting in 2014, most provinces would find it substantially more difficult

to meet their own consolidation objectives. For each percentage point fall in the growth rate of federal transfers to provinces from 2014 on, the probabilities that provinces will be able to meet the fiscal-consolidation objectives in Table 2.4 by following the spending-growth rules in the final column of Table 2.5 fall significantly (Table 2.6). The territories are not shown because they depend on a federal transfer called Territorial Formula Financing, which is not subject to the same negotiation as the three major transfers to provinces. Two factors must be kept in mind when interpreting the results. First, the more distant in time the fiscal-consolidation objective, the greater the cumulative impact of changes in federal transfers on the probability of meeting this objective. Of course, only fiscal outcomes in 2014 and beyond are affected, which explains why the probabilities for Prince Edward Island, whose fiscal-consolidation objective is prior to this date, do not vary. Second, jurisdictions which are dependent on federal transfers for a large share of their revenue, such as the Atlantic Provinces, would of course be more affected than jurisdictions that depend more on their own revenue, such as Alberta.

Table 2.6. **Probabilities of provinces meeting their fiscal-consolidation objectives**
Per cent

	Memo.: Share of revenue attributable to federal transfers in 2007	Nominal rate of growth in federal transfers to provinces ¹ from 2014 to 2020					
		4.8%	4%	3%	2%	1%	0%
Federal government	n.a.	79.5	81.1	83.0	84.8	86.5	89.1
Newfoundland and Labrador	51.3	90.0	77.1	59.4	42.7	27.2	13.9
Prince Edward Island ²	41.7	92.7	92.7	92.7	92.7	92.7	92.7
Nova Scotia	39.5	97.3	91.1	67.5	33.1	13.1	3.2
New Brunswick	36.5	97.7	96.5	93.5	90.3	85.3	78.2
Quebec	17.6	90.7	89.9	88.1	85.9	83.2	79.6
Ontario	16.0	81.1	77.9	73.5	71.0	67.7	64.3
Manitoba	32.0	83.4	78.2	71.1	63.7	56.5	47.9
Saskatchewan	20.9	79.0	70.0	58.6	48.9	40.0	32.2
Alberta	8.7	77.6	76.3	73.7	71.9	69.8	68.3
British Columbia	15.8	86.3	80.8	73.3	64.2	56.3	47.0

1. The territories are not shown as they do not receive the three major transfers considered here (Equalization, CHT and CST) but they instead receive Territorial Formula Financing, which is subject to a different agreement.

2. The probabilities are constant because the consolidation objective is anterior to 2014.

Source: Statistics Canada and OECD calculations.

To curb spending growth, start with withdrawing fiscal stimulus and restrain public-sector wage growth

For all governments, an important first step to restrain spending is to keep temporary economic stimulus measures temporary. Failure to let them expire, and notably to reduce capital expenditure to pre-crisis levels as assumed in the simulations, would only make fiscal consolidation more difficult to achieve. At the federal level, temporary measures include the Canadian Skills and Transition Strategy (worth about CAD 8 billion), including enhancements to Employment Insurance and new funding for skills and training, and special infrastructure investment funds (about CAD 12 billion). Some measures have already expired, most notably the Home Renovation Tax Credit. At the provincial level, fiscal stimulus has mostly taken the form of accelerated infrastructure spending, taking advantage of federal co-financing.

The promise to focus on curbing the growth of programme spending raises the issue of public-sector compensation. Apart from Saskatchewan and Alberta, all governments in Canada have seen average weekly earnings in public administration grow faster on average than in the rest of the economy over the past two decades (Figure 2.5). While there may be good reasons for a higher average level of pay in the public sector, such as differences in the educational/skill composition of the workforce, these should not give rise to large differences in the growth rate of compensation unless that composition is also changing over time. Also, careful studies that look at comparable occupations in both the public and private sectors find a significant public-sector pay premium. Indeed, the federal government's own studies show that with the exception of executives and trades people, federal public-sector employees are paid a premium over their private-sector counterparts (Treasury Board of Canada Secretariat, 2006). Whereas the premium was smaller historically, the rate of increase in salaries in the federal public service since 1998 has exceeded what the private sector has experienced on average. The public-sector pay premium is even more marked when considering the generosity of public-sector pension plans. Only a small and shrinking fraction of private-sector workers enjoys pension plans with parameters comparable to those found in the public sector. The result is that the lump-sum value of a middle-income public-sector retiree's pension, not including private retirement wealth, is roughly five times that of a typical private-sector worker, including the latter's pension plan, if any, and all private retirement accounts (Pierlot, 2008). With a view to restraining government spending growth to eliminate deficits, but also to reduce income inequality and reinforce the social contract between citizens and their public servants, governments should devise strategies to limit wage increases in their public sectors. Indeed, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Alberta and British Columbia have all signalled their intent to limit public-sector pay increases.

If new revenue-raising measures cannot be avoided, start with broadening tax bases and green levies

Although spending restraint is the most effective and economically stimulative way to achieve fiscal consolidation, it might also be necessary to consider new revenue measures. Within existing tax systems and without introducing any new tax, one strategy to raise more revenue would be to scale back the large number and relative importance of tax expenditures in the federal and provincial/territorial tax bases.⁸ In 2004, the federal government reported 143 tax expenditures under the income tax system (personal and corporate), accounting for a revenue shortfall relative to a benchmark tax system of 5.4% of GDP (OECD, 2010a).⁹ General business incentives, not including sector- and region-specific tax relief, accounted for about half this amount. Personal exemptions include an age credit for seniors, a mineral exploration tax credit for investors and a first-time home buyers' tax credit. The federal government also reported 32 tax expenditures under the Goods and Services Tax (GST) in 2004, equal to 1.2% of GDP. Goods and services that are exempted or zero-rated under the GST include basic groceries, prescription drugs, health and dental services, financial services, long-term residential accommodation, child-care services and educational services. All together, tax expenditures subtracted an amount equal to 6.6% of GDP from federal revenue in that year, or roughly 55% of the relevant tax revenue (Figure 2.6). Relative to some other OECD countries, such as Germany, Korea and the Netherlands, these proportions are large. It should be noted that the reporting of tax

Figure 2.5. **Average weekly earnings by province**

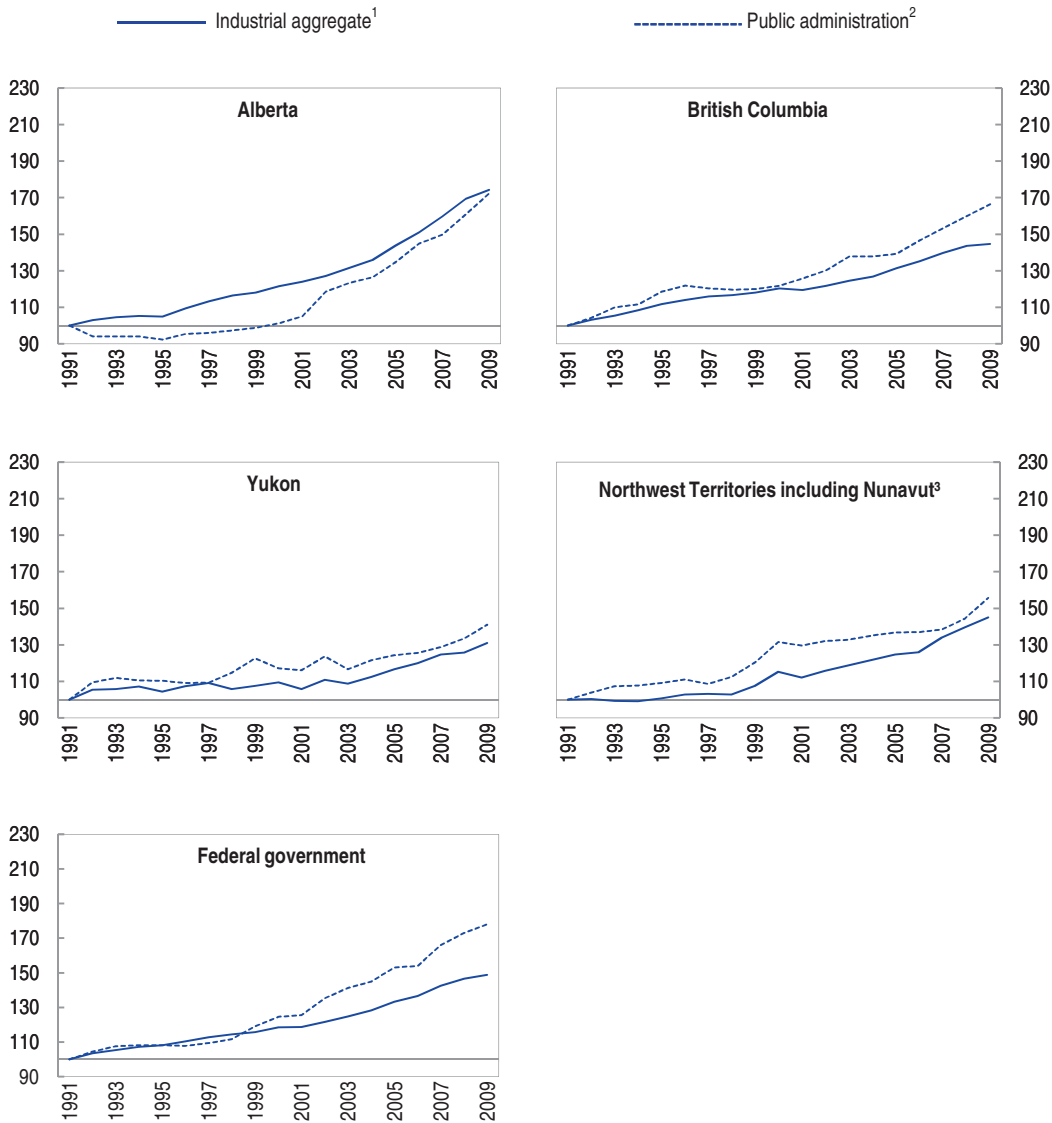
Indices (1991 = 100)



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Figure 2.5. **Average weekly earnings (cont.)**

Indices (1991 = 100)



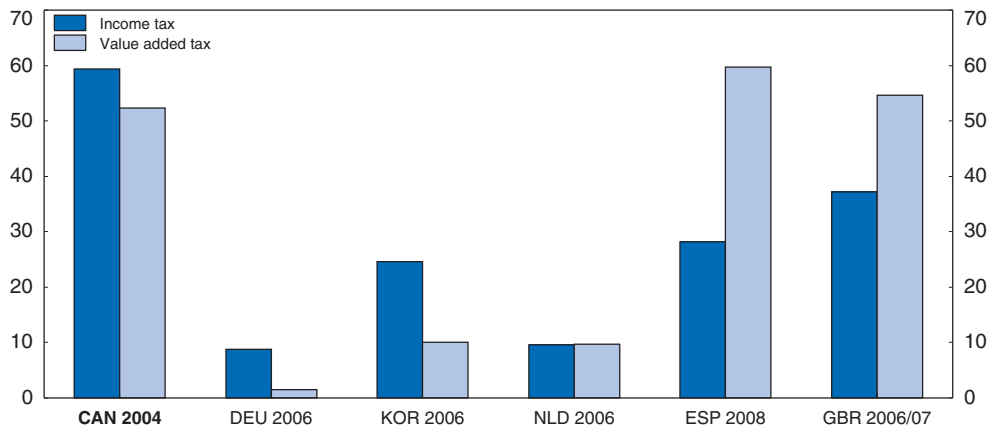
1. The industrial aggregate covers all industrial sectors except those primarily involved in agriculture, fishing and trapping, private household services, religious organisations and the military personnel of the defence services.
2. The public sector comprises establishments primarily engaged in activities of a governmental nature, such as legislative activities, taxation, national defence, public order and safety, immigration services, foreign affairs and international assistance, and the administration of government programs. It does not cover government-owned establishments in other sectors such as health care (e.g. hospitals) or education (e.g. schools and universities).
3. There is a break in the series in 2001. For that and later years, the series are weighted averages of the two separate territories using sectoral employment as weights.

Source: Statistics Canada, CANSIM Tables 281-0027 and 281-0024 and OECD calculations.


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expenditures varies by country, and Canada is recognised as having a comprehensive approach relative to other countries. Even so, high proportions of tax expenditure to GDP imply that broadening tax bases without increasing tax rates would yield new revenue and at the same time potentially remove some economic distortions. This conclusion also goes for provinces/territories. Though tax-expenditure evaluations are not available for all of them, provinces/territories use tax bases that are very similar to those of the federal

Figure 2.6. **Intensity of use of tax expenditures**
Per cent of relevant tax receipts



Source: OECD (2010), *Tax Expenditures in OECD countries*, Paris, OECD.

StatLink  <http://dx.doi.org/10.1787/888932320295>

government, so the intensity of tax expenditures in their own tax bases would be comparable, as would be the possible broadening and proportionate revenue increase.

If new taxes are needed, environmental levies that correct negative externalities stand out as the most promising options. For instance, the federal government has announced a target of reducing carbon emissions by 17% from 2005 levels by 2020. An analysis based on reducing emissions by 20% from 2006 levels by 2020 found that a carbon price starting at CAD 40 per tonne in 2011 and rising to CAD 100 per tonne by 2020 would be needed, along with other policies (Pembina Institute and David Suzuki Foundation, 2009). This analysis found that gradually phasing in such carbon charges would yield about CAD 45 billion per year in extra revenue to the government by 2020, enough to completely eliminate the federal deficit in the baseline scenario. (See Box 1.3 in Chapter 1 for more on climate change policies.)

Finally, new revenue should be raised through instruments that introduce the least possible economic distortions. Taxes on immovable property and value-added taxes have been shown to be the most economically efficient and growth-friendly taxes (Johansson *et al.*, 2008; Arnold, 2008). At the federal level, the two recent successive one-point cuts in the GST could be reversed. Failing that, provinces could decide to occupy the value-added tax room opened up by the GST cuts and raise their own sales (or preferably value-added) tax rates, as Nova Scotia has done.

Discussion by jurisdiction

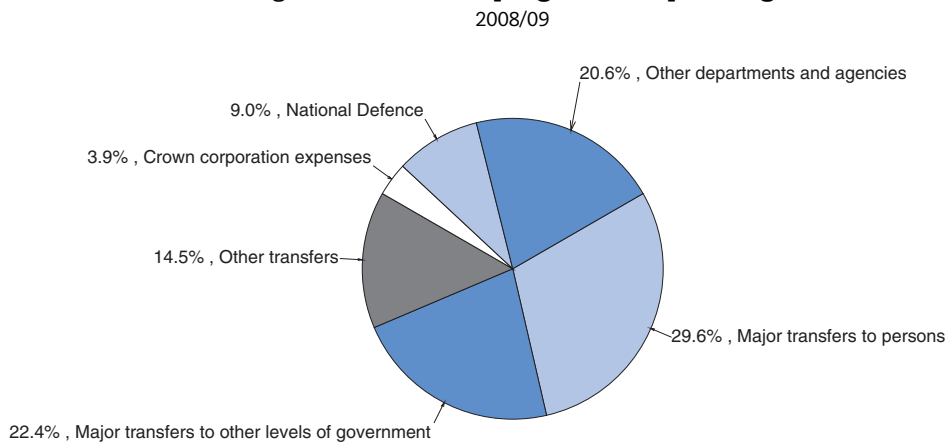
The subsections below discuss consolidation strategies in a more tailored way for each jurisdiction and offer some thoughts on related fiscal issues.

Federal government

According to the 2010 federal budget, released in March, the deficit will be virtually eliminated by 2014/15 through a combination of cyclical increases in revenue and spending restraint. The federal strategy aligns well with the general recommendations made above: letting temporary fiscal-stimulus measures expire and focusing on restraining the growth

of discretionary spending. On the revenue side, besides the general improvement in cyclical revenue, the only significant discretionary revenue measures planned are an increase in employment insurance (EI) premiums¹⁰ and a move to close certain tax loopholes. On the spending side, besides the lapsing of temporary fiscal-stimulus measures after 2010/11, the federal government's fiscal-consolidation strategy focuses on restraining the growth of direct programme spending. This excludes transfers to persons and governments, leaving only about half of total programme spending subject to restraint (Figure 2.7).¹¹ Announced measures include restraining national defence spending growth, capping the international assistance envelope, containing public-administration costs by freezing operational budgets and identifying savings through strategic programme reviews. These measures are expected to help contain total direct programme-spending growth to about 1.3% per annum starting in fiscal 2011/12 when temporary stimulus measures will have expired. The simulation exercises above suggest that this spending-growth target would be sufficient to eliminate the deficit by 2014 with a high probability and, if maintained thereafter, would generate persistent surpluses and allow a rapid rate of debt reduction.

Figure 2.7. **Federal programme spending**



Source: Department of Finance Canada, *Fiscal Reference Tables*, www.fin.gc.ca/pub/frt-trf/index-eng.asp.

In recent years, federal transfers to provinces have increased much more than initially planned, partly because provinces have successfully put pressure on federal politicians to solve a perceived vertical fiscal imbalance. A case in point: from 1997 to 2005, federal budgets repeatedly announced plans for stable or even declining transfers under the Canada Health and Social Transfer (CHST, now split into the CHT and CST) over the medium term, only to have those commitments overturned and replaced by higher spending tracks in the next fiscal update or budget (Smart, 2005). Frequently, transfer increases have been the result of negotiations among the premiers and the prime minister at their annual meetings – as was notably the case in 2000, 2003, and 2004. The result is a transfer system with unpredictable federal spending commitments, one where provinces are conceivably able to extract more transfers from the federal government by manufacturing political crises, for instance around waiting times in hospitals, thus creating perverse incentives. There is empirical evidence that, in a federal system (in this

case Germany), sub-national jurisdictions with softer budget constraints (those with more political influence in the upper chamber of the German parliament) exhibit higher deficits and debts, and receive more “bailouts” from the federal government (Fink and Stratmann, 2009). Furthermore, these jurisdictions are less efficient in spending public funds and are more prone to respond to rent seeking by interest groups. In the last few years the federal government in Canada has taken steps to put transfers to provinces, notably Equalization, on more predictable paths. An even more stable, rules-based transfer system could limit the growth of federal transfers, sharpen incentives for provincial governments and help them plan their fiscal-consolidation strategies by providing them with more certainty than they have had over the last two decades. Well in advance of the expiration of the current accord in 2013/14, the federal government should announce a “growth cap” under which federal-provincial negotiations would take place. For instance, the growth of transfers other than Equalization, which has already been capped at a three-year moving average of nominal GDP growth, could be similarly limited by GDP or federal revenue growth.¹² Such a cap would help enforce “hard” budget constraints on provinces and send a signal to both government negotiators and provincial public-sector unions regarding the wage increases they can hope for as new work contracts are negotiated over the next few years.

Newfoundland and Labrador

On a public-accounts basis, Newfoundland and Labrador registered four consecutive surpluses from 2005/06 to 2008/09. As noted by the province’s Auditor General, the surpluses in recent years were due in large part to increased oil and gas revenue. Buoyant revenue from natural resources also allowed the province to increase spending at a fast pace over the last decade. In fiscal 2009/10 the province is estimated to have realised a deficit, however, and additional deficits are projected for the current and the next two fiscal years. A cut in programme spending is planned in 2012/13, but this will be insufficient to balance the budget. To do so by 2015, the simulations above suggest that discretionary spending would have to be frozen. Such a large downward adjustment in the growth rate of spending will require considerable discipline. Once the zero deficit is achieved, debt-reduction objectives should be announced and continue to be supported by spending-growth limits and surplus targets. Newfoundland and Labrador being one of the jurisdictions which face the direst demographic outlooks, reducing the level of debt takes on added urgency. After eliminating its debt, Newfoundland and Labrador should implement a savings policy for its substantial natural resource revenues along the lines recommended for Alberta (see below).

Prince Edward Island

The economic downturn and the high rates of growth of discretionary spending over the past few years have caused the fiscal position of Prince Edward Island to deteriorate significantly from a balanced position only a few years ago. In its 2010 budget the government has chosen to balance the budget over a term of four years by holding the pace of growth in expenditure below the rate of increase in revenue. The simulations imply that rates of discretionary-spending growth should come down significantly and be limited to between 0.5% and 1% per year to balance the budget by 2013, after which debt-reduction targets should be adopted.

Nova Scotia

After its election in June 2009, the new government commissioned an independent review of the province's finances, which found that the deficit was set to increase to CAD 1.3 billion (on a public-accounts basis) by 2012/13, with net debt continuing to grow (Deloitte and Touche, 2009). Another report commissioned by the government to study longer-term fiscal issues demonstrated that without permanent changes in the revenue or spending paths relative to recent trends Nova Scotia would face a structural deficit (Nova Scotia Economic Advisory Panel, 2009). As a result, first in its September 2009 budget and then in its April 2010 budget, the new government presented fiscal projections to 2013/14 that include new revenue measures and significant expenditure cuts, with the objective of achieving a small surplus in 2013/14. Most notably, the province is increasing its Harmonised Sales Tax (HST) rate by two percentage points to 10%, effective 1 July 2010. The spending cuts are to be made via an expenditure management initiative, starting in 2010/11, that is projected to identify CAD 772 million in yearly savings by its fourth year, which implies that programme expenditures would be lower in 2013/14 than in 2009/10. The simulations presented above are somewhat more optimistic regarding the medium-term fiscal outlook than the two reports commissioned by the government. Taking the tax-rate change into account, they show that on a national-accounts basis, the budget is expected to be balanced in 2010 after a small deficit in 2009. But they also show that the province faces longer-term fiscal pressure. Without a reduction in the recent rate of expenditure growth, the province would return to a negative net lending position before the end of the decade. On the other hand, by reducing discretionary-expenditure growth to between 3% and 4% per year, Nova Scotia could generate fiscal surpluses over the coming decade and lower its net debt-to-GDP ratio from about 30% now to zero by 2020.

New Brunswick

In its December 2009 budget the government presented a six-year plan that, it argued, would put the province on the path to a balanced budget by 2014/15, two years later than the original four-year plan presented in March 2009. It also stated that the objective after attaining a balanced budget would be to reduce the province's net debt. In the new plan, total-spending growth is assumed to be 0.5% on average over the period 2009/10 to 2014/15. The simulations suggest that holding discretionary-spending growth to between 3% and 3.5% per year would be sufficient to eliminate the deficit by 2014.

Though details are lacking in the government's plan as to how the ambitious reduction in spending growth is to be achieved, part of it relies on containing wage growth in the public sector. To do so, the government took the unusual step of announcing in its March 2009 budget:

- a wage freeze on base salaries for all management and non-unionised employees from 1 April 2009 to 31 March 2011;
- that effective 17 March 2009, all expiring collective bargaining agreements for which no replacement agreement has been signed would be re-negotiated for a two-year term with no wage increases during that period;
- a wage freeze for Members of the Legislative Assembly extending to 2010/11;
- that all crown corporations would be directed to institute a similar wage-restraint policy.

The government signalled its intent to implement the wage-restraint policy through negotiations, but also stated that it was prepared to legislate it if necessary. Wage costs

being a very significant share of public expenditure, constraining their growth sends a strong signal to markets that governments are serious about curbing spending growth.

Quebec

Given its high level of debt – it is the most indebted province in relation to the size of its economy – Quebec’s fiscal-consolidation effort needs to be especially vigorous. The province’s long-term debt has persistently carried the highest spread over federal government debt of the four large provinces. The government intends to limit programme-spending growth to 2.9% in 2010/11 and to 2.2% thereafter until 2013/14, at which time the budget would be balanced, but not without new revenue-raising measures. Among such measures is a one percentage point increase (from 7.5% to 8.5%) in the Quebec Sales Tax (QST) effective 1 January 2011 and a further one percentage point increase effective 1 January 2012. Quebec is also introducing an annual health contribution, for each adult, of CAD 25 in 2010, CAD 100 in 2011 and CAD 200 as of 2012. Taking these new revenue measures into account, the simulations suggest that even greater efforts at restraining spending and/or other revenue-raising measures are needed. Assuming an objective of balancing the budget one year later than the government’s, by 2014, the simulations imply that discretionary-spending growth should be limited to between 1.5% and 2% from 2011 on to achieve this objective.

Fiscal competition with other provinces and countries constrains the scope for tax increases. Thus, Quebec is now examining options to collect more revenue through user charges, of which it now makes relatively little use. A 2008 report estimated that Quebec could raise about CAD 5 billion, or about 8% of current budgetary revenue, by closing the gap with other jurisdictions (Government of Quebec, 2008). Electricity tariffs are especially low, hiding large natural-resource rents. Economic efficiency dictates that the price of electricity should match its marginal opportunity cost, determined by the price at which Quebec can sell electricity on inter-provincial or international markets, or at a minimum it should match its marginal production costs (Boyer, 2005 and 2007).¹³ Despite having been unfrozen a few years ago, tuition fees for colleges (CEGEPs) and universities remain especially low and could be increased substantially while remaining competitive with other North American jurisdictions (Laberge, 2008). Rather than raising further revenue, a more significant effort at reducing expenditure growth could be made, which would almost certainly require substantial structural reforms in areas like health care (see Chapter 3).

In the past, Quebec had a balanced-budget rule targeting only the operating balance (the so-called “golden rule”). This fiscal rule created two problems. *First*, because it excluded capital expenditure, it provided an incentive to minimise maintenance expenditure (part of operating expense) relative to new capital formation. *Second*, whereas the rule required budget balance, Quebec should instead have run large surpluses during the pre-crisis period to pay down debt, the equivalent of pre-funding future obligations associated with demographic change. The fiscal rule had the perverse effect of limiting efforts to close the operating deficit, because merely achieving a balanced operating budget was enough to declare success and reap political dividends. Given its need to reduce debt quickly, once the deficit has been eliminated, surplus targets combined with debt-reduction objectives would focus attention on the right measures. A similar approach was recommended some years ago by Joanis and Montmarquette (2004).

The Government of Quebec should consider winding down the Generations Fund, an asset-accumulation fund created in 2006 and applying the proceeds to debt repayment.

The idea behind the fund was that the province could earn a greater financial rate of return on assets in the fund than it pays on its debt, thereby eventually allowing for greater debt reduction. But such a possibility exists only if there is a spread between the cost of the province's liabilities and the return on assets the fund invests in, and the risk difference corresponding to this spread effectively falls on taxpayers. The existence of such a risk became obvious during the economic crisis as the fund's value collapsed. The average rate of return on the fund was -22.4% in 2008 (a loss of CAD 326 million). Amounts diverted to the fund over the past years would have been better applied directly to debt reduction, as they would in the future as well.

Ontario

On a public-accounts basis, Ontario programme spending increased at a trend rate of 7.3% between fiscal 2000/01 and 2007/08. If the province had kept spending to the amounts legislated in spring budgets, it would now be in a much better fiscal position, but additional expenditure was voted on the back of strong cyclical revenue increases for several years in a row, creating large structural obligations. The province now faces a deep structural deficit (see Table 2.2). As required by Ontario's *Fiscal Transparency and Accountability Act 2004*, the government has tabled a recovery plan to balance its books by 2017/18. The plan assumes that revenue growth averages 4.2% annually over the next seven years, while annual increases in programme outlays are held to 1.9% per year on average beyond 2012/13. The government's goal is to hold annual health-sector spending increases to 3% by 2012/13, significantly lower than recent growth, and this goal is the key to the fiscal-consolidation plan. The simulations assume that the budget should be balanced by 2015, two years prior to the government's objective. They imply that to do so would require freezing discretionary expenditure from 2011 on. Other simulations (not shown in the tables above) reveal that even holding discretionary-spending growth to 2% from 2011 on would not be sufficient to balance the budget by the government's target year of 2017. These results suggest two broad choices. Ontario could seek to constrain discretionary spending more than currently planned, a strategy which undoubtedly would need to be supported by extensive structural reforms to be credible, or it needs to raise more revenue. Given the very large increases in public expenditure in recent years, which were not justified either by inflation or population growth, a strategy of expenditure consolidation appears feasible and preferable.

On the topic of fiscal rules, Ontario provides an example of the potentially counterproductive effects of rules that are too strict. Starting in 1999, the government had a no-deficit rule with financial penalties for cabinet members. The rules may have led to a lack of transparency in budgeting. Since then, Ontario has abandoned strict rules, a flexibility that is proving useful in the current context, but which also did not prevent the emergence of a large structural deficit. This 10-year history suggests that while the rules may have been too strict in the past, they now seem to have shifted too close to discretion. If anything, it highlights the need for independent fiscal agencies so that the true fiscal situation can be assessed, and political incentives brought to bear, in real time.

Ontario has decided to harmonise its provincial sales tax with the federal GST, a value-added tax, as of 1 July 2010. Both the province and the federal government, which worked with Ontario on the new policy and supported harmonisation with transitory financial compensation to the province, are commended on this development, long advocated by the OECD. Unfortunately, Ontario has decided to provide point-of-sale rebates for a number

of goods or services categories from the new Harmonised Sales Tax (HST) (*e.g.* some prepared food and beverages and print newspapers) in addition to those already exempt under the GST, thus going against advice to have as broad a base as possible to minimise distortions. Removing these provincial point-of-sale rebates, while keeping the same tax rate (8% for the provincial component), should be the first step taken if fiscal consolidation requires raising more revenue. As it stands, the tax package that introduces the HST is expected to be broadly revenue neutral for the province, as higher revenue from the broader sales tax base will be offset with a package of temporary and permanent business and personal income tax cuts and grants, the latter designed to offset the regressivity of higher spending-based taxation.

Manitoba

Manitoba's Budget 2010 projects a deficit in 2010/11 followed by three further years of deficits before balance is achieved in 2014/15. These deficits are not large, but the province has chosen to keep overall expenditure growing at an annual average rate of 1.8% over the four-year period and to balance the budget gradually. As this plan means five consecutive years of red ink when including the 2009/10 deficit, the government will amend the current legislated fiscal rule requiring budget balance over a four-year period. The new legislation will require the current budget shortfall to be eliminated over four years and a return to surplus in year five of the plan. It will also keep the legal requirement to have balanced budgets into the future. On a national-accounts basis, the simulations project that the province will show a small surplus in 2011 after a deficit the previous year. Furthermore, they suggest that by maintaining growth in discretionary expenditure between 3.5% and 4% per year from 2011 on, the province can reduce its net debt-to-GDP ratio to below 10% by 2020.

Saskatchewan

Saskatchewan's public-accounts deficit in 2009/10 was funded by drawing down the Growth and Fiscal Security Fund (GFSF). Without a downward adjustment to spending growth relative to recent history, deficits would likely continue and would soon cumulatively dwarf the amount left in the GFSF, estimated at about CAD 705 million at the end of fiscal 2009/10. The government would then have to suspend the application of its existing fiscal rules, which require fully offsetting a deficit the following fiscal year. Saskatchewan started this necessary adjustment by cutting total operating expense in 2009/10. The 2010 budget projects that operating spending will be held constant in 2010/11 and then rise by 1% in 2011/12 and by 2% in the following two fiscal years, for an annual average growth rate of 1.3% from 2010/11 to 2013/14. The budget is projected to be balanced without recourse to the GFSF in 2012/13. The simulations show that, on a national-accounts basis, the province will likely realise a surplus in 2010 after a small deficit in 2009. Therefore, the simulations assume an objective of reducing the net debt-to-GDP ratio to zero by the end of the decade. They show that Saskatchewan could attain this objective by limiting growth in discretionary expenditure to between 4.5% and 5% per year.

Alberta

In Alberta, the rapid deterioration in public finances in recent years involves a downturn in the global energy market as much as the recession. Some of this turnaround in energy prices may prove to be only temporary in nature – for instance the oil price has rebounded from its recent low. But some of it may well be permanent. In particular,

revenue from natural gas royalties have collapsed over the past two years along with the international price for natural gas, partly reflecting shale gas discoveries in the central-eastern United States, which have resulted in a structural change in the market for gas and in traditional pricing models. In 2007, the government raised the royalty rates on natural resource extraction but it recently backtracked on that policy. Given these developments, the government estimates a CAD 3.6 billion deficit for the 2009/10 fiscal year. The deficit was fully funded by transferring CAD 3.6 billion out of the Alberta Sustainability Fund (ASF),¹⁴ which has already declined from CAD 16.8 billion at the end of the 2007/08 fiscal year to a projected 15 billion at end-2009/10. The government expects to continue drawing down the fund for the current (2010/11) and the next fiscal years, at which point its value is expected to have fallen to about CAD 4.7 billion. In 2012/13, the government expects to have eliminated its deficit, mainly by severely constraining spending growth over the next few years while revenue recovers.

Indeed, spending is being squeezed in typical boom-bust fashion. As shown in Guillemette (2010), the province exhibits a clear pattern of pro-cyclical fiscal policy whereby spending is ramped up or non-resource revenue slashed (e.g. by using higher royalties to cut tax rates or give rebates) in good years followed by spending contraction in bad ones. Instead of stabilising the economy, the government has thus frequently exacerbated macroeconomic volatility. Once again, after growing at a pace of 10% per year as revenue was growing at 8% per year from fiscal 2002/03 to 2008/09 (on a public-accounts basis), the government now projects total spending to grow at an average of only 2% per year from 2008/09 to 2012/13, and to actually fall in 2011/12. These projections rely on rising prices for energy commodities and real GDP growth of around 3% per year, which result in nominal GDP growth of 6.5% to 8% per year. The simulations suggest that restraining discretionary-spending growth to roughly 1.5% to 2% per year would at best balance the budget two years later than the government objective, in 2014. A legislated spending-growth rule, rather than the current in-year spending rule, would help anchor fiscal policy and, if respected, would avoid another acceleration of spending when the budget is finally balanced. The rule should also be consistent with a new saving policy.

Enacting a new policy on saving is indeed a crucial issue for Alberta. The province is comparable to Norway and Chile in that it benefits from large natural resource reserves and derives a large part of its revenue from royalties. Unlike Norway, which saves all of its oil and gas revenue in a stabilisation fund and draws only 4% of the fund's value each year, Alberta has not had a consistent and disciplined approach to saving. In the 1970s, the government had a policy of saving 30% of its resource revenue in a fund to provide resources for the future. In the face of falling resource prices and rising public expenditures during the 1980s, the province stopped saving. In the early 1990s, with large deficits, rising debt levels and high per capita spending, Alberta went through a painful experience of cutting spending to restore its fiscal strength. The government then set its sights on paying down its debt in full, which it achieved while accumulating upward of CAD 36 billion in net financial assets, thanks in part to rising natural resource prices from 2000 to 2008. Now, with a high level of structural spending, the province has returned to deficit and taken to drawing down its Sustainability Fund to fill the budget gap.

The result of this *ad hoc* saving approach is that Alberta's resource wealth is unlikely to benefit current and future generations equitably. Even current generations lose out if too-rapid short-term spending growth in response to rising cyclical royalties is dissipated in inflation. To improve intergenerational fairness and help achieve long-term fiscal

sustainability, a much higher percentage of resource revenue should be saved (Shiell and Busby, 2008). To this end, a government-commissioned report recommended that Alberta legislate a fiscal rule that requires the government to set aside a fixed share of the province's total revenue in a new consolidated savings fund with a target of building up a CAD 100 billion net asset position by 2030 (Alberta Financial Investment and Planning Advisory Commission, 2007). In addition, the Commission recommended that any year-end surpluses be used first to top up a CAD 3.5 billion macroeconomic stability fund (a re-purposed ASF), as required, and that at least 75% of the rest be allocated to the new consolidated savings fund. Only 4.5% of the value of the fund could be disbursed annually. Such a saving policy, when combined with a spending-growth rule, would have the major advantage of building up more savings in good times, rather than using revenue windfalls to ramp up spending. Savings could be used in bad times to avoid cutting back on public services. That would no longer amplify the business cycle.

British Columbia

Due to the effects of the economic crisis on provincial finances, the government amended its *Balanced Budget and Ministerial Accountability Act* in 2009 to permit temporary deficits until 2012/13. The official fiscal-consolidation plan thus states that the budget must be balanced in 2013/14 and that the debt-to-GDP ratio will decline thereafter. The government's projections are for total expenses to rise by about 2.4% per year until balance is achieved. The simulations project no deficits in 2011 and 2012 even under baseline assumptions, but a return to deficit starting in 2013 unless some effort at reducing spending growth relative to recent trends is made. Limiting discretionary-spending growth to about 2.5% per year would reduce the net debt-to-GDP ratio to zero by the end of the decade. The government hopes to achieve most of the savings required in its consolidation plan by attrition in the public sector, taking advantage of upcoming baby-boom retirements, and by tight expenditure controls, notably the "zero cost" mandate under which renegotiated collective agreements must result in no new cost to government. Penalties on Ministers' salaries will be imposed if targets are not met. On the revenue side, the health-care premium (a fixed head tax which must be paid in order to qualify for Medicare benefits) is being raised as of 2011.¹⁵ On the other hand, the government has said that health-care spending, which continues to increase, would not be affected by the effort to restrain spending growth, a promise it might have to reconsider in light of the savings potential of structural reform in the health sector (see Chapter 3). Like Ontario, British Columbia is harmonising its provincial retail sales tax with the federal GST, effective 1 July 2010, however, it too should reduce the too-numerous exemptions to improve the tax's efficiency.¹⁶

Territories

The Yukon projects a balanced budget in 2010/11 after a deficit in the previous fiscal year. The simulations suggest, however, that on a national-accounts basis the territory is in a deficit position and should limit discretionary-spending growth to 1.5% over the next few years to balance its budget by 2014. Spending growth could increase thereafter and the objective switch to maintaining balance, given that it is already in a net asset position. As to the Northwest Territories and Nunavut, both expect a small budgetary surplus in 2010/11 after deficits in 2009/10. They are analysed as a single unit in the simulations, which

suggest that, on a national-accounts basis, their combined deficit could be eliminated by 2015 by limiting discretionary-expenditure growth to between 0.5% and 1%.

Consolidation plans announced to date are broadly consistent with these recommendations

To date, the federal government and virtually all provincial and territorial governments have committed to return to budget balance over the medium term and have begun to elaborate specific plans to meet their commitments. These plans focus primarily on expenditure-restraint measures, including for example limits to public-sector wage growth, although some provinces have also introduced revenue-raising measures such as increases to consumption taxes. The plans are broadly consistent with the recommendations made in this *Survey* and should allow Canada to return to budget balance over the medium term.

Well-designed fiscal rules can help fiscal consolidation and strengthen fiscal frameworks

Fiscal rules can potentially be useful in achieving consolidation, particularly in avoiding “consolidation fatigue” when multi-year plans are required, as they are in many Canadian jurisdictions. A fiscal rule can be defined in general terms as a constraint on fiscal policy expressed in terms of an indicator of overall fiscal performance. In the study on fiscal-consolidation episodes cited in Box 2.2, the size of fiscal consolidation was significantly larger and the consolidation efforts sustained for longer when such rules were present. On the basis of a detailed analysis of 12 fiscal-consolidation episodes, however, Lilico, Holmes and Sameen (2009) argue that in periods of significant consolidation, self-imposed fiscal rules seem to have had limited, if any, role compared to a “just do it” culture.¹⁷ They have rather tended to be used after successful consolidations, in an attempt to “lock in” success and as an expression of cultural change, not as substitutes for it. What is clear is that the rationale for fiscal rules goes beyond possibly helping to achieve fiscal consolidation. Perhaps most importantly, rules can strengthen fiscal frameworks for the post-consolidation period when the impetus for fiscal discipline is likely to fade.

Fiscal rules help counteract perverse government incentives

The main rationale for the introduction of a fiscal rule, whether a government needs to embark on fiscal consolidation or not, is to improve the credibility of government policy over time; in other words, to improve the time consistency of fiscal policy. The time-consistency problem stems from the existence of a deficit bias in the conduct of fiscal policy, which in turn originates from a common-pool resource problem, as argued by Hagen (1992). In this view, politicians and constituencies benefit from specific spending programmes, while imposing the costs on a common pool. Due to this negative externality, the individually rational strategies generate budgets that are sub-optimal from the perspective of the group. The equilibrium outcome is an inefficient excess appropriation of the common pool of revenue. In an inter-temporal version of the model, short-run political expediency and a lack of understanding of the government inter-temporal budget constraint by the electorate leads to spending that is too high and financed by deficits, with all the ensuing economic and distributional effects of public-debt accumulation, including redistribution from the unborn to the present generations.¹⁸ The results of this dynamic can be seen across OECD countries, almost all of which have tended to run budget deficits year after year in recent history. Fiscal institutions in

general, including formal and informal rules, can potentially enhance fiscal discipline and thus counteract the deficit bias.

Another rationale for fiscal rules is to support macroeconomic stability. A lack of fiscal discipline by governments can reduce the natural counter-cyclical role of fiscal policy to the point of rendering it pro-cyclical. By helping to restore counter-cyclicality, fiscal rules can lessen the burden on monetary policy to damp output fluctuations. Fiscal policy has indeed tended to be pro-cyclical in many Canadian jurisdictions over the past quarter century, particularly in Alberta, Ontario and Manitoba (Guillemette, 2010).

The design of fiscal rules matters

The specifics of the rule or rules chosen to guide budgeting are important determinants of its efficacy. Inappropriate fiscal rules can be destabilising, such as balanced-budget rules that may force governments to cut spending when revenue falls during a downturn (as occurred recently in many US states). Fiscal rules may also lead to behaviour aimed at respecting the letter but not the spirit of the rule (Koen and van den Noord, 2005). Box 2.3 outlines a list of criteria that a good fiscal rule should meet.

Box 2.3. Criteria for evaluating a fiscal rule

The characteristics of the fiscal rule determine its credibility with the capital markets and the electorate and its efficacy in reaching the government's fiscal targets. Following Kopits and Symansky (1998), a good fiscal rule would:*

- *Have a track record of satisfactory compliance.* For instance, while it did not involve fiscal rules per se, the approach taken in the mid-1990s by the federal government worked well for several years in that it achieved the objective of eliminating the federal deficit and reducing the level of debt. These objectives may have been achieved at the expense of creating other problems with the fiscal framework, such as too much caution in forecasting (O'Neill, 2005), but the success achieved with respect to the main objectives argues for using a similar approach in the coming years.
- *Be supported by well-specified policy measures.* For instance, a fiscal rule that limits the growth rate of expenditure should be accompanied by specific explanations of how the reduction in spending growth is to be achieved, including, if necessary, structural reform (*e.g.* reforms to social entitlement programmes). In the case of provinces, health-sector reforms are especially important to limit expenditure growth, given this sector's relative size in provincial budgets (see Chapter 3).
- *Be well defined and transparent.* The indicator to be constrained, the institutional coverage, the specific escape clauses and the accounting and forecasting concepts used should all be clearly spelled out to improve transparency and avoid ambiguities and ineffective enforcement.
- *Target the objective.* The rule specified should correspond directly to the objective sought. For instance, sustainability of the public debt-to-GDP ratio would require a rule expressed as a maximum and non-increasing debt ratio, perhaps in conjunction with other rules on expenditure growth, etc, that support this objective.
- *Be consistent with other rules and objectives of the government.* For instance, price stability being an objective of the central bank, a fiscal rule should support price stability by avoiding pro-cyclical fiscal policy.

Box 2.3. Criteria for evaluating a fiscal rule (cont.)

- *Be simple.* The simplicity of a fiscal rule enhances its appeal and understanding, to politicians and members of the public alike, making it more likely to be followed.
- *Be flexible.* A fiscal rule should be flexible enough to accommodate exogenous shocks beyond the control of the authorities, but there can be tradeoffs between flexibility and other objectives. Fiscal rules defined over the medium term, or in terms of cyclically adjusted balances, can allow flexibility over a strict year-to-year budget-balance rule, but at the cost of diminished simplicity, transparency and possibly credibility. A highly flexible rule can even border on discretion.
- *Be enforceable.* The consequences for non-compliance, whether in the form of financial, judicial or reputational sanctions, should be clearly spelled out. The likelihood of enforcement, both by the capital markets and from self-imposed mechanisms, is increased if an independent authority is responsible for monitoring compliance.

* See also Anderson and Minarik (2007).

Conclusions and recommendations

Box 2.4 gathers the chapter's principal recommendations on the fiscal strategies and processes that should support the fiscal-consolidation drive in the years to come, many of which echo the recommendations of the OECD Working Party of Senior Budget Officials (OECD, 2010b). In the end, however, commitments and institutional rules cannot achieve fiscal consolidation on their own, and laws are simply laws; they can be altered and abolished at any time, as indeed many have been in response to the latest recession. Immediate action to address long-term structural issues that threaten fiscal sustainability is what is needed, both to achieve targets and to reassure markets. In many countries, reforming public pension plans are the principal challenge when it comes to fiscal sustainability. In Canada, the principal challenge is to reform provincial health-care systems. Redesigning these systems to reduce the pace of spending increases without sacrificing service quality is the topic of the next chapter.

Box 2.4. Fiscal policy recommendations**Recommendations for all jurisdictions:**

- For jurisdictions with large deficits: maintain ambitious but achievable deficit targets on the way to a balanced budget. Then, and for jurisdictions not in deficit but with a significant debt burden, announce medium-term debt-to-GDP-ratio targets accompanied by fiscal-balance or surplus targets consistent with meeting these debt targets. Allocate realised surpluses automatically to debt reduction.
- Begin fiscal consolidation in 2011 by allowing temporary stimulus measures to expire as planned. Make restraining the growth of expenditure the cornerstone of fiscal-consolidation strategies, and consider supporting this approach by legislating spending-growth caps for which governments can be directly held to account.
- To enhance credibility, flesh out existing fiscal-consolidation plans including, where necessary, plans for structural reforms. Implement these plans starting in 2011. Adopt or implement existing public-sector wage-restraint policies.

Box 2.4. Fiscal policy recommendations (cont.)

- If raising new revenue is necessary, use instruments that reduce or minimise distortions to economic efficiency. Start with broadening tax bases by eliminating tax expenditures that do not have a compelling economic rationale. Then use measures that correct negative externalities (e.g. carbon tax or emission permit auctions) or relatively efficient taxes (e.g. value-added taxes and property taxes at the local level).
- Consider establishing provincial budget agencies similar to the federal Parliamentary Budget Office that provide independent analysis of fiscal forecast and cost estimates for policy proposals; and/or an agency reporting to the Council of the Federation and tasked with providing independent analysis on provincial fiscal matters.

Some jurisdiction-specific recommendations:

- *Federal government.* Continue working toward a more stable, permanent, rules-based system for determining transfers to provincial governments so as to enhance planning certainty and at the same time place “harder” budget constraints on provinces.
- *Quebec.* Wind up the Generations Fund and apply the remaining assets to debt reduction.
- *Ontario.* Bring forward the target date for balancing the budget and be more ambitious in restraining non-health-spending growth.
- *Alberta.* Implement the recommendations of the Alberta Financial Investment and Planning Advisory Commission. In particular, legislate a fiscal rule that directs a fixed share of total revenue into a long-term investment fund and allows a maximum share of the fund to be spent each year.

Notes

1. The cyclically adjusted budget balance shows the estimated budget balance if the economy were operating at its potential level. A deficit on this indicator suggests that even when the cyclical downturn is over and the economy has returned to its potential productive level, deficits will continue, i.e. that some part of the total deficit is structural.
2. An alternative baseline would be to hold the ratio of discretionary expenditure to GDP constant over the projection period, but this approach would for most jurisdictions already imply a significant slowdown in spending growth compared to recent history.
3. For a discussion of various fiscal sustainability definitions and concepts, see Krejdl (2006).
4. The long-term real interest rates used for these calculations are the predicted nominal interest rates in 2020 by jurisdiction (which are based on OECD *Economic Outlook 87* projections but also depend on projected debt and deficit levels in 2020), minus the assumed long-term inflation rate (2.1%). The trend output growth rate is equal to the average predicted real growth rate of potential output from 2010 to 2020. See Guillemette (2010) for more details.
5. The demographic health-care liability alone accounts for some 120% of GDP according to Robson (2009), but other programmes lower the total as they amount to an implicit demographic asset of roughly 20% of GDP. See Chapter 3 for more health-care liability estimates and discussion.
6. This section draws on Kennedy and Robbins (2001) and Bouthevillain, Paul and Pavot (2007). Other reviews of the federal fiscal-consolidation experience of the 1990s include Bourgon (2009) and Lilico, Holmes and Sameen (2009).
7. See Guillemette (2010) for the baseline output-gap projections by province and territory.
8. Tax expenditures are provisions of tax law, regulation or practices that reduce the tax liability of a comparatively narrow population of taxpayers (physical or moral) relative to a benchmark tax system.

9. There are many conceptual and measurement difficulties involved in accounting for tax expenditures and in making international comparisons. For a thorough discussion of caveats, see OECD (2010a).
10. After having been frozen in 2009 and 2010 as part of temporary stimulus measures, EI premiums will rise from their current CAD 1.73 (per CAD 100 of insurable income) by the cap of 15 cents per year to a projected CAD 2.33 by fiscal 2014/15 in order to return the EI account to balance. The increase in premiums is projected to raise an extra CAD 15.5 billion in revenue cumulatively over the 2011/12 to 2014/15 period. Starting in 2011, an independent board – the Canada Employment Insurance Financing Board – will set contribution rates in a manner that balances the EI programme from 2009 forward. Annual changes in the EI premium rate are limited to 15 cents. See Orr (2009) for more details.
11. Programme spending corresponds to total current expenditure minus public debt charges. Direct programme spending excludes transfers to other levels of government and to persons from total programme spending.
12. Nominal GDP growth over the 2014-to-2020 period is projected to average 3.8% in the baseline scenario.
13. One problem with raising electricity prices that does not apply to some other revenue-increasing measures is that roughly 38% of the new revenue generated and distributed by Hydro-Quebec to the provincial government in dividends is clawed back by the federal government in lower Equalization payments to Quebec (Bélanger and Bernard, 2009).
14. The Alberta Sustainability Fund is a cyclical stabilisation fund. It differs from the Alberta Heritage Savings Trust Fund from which only income earned from investments, minus the amount kept in the Fund for inflation-proofing, is transferred to the provincial government's operating fund.
15. Maximum monthly premium rates will increase by CAD 3.50 per month to CAD 60.50 for single persons, by CAD 7 per month to CAD 115 for two person families and by CAD 7 per month to CAD 121 for families of three or more persons.
16. On top of exemptions and zero ratings already provided under the GST, point-of-sale rebates for the provincial portion of the harmonised sales tax (HST) will be provided in British Columbia for motor fuels, books, children's clothing and footwear, children's car seats and car booster seats, children's diapers and feminine hygiene products. In addition, a provincially administered credit equal to the provincial portion of the HST will be provided for residential energy purchases.
17. Studies of the influence of fiscal rules on budget outcomes that focus on the Canadian experience include Millar (1997), Bird and Tassonyi (2003) and Tellier and Imbeau (2004).
18. See Corsetti and Roubini (1992) and Alesina and Perotti (1996).

Bibliography

- Alberta Financial Investment and Planning Advisory Commission (2007), *Preserving Prosperity – Challenging Alberta to Save*, Alberta Financial Investment and Planning Advisory Commission Report and Recommendations, Government of Alberta, Edmonton.
- Alesina, A.F. and R. Perotti (1996), "Budget Deficits and Budget Institutions", *IMF Working Paper*, No. 96/52, IMF, Washington, DC.
- Alesina, A.F. and S. Ardagna (2009), "Large Changes in Fiscal Policy: Taxes versus Spending", *NBER Working Paper Series*, No. 15438, National Bureau of Economic Research, Cambridge, MA.
- Anderson, B. and J.J. Minarik (2007), "Design Choices for Fiscal Policy Rules", *Fiscal Policy: Current Issues and Challenges*, Banca d'Italia, Rome, pp. 513-55.
- Arnold, J. (2008), "Do tax structures affect aggregate economic growth? Empirical evidence from a panel of OECD countries", *OECD Economics Department Working Papers*, No. 643, OECD, Paris.
- Beffy, P.-O. P. Ollivaud, P. Richardson and F. Sedillot (2006), "New OECD methods for supply-side and medium-term assessments: a capital services approach", *OECD Economics Department Working Papers*, No. 482, OECD, Paris.
- Bélanger, A., L. Martel and E. Caron-Malenfant (2005), *Population Projections for Canada, Provinces and Territories – 2005-2031*, Catalogue No. 91-520-XIE, Statistics Canada, Ottawa.

- Bélanger, G. and J. T. Bernard (2009), “Québec se prive annuellement de centaines de millions”, *Cyberpresse*, 13 March, www.cyberpresse.ca/le-soleil/opinions/points-de-vue/200903/13/01-836163-quebec-se-prive-annuellement-de-centaines-de-millions.php.
- Bird, R.M. and A. Tassonyi (2003), “Constraining Subnational Fiscal Behavior in Canada: Different Approaches, Similar Results?” in J.A. Rodden, G.S. Eskeland and J. Litvack (eds.), *Fiscal Decentralization and the Challenge of Hard Budget Constraints*, MIT Press, Cambridge, MA, pp. 85-132.
- Bourgon, J. (2009), *Program Review: The Government of Canada’s Experience Eliminating the Deficit, 1994-1999 – A Canadian Case Study*, The Centre for International Governance Innovation, Waterloo.
- Bouthevillain, C., L. Paul and J. Pavot (2007), “Debt retrenchment strategies and control of public spending”, *Banque de France Bulletin Digest*, No. 161, Banque de France, Paris.
- Boyer, M. (2005), “Raise Electricity Prices in Quebec – and Benefit Everyone”, *C.D. Howe Institute brief*, No. 13, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/ebrief_13_english.pdf.
- Boyer, M. (2007), “Higher Electricity Prices Can Unleash the Value of Quebec’s Energy Potential”, *Economic Note*, Montreal Economic Institute, Montreal, www.iedm.org/uploaded/pdf/avril2007_en.pdf.
- Briotti, M.G. (2005), “Economic Reactions to Public Finance Consolidation: A Survey of the Literature”, *European Central Bank Occasional Paper Series*, No. 38, ECB, Frankfurt.
- Corsetti, G. and N. Roubini (1992), “Tax Smoothing Discretion Versus Balanced Budget Rules in the Presence of Politically Motivated Fiscal Deficits: The Design of Optimal Fiscal Rules for Europe after 1992”, *CEPR Discussion Paper*, No. 682, Centre for Economic Policy Research, London.
- Corsetti, G., K. Kuester, A. Meier and G. Müller (2010), “Debt consolidation and fiscal stabilization of deep recessions”, *CEPR Discussion Paper*, No. 7649, Centre for Economic Policy Research, London.
- Deloitte and Touche (2009), *Province of Nova Scotia Financial Review – Interim Report*, www.gov.ns.ca/finance/site-finance/media/finance/final_report.pdf.
- Fink, A. and T. Stratmann (2009), “Institutionalized Bailouts and Fiscal Policy: The Consequences of Soft Budget Constraints”, *CESifo Working Paper*, No. 2827, CESIFO, Munich.
- Girouard, N. and C. André (2005), “Measuring cyclically adjusted budget balances for OECD countries”, *OECD Economics Department Working Papers*, No. 434, OECD, Paris.
- Government of Quebec (2008), *The Right Fees to Live Better Together – Report – Task Force on Fees for Public Services*, www.gttsp.gouv.qc.ca/RapportENG_GTTSP.pdf.
- Guichard, S., M. Kennedy, E. Wurzel and C. André (2007), “What promotes fiscal consolidation: OECD country experiences”, *OECD Economics Department Working Papers*, No. 553, OECD, Paris.
- Guillemette, Y. (2010), “A simulation model of federal, provincial and territorial government accounts for the analysis of fiscal-consolidation strategies in Canada”, *OECD Economics Department Working Papers*, No. 800, OECD, Paris.
- Hagen, J. von (1992), “Budgeting Procedures and Fiscal Performance in the European Communities”, *European Economy – Economic Papers*, No. 96, Commission of the EC – Directorate-General for Economic and Financial Affairs (DG ECFIN), Brussels.
- Joanis, M. and C. Montmarquette (2004), “La dette publique : un défi prioritaire pour le Québec”, *Choix*, Vol. 10, No. 9, Institute for Research on Public Policy, Montreal, www.irpp.org/fr/choix/archive/vol10no9.pdf.
- Johansson, A., C. Heady, J. Arnold, B. Brys and L. Vartia (2008), “Tax and economic growth”, *OECD Economics Department Working Papers*, No. 620, OECD, Paris.
- Kennedy, S. and J. Robbins (2001), “The Role of Fiscal Rules in Determining Fiscal Performance”, *Department of Finance Working Paper*, No. 2001-16, Department of Finance Canada, Ottawa.
- Koen, V. and P. van den Noord (2005), “Fiscal gimmickry in Europe: One-off measures and creative accounting”, *OECD Economics Department Working Papers*, No. 417, OECD, Paris.
- Kopits, G. and S. Symansky (1998), “Fiscal Policy Rules”, *IMF Occasional Paper*, No. 162, International Monetary Fund, Washington, DC.
- Krejdl, A. (2006), “Fiscal Sustainability – Definition, Indicators and Assessment of Czech Public Finance Sustainability”, *Czech National Bank Working Paper Series*, No. 2006/3, Czech National Bank, Prague.
- Kumar, M.S., D. Leigh and A. Plekhanov (2007), “Fiscal Adjustments: Determinants and Macroeconomic Consequences”, *IMF Working Paper*, No. WP/07/178, International Monetary Fund, Washington, DC.

- Laberge, M. (2008), "Tuition Fees and the Long-Term Financing of Universities", *Economic Note*, Montreal Economic Institute, Montreal, www.iedm.org/uploaded/pdf/octobre08_en.pdf.
- Lilico, A., E. Holmes and H. Sameen (2009), *Controlling Spending and Government Deficits – Lessons from History and International Experience*, Policy Exchange, London, www.policyexchange.org.uk/images/publications/pdfs/Controlling_Public_Spending_-_Nov_09.pdf.
- Millar, J. (1997), "The Effects of Budget Rules on Fiscal Performance and Macroeconomic Stabilization", *Bank of Canada Working Paper*, No. 97-15, Bank of Canada, Ottawa.
- Nova Scotia Economic Advisory Panel (2009), *Addressing Nova Scotia's Fiscal Challenge – A report prepared by the Nova Scotia Economic Advisory Panel for Premier Darrell Dexter*, www.gov.ns.ca/PPO/PDFs/EAP_FinalReport_Nov12_rev.pdf.
- OECD (2010a), *Tax Expenditures in OECD Countries*, Paris, OECD.
- OECD (2010b), *Restoring Fiscal Sustainability: Lessons for the Public Sector*, OECD Public Governance Committee – Working Party of Senior Budget Officials, Paris.
- O'Neill, T. (2005), *Review of Canadian Federal Fiscal Forecasting – Processes and Systems*, O'Neill Strategic Economics.
- Orr, D. (2009), *How Increases in EI Premiums Speed Up Deficit Reduction*, Dale Orr Economic Insight, www.economicinsight.ca.
- Parliamentary Budget Office (2010), *Fiscal Sustainability Report*, Parliamentary Budget Office, Ottawa, www2.parl.gc.ca/Sites/PBO-DPB/documents/FSR_2010.pdf.
- Pembina Institute and David Suzuki Foundation (2009), *Climate Leadership, Economic Prosperity: Final report on an economic study of greenhouse gas targets and policies for Canada*, <http://pubs.pembina.org/reports/climate-leadership-report-en.pdf>.
- Pierlot, J. (2008), "A Pension in Every Pot: Better Pensions for More Canadians", *C.D. Howe Institute Commentary*, No. 275, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/Commentary_275.pdf.
- Reinhart, C.M. and K.S. Rogoff (2010), "Growth in a time of debt", *American Economic Review*, Vol. 100, No. 2 (May), pp. 573-578.
- Robson, W.B.P. (2009), "Boomer Bulge: Dealing with the Stress of Demographic Change on Government Budgets in Canada", *C.D. Howe Institute e-brief*, No. 71, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/ebrief_71.pdf.
- Röhn, O. (2010), "New evidence on the private saving offset and Ricardian equivalence", *OECD Economics Department Working Papers*, No. 762, OECD, Paris.
- Shiell, L. and C. Busby (2008), "Greater Saving Required: How Alberta can Achieve Fiscal Sustainability from its Resource Revenues", *C.D. Howe Institute Commentary*, No. 263, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/commentary_263.pdf.
- Smart, M. (2005), "Federal Transfers: Principles, Practice and Prospects", *C.D. Howe Institute Working Paper*, Prepared for the Policy Conference "Federal-Provincial Fiscal Reform", 23 June 2005, Toronto, www.cdhowe.org/pdf/workingpaper_2.pdf.
- Tellier, G. and L.M. Imbeau (2004), "Budget deficits and surpluses in the Canadian provinces: a pooled analysis", Paper presented at the annual conference of the European Public Choice Society, Berlin, April.
- Treasury Board of Canada Secretariat (2006), *Expenditure Review of Federal Public Sector – Volume One – The Analytical Report and Recommendation*, Treasury Board, Ottawa, www.tbs-sct.gc.ca/report/orp/2007/er-ed/vol1/vol1-eng.asp.

ANNEX 2.A1

Summary description of the medium-term fiscal-simulation model

The basic idea behind the model is to estimate output gaps for each of the provinces and territories on the basis of simple aggregate supply and demand concepts, and then use these output gaps as cyclical indicators to examine the influence of economic conditions on fiscal variables. Below is a summary of the methodology, which is detailed in Guillemette (2010).

Estimation of output gaps over history and projections

A first estimate of potential output is obtained using a production function on the basis of the working-age population, the trend labour force participation rate, the natural rate of unemployment, trend hours worked, the capital stock and trend labour-augmenting technical progress. This methodology is similar to that of the *OECD Economic Outlook* which is described in Beffy *et al.* (2006). A second estimate of potential output is obtained by simply filtering historical GDP estimates using the Hodrick-Prescott filter. The final potential-output estimate used is the average of the production-function and HP-filter estimates. Historical output gaps from 1981 to 2008 are calculated as percentage deviations of official real GDP estimates from these potential-output estimates.

For the projection period 2009 to 2020, potential-output estimates are extended using population projections, projections of trend labour force participation rates on the basis of recent averages of age- and sex-specific participation rates, projections of hours worked and technical efficiency assuming continuation of historical trends, and assuming that the natural rate of unemployment remains near recent estimates. The capital stock is projected on the basis of historical accumulation and scrapping rates, but adjusted slightly so that once aggregated for the country as a whole, projections of potential output match the projection made for Canada in *OECD Economic Outlook 87*. Demand-side projections are then needed in order to derive output-gap projections. First, near-term GDP growth forecasts for 2010 and 2011 by province are taken from a private-sector forecaster and adjusted so that the Canada-wide projections match those of *OECD Economic Outlook 87*. An external source is necessary because the OECD does not produce projections at the provincial/territorial level. Then, for the years 2012 to 2020, two different approaches are used.

Under the first approach, similar to that used to produce the *OECD Economic Outlook* medium-term baseline, projected output gaps in 2011 are simply assumed to close linearly over a chosen number of years. For consistency and comparability with the *OECD Economic*

Outlook 87 medium-term baseline, output gaps are assumed to close over a four-year period, so that they are completely closed in 2015. Thereafter, output grows at its potential rate, so output gaps remain closed. A second approach, based on stochastic methods, allows the simulation of a large number of plausible paths for output gaps and the construction of probability densities for economic (and eventually fiscal) variables. Under this approach, GDP growth rates by province/territory for each year from 2012 to 2020 are drawn from a multivariate normal distribution. The vectors of means and standard deviations are based on historical GDP growth rates from 1981 to 2008, and the full cross-correlation matrix of provincial growth rates based on the historical period is used to take into account contemporaneous correlation between provincial/territorial economic conditions. GDP deflators by province are projected using a simple relationship in which GDP inflation depends on the size of the provincial and national output gaps.

Influence of economic conditions on fiscal variables

The fiscal-accounting framework used is that of Statistics Canada's Provincial Economic Accounts (PEA), which is consistent with the national-accounts framework. The most recent historical figures available are for 2007. Other data sources, including Statistics Canada's Financial Management System, as well as official fiscal documents from the various jurisdictions, are used to extend PEA figures to today and for near-term fiscal projections. Balance-sheet figures are from Statistics Canada's Government Financial Statistics, which are also consistent with the national accounts. Some revenue categories are assumed to be cyclical, or non-discretionary, namely personal and business income taxes, social insurance contributions, indirect taxes and the share of investment income due to royalties from natural resources. Non-cyclical revenue categories are assumed to grow at the rate of nominal potential output, while the cyclical ones are assumed to depend on output gaps according to estimated elasticities (see below). The exception is royalties from natural resources. In provinces where such royalties account for a large share of investment income, cyclical royalties are assumed to be influenced by "commodity price gaps". These are similar in spirit to output gaps, but they are computed as differences between current real energy and non-energy commodity prices relative to equilibrium values, which are assumed to be 10-year moving averages of Bank of Canada commodity price indices. One spending category, transfers to persons, is assumed to be cyclical. Others are considered discretionary variables – transfers to other levels of government, net expenditure on goods and services, transfers to businesses and investment in fixed capital and inventories – and the rest are assumed to be non-cyclical and to grow along with nominal potential output.

The sensitivity of cyclical revenue and expenditure categories with respect to their respective cyclical indicators are estimated separately for each jurisdiction using mainly regression analysis but also other techniques following the general approach described in Girouard and André (2005) and used for cyclical fiscal adjustments in the *OECD Economic Outlook*.

Other model features and outputs

The sensitivity estimates allow the calculation of historical cyclically adjusted budget balances for each jurisdiction. Cyclically adjusted primary balances are also computed. These cyclically adjusted balances can be used along with output-gap estimates to study the historical stance of fiscal policy in each jurisdiction. Sensitivity estimates are also used

to project cyclical government revenue and expenditure over the medium term by applying them to projected output gaps under either the deterministic or the stochastic approaches. To obtain a full set of fiscal projections, a few other model features are needed. *First*, non-cyclical revenue and expenditure are projected by making them grow at the rate of growth of nominal potential output. *Second*, investment income due to natural-resource royalties is projected by assuming that real commodity prices stay constant at the last historical observation over the projection period, so that “commodity price gaps” are closed by the end of the projection period. *Third*, investment income not due to royalties is assumed to depend on the level of financial assets (which grow at the rate of potential output except if gross debt reaches zero in which case surpluses add to financial assets) and on long-term interest rates as projected in *OECD Economic Outlook 87*, with the recent historical spread over the long-term interest rate remaining constant over the projection period. As for stocks, net debt changes along with net lending. Market debt is obtained by identity and non-market debt grows at the rate of potential output. Interest on the public debt is assumed to depend on the level of market debt, on a blended interest rate and on the term structure of market debt. The blended interest rate on market debt is modelled using a dynamic equation with interest-rate inertia. To take into account the reaction of capital markets to fiscal positions, market interest rates are adjusted using a spread that depends on fiscal balances and debt, using estimates from the empirical literature.

Assumptions then have to be made for discretionary fiscal variables, which are all spending and transfer variables. These can be varied to construct different scenarios, in either the deterministic or the stochastic approaches, to study the influence of government decisions on future fiscal outcomes and on the likelihood of reaching certain targets. The baseline assumptions derived by extrapolating recent trends are described below.

Baseline fiscal assumptions

For the federal government, actual fiscal results for all budget categories are available for 2008 and 2009 in the regular quarterly national-accounts releases. Assumptions for discretionary variables for 2008, 2009 and 2010 for the provinces and territories and for 2010 for the federal government are derived from official budget documents. They are as follows:

- “Net current expenditure on goods and services” and “current transfers to businesses” are assumed to grow at the budgeted rate of growth of programme/operating expenditure. The reason for applying this assumption to transfers to businesses is that there is typically no budget line that corresponds closely to transfers to businesses, and, in any case, these are invariably a small share of current expenditures.
- “Investment in fixed capital and inventories” is assumed to grow at the budgeted rate of growth of capital expenditure, or, when available in the statement of change in net debt, of acquisition of tangible capital assets. This category does not include depreciation allowances (which are assumed to grow at the rate of nominal potential output) and net capital transfers (which are set to zero).
- The rates of growth of federal transfers to provinces are obtained from provincial and territorial budget documents.
- The rates of growth of provincial transfers to local governments are assumed to remain at their 1997-2007 average growth rates.

For 2011 and beyond, the baseline assumptions for federal and provincial discretionary fiscal variables are as follows:

- The rate of growth of federal “current transfers to provincial governments” is assumed to be 4.8%, based on a weighted average of the size of major transfers and their expected growth rates. The Canada Health Transfer (CHT) and the Canada Social Transfer (CST) are currently legislated to grow at 6% and 3%, respectively, and Equalization grows at a three-year moving average of nominal GDP growth.* After the current legislation expires in 2013/14, the overall rate of growth of federal transfers remains at 4.8% on a business-as-usual basis.
- The growth rates of “net current expenditure on goods and services” and “current transfers to businesses” are set equal to the average rate of growth of “net current expenditure on goods and services” over the 1997-to-2007 period. The reason why historical growth rates of “current transfers to businesses” are not used is that there is too much year-to-year variation in this expenditure category historically, especially in small provinces, so the growth rate would depend too much on the particular start and end years. The 1997-to-2007 period is chosen because 2007 is the last year for which data are available from the PEA, and it avoids the more recent period where fiscal stimulus temporarily increased the rate of growth of expenditure.
- The level of “investment in fixed capital and inventories” in 2011 is assumed to fall back to its 2008 level as stimulus spending is withdrawn. Almost all jurisdictions saw large cumulative increases in this spending category in 2009 and 2010 because a significant portion of stimulus spending in provinces was targeted on infrastructure, with the help of federal transfers earmarked for infrastructure. Post 2011, “investment in fixed capital and inventories” grows at its average rate of growth over the 1997-to-2007 period (1999 to 2009 for the federal government).
- Provincial/territorial “current transfers to local governments” are assumed to grow at their 1997-2007 average growth rates until the end of the projection period.

The fiscal assumptions are summarised in Table 2.A1.1.

Differences between projections based on national accounts versus public accounts

The projections given by the model, based on national-accounts concepts, can differ substantially from official government projections, based on public-accounts concepts. For instance, some jurisdictions exclude certain government entities from their headline fiscal projections that would be included in the national accounts system. Also, fiscal targets based on national-accounts concepts are implicitly more stringent than targets based on public-accounts concepts as net lending balances are currently more negative than public-accounts balances. This is because net lending is a cash-based concept and therefore includes the full cash outlay associated with capital purchases rather than just the amortised amount, as in the public-accounts. For example, the net lending balance averaged almost a full percentage point of GDP less than the corresponding public-accounts figure for provinces and territories between 2000/01 and 2009/10. As a result,

* In November 2008, the federal government announced changes to the Equalization formula to limit increases in payments that would have otherwise occurred given buoyant resource revenue in Alberta. It put a limit on the total amount that would be paid out – the limit is set to grow at a three-year moving average of nominal GDP.

returning to balance on a net lending basis is equivalent to targeting a surplus of about 1% of GDP on a public-accounts basis. Another difference is that public accounts use fiscal years (which end on 31 March) whereas national accounts and therefore the simulations use calendar years.

Table 2.A1.1. **Short- and medium-term fiscal assumptions in the baseline scenario**

Growth rate of ...		NL	PE	NS	NB	QC	ON	MB	SK	AB	BC	YT	NT&NU	Federal
	Variables that change after 2010 depending on the scenario													
... current transfers from federal government	2009	-38.1	13.5	10.5	4.3	8.6	11.9	5.3	-6.8	18.8	14.1	3.9	2.3	n.a.
	2010	15.1	-0.2	-1.7	0.5	0.6	27.6	1.3	5.8	2.4	12.5	5.2	6.4	
	2011-13	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
	2014-20	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
... net current expenditure on goods and services and transfers to businesses	2009	15.7	9.8	6.3	6.7	3.8	14.8	6.9	-1.9	0.3	6.7	11.5	1.3	Actual
	2010	3.5	5.9	-0.3	1.6	2.9	6.5	1.5	0.6	3.9	2.0	-3.8	1.2	3.1
	2011	8.7	5.9	5.1	5.1	5.4	6.5	6.4	5.9	8.5	4.4	6.1	6.5	5.3
	Post-2011	8.7	5.9	5.1	5.1	5.4	6.5	6.4	5.9	8.5	4.4	6.1	6.5	5.3
... investment in fixed capital and inventories	2009	24.4	50.1	18.1	42.7	56.9	37.1	30.9	14.8	-1.3	6.2	54.2	5.1	Actual
	2010	79.6	-2.8	-9.2	45.0	3.8	15.3	39.2	-17.3	5.9	34.9	-13.8	-33.3	9.1
	2011	-55.2	-31.5	-6.8	-51.7	-38.6	-36.7	-45.1	5.3	-4.3	-30.2	-24.8	42.6	-15.9
	Post-2011	7.0	6.8	8.7	2.8	10.6	9.3	7.0	7.0	20.0	10.6	7.0	7.0	3.7
	Variable that do not change													
... current transfers to local governments	2009	2.8	5.2	2.9	1.0	4.4	5.8	1.7	5.3	8.0	2.0	-0.4	6.1	n.a.
	2010	2.8	5.2	2.9	1.0	4.4	5.8	1.7	5.3	8.0	2.0	-0.4	6.1	
	2011	2.8	5.2	2.9	1.0	4.4	5.8	1.7	5.3	8.0	2.0	-0.4	6.1	
	Post-2011	2.8	5.2	2.9	1.0	4.4	5.8	1.7	5.3	8.0	2.0	-0.4	6.1	

Chapter 3

Overcoming challenges in health-care reform

Canada's public health-care system (Medicare) offers top-notch care for legislatively-defined essential services, without charge, to all residents. Treatment quality and aggregate health outcomes are good, and the population values in particular the notion of fairness. However, pressure for health-care cost control is constant. Allocations of scarce health-care resources take place through supply-side restrictions, often in the form of waiting lists for elective services, as prices do not play any role. As a result of the historical development of Canada's health care system, some of the fastest rising costs, notably for pharmaceuticals and home care, are largely outside of Medicare. Despite equality of access to health care, there is some inequality of health outcomes, suggesting the need to pay greater attention to other (social) determinants of health. As in other OECD countries, constraints are set to tighten further, both in the medium term as post-crisis deficits are wound down, and more durably in the longer term, as an ageing population requires substantially more services, while growth in the tax base to fund them slows, and technology goes on expanding possibilities for life extension and life quality. The objective should be to complement top-down supply control by more accountability and use of price incentives at the micro level as the main means of promoting both efficiency and quality, and hence system sustainability.

Canada boasts universal public health care offering high-quality services, though at high resource cost. Even though the health-care system is amongst the most decentralised in the OECD, with little direct federal involvement (apart from financing), Canadians attach great importance to it as a foundation for shared pan-Canadian values of a just society. As elsewhere in the OECD, health care has become a prime policy concern in the wake of persistent unplanned growth in health-care expenditures in relation to GDP. In the absence of adaptations, costs are expected to mount relentlessly in coming decades because of population ageing, technological progress and relative price developments, putting a potentially unsustainable burden on public budgets. Health care is thus highly germane to the fiscal issues discussed in Chapter 2. Reforms for sustainable health care by definition serve the goal of fiscal sustainability. The deteriorated budget situation may, in fact, provide an opening for fundamental reforms, which have so far eluded many Canadian provinces.

Achieving the multiple objectives of accessible, high-quality and affordable health care over the long run will require that macro budget control be complemented by micro incentives to supply and demand health-care services efficiently. Such reforms have been gaining traction in other OECD countries but are still viewed with apprehension by many Canadians who see them as violating equity goals. The following policy issues appear to be the most pertinent for Canada:

- **Zero pricing.** Health Care overconsumption and/or overpricing is encouraged by the lack of price signals in Medicare. The lack of any co-payments or deductibles for universal public health care differentiates the Canadian system from that of any other OECD country (with the exception of the United Kingdom). The solution has been to ration by means of long waits for treatment – widely regarded as the Achilles heel of the system – as budget considerations limit the possible increases in supply. There is growing interest in OECD countries in imposing some modest charges to encourage more responsible service use by patients and allay taxpayer concerns about sustainability (OECD, 2009a) However, in Canada, user charges for insured hospital and physician services contravene the *Canada Health Act* (CHA).
- **Lack of cost-saving incentives.** Greater cost savings could probably be had from competitive public purchasing of health services, forcing suppliers to be more efficient in order to win government business. Provincial laws sustain centralised public monopolies by blanket prohibitions of private funding for Medicare services, impeding their contestability. Doctors set their service fees in a bargaining duopoly with provincial governments while enjoying full autonomy in their choice of treatment and mode of organisation. There is still far too much historical-based budgeting of hospitals, doing little to reward efficiency. There has been controversy over the entry of private hospitals to alleviate wait lists and spur competition, despite the fact that the CHA does not preclude provinces from using private providers to deliver insured health services, as long as insured persons are not charged for insured services.

- **Fragmented financing.** All non-hospital and non-physician services – including pharmaceuticals, long-term/home care and therapeutic services – are outside Medicare. Despite provincial public safety nets and employer-provided private insurance for such services, gaps in coverage are frequent and out-of-pocket costs can be high. With sector-segmented finance, non-congruent incentives along the continuum of care may impede an optimal division of labour for a given patient and prevent efficient service integration for any given episode of illness. The affordability of bringing all truly necessary services under the Medicare umbrella is uncertain. Faced with this dilemma, government may need to devise a statutory (or decent minimum) care package determined by the public's willingness to pay the necessary taxes. As a rule, if measures are taken to increase access, then complementary measures will need to be taken to hold down costs.
- **Gaps in information.** Much progress has been made in developing nationwide health databases, notably through the efforts of the Canadian Institute for Health Information (CIHI) and Statistics Canada, and Canada has some of the best health data in the world. However, efforts to evaluate policies are hampered by an insufficiency of publicly available provincial performance data (e.g. on unit costs, volumes and quality), as well as of clinical data covering treatment outcomes. This is partly technical, as a lag exists, relative to both other sectors and countries, in adopting information and communication technologies (ICT) in health care. Ministries of health, responsible for nearly half of overall provincial spending, may lack the commensurate analytical capacity. But there are transparency issues as well: provincial health ministries may not be terribly keen to expose their systems' weaknesses, and doctors may not like being subject to scrutiny, unless pushed by effective checks and balances. The incentives for accountability should be examined.

This chapter attempts to identify solutions to these key challenges for Canadian health-care reform, building on a rich body of work in Canada as well as OECD cross-country research and experience. Its outline is as follows. The first section describes the institutional framework for the financing and organisation of health care in Canada. The second section examines patterns in performance. The third discusses the main policy implications, and the chapter wraps up with key recommendations.

Policy and institutional framework

Health care is a primarily provincial responsibility, but financing is shared with the federal government (mainly via transfers), often giving rise to conflicts. Financing modes are sharply segmented across subsectors: for hospital and physician services (Medicare, about half the total), there is public universal access in the form of “first dollar” coverage; for all other services, a variable system of mixed public-private finance is provided. Canada thus emerges as a hybrid system in the OECD context, juxtaposing elements of a single payer and strong regulation against decentralisation, private funding and market mechanisms.

Canada in an international perspective

The universal public system (Medicare)

Medicare, the universal public health-care system in Canada, covers all eligible provincial and territorial residents for medically necessary hospital and physician services, and it is almost entirely financed by general government revenue (primarily personal, corporate and sales taxes). It appears to be unique among OECD countries in two

important respects: i) coverage is restricted to medically necessary hospital and physician services whereas most OECD universal public systems provide more comprehensive coverage including prescription medicines and dental care; ii) conversely, there is no private cost sharing for covered services, which is deemed to be a violation of the accessibility principle of the CHA, whereas most other OECD universal public systems require patient co-payments for at least physician visits and allow private health insurance to cover such co-payments and/or to supplement the quality of public services (amenities,¹ choice of provider), and sometimes to bypass queues for public services (Table 3.1). Canadian Medicare coverage is thus “narrow but deep” (Marchildon, 2010).

These distinguishing features point to both major strengths and weaknesses of the Canadian system. A critical advantage is the high priority given to equity, insofar as no financial barriers to access to covered services can be said to exist. The health system is a major vehicle of resource redistribution, not only from healthy to sick as in any insurance scheme but also from rich to poor via progressive general tax financing. On the downside, covered services are limited to a traditional definition of care, which may distort the health-care market by favouring these forms of care over innovative alternatives. Zero pricing of such services aggravates moral hazard and increases the reliance on queuing as a rationing device. Finally, whereas most OECD countries manage to integrate private funding into the core public health-care system, Canada’s package of public services are effectively firewalled from private finance influence, reinforcing the government’s funding monopoly and strongly limiting contestability of public provision.²

Table 3.1. **Public health insurance coverage and co-payments in the largest seven OECD countries**

2008-09

	Acute in-patient care	Outpatient primary care and specialist contacts	Pharmaceuticals	Dental care
Canada	No co-payment	No co-payment	Co-payment,¹ 25-49%	Not covered
France	Co-payment, 1-24%	Co-payment, 25-49%	Co-payment, 25-49%	Co-payment, 50-99%
Germany	Co-payment (small)	Co-payment, 1-24%	Co-payment, 1-24%	Co-payment, 1-24%
Italy	No co-payment	Co-payment, 1-24%	No co-payment	Co-payment
Japan	Co-payment, 25-49%	Co-payment, 25-49%	Co-payment, 25-49%	Co-payment, 25-49%
United Kingdom	No co-payment	No co-payment	No co-payment ²	Co-payment, 1-24%
United States (Medicare 2010)	Deductible, USD 1 000 ³	Co-payment, 20%	Co-payment (Part B, 20%)	Not covered

1. Non-uniform provincial drug plans covering selected populations.

2. In England, a fixed charge of GBP 7.20 is payable per item. However, patients under 16 years old (19 years if still in full-time education) or over 59 years get prescribed drugs for free and there are also exemptions for people with certain medical conditions, including cancer, those on low incomes and those prescribed drugs for contraception. In Northern Ireland, Scotland and Wales, prescription charges are either abolished or in the process of being abolished.

3. For stays up to 60 days. Between 60 and 90 days, USD 275 coinsurance for each day, and USD 550 per day between 90 and 150 days, beyond which patient pays all costs.

Source: OECD (2009), *Health at a Glance 2009* and US Department of Health and Human Services.

European social insurance-based health-care systems, which tend to be less redistributive but embedded within stronger social safety nets, have by and large taken an eclectic approach to public health care and shown more willingness to experiment with US-inspired reforms to boost health-system productivity (Blomqvist, 2002). In past fiscal crises, Canada was willing to sacrifice health-system capacity but brooked no compromise

with the principle of freedom from payment for services, whereas Finland and Sweden engaged the private sector in bearing a greater burden of health-system costs (Evans, 2001). As will be seen, European social insurance-based systems may provide more services while spending about as much as Canada (even less on an age-adjusted basis), while the United Kingdom and Japanese central planning systems have similar access problems but spend less. Canada could improve its position along this trade-off by taking some inspiration from other countries' experiences.

Canada's public health-care system (both Medicare and publicly funded parts of non-Medicare services; see below) is further distinguished by its virtually complete decentralisation to the provinces, which arises naturally under its strongly federal system of government. Among OECD health-care systems, only Italy's is so thoroughly decentralised, though there has been a clear OECD-wide trend toward decentralisation during the last 40 years or so of rapid public health-care spending growth. Such growth has surpassed that of GDP and squeezed the share of non-health spending in total government outlays. While there are many contributing factors (*e.g.* technology), decentralisation itself, despite its merits, could be another insofar as it gives rise to co-ordination problems manifested in soft budget constraints, which may be particularly important in health care, given its high visibility and political sensitivity; indeed, where subnational governments rely strongly on central transfers, health spending has grown briskly. However, Canadian provinces receive more modest federal transfers in relation to their total revenues, than in many other decentralised countries, *i.e.* the "vertical fiscal imbalance" is smaller (Crivelli *et al.*, 2010). This may have helped to keep public spending growth in check, albeit levels remain high.

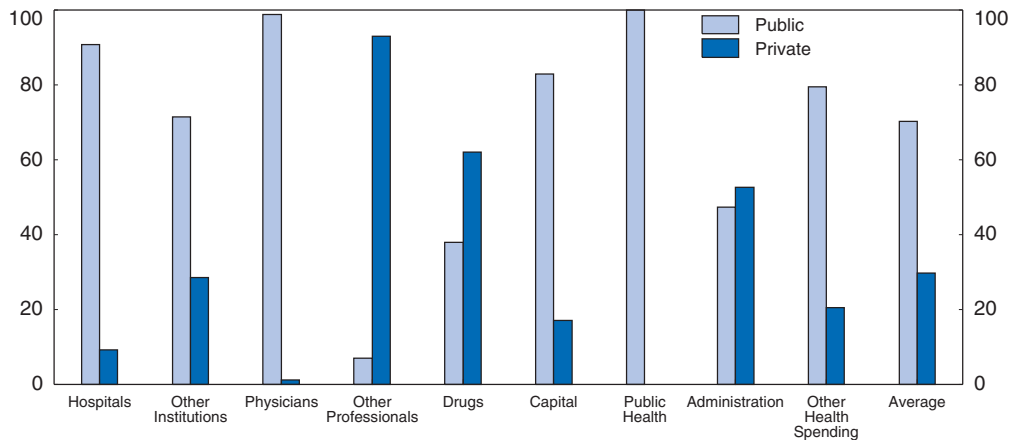
The contribution from private finance (non-Medicare)

Services lying outside Medicare, namely those not provided in hospitals or by physicians, are covered by a mix of provincial benefits, employer-sponsored, tax-deductible private health insurance for workers, and out-of-pocket payments. For these services, some people are left with little or no protection, for example the working poor, small business employees, self-employed or working-age persons and couples with no labour-market attachment, although many of them would have access to provincial supplementary benefits (*e.g.* for social assistance recipients) and individuals without employer sponsored health insurance can purchase private health insurance directly. Retirees who are not on old-age assistance often face out-of-pocket costs in provincial pharmacare plans of up to 50%. This raises not only equity but also efficiency concerns to the extent that people unable to afford treatment of incipient conditions may let them worsen to the point where they require acute-care services at high public cost. Pharmaceuticals, and especially other professional services performed outside hospitals by non-physicians (pharmacists, dentists, optometrists, therapists, caregivers and nurses supplying primary care) are thus relatively heavily privately financed (Figure 3.1), albeit to varying degrees across provinces. Overall, because of the relatively narrow scope of Medicare coverage, the share of private insurance is among the highest in the OECD, and the share of public financing is below the OECD average (70% *versus* 72%; Figure 3.2).

Fiscal federal relations

Canada's constitutional federalist arrangements devolve primary responsibility for health spending to the provinces and territories, but by agreement they are financed in

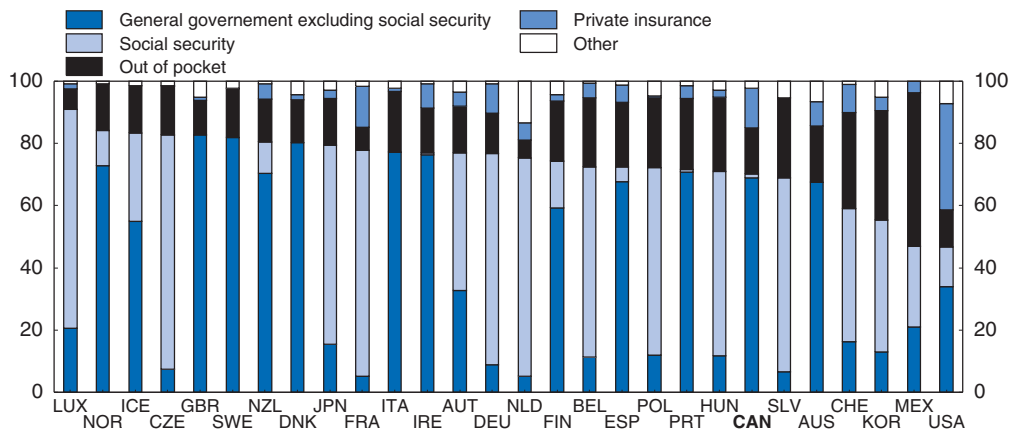
Figure 3.1. **Public and private shares of total health expenditure by use of funds**
Percentage, 2009



Source: Canadian Institute for Health Information (CIHI).

StatLink <http://dx.doi.org/10.1787/888932320314>

Figure 3.2. **The financing mix in selected OECD countries**
As a percentage of total expenditure
2008 or latest available year



Source: OECD (2010), *Health Database*.

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part by federal transfers. In general, decentralisation has several potential advantages: it could make the health-care system more responsive to local needs and accountable to taxpayers, stimulate benchmark competition across jurisdictions as citizens “vote with their feet”, and promote experimentation, compensating for centralised rigidities. Benchmark competition is not well developed in Canada due to lack of price and user information. At worst, though, decentralisation might result in institutional duplication, failure to achieve economies of scale, and weakened cost control and accountability when responsibilities overlap (Joumard *et al.*, 2010). Provincial accountability is comparatively high in Canada insofar as there is a clear demarcation between federal and provincial spending assignments. A relatively modest vertical fiscal imbalance should likewise hold in check the tendency to blame problems on insufficient federal funding. On the other hand, accountability may still be attenuated by bargaining over federal transfers, as in

some other federations where spending autonomy is not fully matched by financing responsibility (e.g. Italy; see OECD, 2007). Full provincial financing responsibility for health care, by contrast, would incentivise the search for efficiency gains in order to avoid the unpopular step of raising taxes, though it would accentuate the problem of heterogeneous relative fiscal capacity across provinces.

The role of the federal government

The chief role of the federal government, with implementation vested in the federal health ministry, Health Canada, is to set broad principles expressing the nation's shared values and promoting its cohesion, and to share in the financial burden of provincial health-care provision by means of federal transfers to the provinces and territories as its main lever to enforce such principles. The 1984 *Canada Health Act* (CHA) sets the conditions for the Canada Health Transfer (CHT). These conditions – namely universality, comprehensiveness, accessibility (i.e. without user fees or extra billing), portability (coverage follows the person across provincial lines), public administration (i.e. of publicly funded insurance plans) – are expressions of the set of national principles, yet vague enough to be wide open to interpretation (see Box 3.2). Health Canada instructs Finance Canada to make deductions from the CHT for any province that it has deemed to have violated any of these conditions. Extra billing, i.e. charging the patient for a given service more than the established Medicare reimbursement rate, is one of the reasons for which the CHT payments have been withheld, and these mandatory penalties have been imposed as the result of self-reporting (namely, by British Columbia) or by other means. Non-compliance with federal policy on private clinics, i.e. charging facility fees for services where the physician fee is covered by the provincial health insurance plan, considered to be *de facto* user fees, was another (Boyчук, 2008).

Besides its duties in administering provincial health transfers and enforcing associated national health standards, Health Canada is directly responsible for the funding, administration and delivery of some services to First Nations living on reserve and Inuit. It also has major responsibility for population health (including a major tobacco-control initiative), product and food safety, and health data and research – the latter in support of Canada's objective to become one of the five leading health-research nations in the world.³ Other federal departments and agencies also have health care duties toward specific groups such as the Canadian armed forces, the Royal Canadian Mounted Police, war veterans, refugee claimants and federal prisoners.⁴ Pharmaceutical market regulation is another important field of federal activity (see further below).

The provincial role in health-care administration and provision

The ten provinces and three territories (hereafter referred to collectively as “provinces”) are wholly autonomous and responsible for the financing (over and above federal transfers), coverage and organisation of health-care services for their residents. These include duties of data collection, performance monitoring, and manpower and immigration policies.⁵ For Medicare services, a fair degree of coherence is enforced by the conditions of the CHA/CHT. Most provinces have implemented regulations upholding the five conditions of the CHA, while British Columbia has added a sixth, that of sustainability (as yet ill-defined). Provinces compete for health-care human resources, and patients can cross provincial borders to receive insured hospital and physician services under the portability criterion of the CHA, which is reimbursed by the province of residence, even if

at a higher cost, although prior consent may be required. Hence, one can speak of 13 distinct and to some extent competing public health-insurance systems in Canada, though with many commonalities as well. Because of the high degree of policy interdependence, and also autonomy, there is considerable emphasis on mechanisms for federal-provincial collaboration, notably the federal/provincial/territorial health ministers' conference system, and pan-Canadian agencies for data and policy co-ordination (Marchildon, 2010).⁶

For services outside Medicare, provincial autonomy is greater as there are no national standards to enforce, allowing a variety of mixed public/private systems. Provinces and territories provide a range of additional services and benefits, beyond hospital and physician services, to their residents. These benefits are outside the scope of the CHA, and as such can be provided on the terms and conditions decided by each province and territory. These benefits generally include services such as prescription drugs (outside of hospitals), vision care and dental services, and may be targeted at specific groups, such as seniors or those on income assistance. Residents not covered by the additional benefits can obtain private health insurance, normally through their employer, or have to pay out-of-pocket for these services.

Provincial reforms

There have been two key reform phases. The first was during 1988-96, particularly during the early 1990s, a period of federal fiscal consolidation which resulted in cuts in transfers to the provinces and forced them to find health savings. It featured intensive human and physical capacity rationalisations, complemented by reforms to improve health-care quality and shift its focus away from costly hospital care and treating illness toward efficient integrated primary care and promoting wellness (Marchildon, 2005). This was accompanied by the creation of regional health authorities (RHAs) in the provinces,⁷ along with the establishment of CIHI and investment in information technology. The RHAs became simultaneously owners of the hospitals and purchasers of their services. By effectively dismantling the power of local communities to block hospital closures, the creation of the RHAs demonstrated Canadian governments' ability to forge a consensus around the overriding issues of debt and deficit reduction (Church and Smith, 2006). Thus, the devolution of health care administration from the provincial to regional levels was accompanied by a re-centralisation of powers from the municipal toward the regional/provincial levels. The major exception to this model has been Ontario, where local health integrated networks (LHINs), created only in 2005, have maintained separate governing boards from hospitals, i.e. a purchaser-provider split not found in the other provinces. In all cases, physician remuneration and prescription drugs remained under centralised control at the ministries of health, which restricted the RHAs' (and LHINs') scope for allocative action.

The second major reform phase began in 1997 with debt reduction and the improving fiscal situation and lasted at least up until the recession of 2008-09. In contrast to the first phase, this one was marked by strong growth in public health spending, with a tendency for *ad hoc* funding to "buy" reforms. Despite provincial reinvestments in human resources and equipment, earlier acute-sector capacity cuts were never made up, while demand grew faster than expected, especially for orthopaedic surgery and advanced diagnostic imaging, so that excess demand in these sectors emerged. Worries about system sustainability led to a series of reports in the 2000s at both the provincial and federal levels. The federal reports (headed by MM. Kirby and Romanow) recommended more spending as necessary

and socially desirable, indicating a low priority on addressing the fiscal challenge at a time of rising surpluses (TD Economics, 2010). Generous new federal funding followed, but it effectively removed the urgency of cost containment and relieved pressure on the provinces to pursue health reform more aggressively (Boothe and Carson, 2003). Even avid reformers like Alberta and Saskatchewan put their health reforms (as respectively proposed in the Mazankowski and Fyke reports) in abeyance after federal funding increased. The Quebec pro-privatisation reforms (Castonguay report) were likewise initially shelved.⁸

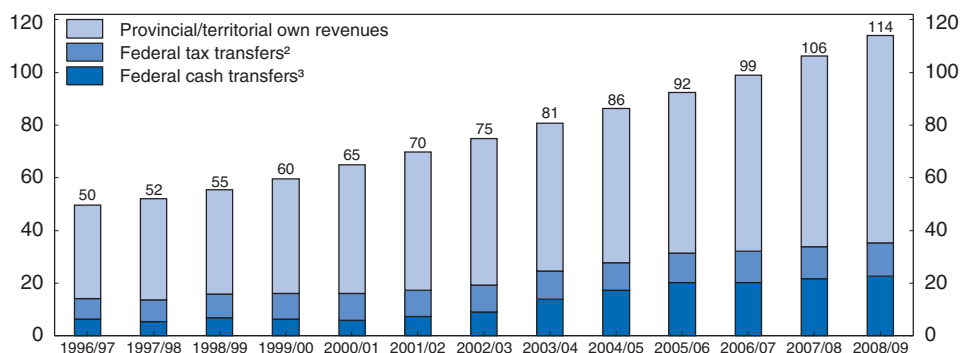
Provincial health-care finance

In the aggregate, provincial health-care spending is financed roughly two-thirds by own general tax revenues and one-third by the CHT (federal cash transfers) and tax points (percentage points reduction in a federal tax that leaves room for provincial tax increases on the same base) (Figure 3.3 and Box 3.1). The cash transfer was cut by the federal government unilaterally in the context of its mid-1990s budget crisis, but restored by a federal-provincial Accord in 2004. The “stop-go” financing of health care damaged public confidence in government’s ability to manage health care, and, as already noted, led to recurring concerns about the sustainability of the system and persistently long waiting times. Hence, the recession in 2008-09 led the federal government to announce early on that fiscal consolidation would not be on the back of the CHT, and that it would not be cut when it comes up for renewal in 2013. Budget 2010 confirmed that the Government will not cut major transfers such as the CHT, and that the CHT will continue to grow as legislated to 2013-14.

By far the main source of provincial own revenues is general tax finance. Cyclical variability in such taxes is transmitted into health spending. In some provinces, notably British Columbia, Ontario, Quebec (as of mid-2010) and formerly Alberta, a small part of


Figure 3.3. **Notional financing of provincial health expenditure**

Billions CAD¹



1. The figures above the bar are derived from provincial/territorial health expenditures data from CIHI. They are converted to fiscal years to allow for comparison with federal transfers for health.
2. From 1996/97 to 2003/04, a 67.9% allocation in the transfers of income tax points to provinces (from personal and corporate income tax point transfers to provinces in Tax Expenditures and Evaluations) and 62% thereafter, is assumed. These data are converted to fiscal years.
3. From 1996/97 through 2002/03 estimated as a 43% allocation in the block health and social transfer; and 62% for 2003/04 to 2004/05; from 2005/06, Canada health transfer data from Federal Support to provinces and territories (Department of Finance).

Source: CIHI, *National Health Expenditure Trends, 1975-2009*; Department of Finance, *Federal Support to Provinces and Territories*; *Fiscal Reference Tables*; *Tax Expenditures and Evaluations*.

StatLink  <http://dx.doi.org/10.1787/888932320352>

Box 3.1. The Canada Health Transfer (CHT)

The CHT is a federal block transfer only notionally tied to provincial health spending. The original block transfer was created in 1977 with the Established Programs Financing (EPF), which replaced the previous 50% federal cost-sharing formula for provincial hospital and physician service expenditures, as well as for education. Roughly half of the former cost-sharing transfer, which had been fully in cash, was replaced by the permanent transfer of federal “tax points” (percentage points of the federal take for corporate and personal income taxes raised in the province). The remaining cash portion was to be no longer based on actual health spending but on population plus an inflation adjustment, adding predictability to the federal government and accountability to the provinces (Deber, 2009). But whereas the federal government counts the tax point transfer as part of its overall health transfer, the provinces have tended to focus on the residual cash transfer as a reduced entitlement. Furthermore, to deal with the federal deficit, the federal government unilaterally and repeatedly changed the conditions for the cash transfer: in 1986, the escalator was reduced to GNP growth minus 2%; in 1989, it was reduced to GNP growth minus 3%; and in 1990, it was eliminated altogether.

In 1996, the federal government decided to further reduce cash transfers by some 15% through a new Canada Health and Social Transfer (CHST), combining EPF with former social-assistance transfers. While the CHST had no escalator, the cash floor was increased in 1998-97, and the transfer was enriched by a series of cash supplements for health care and early childhood development in 2000, 2003 and 2004. In 2004, the CHST was split into the Canada Health Transfer (CHT) and the Canada Social Transfer (CST), with health now receiving a higher apportionment in the total block transfer as based on provincial spending patterns. Since the economy and fiscal situation had recovered, a CAD 16 billion Health Reform Transfer to support reforms in primary care, home care and catastrophic drug coverage was agreed to and confirmed in Budget 2003. After five years, the funding (i.e. CAD 3.2 billion annually) was to be incorporated into the CHT with any earmarking removed. However, the 2004 Accord confirmed these priority areas and the Health Reform Transfer was incorporated into the CHT in 2005/06. In addition, through the 2004 Accord, a 6% annual escalator based on the CAD 19 billion CHT base for 2005/06 was agreed to for the period of 2006/07-2013/14. Special funds were created by the accords, notably the 5 year CAD 4.25 billion federal Wait Times Reduction Fund and the 250 million annual Wait Times Reduction Transfer (starting in 2009-10) which expires in 2013-14. The recession and debt build-up in 2008-09, however, have cast doubt on the federal government’s ability to keep increasing the CHT at such a rapid rate once the present accord expires, though the provinces insist that it will be necessary.

health care (some 15% in British Columbia, for instance) is financed by a non-earmarked health-care premium, which is charged directly by British Columbia but via the income tax in Ontario and Quebec. The premium is less cyclical and less distorting than other taxes, though income tested. Structural differences in provincial tax capacity do not generally translate into health-care system disparities as measured by per capita spending levels. Part of this structural difference is compensated by equalising federal transfers (see Chapter 2), while cyclical fluctuations (highly correlated across provinces) are partly smoothed by the CHT, which depends mostly on population, and health care tax points include an element of equalisation as well. Nevertheless, the tax burden placed on persons and corporations to pay for national standards of health care is higher in the poorer, non-resource-rich provinces (Orr, 2010). Alberta, the richest province with also the highest per

capita level of health spending, devotes 7% of its GDP to health care whereas Quebec, with the lowest level of per capita spending, nevertheless spends 12%, and PEI, the poorest province spends 16% (Table 3.2). One reason for large variations in per capita spending is differential rates of population ageing. Quebec and the eastern provinces are ageing much faster than provinces to the west.

Table 3.2. **Total health spending and coverage by province**
2008

	Population (000s)	GDP per capita (CAD)	Health expenditure per capita		Percentage public financed	Average annual change in public health expenditure per capita	Average annual change in own source revenues	Share of public health spending in total programme expenditures		
			(CAD)	% of GDP				1998 ¹ /2008	1997 ²	2008
			<i>Of which:</i>					1998 ¹ /2008	1997 ²	2008
Newfoundland and Labrador	506	61 758	5 532	9.0	76.9	7.6	10.5	33	39	
Prince Edward Island	139	33 159	5 224	15.8	72.1	7.5	4.3	33	42	
Nova Scotia	937	36 503	5 504	15.1	70.4	7.2	6.5	42	48	
New Brunswick	747	36 635	5 329	14.5	71.1	7.3	4.2	34	42	
Quebec	7 753	38 979	4 654	11.9	71.4	5.8	3.4	39	45	
Ontario	12 936	45 440	5 314	11.7	68.2	6.3	3.0	49	52	
Manitoba	1 206	42 147	5 560	13.2	74.2	6.9	8.9	45	43	
Saskatchewan	1 014	62 656	5 495	8.8	77.5	7.2	7.9	45	45	
Alberta	3 596	80 997	5 795	7.2	73.2	8.3	6.0	37	42	
British Columbia	4 384	45 150	5 024	11.1	70.6	5.4	3.5	38	44	
Yukon	33	57 368	7 586	13.2	78.4	7.5	5.4	19	22	
Northwest Territories	44	116 720	9 564	8.2	83.3	6.1	10.8	26	27	
Nunavut	32	50 659	11 561	22.8	93.7	9.0	7.6	24	29	

1. Fiscal years: 1999/2000 for Ontario, Northwest Territories and Nunavut; 2003/04 for Manitoba; 1998/99 for British Columbia.

2. 1999 for and British Columbia; 2000 for Ontario, Northwest Territories and Nunavut; 2004 for Manitoba.

Source: Statistics Canada; CIHI (2009), *National Health Expenditure Trends, 1975 to 2009*; Department of Finance (2009), *Fiscal Reference Tables*, and OECD calculations.

Provider payment methods and incentives

Perhaps at least as much as the ultimate source of funding, the manner in which this money is transmitted all along the funding chain is crucial to the formation of accountability and efficiency incentives facing purchasers, providers and users of health care. Incentives embedded in provider payment methods, in particular, have major implications for the health-care system's performance.

Devolution of health budgets to RHAs/hospitals

Provincial ministries of health receive their health-care spending envelopes from, and are subsequently monitored by, finance ministries following the regular political process of prioritisation in the provincial budgets. They devolve part of these budgets to regional health authorities (RHAs), which goes mainly to pay for the non-physician portion (roughly half) of hospital operating budgets, capital investments and community health (polyclinics, home and long-term care, etc.). The size of the regional budgets in most provinces depends on historical spending plus an inflation factor (usually 2%). Much of the pressure for higher funding originates with the regions and is transmitted by the province back to the national taxpayer via lobbying for enhancing the CHT. RHAs in British Columbia,

Ontario (LHINs), and New Brunswick have also been actively engaging the private sector in public-private partnerships (P3s) for hospital capital projects, the preferred model being “design-build-finance-maintain”. As with any off-balance-sheet accounting, this carries significant risks of contingent government liabilities.

Hospitals receive their operating budgets typically on the basis of their own historical spending plus inflation, mirroring the RHAs’ own budgeting procedure, with no contracting process to speak of. Ontario has followed a different route, using contracting made feasible by the purchaser-provider split in its regional structure: the LHINs draw up service contracts with each of the hospitals on their territory, specifying conditions governing prudent and effective use of Ontario taxpayer dollars. Ontario appears to be getting better results in terms of reduced hospital waiting times (see Table 3.8 below).

Several provinces have begun to experiment with regional population-based budgets, often adjusted for demographic structures. Formula-based budgets tend to be superior to those that are historical-based because they help circumvent the risk that budget allocations in the base year were inappropriate, perversely rewarding inefficient regions and penalising efficient ones. They also eliminate the perverse incentive to spend as much as possible (or hide efficiency gains) each year in order to safeguard the historical spending base. However, except for Alberta and Saskatchewan, these have been slow to take root. In British Columbia, a study showed that historical baseline spending overfunded the capital region and underfunded the other three, but the policy response has been to provide only incremental funding on a fairer population-based formula (Vancouver Island Health Authority, 2008). Another problem may be that risk adjustment by simple age and sex structures captures only a small part of actual need variations across regions, allowing inequities in the regional apportionment to persist (Deber *et al.*, 2008). Doing proper risk adjustments, however, requires more information, expertise and perhaps substantial additions to administrative costs.

There has likewise been an incipient shift toward activity-based budgeting, notably in Alberta, British Columbia and Ontario, *i.e.* paying for services provided in the hospital on the basis of prospective unit costs, which is more in line with international trends. Such a method encourages efficient provision, though it increases budget risk unless capped within a spending envelope. Intensive investments in terms of measuring costs, determining case mixes, categorising treatment episodes correctly and measuring and monitoring performance are likely to be required, but, even so, strong risks of gaming the system (by reclassifying diagnoses) remain. The British Columbia experience is again indicative. Substantial incremental funding to its regions over the past five years has been tied to achievement of specific service objectives, in particular, cuts in waiting times for selected procedures. There is evidence that this has stimulated efficiency gains in the designated areas (as allocations are based on targeted volumes times standard cost), but at the cost of further reduced ability by RHAs to make resource allocations in accordance with local needs. Hence, needs crying out for resources in mental health and chronic care may have been neglected in favour of (too many) knee and hip surgeries and cataract removals (VIHA, 2008).

Moving toward performance-based budgeting (“paying for performance”, or P4P) seems another ineluctable trend, as popularised by US and UK innovations in this domain. In the United States, there were 115 P4P acute-care programmes by 2005, while in the English NHS 25% of primary-care physician payments have been attached to performance

criteria, while hospitals' performance results are now published. P4P typically rewards service providers on the basis of quality, rather than quantity as in the case of activity-based funding. Once again, this method requires intensive information and monitoring to work effectively. Hospitals and doctors may risk-select patients less likely to present complications and more likely to allow attainment of specified P4P goals. Process targets may be no less risky than output targets, as rigid adherence to treatment protocols may not be right for every patient and thus inhibit desirable innovations by providers on their behalf. These risks must be balanced against opposing benefits. Canada is treading cautiously, *e.g.* modest payments by several BC regions for timely processing of emergency-room patients and for moving toward integrated primary-care delivery models, as in other provinces. Publication of performance outcomes might be more effective by stimulating reputational competition among hospitals, as suggested by the US and UK experience.

Payments to doctors

In each province, doctors working in both primary and acute care bill the public health-insurance system for services rendered and receive payment directly from the health ministry. In most provinces, patients themselves never see any bills and thus have no idea of the cost of services they receive. Doctors, including those employed in hospitals, are paid predominantly on a fee-for-service (FFS) basis. The level of fees is determined by bargaining between the ministry and doctors' unions (often several, representing GPs and the different specialties). Doctors' bargaining power is enhanced by the attraction of high salaries and job opportunities in the United States, and strong public support. They generally bargain for income and managed to negotiate some generous fee increases during the late 1990s to late 2000s economic boom. Physician income is higher than the OECD average. However, doctors are also responsible for internalising Medicare constraints in more difficult budgetary times, and in this sense their fees can be considered to be regulated by the provinces. In the 1990s budget crisis, for example, most provinces capped aggregate doctor incomes with *de facto* claw-back provisions. By contrast, the normally utilised public contract model regulates fees rather than incomes, with the public funder taking the risk of excessive service volumes.

Several provinces have experimented with alternative payment methods, such as salary and capitation, given that FFS has been linked to supplier-induced demand (SID). These alternatives now constitute nearly one-quarter of total physician payments in Canada, but sufficient information for evaluation is lacking: whereas large incentive payments to encourage these schemes were made, in the absence of FFS billing, activity volumes were not recorded. It is unclear if the programmes will become self-sustaining in the absence of continued boosts to special funding. Doctors historically prefer FFS billing and were mainly motivated to take up capitation only when overall budget caps on aggregate FFS incomes were imposed. Now that these caps have been removed, it is uncertain how readily they will accept the risks of capitation. In any event, it will be important to keep track of volumes provided, by means of shadow billing records, to guard against possible underprovision of services under such schemes.

There has been strong pressure to modernise delivery and eliminate primary-care "silos" (*i.e.* atomised and very loosely co-ordinated delivery units, notably solo doctor practices and multiple system entry points, often involving losses of information and time, duplicate testing, errors, etc.), which are seen as impeding smooth delivery and efficiency (Deber, 2003). The push for integration of these silos is seen as a means of reducing hospital

admissions and managing increasingly prevalent chronic diseases. However, with physician funding streams completely bypassing them, RHAs' ability to affect doctors' incentives in desired directions is limited. Furthermore, separate funding streams for other health professionals – who must often be paid privately if they do not work in hospitals – make it difficult to encourage team practices involving delegation of simpler physician tasks to lower paid health professionals.

Payment for and reimbursement of pharmaceuticals

Federal and provincial governments (except Quebec) subsidise employer-provided private prescription-drug insurance (which may also cover dental and vision care) by exempting it from personal income tax.⁹ Such subsidies are regressive, since they disproportionately benefit richer and employed workers. Many firms provide such benefits in competing for workers, especially larger firms where risk-pooling under a group plan is more feasible. Provincial government coverage varies a great deal, but most provide public drug safety nets for the poor and aged and/or catastrophic drug coverage of the general population with a (high) ceiling on out-of-pocket costs as a percentage of income. Quebec's pharmaceutical plan is the only one that attains universality, via mandatory purchase of prescription drug insurance through an array of social and highly regulated private plans (somewhat along the lines of Switzerland's system).¹⁰ Nationally, public programmes provide coverage for approximately a third of the population while approximately half of the working age population participates in private drug insurance plans as a part of employment-related groups (Morgan, 2008a). It is estimated that 10-20% of the Canadian population has no pharmaceuticals coverage whatsoever, while another large number may have inadequate coverage (Morgan, 2008a).¹¹ Since drug use in hospitals is fully covered by Medicare, this asymmetry gives doctors an incentive to keep their patients longer in hospital than otherwise warranted in order to benefit from free high-cost drugs (Morgan, 2008b).

At the federal level, the prices of patented drug products are regulated by the Patented Medicines Prices Review Board, based on the factors set out in the Patent Act. These factors include the prices at which the medicine has been sold in the relevant market in Canada, the prices of other medicines in the same therapeutic class, the prices at which the medicine and other medicines in the same therapeutic class have been sold in seven comparator countries (often limiting a drug's price to its median price in seven comparator countries), changes in the Consumer Price Index, and such other factors as may be specified in the Patented Medicines Regulations. If the domestic price is considered excessive, the Board may order the patentee to offset the excess revenues accumulated (by reducing the price of the drug or the price of another drug, or by making a payment to the federal government). New drugs must be federally approved for marketing based on an examination of their safety, efficacy and quality.

There are 13 individual provincial and territorial public drug plans, as well as federally-funded public drug plans. Decision-making for listing of drugs on public drug plan formularies is supported by the Common Drug Review (CDR), a federal/provincial/territorial – sponsored process managed by the Canadian Agency for Drugs and Technologies in Health. The CDR conducts objective, rigorous reviews of the clinical and cost effectiveness of drugs, and provides formulary listing recommendations to the publicly-funded drug plans in Canada (except Quebec). The CDR helps inform and support drug plan decisions by providing equal access to timely evidence-based information and

expert advice. CDR recommendations as to whether to list a drug on public drug plan formularies are not binding on the participating jurisdictions. Participating drug plans take into consideration CDR's recommendations in the context of their mandate, priorities, resources and jurisdictional needs before making a final benefit listing and coverage decision. Hospitals decide their own drug formularies and pay low wholesale prices (covered by Medicare), but account for a small part of total drug use. Private drug plans may provide wider coverage than the public plans, as part of a negotiated worker benefit package. Generics' prices are market determined but among the highest in the world (see below).

Until 2003 Canada had the longest delays for approval of new drugs for marketing in the OECD apart from Japan, but since then the situation has much improved with implementation of a federal policy to shorten the worst delays by means of objective setting (Paris and Docteur, 2007). However, some recent scandals have prompted concerns that the approvals may now be too hasty and overly influenced by industry clinical trials (Deber, 2008), though some others insist that it still does not allow fast enough access to new treatment options (Skinner and Rovere, 2009). There is also concern that the use of product groups to regulate patented drug prices might discourage innovation.

Funding for home care

The 2004 10-Year Plan to Strengthen Health Care identified home care as one of the three priorities for targeted federal financial support over the following five years. However, with home-care interest groups not particularly strong, physicians and pharmacare grabbed the lion's share of the funding – as its division among the three categories was left to the provinces – and hospitals able to access these funds after earmarking expired on 1 April 2009 (Motiwala *et al.*, 2005). Each province has its own home-care programme. All provinces currently provide professional services (nursing and case management), homemaking (cleaning, cooking and the like) and personal support services (*i.e.* assistance for activities of daily living, ADL), normally by contracting out to private home-support firms or to self-employed professionals such as registered nurses (RNs) and licensed practical nurses (LPNs). Competition in home-support services should be possible because of their lower-skill nature (implying fewer barriers to entry). In Ontario's experience, RNs' wages have tended to rise in response to competitive contracting, suggesting a skills shortage, though these increases have been constrained by the presence of for-profit providers in the home-care market, while wages for lower-skilled LPNs have unequivocally fallen (Zarnett *et al.*, 2009). Eligibility for professional support is based mainly on need, while most provinces income test eligibility for home-support services (Alberta charges beneficiaries a flat CAD 5 dollar per hour rate), and waiting lists are common.

As agreed to under the Plan, provinces have identified a minimum basket of publicly funded services for short-term acute home care, palliative/end-of-life care and short-term acute community mental-health care. Private spending by those who do not qualify for public support, or to supplement the public level of services they do receive, is prevalent. Home-care is one of the fastest growing components of health care, along with pharmaceuticals and medical technology. Post-acute care has risen strongly with hospital-bed closures and accelerated discharges, and the demand for long-term care is expected to expand sharply with rising disability rates and population ageing. Public policies accord no explicit funding or legal protection to home care as a recognised medically necessary

service, and they implicitly cost-shift towards out-of-pocket and informal arrangements, inadvertently producing inequities in access, contrary to the objectives of the CHA. They further fail to take into account private and social opportunity costs of informal primary caregivers, many of whom have to renounce gainful employment, or the gender inequalities that this usually implies. Federal benefits for leaves of absence taken by workers to provide end-of-life care for family members are a step in the right direction but cover only a small subset of actual needs.

The role of the private sector in a publicly funded system

Canadian physicians are overwhelmingly self-employed, though 99% of their incomes derives from public sources. Most hospitals are nominally private, not-for-profit, though *de facto* public since they operate under mandates determined by government following creation of the RHAs (which replaced hospital boards). Private, for-profit, investor-owned corporations predominate in sectors such as pharmaceuticals and laboratory work. Recently, niche hospital services provided by private, for-profit specialty clinics have become available, but not without controversy.

There seems to be confusion about the legitimate role of the private sector under the CHA. The Act, in fact, places no limits on private provision of core services, and few conditions on private financing apart from the prohibition on charging fees in excess of those established by Medicare, so-called extra-billing and user charging. Yet, private, for-profit delivery of hospital services is hotly contested, and virtually all provinces have legislation proscribing dual practice allowing physicians to provide core services by a mixture of public and private insurance contracts. Whereas all but Ontario permit physicians to opt out of the public system and accept only privately paying patients, four of these provinces prohibit the use of private insurance to pay for these services, while two others limit allowable fees to those established by Medicare; the latter regulation is particularly stringent and greatly reduces the incentive to operate outside the public plan. These impediments to competition in financing restrict competition in provision (Box 3.2).

Box 3.2. The Canada Health Act and the private insurance/provision debate

Provinces have interpreted the CHA narrowly to effectively limit the scope for private funding of Medicare services by regulating private insurance, billing practices and fees (Table 3.3). But, according to Boychuk (2008), a careful examination of the CHA reveals broad scope for private funding and insurance for health services within the framework of the Act. The only forms of private funding clearly prohibited are user fees and extra billing for Medicare services. However, if the provider de-enrolls from the provincial plan, then he or she can charge whatever fee they deem appropriate. Also potentially permissible are enhanced service, facility and annual registration fees charged by physicians providing a mix of services, including those publicly insured and where the capital has been privately provided. The CHA allows private financing for services that are not insured health services under the Act. It also allows physicians to receive public payment for insured services and private payment for uninsured services, so long as funding does not come from both sources for a particular instance of the same insured service (which would amount to extra billing). Such payment possibilities would be likely to encourage the growth of private provision in clinical services, give physicians greater scope to innovate and possibly put fewer demands on the public insurance system while encouraging efficiency in public provision.

Box 3.2. The Canada Health Act and the private insurance/provision debate (cont.)

Besides the absence of user fees, a singular feature of Medicare systems in the Canadian provinces (with the notable exception of Newfoundland) is that physicians are effectively prevented from working in both the private and public sectors. According to Flood and Archibald (2001), the primary objective of this prohibition is not to make private practice illegal, but rather to prevent the subsidisation of the private sector by the public sector (while other single payers like the United Kingdom and New Zealand allow physicians to top up their core public incomes by working in the private sector on a FFS basis). The regulations governing private payment of medically necessary physician and hospital services are complex and varied:

- *Opted out physicians* continue to participate in, or are enrolled in, a provincial health insurance plan but choose to bill their patients directly. Direct billing refers to the physician practice of charging patients directly for the entire amount of a service insured by the public insurance plan. Patients can then seek reimbursement from the provincial/territorial plan for services received. Physicians may not charge fees exceeding the provincial/territorial fee code rate. Because opted out physicians are not allowed to extra bill their patients, there are very few advantages to being an opted out physician.
- *Non-participating physicians* are those who choose to practice wholly outside the provincial health insurance plan. The physician cannot bill the provincial health insurance plan for the services he or she provides, nor can the patients be reimbursed by the provincial health insurance plan for those services. Because non-participating physicians are not connected in any way to the provincial health insurance plan, as a general principle, they can charge their patients whatever they deem appropriate for their services. Unlike opted out physicians, they are not restricted to charging the amount set out in the authorized tariff of fees (the one exception is in Nova Scotia which limits non-participating physicians to the amounts prescribed in the authorized tariff of fees). However, four provinces (Alberta, British Columbia, Quebec and PEI) implement a legal ban on private insurance for publicly insured services, so that patients wishing to receive services outside the public plan must absorb their full cost. Hence, private health insurance has not taken off even in the provinces where it is in principle allowed, and only Newfoundland does not in any way prohibit or discourage private health insurance cover of Medicare services provided by non-participating physicians.
- *Dual practice*: The potential for private funding of publicly-insured services is closely related to the ability by physicians to combine both private and public income streams, i.e. allowing them to have access to both private and public income streams for services covered under the public plan. But most provinces/territories prohibit such an option – so-called “dual practice” – by legally requiring that physicians practice either entirely within or entirely outside of the provincial health insurance plan, though Ontario has prohibited doctors from de-enrolling since 2004. As a general rule, physicians are not currently permitted to exercise their right to de-enroll, or become non-participating physicians, on a selective basis and to provide publicly insured health services in and out of the public system at the same time.

The 2005 Chaoulli constitutional court case posed a direct challenge to the prohibition of private insurance for Medicare services in Quebec when there are waiting lists for treatment. Canada’s Supreme Court ruled in favour of the litigant, saying that the prohibition was in violation of Quebec’s charter of human rights. Quebec subsequently introduced legislation for care guarantees as well as limited recourse to private health insurance for some procedures, and the federal government has made care guarantees one of its priorities. The 2008 Castonguay report for health reform in Quebec (Government of Quebec, 2008) made mixed physician contracts and private insurance for hospital and physician services a cornerstone of its recommendation to relieve pressure on the public

Box 3.2. **The Canada Health Act and the private insurance/provision debate** (cont.)

system and increase its efficiency through public-private competition. However, there has been no movement toward mixed billing in Quebec or anywhere else in Canada. Some observers expect that the CHA will eventually have to be amended to allow such changes to occur via a sixth principle (on top of the CHA's five) of patient accountability, allowing private payment if limits on waiting times cannot be enforced (Monahan, 2006).

Underlying the CHA debate is concern about emergence of a “two-tier system” if competing private provision and finance for core services were to be unrestricted. It is frequently asserted that the less costly patient cases would flow to the private, for-profit hospital sector, boosting its profitability and ability to attract talented doctors, leaving the hard, risky cases and weaker health human resources to the public hospital sector, to which the poor and very ill would be condemned to receive only low-quality care. Likewise, private insurers could earn easy profits by cream skimming the low risks and leaving the high risks to the public sector (Deber, 2009). It is claimed that there is no evidence that higher private spending cuts waiting lists but rather raises public costs (Stabile, 2008), and an experience-based study in Manitoba showed this to be the case (CHRSE, 2005). Most seriously, perhaps, a successful private tier could undermine public support and willingness to pay for the public tier. Union interests object because profits may be generated by hiring non-unionised health-care workers. Furthermore, some claim that in a situation of penury of physicians such as in Canada, competition cannot work in any event but will rather bid up wages.

Such arguments are debatable. The public sector may be the appropriate locus for complex care because only it can afford the requisite large capital investments, and highly talented and ambitious doctors will always gravitate toward “hard cases” and larger institutions offering richer professional interactions. Cream skimming by for-profits, even if depriving not-for-profits opportunities to cross-subsidise costly patients by profitable ones, could still be beneficial from a system-wide perspective if it leads to an optimal allocation of patients between full-service hospitals and specialty clinics (Ruseski, 2009). Evidence from the United States suggests that entry of specialty clinics into the hospital sector more often than not increases non-for-profit hospital cost efficiency via competition, without compromising service quality (Ruseski, 2009). The Italian state of Lombardy saw significant gains in public hospital efficiency and quality after it put private and public hospitals on an equal footing by making each equally eligible for public funds, forcing them to compete (Stancati, 2010). OECD cross-country analysis shows that inequalities in health status tend to be lower in the three (non-US) countries with private insurance-based systems – Germany, the Netherlands and Switzerland (Joumard *et al.*, 2010), which is at least suggestive of no serious problems with access under well-regulated private insurance. It has also been asserted that arguments against private insurance and provision claiming to be “evidence based” actually present a highly selective reading of the evidence, thus engaging values that have not been made clear (Yeo *et al.*, 2009). Finally, it should be recognised that opening the door more widely to private sector involvement in clinical service provision could help to stimulate the emergence of high value-added health care clusters with enormous economic potential (TD Economics, 2010).

Box 3.2. **The Canada Health Act and the private insurance/provision debate** (cont.)Table 3.3. **Private funding sources and CHA compliance**

Mechanism	Provinces allowed/in use	CHA compliance
Co-payments*	None	Not CHA compliant
Extra-billing**	None	Not CHA compliant
Private insurance	Saskatchewan, New Brunswick, Nova Scotia, Newfoundland	The CHA is silent on provision/regulation of private insurance for insured health services.
Allowing physicians to bill both publicly and privately	New Brunswick, Prince Edward Island, Newfoundland	Dual practice is not explicitly prohibited under the <i>Canada Health Act</i> , as regulation of physician practice is within provincial jurisdiction. However, should it result in diminished health human resources in the public system and thereby limit access to publicly funded health care services, it could undermine the accessibility criterion of the CHA. As well, physicians can practice both publicly and privately if the private care is for services that fall outside the insured services of the CHA, e.g. cosmetic-care services.
Facility fee (user fee)	***	Charging facility fees for <i>medically necessary</i> services is not consistent with the CHA and is considered an impediment to access. Equivalently, facility fees are CHA compliant (charged by private or public facilities) if the physician fee is not covered by the public plan.
Enhanced service fee	****	Charges for enhanced services are permissible under the CHA as long as there is no medical necessity attached to the product or service and that a non-enhanced service is available at no charge to the patient. As well, purchasing enhanced services must not provide preferential access to insured services, nor can it hinder access to insured services to those who choose not to purchase enhanced services. Physicians cannot deny access due to a service fee.
Annual registration fee	British Columbia	Annual registration fees charged by a physician providing a mix of both public and private services would raise concerns under the accessibility criterion of the CHA, if such a fee impeded access to an insured health service. As such it could be considered either a user charge or extra billing.
MSA corridor	None	Medical Savings Accounts (MSA) do not currently exist in any province or territory. Depending on which health care services are covered by an MSA, it is possible that charges for services funded by a MSA could be considered as either extra billing or user fees.

* In Canada, the application of charges to patients (i.e., co-payment) for insured health services is a violation of the user charges provisions of the Act. Provinces and territories that allow user charges are subject to mandatory dollar-for-dollar deductions from their federal transfer payments.

** Extra billing occurs when an insured person is charged by a physician in an amount in addition to that paid by the provincial health insurance plan.

*** Facility fees are just one example of a user charge. User charges are defined by the CHA as any charge for an insured service, other than extra billing, that is permitted by a provincial health care insurance plan and is not payable by the plan.

**** Unknown. However, this is a common practice and fees for enhanced service quality are probably in effect in all provinces.

Source: Boychuk (2008) and information provided by Canadian authorities.

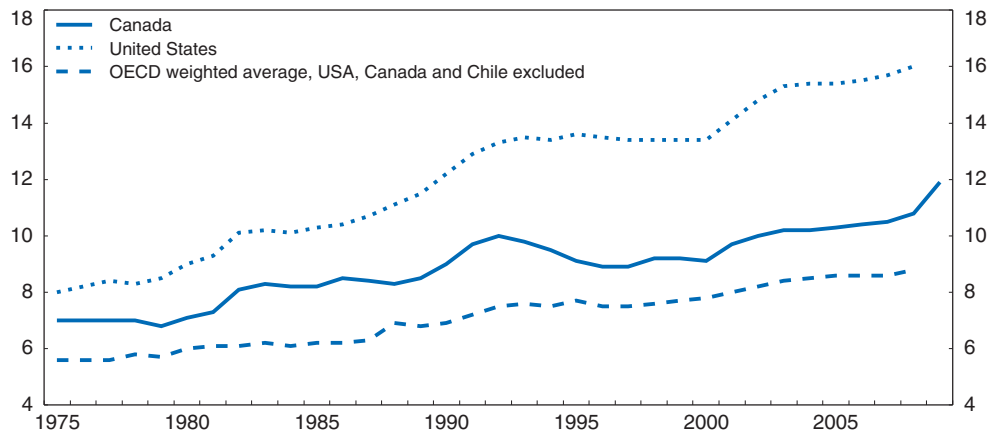
Health-system performance

The performance of Canada's health system in terms of care quality and aggregate health outcomes is generally very good. Despite the lack of financial barriers to access for core services, however, timeliness of access is a sore point, and equity of outcomes is frustratingly elusive. Financial sustainability is a long-standing concern, even more so in the wake of the shrinkage of the tax base in the recent recession, while the demographic transition is approaching, even if later than in Europe and Japan.


Trends in spending growth

An OECD trend of note has been rapid growth of health expenditure up until the early 1990s, followed by a decade-long pause, then a resumption of high growth starting in the early 2000s (Figure 3.4). The interim period of stabilisation may reflect the progressive

Figure 3.4. **Total health expenditure as a share of GDP**
Percentage of GDP



Source: CIHI, *National Health Expenditure Trends, 1975 to 2009* and OECD (2010), *Health Database*.

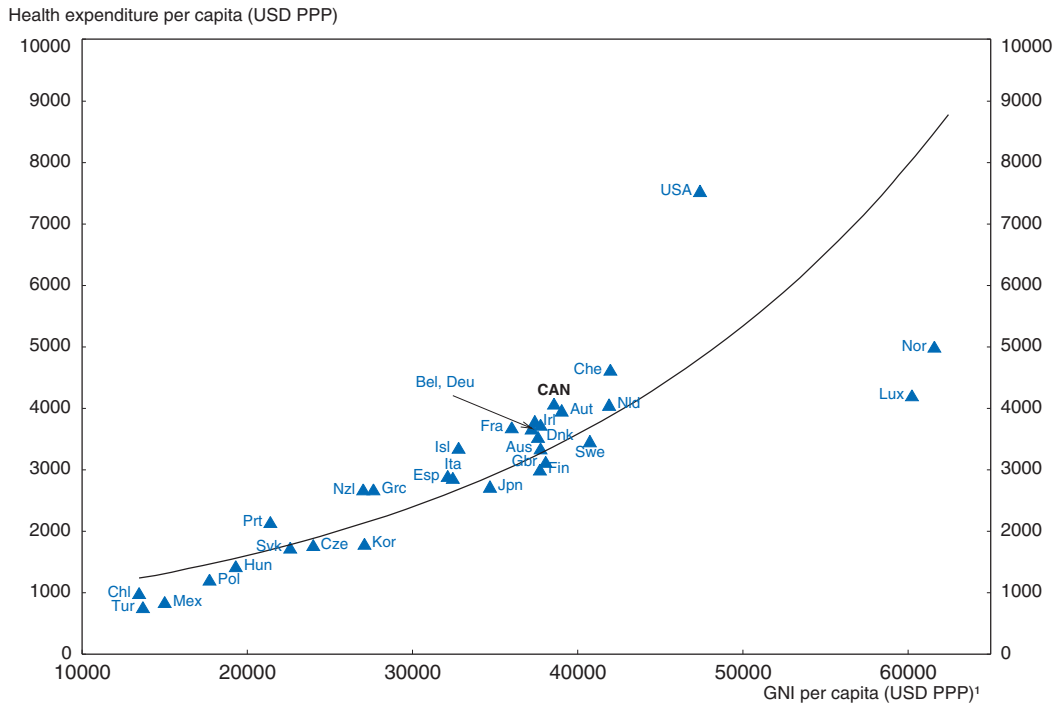
StatLink  <http://dx.doi.org/10.1787/888932320371>

shift of many countries toward market-like reforms such as managed care in the United States. Canada's ability to actually push down the growth of health spending to below that of GDP, though, required the use of strong top-down control measures as described above. In either case, the cost slowdown did not endure, and in the final analysis, it seems that health spending was largely cyclically driven, despite huge differences in institutions and policies. Still, the United States and to a lesser extent Canada stand out as having relatively high growth and spending levels over the long run. In level terms, Canada's per capita health spending in 2008 was fifth highest in the OECD, somewhat above its rank in per capita income – considered the best single predictor of health spending – of eighth highest (Figure 3.5). With regard to public sector spending on health as a percentage of GDP (i.e. 7.3% in 2008), though, Canada falls within the middle of the pack of OECD countries.

Looking at the main components of health spending, the fastest rates of growth by far have occurred in pharmaceuticals and services of “other professionals” (non-physician medical personnel outside hospitals), especially those supplying home care. As both these categories lie outside Medicare, the share of spending on Medicare services fell sharply. As a share of GDP, Medicare spending by 2008 was hardly higher than it had been in 1975: a sharp dip during the mid-1990s was only slightly unwound during the 2000s. Non-Medicare spending has risen considerably, however (Figure 3.6). Since 1997, a large part of non-Medicare spending growth has been public (catastrophic drug plans, etc.), as the private share of total health spending stabilised (Figure 3.7). It is noteworthy that spending on pharmaceuticals now exceeds that for physician consultations. Comparing the main expenditures across the OECD countries, Canada stands out with low per capita spending (along with Japan among the G7) on in-patient care, against relatively high spending on out-patient care (3rd highest, yet half the US level), drugs and durable goods (2nd highest) and public/preventive care (top) (Table 3.4).

The divergent Medicare and non-Medicare trends may suggest that centralised public administration of health-care is better at containing costs and therefore more sustainable than private insurance. However, this is not necessarily the case, as in some respects care has shifted away from Medicare-covered services to non-hospital care and

Figure 3.5. **Health expenditure per capita and income per capita**
2008 or latest available year

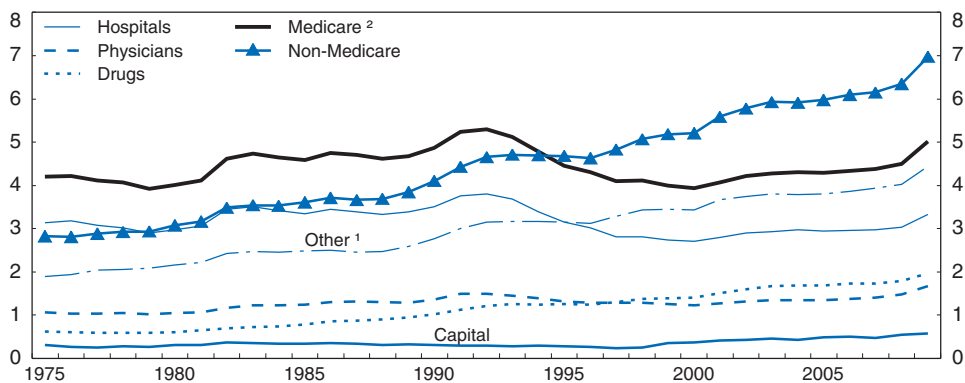


1. GDP for Turkey.

Source: OECD (2010), Health Database and OECD Economic Outlook 87 Database.

StatLink <http://dx.doi.org/10.1787/888932320390>

Figure 3.6. **Health expenditure by use of funds**
Percentage of GDP



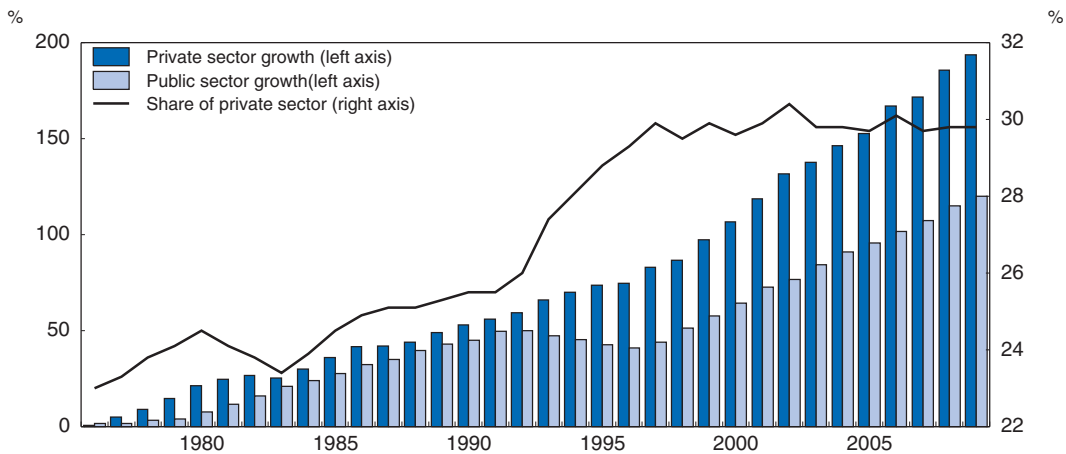
1. Includes other institutions (½ per cent of GDP in 1975 and 1% in 2008), other professionals, public health, administration and other.

2. Medicare is hospitals plus physicians. Non-medicare is drugs plus other.

Source: Canadian Institute for Health Information, NHEX Database and OECD, OECD Economic Outlook 87 Database.

StatLink <http://dx.doi.org/10.1787/888932320409>

pharmaceuticals (Skinner and Rovere, 2009). Furthermore, it is difficult to compare trends across very disparate services in Medicare *versus* non-Medicare and attribute differences to institutions alone. In that case it may be interesting to look at the United States, where hospital and physician services are supplied by the public (old-age Medicare) and the

Figure 3.7. **Private and public real health expenditure, cumulative growth per capita**

Source: Canadian Institute for Health Information, *National Health Expenditure Trends 1975 to 2009*.


StatLink  <http://dx.doi.org/10.1787/888932320428>

Table 3.4. **Expenditure per capita on different care aggregates in OECD countries**
2008 or latest available year,¹ USD PPP

	In-patient care	Out-patient ² care	LTC/Home care	Medical goods ³	Prevention and public health	Administration and insurance	Investment	Total expenditure on health
Australia	1 176	1 243	11	584	67	88	185	3 353
Austria	1 344	1 029	497	680	69	139	213	3 970
Belgium	1 081	915	758	649	98	175	– ⁴	3 677
Canada	622	1 407	581	809	276	147	213	4 079
Czech Republic	523	598	51	428	46	61	44	1 781
Denmark	1 015	1 112	724	448	49	41	151	3 540
Finland	740	1 015	365	511	162	64	151	3 008
France	1 075	1 020	407	768	72	253	101	3 696
Germany	995	1 039	506	739	135	196	127	3 737
Hungary	372	373	59	510	55	18	37	1 437
Iceland	901	1 149	659	537	53	62	59	3 359
Japan	652	920	407	577	65	64	42	2 729
Korea	484	598	51	463	42	56	107	1 801
New Zealand	666	914	467	288	156	192	– ⁴	2 683
Norway	1 314	1 396	1 283	584	97	40	290	5 003
Poland	375	325	83	305	27	19	80	1 213
Portugal	431	983	71	508	39	25	94	2 151
Slovak Republic	367	534	13	621	49	68	86	1 738
Spain	648	1 083	254	660	67	92	99	2 902
Sweden	878	1 392	273	556	120	47	175	3 470
Switzerland	1 267	1 459	868	547	104	224	– ⁴	4 469
United States	1 392	3 331	667	984	266	524	374	7 538
OECD average of above countries	833	1 083	412	580	96	118	125	3 242

1. 2006 for Portugal; 2007 for Australia, Denmark, Japan and Switzerland.

2. Out-patient care covers both hospital and non-hospital settings. Also includes same-day care and ancillary services.

3. Covers pharmaceuticals (and other non-durables) and durable goods.

4. No separate estimates of investment are available.

Source: OECD (2010), *Health Database*.

private (working-age) systems alike: it has been shown that long-run per enrollee cost control for comparable services was still better in the public system (Boccuti and Moon, 2003). This might corroborate the argument that features of the public single-payer system such as lower administrative costs and the ability to price aggressively for the services it covers have lent themselves to better health-care cost control.

Cost drivers and containment measures

Factors like income, population growth and age structure, patterns of disease and financial incentives for intensity of utilisation determine the level of demand placed on the health-care system. Policies in Canada have attempted to constrain demand mainly by preventive and public health approaches, as well as public insurance coverage restrictions (delisting) and gate-keeping arrangements. On the supply side, capacity constraints (numbers of doctors and hospital beds), cost and price of inputs (doctor pay, pharmaceuticals, administration), technological intensity of care and productivity (Baumol's disease of generally low public-service productivity against high wages, hospital organisation) have been the foci of budget policy control. Canada's (and other countries') experience shows that setting either overall budget constraints or more specific supply constraints is one of the best means of achieving cost control.

There is little concrete information on the extent to which cost growth has reflected volume or price rises, though excess demand pressure driven by zero prices at the point of service and supply constraints may have manifested itself in excessive input prices, as well as queues. According to the OECD's calculations, Canada exhibits the second highest national health deflator (relative to the GDP deflator) in the OECD, after the United States (Journard *et al.*, 2010). Insofar as Medicare services are not priced, this measure may give excessive weight to pharmaceuticals, though doctors' wages, a key input cost, are known to be high. According to a decomposition of public health spending growth per capita over the period 1981-2002 into the effects of age, income and a residual capturing both relative price and age-adjusted per capita utilisation, the residual explains 23% of the total in Canada, *versus* an OECD average of 28% (OECD, 2006). With long-run price growth presumably above the OECD average, this could suggest somewhat below average per capita volume growth in Canada.¹²

Demand-side determinants

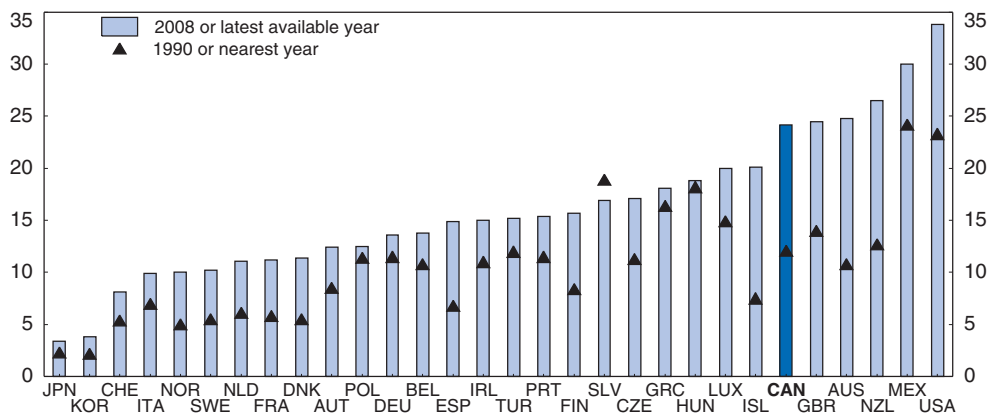
Income and demographics: These are the major exogenous drivers, as they are not receptive to health-care policy influence except indirectly. Health care is a normal good, and so its demand rises at least as rapidly as income (basically reflecting the working age population, the employment rate, productivity and the terms of trade). Most studies find an income elasticity of health care spending of around unity (OECD, 2006). Strongly rising per capita incomes in recent years (thanks largely to terms-of-trade gains) were thus a major push factor for health care in Canada. Age structure also matters. Older people use health services, in particular pharmaceuticals and long-term care, much more intensively than do other age groups (per capita spending by Canadians over 65 years of age is on average six times higher than for those under 65). In Canada, this cannot be an explanation for the high spending level (as yet) as the population is still relatively young. More rapidly ageing countries in Europe and Japan, most of which spend less per capita on health care than Canada, have been more efficient in resource use, all else equal. However, ageing is set to accelerate notably in Canada (the elderly rate is expected to more than double from

around 13% currently to 27% by 2050; see Hagist and Kotlikoff, 2005), and will affect spending growth significantly.

Patterns of disease: Canada shows the OECD's third highest rate of diabetes incidence, after the United States and Mexico and also one of the highest rates of cerebro-vascular disease, suggesting the burden of relatively high costs for chronic care (see Table 3.6). Obesity, a major risk factor for diabetes and other chronic diseases, is relatively high (together with the other English speaking countries and Mexico) among OECD countries, fast rising and a focus of policy concern (Figure 3.8). Drugs to treat chronic conditions such as high blood pressure and cholesterol, heartburn, depression, diabetes and asthma account for nearly three-quarters of drug spending (Morgan *et al.*, 2008). Though disability rates have been stable so far, ageing is expected to increase disability numbers (Lafortune and Balestat, 2007). Preventive care, notably the diffusion of public information and incentives for healthy lifestyles, can be an important component of health care cost control. Canada's high rate of spending on public health and prevention suggests a salutary forward-looking policy to address the problem, on condition that it is well targeted toward populations at greatest risk of chronic disease, notably those at the lower end of the income scale, and does not deflect resources to serve political goals (*e.g.* unnecessary mass immunisations or screenings). A high rate of expected return for preventive policies is essential insofar as benefits are often not felt until far into the future while costs are immediate. British Columbia, a Canadian leader in promoting healthy lifestyles is also a leading province in terms of health outcomes and control of per capita public health expenditure growth (Table 3.2). Long-run cost savings are nevertheless not certain because by prolonging life, prevention exposes individuals to conditions they would otherwise not have incurred (Sassi *et al.*, 2009). The goal is rather to enhance welfare by healthy life years gained, as efficiently as possible.


Figure 3.8. **Increasing obesity rates in OECD countries**

Obese population self reported,¹ percentage of total population



1. Obese population measured for Canada, Japan, Korea, New Zealand, Slovak Republic, United Kingdom and United States; self-reported for all other countries.

Source: OECD (2010), *Health Database*.

StatLink  <http://dx.doi.org/10.1787/888932320447>

Adapting the health infrastructure to the diseases of ageing is another challenge. A major projected health threat is Alzheimer's disease and other dementias, which afflict about one third of all people beyond the age of 85. The number of affected people is

expected to double in Canada over coming decades due to its high projected rate of ageing. This calls for investments in home and long-term care and mental health services for the aged as well as training of more geriatric specialists in primary care. While Canada is one of the few OECD countries without a national mental health strategy, work is being done at the provincial/territorial level and in 2007 the Government of Canada established the Mental Health Commission of Canada, an independent, arm's-length organisation mandated to act as a focal point on issues related to mental health. As part of its mandate, the Commission has been tasked with the development of a national mental health strategy. Developing one may require extensions of health insurance coverage for therapy, within a general rebalancing of priorities toward areas of high expected returns.

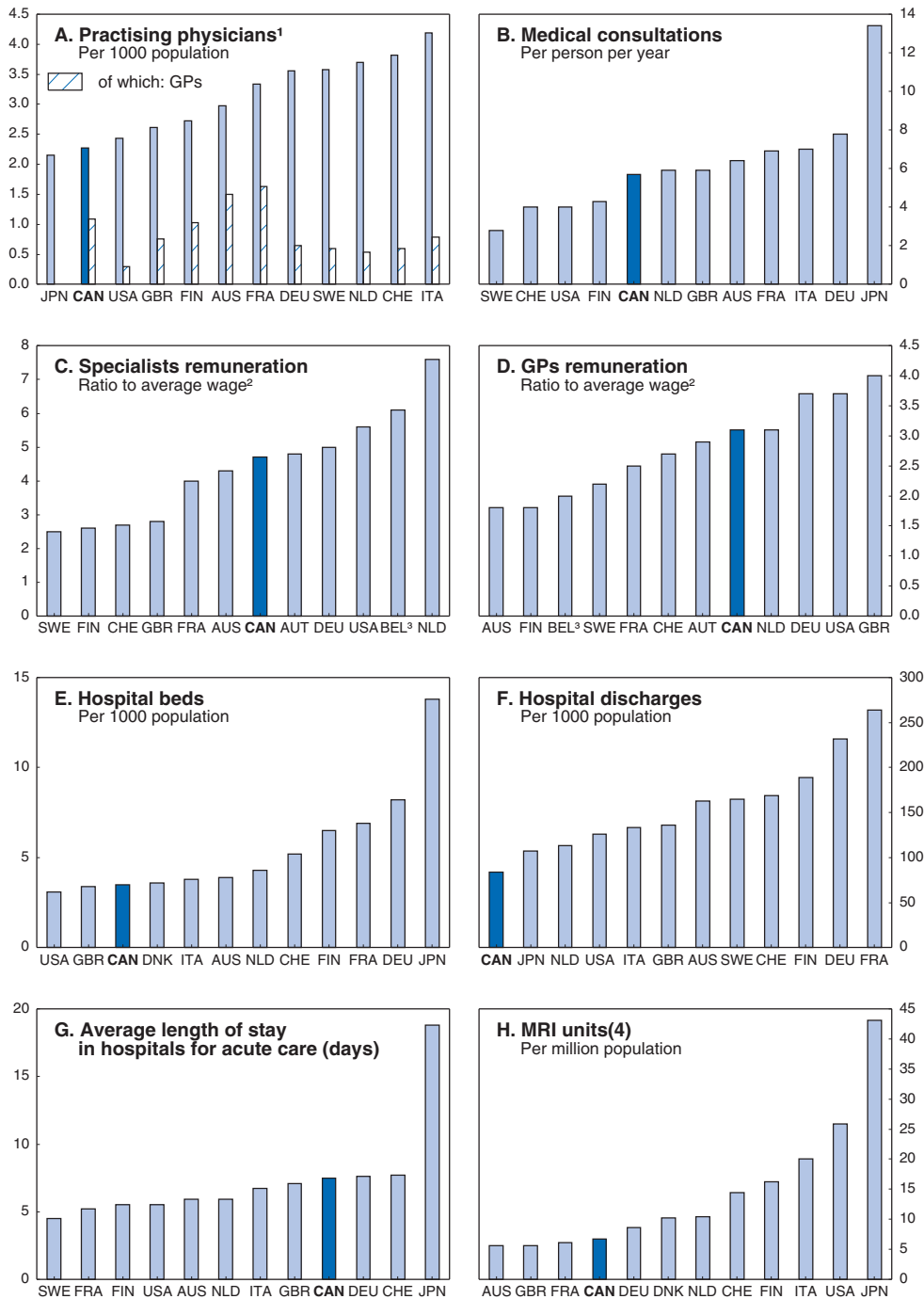
Intensity of resource utilisation: This category reflects residual factors driving the demand for health care over and above income and illness, notably advances in medical technology and financial incentives in treatment decisions by providers and demand decisions by users. Compared with other OECD countries, medical consultations per capita are not excessive, while hospital discharges are extremely low in Canada (Figure 3.9). This is likely to reflect supply-side constraints rather than (as sometimes argued) any lack of SID or moral hazard due to zero pricing. Patients' free choice of doctors is also constrained by the requirement for GP referrals to access specialist services, which appears to be more stringent than in many other countries (see Figure 3.12 below). On the other hand, per capita pharmaceuticals consumption is high (Table 3.4), despite often large copayments and limited coverage, which could reflect strong industry pressure on prescribers and consumers.¹³ Doctors also have a financial incentive to prescribe drugs as a costless and convenient way to provide "closure" to a patient visit, in other words, cutting it short with a demonstration that they are "doing something" for the patient – but they are not paid to keep abreast of the literature on best drug prescribing practices (Morgan, 2008b).

Provincial drug plans are turning their attention to better demand control via evidence-based listing decisions and restrictions on access to high-price drugs. For expensive new cancer drugs, permission is granted on a case-by-case basis. Patients represented by vocal pressure groups (genetic diseases, cancer) have often been able to get such cover, which may prolong life for a few months at a cost of ten or more times average annual income as pharmaceutical companies exploit "your money or your life" pricing power, posing serious ethical issues (Deber, 2008). Private drug plans tend to place fewer restrictions on access, relying more on patient deductibles and co-payments, but are ultimately less effective in cost control because they lack the market power of large public payers. Unions usually press employers to pay these charges while offering broad insurance coverage in negotiated labour contracts, which creates *de facto* zero pricing, subsidised by tax policies.

Supply-side determinants

Physician services: The greater the supply of doctors, the greater the volume of services, though costs should rise less than proportionately (or could conceivably fall) if doctors' pay is sensitive to their numbers. In Canada, the number of doctors grew strongly in the 1970s and 1980s and then declined due to deliberate policy efforts (Box 3.3). Presently, physician density (2.3 per 1 000 population) is sixth lowest in the OECD and well below the OECD average (3.2). Among the G7 countries, only Japan keeps doctor density so low and similarly uses it as a strategy of cost control, though at the price of long waits for short physician visits and overworked doctors (OECD, 2009b). The United States has kept doctor supply

Figure 3.9. **Indicators of resource use in the health sector**
2008 or latest available year



1. For Canada, France and Italy: professionally active physicians; for Netherlands: physicians licenced to practice.
 2. Self employed except for Finland, Sweden, and specialists in United Kingdom.
 3. Data include practice expenses, resulting in an over-estimation.
 4. MRI units in hospitals for Belgium, France and Germany.

Source: OECD (2010), *Health Database*.

StatLink <http://dx.doi.org/10.1787/888932320466>

almost as low but as a result of professional pressure to maintain high physician incomes (Japan, by contrast, holds down physician fees by tight regulation). Quebec, the province with consistently lowest spending per capita – despite having the “oldest” population and (uniquely) universal pharmacare – has more doctors per capita and lower doctor pay than in any other province, though part of the pay discrepancy may also be traced to its relatively high share of female doctors (over 40%), in addition to linguistic barriers to doctors’ mobility (Bélanger, 2005). For the OECD in general, an inverse relationship between GP density and pay seems robust, but less so for specialists as many other institutional factors intervene (Fujisawa and Lafortune, 2008). In Canada, overall physician compensation relative to average wages is higher than in Japan, some European countries and much higher than in the Nordics (where societies are highly egalitarian and many specialists are salaried hospital employees), but still much below its US counterpart (Figure 3.9). While there is no clear relationship between doctor density and overall wage push, strong doctors’ unions in Canada and the United States are likely to make for such a tendency.

Cost pressures may also arise from the presence of too many (highly paid) specialists in the doctor mix. Though a relatively good balance between GP and specialist numbers exists in Canada (Figure 3.9), specialisation is strongly preferred by recent medical school graduates in response to growing pay premiums and higher prestige accorded to specialising in a caring profession where technological knowledge is increasingly prized over intuition and relationship skills. Along with renewed expansions in medical school capacity (Box 3.3), this portends higher use rates and costs henceforth, though not necessarily higher system productivity as defined in terms of health outcomes: doctor-patient relations are thought to be essential to the diagnostic and healing processes alike, but increasingly neglected with the abandonment of family practice. The evidence has pointed to the importance of having a steady long-term primary contact, even in the context of integrated primary care teams, in order to save on long-run system costs.

Although fee-for-service payment should encourage physicians to seek high volumes, income effects arising from high compensation levels as in Canada, and high marginal tax rates, may conversely induce them to limit their effort, lowering productivity. Physician productivity may be further hampered by a relative lack of physical capacity, notably hospital operating space and diagnostic equipment (Figure 3.9). Having to deal with insurance paperwork can also be counter-productive, though much less so than in the United States, thanks to the single-payer system. Nurses are much more likely than doctors to suffer from non-productive working “out of scope”. A survey in British Columbia showed that as much as 60% of nurses’ time was spent on menial or administrative tasks, rather than those for which their training had prepared them, which in turn detracted from focussed patient care and seriously jeopardised hospital service quality (CNA, 2009). This suggests scope for efficiency gains in hospital organisation.

Hospital services: Falling bed numbers and shorter average lengths of stay have implied large hospital efficiency gains in Canada as in other OECD countries in recent decades, as seen in the downtrend in hospital costs relative to GDP (Figure 3.6). These gains have been made possible largely by technology, in particular less invasive procedures and better anaesthetics to allow for more rapid recoveries and same-day surgical care, and use of new drug technologies instead of hospitalisations and surgery to treat conditions. Also, the shift to activity-based hospital funding in many countries has encouraged shorter stays and other organisational efficiencies, reducing unit treatment costs significantly. In Canada, hospital discharge rates are

Box 3.3. Manpower planning

An important complement to caps on hospital budgets and doctor incomes has been the use of manpower policies to limit physician supply. Since doctors' incomes are by far the largest component of Medicare spending, the number of doctors is a key issue. The health spending cuts of the 1990s were accompanied by the conviction that there was a surplus of doctors following the major medical school expansions and immigration waves of the 1970s and early 1980s, themselves based on erroneous earlier projections of population growth (Dumont *et al.*, 2008). Barer and Stoddart (1991) argued that health care is largely supply-driven, so that in order to decrease health spending it is necessary first to decrease the number of doctors, an argument which was seized upon by provincial governments as intellectual cover for cuts (though the authors later said that such conclusions were taken out of context and that accompanying recommendations to greatly increase the supply of non-physician professionals were ignored). Moreover, doctors felt trapped in a zero-sum game under the imposed global budget caps on their aggregate remuneration and came to see that having fewer of them was the only way to maintain per capita incomes (Deber, 2009). Doctors were also frustrated by extensive hospital-bed cuts via province-wide hospital rationalisations, leaving them with less capacity with which to work. Many more doctors and nurses than expected took early retirement after being offered generous packages by the provinces. Emigration, mainly to the United States surged, and many emigrants never returned home. Medical-school admissions in many provinces were slashed in order to reduce the future stock of doctors, and immigration policies were tightened sharply in order to limit doctor supply in the meantime (Dumont *et al.*, 2008).

But by the early 2000s, perceptions began to shift toward a looming doctor shortage, believed to be the likely consequence of past medical school enrolment reductions, imminent baby-boomer physician retirements, changing doctor lifestyles toward more leisure and higher future per capita demand for services by an ageing population. A nursing shortage was already being acutely felt. The idea of a doctor shortage also provided the moral cover for increased current health-care spending in general, largely in the form of higher doctor pay. However, some experts continued to insist that there was no shortage, merely low doctor productivity (Evans, 2004). Manpower policies subsequently shifted gears: provinces have expanded medical-school slots and the federal government has collaborated with provinces, territories and regulatory bodies to help facilitate the integration of immigrant doctors and nurses into the Canadian health workforce. Research done for the United States, taking into account not only direct training costs but also opportunity costs, against the marginal benefits of extra health care, suggests that training more doctors may not be all that good a social investment (Glied *et al.*, 2009). It is preferable to train many more lower-skill health workers who are able to take over many of the doctors' more mundane functions. This also suggests that the recommendations of the Barer-Stoddart report may not have been completely off the mark.

at rock bottom, only half the OECD average, reflecting capacity restrictions: acute-care bed density is among the lowest in the OECD. On the other hand, average length of stay appears to be on the high side, though this statistic may not be directly comparable with other countries given the very low bed rate in Canada. Canada likewise invests comparatively little in expensive high-tech imaging machines (Figure 3.9). All in all, technological changes in the hospital sector were probably as fully implemented as in other systems with better incentives, thanks to the binding budgetary and supply side constraints.

Pharmaceuticals: Pharmaceutical spending has risen substantially almost everywhere in the OECD. New Zealand is a notable exception, where both hard price bargaining vis-à-vis international drug companies by a centralised public purchaser (with no domestic industry to protect) and conservative listing decisions reflecting its own tight budget have held drug costs in check (OECD, 2009c). Perhaps surprisingly, drug price inflation in Canada has been limited, even negative, as entry of generics for older drugs and their greater use has offset cost push by expensive new drugs. Such moderating price effects are expected to accelerate, at least in the near term, as patents on many “blockbuster” drugs developed over the last few decades start to expire. Retail spending on prescription drugs per capita, adjusted for general inflation, rose at an average annual rate of 6% between 1998 and 2007. Average prices paid for drugs fell slightly in all provinces (except Manitoba), as increased unit prices were more than offset by generic savings (the opposite occurred in Manitoba) (Morgan *et al.*, 2008). Rapidly expanding volumes explain all of the cost push, and to a large extent they reflect population ageing and the diffusion of new drugs (OECD, 2009a). Canadians spend a large amount on drugs – 50% more per capita than in the OECD on average – despite a relatively youthful population. Large variations in per capita consumption across provinces reflect varying age structures but also wide differences in consumption volumes and therapeutic choices (Morgan *et al.*, 2008), price differences being less significant, as those for patented drugs are regulated at the federal level. This suggests possible efficiency gains by the adoption of best prescribing practice, for example as appears to be found in British Columbia.

Canada is one of a handful of OECD countries where generics have a large market share (around 50% in volume terms), which, all else equal, should lower costs. But Canadian drug-price levels are high in international comparative terms (Table 3.5). Patented medicines’ prices remain substantially higher than in all European countries except Switzerland, though still much below the United States, which has a large weight in the reference price formula. The greater concern, however, is in generics, where Canadian prices are higher than in other countries by a wide margin – 54% higher than in the United States, for example. This mainly reflects distortive effects of insurance, pharmacy kick-backs and certain public procurement policies, on market competition (Box 3.4). As public purchases grow, however, provinces are starting to exercise their monopsony power,

Table 3.5. Average foreign-to-Canadian drug price ratios

2005

	Non-patented branded	Generic	Patented
Canada	1.00	1.00	1.00
Australia	0.81	0.85	0.78
Finland	0.75	0.49	0.88
France	0.76	0.71	0.85
Germany	0.91	0.84	0.96
Italy	0.73	0.76	0.75
Netherlands	0.72	0.80	0.85
New Zealand	0.64	0.23	0.79
Spain	0.59	0.58	0.73
Switzerland	1.34	0.99	1.09
United Kingdom	0.87	0.80	0.90
United States	2.46	0.65	1.69

Source: Institute of Health Economics (2008), *IHE in your pocket 2008*, Edmonton.

Box 3.4. Generics competition

Canada's inexplicably high generics' prices deserve attention. If they converged to international norms, significant savings would ensue. Generics, unlike patented drugs, have nothing by which to differentiate themselves except price. However, insurance makes customers insensitive to price, and even if there are co-payments, these are typically a flat fee and may be covered by private insurance, while sick customers are less able to hunt for bargains and more amenable to pharmacist influence – although the many Canadians with high out-of-pocket payments for drugs may be more price-sensitive. Thus, generics manufacturers compete mainly by purchasing shelf space in pharmacies by means of pharmacist rebates (also known as professional allowances), with customers and their insurers paying full list price. On top of the wholesale price plus mark-up, retail prices include a dispensing fee, which may be regulated.

Provinces have reacted in various ways in their struggle to control rising drug costs, but in doing so have inadvertently added new distortions. Ontario's public drug plan has imposed "minimum" discounts from off-patent brands – initially 70%, now 50% – but this approach merely sets a ceiling on list price at a still relatively high level, where prices tend to cluster. Quebec's public plan has responded by piggy-backing on other provinces with its "most favoured nation" rule, which sets its generic list price at the lowest level achieved in any other province but may undermine others' efforts to negotiate low prices: for example, Saskatchewan has implemented a transparent tendering process for generics but has been unable to negotiate a price commensurate with its lower costs (reflecting the fact that participating manufacturers are not allowed to pay rebates to pharmacies), because such a price would immediately become effective in Quebec without covering its higher costs (as rebates there are still permitted). More recently, Ontario and British Columbia have attempted to capture the pharmacists' rebate by outlawing it and then negotiating secret rebates with manufacturers for drugs, also thereby circumventing Quebec's rule. As a result, the drug manufacturers can post high list prices without losing sales to the public insurer in these provinces, who obtains a very low and non-transparent net price, with repercussions on private payers in Ontario and elsewhere. Competition is distorted by such sole-sourcing agreements, because they are "bought" by secret rebates based on a firm's ability to charge high list prices, rather than on its ability to produce at low costs as under a normal tender. Ontario has announced in its 2010 budget its intention to reduce generics prices to 25% of the branded equivalent for both public and private purchasers by banning pharmacy rebates, while raising dispensing fees for pharmacies in rural or underserved areas. While this will greatly reduce distortions, it should be noted that many generics prices in the US market are still less than 25% of the branded equivalent (Rovere and Skinner, 2010).

Governments have mixed objectives in setting prices, as they wish to promote domestic pharmaceuticals industries (notably in Quebec and Ontario) as well as save money on drug purchases and improve access to drug therapies. The initial generics price should be high enough to reward the first generic entrant, who typically must incur heavy litigation costs and risks of challenging patents (which rarely expire as patentees submit multiple new versions of the same basic molecule, or may authorise their own generic versions). Subsequent entry should lower the price, however, and help reveal lower-cost competitors (*e.g.* from India). Hollis (2009) recommends a staggered price-setting mechanism – *e.g.* 75% of the patented drug price for the first entrant; 55% for the second, 45% for the next three, and so on. Or, if once the patent has been successfully challenged or found to be non-infringed many firms enter simultaneously, they should pay the trailblazer a modest royalty – far below the benefits to consumers – in order to reward its "innovation" in the form of eliminating an inefficient monopoly. Tendering mechanisms, which try to set a low price at the outset and keep it there for the winner, may discourage future challenges by generics firms, inadvertently killing off competition. Yet tendering may have its place at a later stage of generic competition (see Competition Bureau, 2007).

albeit mostly independently of each other, as a market counterpart to the oligopolistic structure of supply, helping to drive down prices.

Baumol's cost disease: Despite increasing substitution for hospital and doctor services by pharmaceutical therapies, and technological complementarities as well, health care like all government services remains overwhelmingly labour intensive and therefore a low-productivity-growth activity in the aggregate economy context. Baumol's model of "unbalanced growth" has been tested for a cross-country sample of 19 OECD countries and found to be validated (Hartwig, 2008). Canada may suffer more insofar as the differential between nominal wage growth and total economy productivity growth (the "Baumol variable") is relatively large, given substantial terms-of-trade gains over recent history.

Quality

Quality encompasses both the effectiveness and subjective patient experience of health care. There are two main types of quality indicators, objective (output) and subjective (process). Among the objective indicators, Canada shows admirably high success rates in treating some of the chief cancers (Table 3.6). This likely reflects the high political priority given to cancer. It also scores very well on amenable mortality and avoidable admissions for asthma, considered to be indicators of the quality of primary and chronic care, respectively, where policy support is also high. More mediocre results for cardiovascular disease may reflect relatively weak efficiency incentives in hospitals, for example, low use of angioplasties (stent procedures) as opposed to surgically intensive bypasses (see Table 3.9 below), inconsistent use of beta blockers following heart attacks,¹⁴ or scarcity of scanners to make rapid life-saving diagnoses following a heart attack or stroke (Wolfson, 2009). Looking at subjective indicators for seven OECD countries, Canada scores highly on health outcomes, but along with United States ranks below the median on other measures of patient satisfaction, in Canada's case most notably for quality and

Table 3.6. Health care quality indicators

Age-sex standardised rates, 2007

Indicator	Rank ¹ within OECD	Canadian data	Highest and lowest in sample (per cent)
Breast cancer 5-year survival rates (2002-07)	3 out of 16	87.1%	(90.5; 61.6)
Cervical cancer 5-year survival rates (2002-07)	2 out of 14	71.9%	(76.5; 50.1)
Colorectal cancer 5-year survival rates (2000-05)	6 out of 16	60.7%	(67.3; 38.1)
In-hospital mortality rate within 30 days, stroke			
Hemorrhagic stroke	9 out of 19	23.2%	(30.3; 9.5)
Ischemic stroke	17 out of 19	7.6%	(9.0; 2.3)
In-hospital mortality rate, myocardial infarction	13 out of 19	4.2%	(8.1; 2.1)
Reduction in in-hospital case- fatality within 30 days after admission for stroke, 2002-07			
Hemorrhagic stroke	4 out of 13	5.5%	(0.5; 33.8)
Ischemic stroke	2 out of 13	1.6%	(0.4; 39.8)
Asthma admission rates (population aged 15 and over)	2 out of 22	18 per 100 000	(17; 120)
Prevalence of diabetes (population aged 20-79, 2010)	20 out of 22	9.2%	(10.8; 1.6)
Amenable mortality ²	6 out of 19	76.8 per 100 000	–

1. Number 1 means highest performance.

2. Death from treatable conditions.

Source: Nolte, E. and C.M. McKee (2008), "Measuring the Health of Nations: Updating an Earlier Analysis", *Health Affairs*, January/February; OECD (2009), *Health at Glance*, OECD, Paris.

timeliness of care; ironically, these two countries are also the two highest spenders, suggesting weak efficiency (Table 3.7). Adverse medical events (e.g. drug reactions) may also signal quality problems, partly stemming from inappropriate and excessive treatment under unrestricted, free access (Deber, 2008 and Senate of Canada, 2007).

Table 3.7. **Ranking of patient satisfaction**
2010

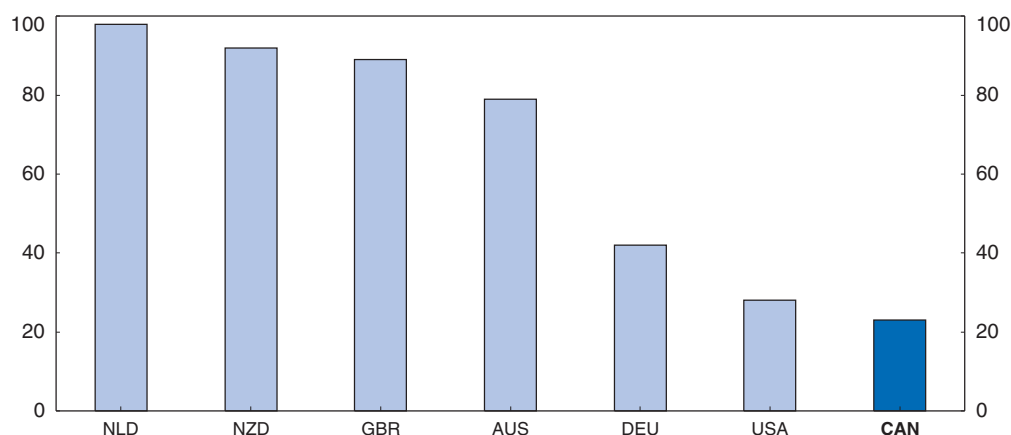
	Netherlands	United Kingdom	Australia	Germany	New Zealand	Canada	United States
Overall ranking	1	2	3	4	5	6	7
Quality care	2	3	4	5	1	7	6
Effective	3	1	2	6	5	7	4
Safe	1	2	6	3	4	5	7
Co-ordinated	2	3	4	7	1	5	6
Patient-centred	6	7	2	3	1	5	4
Access	1	2	6.5	3	4	5	6.5
Cost-related problem	2	1	6	3.5	5	3.5	7
Timeliness of care	1	4	6	2	3	7	5
Efficiency	3	1	2	5	4	6	7
Equity	1	2	4	3	6	5	7
Long healthy and productive lives	4	6	1	3	5	2	7
Health expenditure per capita, 2008 ¹	USD 4 063	USD 3 129	USD 3 353	USD 3 737	USD 2 683	USD 4 079	USD 7 538

1. At Purchasing Power Parity, 2007 for Australia.

Source: The Commonwealth Fund (2010), *Mirror, Mirror on the Wall: How the Performance of the US Health Care System Compares Internationally, 2010 update*; OECD (2010), *Health Database*.

Quality depends on better information to guide the appropriateness of care, and stronger efficiency incentives. Provincial data submissions to CIHI are voluntary (only Statistics Canada has coercive power to collect data), and those provided are often too unprocessed and overly detailed to allow easy analysis and interpretation. Furthermore, there are no good indicators for the co-ordination of care. There is likewise almost no longer-term follow-up of patients, apart from standard cut-off points (typically 30 days) for hospital readmission, post-surgical infection or cancer, heart attack and stroke survival rates, so that knowledge of treatments' impacts on life quality is rudimentary, despite the image of a very sophisticated technology. Statistics Canada is engaged in generating the requisite micro data and, indeed, is a world pioneer in health data collection and indicators of health status, health resources and their use, and determinants of health (Marchildon, 2005). The US Medicare system has already produced much useful data on US hospitals, which incontestably show that high quality and cost efficiency go hand in hand – there is no trade off (Wolfson, 2009). Equally relevant are statistical process quality-control techniques long used by industry to achieve dramatic improvements in product quality, but not yet implemented in health care. Information technology can play a major role here. Canada has invested substantial public funding in e-Health. However doctors report low use of electronic medical records at the community level (Figure 3.10). This is largely due to the fact that, given the complexity and scope of Canada's federated health care system, the approach was to establish jurisdictional e-Health systems (called the "electronic health record") with a plan to connect clinical settings such as doctors' offices as a subsequent phase. Canada recently allocated significant new funding to support work in this emerging area.

Figure 3.10. Physicians' use of electronic medical records
 Percentage of primary care physicians using electronic medical records, 2006



Source: Institute of Health Economics (2008), *IHE in your pocket 2008*, Edmonton.

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Equity

Equity is an important aspect of quality, especially in Canada where it receives a large weight in social utility. OECD studies show that equitable access to general practitioners (GPs) and to hospital acute care is at least as good as in any other OECD country, with even a pro-poor bias in the latter,¹⁵ suggesting a large degree of success in achieving the goal of equal access (Doorslaer, 2008). However, the 15% of Canadians lacking a regular GP are less likely to receive primary and specialist care, although the increase in the number of walk-in clinics has much improved access to a GP, and there is a clear pro-rich bias in the access to specialists. Anecdotal evidence suggests that rich, educated patients are better able to elicit specialist referrals from GP gatekeepers, and they even appear to receive better care in hospitals. The ease of access to health services is likewise higher in more affluent areas where doctors prefer to live and work. However, this pro-rich bias is no worse than in many other OECD countries. Where Canada's policies seem to least favour the poorer parts of society is in the equality of access to pharmaceutical treatment. The Commonwealth International Health Policy Survey 2001 showed that three times as many poor as rich people are likely to report cost as an impediment to purchasing drugs, against only twice as many in the United States and other countries, implying the largest relative (though not absolute) income-related difference in Canada. In addition, those with private insurance were 40% less likely to report access problems because of cost. This suggests that income-related access to prescription drugs may be a result of the lack of universal coverage and unequal distribution of private insurance coverage across income groups in Canada (Doorslaer, 2008). It has also been shown that having private drug insurance increased physician visits (to obtain prescriptions) by 10% on average (Stabile, 2001). And, despite the high degree of equality of access, health outcomes in Canada are surprisingly sensitive to income level, even if very good in aggregate absolute terms (Box 3.5).

Waiting lists

The highest-profile quality problem in Canada is that of long waiting lists and excessive waiting times for treatment. The genesis of the problem is widely believed to be the 1990s budget cuts, which focused heavily on capacity reductions. The persistence, even

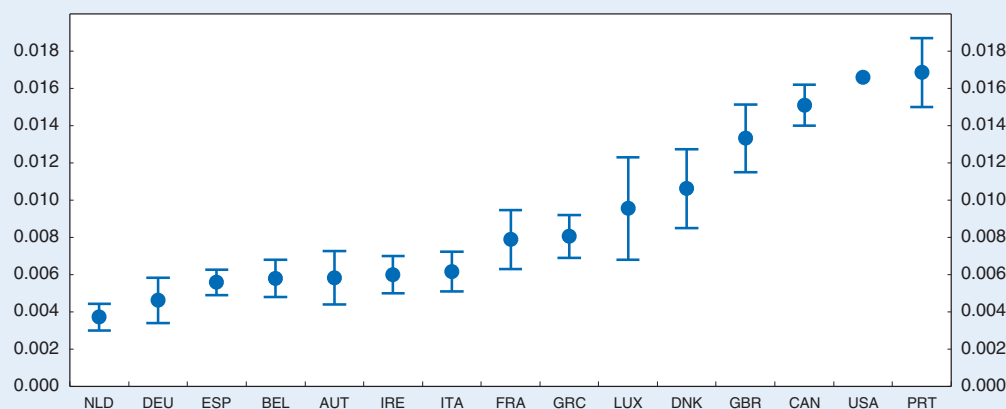
Box 3.5. Inequality in health outcomes

Various indicators suggest a relatively high degree of inequality in health status across Canadian social and income groups. The dispersion in mortality by age across regions is the highest in the OECD (that at the individual level is 8th highest in the OECD and 2nd highest in the G7). As this result does not seem to be closely correlated with the regional distribution of doctors, it may be inferred that inequality in access plays a minor role in explaining inequalities in health status (Joumard *et al.*, 2010, Figure 2). There is a large difference between above- and below-average income groups in the percentage of adults going without needed care due to costs (OECD *Factbook*, 2009, p. 297). Taking into account morbidity as well as mortality under a “health utility index” (HUI) to obtain a richer measure of health status, there is strong evidence within Canada of a profound impact of socio-economic position on health (McIntosh *et al.*, 2009): in fact, the resulting inequalities in health status between the bottom 80% and the top 20% of the population are equivalent to the entire national burden of cancer as measured by premature mortality or healthy life years lost – though much less policy attention is given to this problem than to cancer.

Extending the HUI approach to international comparisons is difficult because the morbidity component of the index is necessarily based on subjective quality of life indicators, which may vary from country to country. Nevertheless, attempts have been made. Utilising the 2002 Canadian Community Health Survey and similar surveys conducted abroad, Canada’s estimated socio-economic gradient (*i.e.* the extent to which health status, as measured by the HUI, varies with income) is closer to that found in the United States than in continental Europe, despite health social safety nets closer to European than to US norms (Figure 3.11). Utilising instead the 2003 Joint Canada/US Survey of Health microdata file to generate more consistent cross-country health utility indices for these two countries alone shows that the gradient may even be slightly steeper in Canada for working ages, but milder for over-65s, than in the United States (O’Neill and O’Neill, 2007). Identifying the underlying causes of such inequities is necessary in order to design an appropriate policy response. One study pinpoints female gender (of working age) as a unique predictor of unmet health-care needs in Canada, leading to the hypothesis that working full time outside the home, under often precarious conditions, and providing unpaid care to their families may impede the ability of women to tend to their own health-care needs (Bryant *et al.*, 2009). Thus, the crowding out of family support social services (such as child care and after-school programmes) by health spending could well be counter-productive.

Collectively, Aboriginal Peoples represent the most disadvantaged group in several respects, and include those living on and off reserve (First Nations, Inuit and Métis). Though accounting for a small proportion of the population, the Canadian government has committed to addressing historical injustices against these peoples. Social indicators for them are still sparse, but available mortality rates are significantly higher than in the general population – 60% higher for men and double for women (CHRSE, 2010). Indeed, a dire situation in basic living conditions and health on reservations, with high rates of addiction, chronic illness, and environmental poisoning, is often depicted in investigative newspaper reports. The Health Council of Canada (2005) has made developing an appropriate information base and reforming policies for the First Nations a high priority. Health Canada is working to improve the delivery of health care (for a part of which the federal government has direct responsibility) through greater self-governance.

Box 3.5. Inequality in health outcomes (cont.)

Figure 3.11. Income-related health inequality¹

1. Concentration indices for income-predicted Health Utility Index (HUI), adjusted for gender and age. US data are not gender and age adjusted and no 95% confidence interval is reported, implying some non-comparability. These rankings do not capture comparisons of health inequality *per se*, but rather the sensitivity of health status to inequality in income, the latter varying markedly from country to country.

Source: Doorslaer (2008) and Xu, K.T. (2006), "State-level variations in income-related inequality in health and health achievement in the United States", *Social Science Medicine*, Vol. 53, No. 2.

lengthening of waiting lists despite increased funding reflects: i) improving technology that, in conjunction with the zero pricing policy, greatly increased the demand for certain elective procedures to repair worn body parts; ii) new money likely going into pushing up unit prices rather than increased service volumes, given unchanged provider incentives; and iii) persisting budget restrictions on doctor and hospital capacity.

Waiting is thought to occur on many levels, as bottlenecks cascade throughout the system. Finding a primary-care doctor is difficult in some areas, both rural and urban (some 30% of Calgary residents, for instance, are reportedly not able to get a family physician). Dwindling effective GP supply reflects several factors. On top of already existing capacity tightness due to low physician numbers and reduced average hours, GPs' scope of practice has narrowed, as many former duties have been taken up by specialists (e.g. obstetricians).¹⁶ Patient access to such specialists, however, is itself hampered by the penury of GP gatekeepers. Even so, specialists are in high demand, as evidenced by long waiting times for specialist visits (Table 3.8). Waiting for primary care then spills over into demand for acute care. Emergency rooms (ERs) clog up as people without regular family doctors show up with aggravated untreated conditions, or simply because no doctor is available after regular office hours. Excessive ER waiting fills the rare hospital beds needed for non-urgent acute care, so that waiting for elective surgery then emerges. Hospitals on global budgets have a vested interest in maintaining long waiting lists for elective surgery. Also some patients are on more than one waiting list, and, apart from some successful pilots (below), there is a lack of co-ordination among specialists to manage and optimise waiting lists.

Table 3.8. Median waiting times for specialist physicians by province
Weeks waited, 2009

	Wait from GP to specialist	Wait from specialist to treatment		
		Total ¹	Of which:	
			Arthroplasty ²	Cataract removal
Newfoundland	14.0	13.2	20.0	8.3
Prince Edward Island	14.5	12.2	31.5	8.0
New Brunswick	14.3	11.4	24.0	15.0
Saskatchewan	11.2	14.0	26.0	12.0
Nova Scotia	12.2	10.9	60.0	7.0
Alberta	10.0	9.6	20.0	14.0
British Columbia	7.8	9.2	20.0	8.0
Quebec	8.3	8.2	16.0	10.0
Manitoba	6.3	8.0	24.0	8.0
Ontario	6.7	5.8	12.0	6.0
Canada¹	8.2	8.0	n.a.	n.a.

1. Weighted average.

2. Hip, knee, ankle, shoulder.

Source: Fraser Institute (2009), *Waiting your turn, Hospital waiting lists in Canada*, Fraser Institute, Vancouver.

It is hard to judge the relative severity of the problem since there are no good internationally comparable data on waiting times, reflecting serious definitional differences (Hurst and Siciliani, 2003). Domestic data indicate that average waiting times for elective surgery are within recently established UK “war on waiting” targets (18 weeks between GP referral and treatment; 16 in Canada), though well in excess of the ER waiting time targets (a maximum of 4 hours; more than 12 hours in Canada). This surprisingly good result (apart from ER waits) may reflect the fact that waiting times have recently fallen in response to the 2004 federal Wait Times Initiative to assist provincial measures, such as centralised registries and prioritisation systems, in selected therapeutic areas. There remains, however, considerable variance across provinces, with corresponding scope for improvement, especially in the Atlantic provinces and Saskatchewan (Table 3.8). Furthermore, this may not be a sustainable solution, even if it were possible to keep paying for achieving targets.¹⁷ Evidence shows that waiting lists can take on a life of their own: boosting the supply of services temporarily shrinks the list, which only encourages more demand, especially at a zero price and particularly for elective services, and the problem recurs (Hurst and Siciliani, 2003). Selective targets may distort the allocation of resources. High rates of the targeted procedures (except perhaps for hip replacements) now coexist with low overall hospital volumes (Table 3.9 and Figure 3.9).¹⁸

Table 3.9. Elective surgery
2008 or latest available year

	Canada	Australia	France	Italy	Netherlands	Sweden	Switzerland	United Kingdom
Per 100 000 population:								
Number of cataract surgeries	1 042	899	944	896	801	790	421	673
Number of knee replacements	142	158	114	97	119	110	179	146
Number of hip replacements	121	155	220	154	205	207	226	195
Revascularisation procedures ¹	187	282	220	455	199	218	175	138
Coronary angioplasty as % of total cardiac procedures	61	69	86	84	71	74	80	68

1. Coronary bypass and percutaneous coronary interventions except for Sweden coronary bypass and stenting.

Source: OECD, *Health Database* (2010).

Sustainability

In historical perspective, total health spending has doubled as a share of GDP over the last half century, from around 5.5% in 1960 to 12% in 2009, and public health spending somewhat less so. Over the last decade of generally reasonable GDP growth, provincial public health spending per capita accelerated to over 7% p.a. (4¼ per cent p.a. on a real basis, using the government consumption deflator), whereas provincial own revenues grew by 6% p.a. on average (Table 3.2). Key sources of health cost pressure over this period were generous provincial wage settlements with nurses and doctors, and wider diffusion with increased public coverage of drug therapies. The difference was made up by rising federal transfers, the interest dividend on lower debt service, and slower growth in non-health spending, only part of which was cyclical. Provincial surpluses were largely spent on income tax cuts rather than prefunding (via debt reduction or asset build-up) of future entitlements. This weakened the tax base and left provinces exposed to future interest-rate increases on their debts, not to mention unfunded liabilities in health care (Box 3.6).

Box 3.6. The future public burden of health care

Whereas public pensions (Canada and Quebec pension plans) are considered to be on a more or less sustainable footing, very large unfunded liabilities are implied by ageing and other pressures in health care. Ageing is normally expected to increase average per capita spending even if that for every age group individually remains unchanged, as the weight of the higher-spending older age tranches grows. However, this may be qualified by the fact that “distance to death” imposes substantial non-linearity within the old-age cohorts themselves. That is, as life expectancy keeps lengthening, the year of death (when most lifetime health-care costs are incurred) shifts out and is more heavily discounted. This alleviates – but does not eliminate – the ageing impact in a dynamic sense (Payne *et al.*, 2007). According to OECD (2006) calculations, which include distance-to-death as well as (optimistic) healthy-ageing assumptions, Canada’s public health and long-term care spending as a share of GDP is set to nearly double by 2050 (from 7.3% in 2005 to 13.5%) if the long-run historical average residual cost pressures (the part of health spending growth not explained by GDP) were to persist, but grow by only around 50% (to 10.8%) if such pressures were to be brought under control by the use of policy levers. Thus, even in the best case, extra room must be found in provincial budgets to the tune of 3½ percentage points of GDP, but, in the absence of policy corrections, the shortfall could be as much as 6 points of GDP or more. The burden would be distributed unevenly because of different rates of population ageing across provinces, with British Columbia and Quebec finding themselves especially hard hit. Robson (2009) corroborates such orders of magnitude with predicted public health spending of 12% of GDP by 2050 (Table 3.10). He estimates that the real discounted value of the public debt of the three government levels is three times higher than the published figures, mostly because of the huge unfunded liabilities related to health, and to a much smaller extent those related to pensions. Some Canadian experts dispute that ageing effects alone can drive unsustainable fiscal trends, arguing that they are small thanks to ongoing compression of morbidity (healthy ageing), and while underlying use rates have driven cost trends thus far, complex systems have unforeseen ways of adapting (Evans *et al.*, 2001). However, Hagist and Kotlikoff (2005) estimate that if benefit growth in countries were to be immediately stabilised, Canada (along with Germany) would have the highest present value of public spending as a ratio of GDP among 10 OECD comparator countries because it: i) has relatively high current benefits; ii) is slated to age very significantly; and, most importantly, iii) has a very steep age-benefit profile. (If past rates of benefit growth were to continue for a while, the increase in health spending would of course be larger, though Canada’s relative position would improve insofar as its own past average rate of growth has been milder than in some other countries).

Box 3.6. The future public burden of health care (cont.)

Table 3.10. Public health and long-term care spending: long-run projections

In per cent of GDP

	2005	Total	
		2050	
		Cost-pressure	Cost-containment
I. OECD cross-country projections			
Canada	7.3	13.5	10.8
France	8.1	13.4	10.8
Germany	8.8	14.3	11.8
Italy	6.6	13.2	10.7
Japan	6.9	13.4	10.9
United Kingdom	7.2	12.7	10.0
United States	7.2	12.4	9.7
OECD average	6.7	12.8	10.1
II. Canada: domestic projections			
Robson (2009)	7.5 ¹	12	–
Lee (2007)	7.5 ¹	12.5	8
Brimacombe <i>et al.</i> (2001)	2.2% annual growth in real per capita expenditure, 1999-2020 ²		
Matteo and Matteo (2009, Alberta)	1.9-6.1% annual growth in real per capita expenditure, 2007-30		
TD Economics (2010, Ontario)	6.5% annual growth in health expenditure, of which 2% real per capita, 2010-30		

1. 2007.

2. Between 1999 and 2008, real per capita expenditures (CIHI definition) grew by 3.7% per annum.

Source: OECD (2006); Robson (2009); Lee (2007); Brimacombe *et al.* (2001); Matteo and Matteo (2009); TD Economics (2010).

The key policy question therefore is whether the growing imbalance between health care and revenue sources is sustainable at current policy settings. The very real possibility that provincial health-care spending will outstrip revenue growth raises the prospect of enormous future fiscal deficits, requiring i) cuts in other spending, ii) tax increases, iii) delisting of public health-care services (privatisation), or iv) finding savings within health-care itself. Higher federal transfers, the historically preferred solution, do not seem likely given the federal government's own fiscal problems (see Chapter 2). None of these options is especially attractive as each is an object of fierce public opposition, so that the likely outcome is a compromise/mix of all four. They will now be briefly reviewed.

Crowding out. Even though its share in provincial spending has risen markedly (Table 3.2), health has not "crowded out" other social spending in an absolute sense (Landon *et al.*, 2006). But it may yet do so, even in the medium term if current pledges to maintain annual health spending growth at some 3% in real terms (except for Ontario, which seeks to decelerate health spending) are honoured. The hazards of undermining the already fraying social safety net, not least from the point of view of health itself (see above), seem clear. But there may be less productive spending programmes that could be cut (see Chapter 2).

Tax increases. One way of looking at the issue is through the lens of declining income tax rates and social choices: the combined federal and provincial personal and corporate income tax cuts during the mid-2000s were, by 2004/05, estimated to be some 60% as large

as all provincial health-care spending (Evans, 2004). The substantial 2007-13 federal tax cuts would have increased this ratio further. There is therefore room to raise taxes again, but there would be economic efficiency costs (which is presumably why taxes were cut in the first place). It is estimated that each CAD 1 raised in income tax displaces CAD 1.30 in GDP.

Privatisation. The sustainability debate is closely linked to concepts of fairness and the debate on public-private finance in Canadian health care (Matteo and Matteo, 2009). Some (e.g., the above-noted Mazankowski and Castonguay reports) have argued that, in order to solve the sustainability crisis, an increasing share of future funding for health care will have to come from private sources (Marchildon, 2010). To its opponents, however, privatisation represents a shift in Canadian social values aiming, like income tax cuts, at reducing opportunities for redistribution and enabling the rich to enjoy a better standard of health care. Rather than open up publicly insured services to private co-financing (Box 3.2), provinces have tended to cost-shift to the private sector via “delisting” decisions to terminate or limit public cover for selected services (of certain drugs, optometry, speech and physio-therapies, chiropractic), which have sometimes been arbitrary and unfair in their incidence (Stabile, 2008), and the process may continue in response to present budget difficulties. However, unsustainable private costs can end up as a public-sector liability.¹⁹

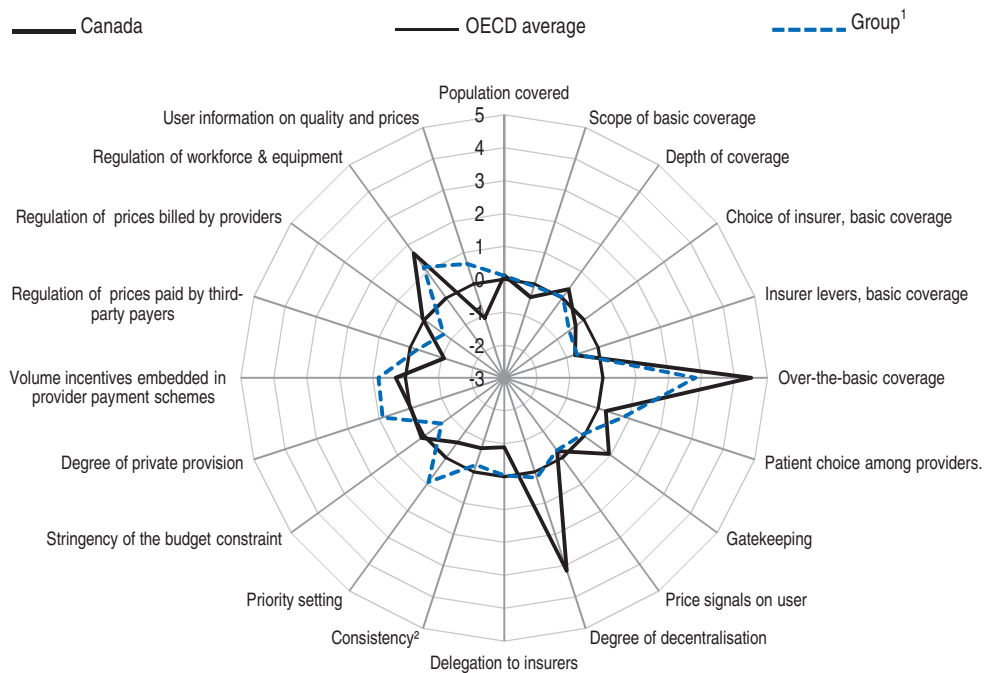
Value for money in health care. The extent to which public health-care costs (and therefore taxes and/or private burdens) will need to rise could be greatly limited by more efficient management of the resources that are already being spent. The very large (nearly 50%) share of health in total provincial primary spending demands examination of its efficiency, given the large economic deadweight losses associated with its tax financing and opportunity costs of foregone alternative spending. The rising demand for services created by improvements in health insurance cover and ageing should be met insofar as possible by rising productivity on the supply side. Indeed, with doctor and bed numbers already very low, and health professionals’ wages high, this leaves “reform” as the only option. However, efforts to “make do with less” in health care faces formidable insider resistance to resulting job losses and income cuts. In virtually all OECD countries, the lack of measures of health outcomes and quality has encouraged ideology to flourish in health debates; in this setting, the medical profession has often blocked efficiency reforms that challenge their professional freedoms or economic interests. Thus, successful reforms have been informed by diagnostic data and analysis which often included international comparisons of health system performance, and their implementation required the co-operation of the professional monopolists who provide health services (Hurst, 2010). Since such co-operation has been typically secured through the payment of large bonuses, implementing health care reforms under a tight resource constraint, as the analysis in Chapter 2 suggests to be the case for Canada, may prove to be a particular challenge.

Reforms to enhance efficiency in support of sustainability

Recent OECD work (Joumard *et al.*, 2010) has developed a set of indicators linked to health system performance. The efficiency and quality indicators for Canada nicely summarise many of the aforementioned features: above-average efficiency in terms of health outcomes, hospital bed use, primary care and prevention, but with room for improvement with respect to equity of health outcomes and some acute-care outputs. The institutional indicators reflect relatively narrow but deep basic public insurance cover, a large role for (segmented) PHI, provider choice but less use of price signals, high-volume incentives with regulation of capacity but not provider prices, and significant

decentralisation but less consistency in responsibility assignments (Figure 3.12). Comparisons with OECD peers would suggest that Canada: extend the scope of the basic insurance package to address inequities in health outcomes; introduce price signals to constrain demand; soften regulation of workforce and equipment; and enforce greater coherence across federal assignments to deliver efficiency gains. As these recommendations accord with the analysis in this chapter, the following discussion will attempt to flesh out and extend them by drawing on the foregoing discussion of incentives and performance.


Figure 3.12. **Institutional and policy indicators for Canada**



1. Australia, Belgium, Canada, France.

2. Consistency in responsibility assignment across levels of government.

Source: Journard et al. (2010).

StatLink  <http://dx.doi.org/10.1787/888932320504>

Steering demand for health-care services

Excessive waiting times suggest that supply is insufficient to meet demand at a zero price. Canada is very unusual in not requiring any form of patient payment whatsoever for core services. Some form of pricing could be introduced in order to better reveal and ration demand. It may conceivably encourage healthier lifestyles and thus prevent costly future chronic diseases by the reduction of insurance moral hazard. Patient user charges could provide the potential “double benefit” of reduced use and co-financing of public health care. Both the extent and health impact of such a benefit is an empirical question which has been poorly studied. However, the US Rand Insurance Experiment (Newhouse, 1993) suggested that a 25% co-payment reduced use by 15%, and a large-deductible plan reduced use by 25-30%, without compromising health outcomes, except for the very poor and sick (which was traced to a lack of initial screenings for blood pressure); the strongest demand response was found when cost sharing was increased from zero to a positive amount. An

experiment in Saskatchewan likewise found undesirable impacts of co-payments on health outcomes for the poor and chronically sick (CHSFR, 2001). Most OECD public health-care systems accordingly exempt such individuals from co-payments. However, since the use of health care is highly skewed, with a small minority of patients (possibly very poor and/or very sick) accounting for the lion's share of expenses, such exemptions could well limit the financial benefit, while also creating "poverty traps".

The impact of user charges on equity could be minimised, and on cost reduction maximised, by making user fees progressive via linkage with the income tax system. Fees could be calculated as a fixed percentage of the total cost of services used by the tax unit, subject to a stop-loss ceiling. The degree of cost sharing would rise with income in an equitable manner. Highly valuable services, notably preventive care, should be exempted from cost sharing, for example by allowing free annual check-ups, as many private plans already do. Aba, Goodman and Mintz (2002) recommend a 40% co-payment by individuals and families of all their hospital and physician costs up to an annual limit of 3% of income, after exempting the first CAD 10 000 (pharmaceuticals and other services would be excluded insofar as they remain outside the Medicare system). It would be administered by the income tax system, and some CAD 6.6 billion in revenues would have been generated in the year 2000. To this would be added CAD 6.3 billion savings in reduced use of services (assuming a very conservative 0.17 price elasticity of demand) – a total fiscal gain of CAD 12.9 billion, or 28% of Medicare spending in 2000 (CAD 46.7 billion), which could be used to cut income taxes and fund other health priorities (notably expanding Medicare to other essential services starting with pharmaceuticals; see below).

In Canada, any form of patient cost-sharing is traditionally seen as violating equity, and therefore rarely considered. It is certainly true that the introduction of user fees, if not graduated for income, would fall most heavily on the poor. However, health care is an inefficient vehicle for poverty reduction and might even be regressive in a life-cycle sense, insofar as life span is highly correlated with income. From both efficiency and income distribution perspectives, a substantial chunk of health spending might be usefully replaced by targeted anti-poverty spending, by dedicating a part of user fees for this purpose. This would leave the poor better off on balance, as they are likely to value better housing, nutrition, education, etc. more highly than health care itself, and an improved overall consumption basket could well have a more meaningful impact on their health status than yet more health spending. Furthermore, it should be acknowledged that the only real alternative to user charges is rationing, and both economic theory and evidence point to the inequities of the latter.

Canadians' attitudes may be undergoing a process of change, nevertheless. Quebec, so often a first mover in Canadian health reforms, has floated the idea of a possible future health deductible (CAD 25 per visit up to 10 visits annually per adult) via the income tax return, thereby taking capacity to pay into account (Government of Quebec, 2010). The purpose of the measure is to encourage citizens to take responsibility for their use of health care and for their own health, while giving the government a tool to orient users in desired directions by adjusting the amount of the deductible. The Quebec government has further indicated its intention to study European systems (*e.g.* Sweden's) that have implemented significant levels of consumer cost-sharing with success. A recent survey (Ipsos Reid, 2010a) has shown Canadians ready to accept tax-favoured Medical Savings Accounts (MSAs) akin to RRSPs or contribution-based accounts akin to the CPP, as respective vehicles for consumers to manage and "own" their deductibles up to a

catastrophic insurance limit or to prefund future health-care needs via social contributions, more readily so than income-linked co-payments or higher general taxes. While MSAs are often considered inequitable and ill adapted to risk pooling, the use of social insurance has been recommended by some experts as an efficient way to finance universal pharmacare (Flood *et al.*, 2008). Another survey (Ipsos Reid, 2010b) showed that nearly half of Canadians would allow controversial measures such as doctor visitation fees and two in three would be willing to accept a change in the health system that would allow them to buy private health insurance for treatment in private facilities not funded by tax dollars.

Encouraging contestability in funding and provision

Another goal is to make the supply side (provision) more efficient in order to satisfy as much demand as possible, while doing so appropriately (with minimal waste), at the given budget constraint. Medicare, despite being a single-payer system, allows for broad consumer choice of provider, private entry (in principle) and provincial autonomy in provision – factors that should be conducive to benchmark competition and innovation, hence productive efficiency. These opportunities are not being well enough exploited. Special new funding streams to reduce waiting times in select high-profile areas have been successful on their own terms, yet treated the symptoms rather than underlying causes of the problem. P4P payments are not only expensive but also tend to distort resource allocation and blunt intrinsic doctor motivation.

Allowing private health insurance (PHI) at the margin of the public Medicare system could impart it with much needed contestability and also encourage private provision. If even only a small portion of the population chooses to opt out of public insurance and purchase private insurance for core services (*i.e.* duplicate insurance, as in Britain and Sweden), the presence of competition from private plans would give politicians and managers of the public plan a strong incentive to operate more efficiently and reduce costs, since otherwise they would lose market share (Blomqvist, 2008). There is a first move in this direction in Quebec, which has conditionally allowed private insurance coverage for core services suffering from queues. To make such competition at the margin work, doctors should be able to serve either public or private paying patients, as recommended by the Castonguay report (Quebec, 2008). The prohibition of extra billing for core services should continue to hold, so as to force private providers to compete on the basis of efficiency, though allowances may be needed for recouping private capital investments. PHI, if it is to cover a broader array of services including those in the core, will need to be regulated (as it is in Quebec) to prevent it from competing on the basis of risk selection, rather than price and quality. Such plans should be able to operate nationally, *i.e.* across employment groups and provincial borders, so as to attain sufficient scale for risk pooling.

A similar issue arises concerning the purchase of private insurance against the cost of co-payments and deductibles (supplementary insurance, as in France and New Zealand). It has been argued that this imposes an additional burden on the taxpayer, since by effectively removing the incentive effect of the user charge they increase use of the public system. Since wealthier people would better be able to afford it, there are serious equity concerns as well. It would again be advisable to allow such insurance as a matter of choice and efficiency, but to tax it for the public externality that it imposes (rather than subsidise it in order to make it attainable for the less-well-off, which is expensive, as Australia and other countries have shown). Proposals to tax rather than ban private health insurance (Stabile, 2008 and Glied, 2008) as a way to internalise its negative externalities, suggest a

move away from ideological extremes toward Pareto-efficient solutions. Regulation of PHI to discourage cream skimming and adverse selection is a further way to approach this goal. By the same token, regressive tax deductibility of employer sponsored PHI should be discontinued, and instead it should be taxed progressively.

Even in the absence of opting out and mixed physician contracts, a competitive process for public contracting out of health services, notably for private hospital services on an equal footing with public hospitals, could stimulate public-sector accountability as for any type of public procurement. A recent study of procurement of cataract surgery in Alberta suggests the following reforms. Instead of the current system where there are no incentives to hold down prices, no rewards for boosting quality and waiting lists are not rationalised, a new approach (having been proven effective elsewhere) would rely on independent gatekeepers to identify candidates for surgery, a competitive bidding process to hold down prices and warranties to assure quality (Dranove *et al.*, 2009). Hospitals should be shifted toward activity-based budgeting (as Alberta, Ontario and British Columbia are already partially doing with plans to generalise this approach), to raise their productivity and reduce incentives for waiting lists. Global budgets based on objective criteria like risk-adjusted populations to promote efficiency imply a fairer (needs-based) distribution of health-care resources than do historical cost-based budgets, but contain no incentives to better respond to demand.

In the same vein, contestability should be injected into public bargaining with physicians over fees or incomes. The objective should be to encourage doctors to order fewer (unnecessary) procedures and hospitals to become more efficient in supplying them. Many problems of the Canadian health-care system can be traced to the way that physicians are paid. To attain micro efficiency, physician payment should be decentralised from the provincial to the RHA level, which is less politicised and directly accountable for performance (Contandriopoulos and Brousselle, 2010). Paying doctors partially by capitation along with patient rostering should now be generalised, so as to discourage excessive services while maintaining competitive pressure on physicians to maintain patients on their lists by serving them well. Since payment by capitation creates incentives to over-refer to specialists and hospitals, as one's own effort is not rewarded at the margin, some form of cost sharing for referrals is advisable, for example as with GP fundholding in the English NHS, even though gate keeping is already relatively strong in Canada (Figure 3.12). There is good evidence that a blend of FFS and capitation balances incentives holds down volumes and improves quality of services (Léger, 2008), although the optimal weightings have yet to be worked out. A gradualist approach, designed to quell likely resistance from stakeholders, is to allow patients and physicians to choose between two alternative plans: a rostering/capitation/fundholding plan, typically in the context of a group primary practice (much like US managed care), or the fee-for-service status quo (Blomqvist, 2002). By accepting the restrictions of the rostering plan, patients could be relieved of co-payments and thus induced to opt into it, while doctors would be assured of steady incomes and hours. Consumers' freedom to choose their preferred mix of risk bearing and affordability is efficient. Canada is almost unique in the OECD in offering consumers so little choice in the area of health insurance.

Integrating services inside and outside of Medicare

Among the countries with universal health-care systems, Canada is highly unusual in not having universal coverage for pharmaceuticals. A compelling case can be made that

Medicare needs to be updated to present-day notions of essential health care, allowing for both fairness in access and a more efficient, integrated approach to financing and delivery. This may require a reform of the CHA by more broadly interpreting “medically necessary”. It would include basic drug and other selected, currently non-core services in an adequate yet comprehensive revised core package. To finance it in a sustainable way, private payment should be allowed for core services, as is already the case in other OECD countries (though in the English NHS to a smaller extent), and already argued above for efficiency reasons. Tough and unpopular prioritisation decisions based on effectiveness and costs will have to be made continually as technology advances.

Fragmented financing has led to fragmented care, which raises costs and reduces quality. It has hampered the delegation of physician tasks to other medical personnel, notably practical nurses who are not only less expensive than doctors but also often better able to deliver relationship-based and holistic care, though scope-of-practice rules may also be a factor. Ontario has already set up the first nurse practitioner-led clinics in some underserved remote areas, though this step has been criticised by doctors. To encourage this development, devolving both physician and hospital funding streams to the RHAs would help them achieve health-system objectives while making competitive contracting more feasible and allowing physicians to be paid under contract with the RHAs as argued above. By further integrating pharmaceuticals and home care into the core insurance package, RHAs’ incentives for the prudent management of the various components of the total health-care budget would be well aligned, including the incentive to consider the total health effects of drug coverage policies. The integration of health-care delivery including pharmaceuticals in New Zealand, by way of example, has been one of the keys to its success in controlling pharmaceutical spending (Morgan, 2008b). The RHAs’ budget allocations should themselves be based on risk-adjusted populations, rather than historical costs as currently in most provinces. To enhance their political accountability, RHA boards should ideally include a few locally elected members, and provincial ministers should exercise the power to remove appointed board members in case of RHA non-performance (this seems to work well in other countries, such as Italy following the late 1990s decentralisation reforms). Hospital boards should ideally be separated from the RHAs, so as to let them focus on management in a de-politicised way. Ontario has led the way with its LHINs.

Some approximate figures (based on estimates by Marchildon, 2006 and updated to a 2009 health spending baseline) may help conceptualise the challenge. If all pharmaceutical spending were to be incorporated into Medicare and allowed to benefit from the same zero private cost-sharing policy, annual Medicare spending would be 40% higher, i.e. an increase from around 5 to 7% of GDP with an equivalent reduction in private and provincial public safety net spending, leaving total health spending unchanged at 12% of GDP (in 2009 prices).²⁰ This estimate, however, assumes that the generosity of the new benefit will be around the average of current provincial and private drug plans, whereas there would be likely political pressure to level up to the most generous plan (Marchildon, 2006). It also abstracts from likely demand effects of moving from large positive co-payments for many provincial and private plans – and from 100% for the currently uninsured 10-20% of the population, and similarly for the underinsured – to zero. Lifting either of these assumptions would clearly increase public and total health spending in response to universal first dollar coverage for prescription pharmaceuticals. In an alternative scenario, maintaining the same level of private cost sharing as in the most

generous provincial public drug plan today and applying that to hospital as well as out-of-hospital pharmaceuticals (to prevent cost-shifting), while also leaving existing employer-provided private drug benefit plans mostly in place, would reduce the final Medicare bill to some 6% of GDP (an increase of 25%), but again a likely lower limit. Thus, a third alternative must be contemplated, namely extending the modest rate of cost sharing for pharmaceuticals to all Medicare services in order to pay for universal public drug coverage inclusive of its likely demand boosting effects. On a rough estimate, the universal prescription drug plan with copayments augmented by a 10-15% demand increase in response to the expansion of coverage would cost some 1-2 percentage points of GDP. This amount could be fully financed by the predicted savings from the Abo, Goodman and Mintz (2002) basic Medicare copayment model. Of course, given Canada's extremely high rate of drug consumption already, it would be preferable to constrain its further growth and instead to use the balance of these savings to bring under the Medicare umbrella other important non-Medicare services like therapists, community nurses, etc. By promoting integrated models of primary care with long-run savings, such a package could even pay for itself.

Improving quality: the critical role of information

Some of the observed quality problems in Canada's health-care system are caused by misplaced incentives, but also by the sheer growth in medical knowledge against a limited human capacity to absorb and master it. Promoting higher quality and more cost-efficient health care by better information provision and diffusion of information technology (ICT) is increasingly a policy priority in Canada and other OECD countries. Making use of electronic health records (EHR) to handle information overflow and manage risk in health-care delivery, comparable to that already achieved in finance and industry, seems an obvious solution, though also very costly, as complex data-management systems have to be set up and subsequently maintained by making substantial investments. Canada is providing funding for this purpose as best it can, though progress is often blocked by perhaps exaggerated concerns for privacy, legitimate as these may be, and there have been governance issues related to the need for transparent contracting of very large sums of money. The economic case for such investments appears sound. Preliminary estimates based on successes in similar health care environments suggest that Canada is on track to realise CAD 1-1.9 billion in annual benefits (depending on whether EHR is deployed by 50% or 100% of Canadians) through eliminating duplicative tests and, more importantly, reducing adverse drug events, a substantial payback on investment (Canada Health Infoway, 2007). But even if such large savings did not materialise, international experience demonstrates that the quality of care could be greatly improved.

But major challenges also exist with regard to lower-tech solutions, many of which could be implemented at comparatively low cost while offering high expected returns. Chief among these are: i) ensuring that Statistics Canada has the budget to carry out its important work in the health-care field (e.g. a project to build micro databases following up on health status of individuals for an extended period after treatment – but traditionally resisted by the medical community); and ii) encouraging provincial ministries of health to build up their capacity to process, analyse and share more data on health-system performance – as befits their responsibility for half of the provincial budget – perhaps by marginal conditional funding of federal transfers, as for example the CAD 16 billion Health Reform Transfer of 2004 (see Box 3.1). Better information on prices, volumes, access and

quality would allow health-care researchers to study the impacts of policy changes and institutions like the Health Council of Canada to fulfil their intended role of publicly airing provincial problems and generating public discussions of health-system reform needs. Creating an independent, pan-Canadian agency to explicitly monitor health-care quality and provide advice on clinical and institutional best practice, or better yet, giving such a role to an existing one (e.g. CIHI), could importantly support this work.

Levying user charges as argued above will create the obligation to keep detailed records of each taxpayer's use of health-care services. This might be administratively burdensome, and indeed, the opponents of user charges have argued that the costs of processing would largely offset any *ex ante* gains. Such costs could be lessened by effective use of technology, e.g. smart cards as in the case of France's *carte vitale*. Furthermore, the need to keep track of costs of individual patient services should contribute to a better information base: the general lack of good cost data has been a significant obstacle to improved resource allocation in health care (Blomqvist, 2002). Major gaps exist in non-fee-for-service physician data, long-term care data and private health services data. Low administrative costs in single-payer systems are considered one of their most attractive features, but should not require skimping on data.

Managing Medicare

Scarcity is a normal condition in publicly funded health care, giving rise to calls for more spending. As the resource constraint must be satisfied in one way or another, public health care has been rationed by means of waiting lists and cost shifting to the private sector. Often these forms of rationing are arbitrary, inequitable and inefficient (e.g. first come, first served waiting-list management; all-or-nothing delisting decisions). Even before the above reforms are implemented, an economic approach to policy priority setting is needed. Such an approach would be based on the principle that change occurs at the margin, so that the relevant choice is how much of a service to provide, not whether it should be provided at all (Donaldson et al., 2002). Only when the benefits of new spending exceed the opportunity cost of its alternative uses should spending be increased. Targeting new health and social spending to disadvantaged populations, notably in areas like integrated primary care and mental health, is likely to yield the highest marginal benefits, hence improvements in overall health outcomes and health-spending efficiency as defined by the OECD. Clearly identifying the objective of health policy as health and well-being of the population (rather than in terms of health care outputs) could underpin a more holistic approach extending the prioritisation process to the entire budget, in which case, an emphasis on education and social equality could be accommodated. At the same time, rules for comparing marginal costs and benefits should be kept simple. Past attempts at economic-based prioritisation were often too resource intensive to work. The Common Drug Review (allocating pharmaceutical resources to where greatest clinical benefit can be derived) and the Western Wait Times Project (prioritising patients on waiting lists by objective criteria) are good examples of economic-based priority setting, hence "rational" rationing. Quebec is establishing an *Institut national d'excellence en santé et services sociaux* charged with improving health-care quality and informing prioritisation decisions, modelled on a counterpart institution in the English NHS. This could provide an example for other provinces, though ideally a pan-Canadian institution, with potential authority to make binding recommendations as is the case for UK and proposed US counterparts, is needed.

Fiscal-federal governance should also be strengthened. There has been a tendency for the CHA to inhibit provincial innovation and reform, including past attempts by provinces to introduce modest user charges or to allow private provision of core services. Whereas federal policy towards provincial health-care policy has been studiously hands-off, its potential influence as the ultimate guardian of the CHA is great. It should encourage a more liberal interpretation of the Act as part of a helpful coming wave of fundamental

Box 3.7. Recommendations for health-care reform

This Chapter provides a list of recommendations for promoting access, cost and quality of the health-care system. Given the need for fiscal consolidations, as outlined in Chapter 2, priority should be given to measures promoting cost containment. Any measures to promote access or quality that lead to additional costs should be accompanied by financing or incentive measures to contain these costs.

Promote cost containment

- Eliminate zero patient cost sharing for core services by imposing co-payments and deductibles. If necessary, revise the Canada Health Act (CHA).
- For provinces not already doing so, replace historical-based cost budgeting of Regional Health Authorities (RHAs) by one based on a formula (e.g. risk-adjusted population). Devolve integrated budgets for hospital, physician and pharmaceutical services to RHAs to allow optimising resource allocations.
- For provinces which have not already done so, introduce an element of capitation or salary for doctor payment together with fees regulated by RHAs, and strengthen gatekeeping by some form of cost sharing.
- For provinces which have not already done so, move to activity-based (e.g. Diagnosis Related Groups) budgets for hospital funding, contracting with private and public hospitals on an equal footing, with overall budget caps adjusted upwards to reward efficiency.
- Base federal funding to provinces on rules and envision tax points in lieu of cash transfers.
- Control prices for generic drugs at internationally comparable levels.
- Clarify the CHA to facilitate provincial experimentation with private entry of hospital services and mixed public/private physician contracts, so as to stimulate competition and innovation in service delivery.

Promote access

- As finances permit (i.e. following the above cost-containing reforms), include essential pharmaceuticals, and eventually, home care, selected therapy and nursing services in a revised public core package.
- Regulate private health insurance (PHI) to prevent cream-skimming and adverse selection; remove tax exemptions for employer PHI benefits, and consider taxing supplemental PHI progressively.

Promote quality

- Accelerate the applications of information and communication technologies in health care, starting small-scale if necessary, resolving privacy issues and changing provider incentives as outlined above.
- Encourage provinces to provide better health-system analysis and performance data, e.g. by marginal conditionality of federal funding.
- Charge an existing pan-Canadian, independent agency with monitoring and analysis of health-care quality.

health-care reforms in a very difficult budget environment. Past squabbles about the “fair share” of federal transfers for health should be replaced by a transparent rules-based sharing system. Provinces should contemplate taking up tax room vacated by the federal GST cut, and the federal government could consider transferring more income tax points in lieu of cash, to strengthen provincial tax bases, in view of long-run ageing pressures to which they will be subject, and also to strengthen accountability. Cross-country estimates of a significant linkage between health care cost growth and central transfers to lower level governments (in particular if the latter can easily issue debt) suggest that significant savings could be realised with such a transfer of tax points (Crivelli, Leive and Stratmann, 2010). Regulations should be made more similar across provinces and *vis-à-vis* the federal government. For example, the Common Drug Review should uniquely inform provincial drug-listing decisions, and drug purchasing might be co-ordinated at the national level to enhance collective buying power and align policies.

Notes

1. Canada does allow the purchase of private insurance to pay for single rooms in hospitals.
2. The OECD classifies Canada’s private health insurance system as “supplementary”, suggesting a mix of private and public financing across a broad range of services (as in Sweden), but this is in fact only the case in sectors outside the legislated medically necessary services (see Stabile, 2008, who classifies it as complementary, or sector-segmented).
3. The federal government funds health research through the Canadian Institute of Health Research and collects data on a national basis through Statistics Canada (Marchildon, 2010).
4. The Department of National Defence provides regular force members and eligible members of the reserve force with specified benefits for medical, dental and operational reasons. The Royal Canadian Mounted Police is responsible for ensuring the provision of health care benefits for regular members and eligible civilian members. Veterans Affairs Canada offers health care benefits and services to eligible veterans and others who qualify under the terms of two programmes: the Health Benefits Program (medical, surgical or dental examinations; surgical or prosthetic devices or aids; prescribed drugs; treatment by health professionals) and the Veterans Independence Program (a national home care program). Citizenship and Immigration Canada’s Interim Federal Health Program is a humanitarian program, the purpose of which is to provide temporary health care coverage for certain classes of migrants (now almost exclusively refugee claimants and Convention refugees) in need of assistance during their settlement period in Canada. The Correctional Service of Canada is responsible for providing federal inmates and some former inmates on parole with essential health care.
5. Spending on health human capital, i.e. doctor, nurse and other health professional education and training, comes mainly out of the education budget and is therefore not counted in health spending.
6. The major intergovernmental agencies are: the Canadian Institute for Health Information (CIHI) to collect and disseminate health data generated by the provinces; the Health Council of Canada (HCC) to provide assessments and recommendations for reform; Canada Health Infoway (a federal/provincial/territorial effort) to accelerate development of electronic health records; the Canadian Patient Safety Institute to monitor medical errors and implement improvements in patient safety throughout Canada; and the Canadian Blood Services. Quebec and Alberta do not participate in the HCC (Marchildon, 2010).
7. In 2008, Alberta amalgamated all nine of its RHAs into a single Alberta Health Services.
8. See Senate of Canada (2002) and Commission on the Future of Health Care in Canada (2002) for the federal reports and Premier’s Advisory Council on Health for Alberta (2001), Government of Saskatchewan (2001) and Government of Quebec (2008) for the provincial reports.
9. The projected total federal budget cost of these tax expenditures amounted to CAD 2.7 billion in 2009, and a further CAD 1.5 billion went to tax credits for disability and medical expenses (Department of Finance, *Tax Expenditures and Evaluations* 2009). Statistics on provincial tax expenditures are not published by all provinces, but assuming common provincial-federal tax

bases and applying the same percentage tax expenditure to the provincial personal income tax take in 2009, these can be estimated at CAD 2.7 billion – altogether CAD 6.9 billion, some 0.35% of GDP. This compares with USD 200 billion, or 1.4% of GDP, for the same tax expenditure in the United States, reflecting the much larger role of private health insurance and correspondingly larger distortions/fiscal costs.

10. Insurance premiums are waived for a segment of Quebec residents (social assistance recipients, low income seniors, as well as children of persons covered under the public plan, if they are under age 18 or if they are 18 to 25, full-time students, without a spouse and live with their parents), who nevertheless receive full coverage of expenses under the public drug plan.
11. There have been no systematic studies of the extent of underinsurance (usually defined as private drug payments exceeding 3-4% of household income) (Morgan, 2008a).
12. A breakdown of total (public and private) health spending growth over the period 1980-2009 for Ontario finds that the utilisation factor explains one-quarter and relative health price inflation (proxied by growth in the overall government-spending deflator less CPI inflation) for another 8% (TD Economics, 2010).
13. Despite a Canadian ban on direct-to-consumer advertising, most Canadian consumers are exposed to such advertising from US television, which is apparently very influential in expanding demand for “blockbuster” drugs (Marchildon, 2005). The industry also may exert substantial influence over physicians and politicians by means of “detailing” (marketing) to the former and intensive lobbying of the latter. Presently, marketing activities account for a larger share of industry costs than does pharmaceutical R&D.
14. Beta blockers are relatively inexpensive drugs whose use is strongly associated with improved one-year mortality, but physicians have low incentives to prescribe them, as their own incomes do not benefit (Wolfson, 2009).
15. The pro-poor bias in acute hospital care, seen also in Switzerland, the United States, Germany, Belgium and Australia is poorly understood. It could reflect the fact that richer people tend to use outpatient hospital procedures more effectively, and that the poor lack proper primary care, making them more likely to visit an emergency room.
16. GPs are also increasingly seeking positions as “hospitalists”, which involves serving hospital inpatients on a light schedule and good salary, thus abandoning family practice with its unpredictable hours.
17. Cutting waiting lists by extra funding merely addresses the tail end of the distribution, doing nothing to optimally allocate the much larger population all along the list. Patient guarantees, introduced by Quebec and now being developed in collaboration with Health Canada by other provinces, would be preferable because they give provinces an incentive to minimise waits.
18. CIHI research shows that non-targeted procedures did not decline as the targeted ones were increased in response to incentives. If so, this may reflect substantial previous hospital excess capacity even in the presence of waiting lists.
19. Some of these all-or-nothing decisions may end up increasing demand and costing more in the longer term. For example, eye exams were delisted by Ontario, but this may have resulted in eye diseases being caught later and costing much more to fix, while also adversely affecting health outcomes. Untreated tooth infections because of an inability to pay for delisted dental care can also have grave health consequences.
20. The scenario presented by Marchildon (2006) is that of a federal pharmacare programme on an equal footing with Medicare, rather than being an extension of Medicare itself. According to this author, a universal federal prescription drug benefit would help to control rampant drug cost escalation (the major threat to fiscal sustainability) by: resolving the present incoherence between a strong federal role in regulation of prescription pharmaceuticals with provincial responsibility for their administration and payment; allow a natural extension of federal authority to the regulation of generics prices; enable the substantial bargaining power of a single national purchaser to negotiate attractive prices with pharmaceutical companies, ideally making price regulation redundant; increase benefits in the “have not” provinces (notably in the Atlantic provinces) to one of the more generous provincial plans, acting as a national unifier, while allowing a separate yet harmonised (and more sustainable) arrangement for Quebec. Yet, as Marchildon points out, the risk of cost shifting from provinces to the federal government would have to be contained by adequate mechanisms for provincial-federal co-operation in health care.

Bibliography

- Aba, S., W.D. Goodman, J.M. Mintz (2002), "Funding Public Provision of Private Health: The Case for a Copayment Contribution through the Tax System", *C.D. Howe Institute Commentary*, No. 163, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/commentary_163.pdf.
- Barer, M.L. and G.L. Stoddart (1991), *Toward Integrated Medical Resource Policies for Canada*, prepared for the Federal/Provincial/Territorial Conference of Deputy Ministers of Health, Ottawa.
- Bélanger, G. (2005), *L'Économie de la santé et l'État providence*, Les Éditions Varia, Montréal.
- Blomqvist, A. (2002), "Canadian Health Care in a Global Context: Diagnosis and Prescriptions", *Benefactors Lecture*, 2002, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/Benefactors_Lecture_2002.pdf.
- Boccuti, C. and M. Moon (2003), "Comparing Medicare And Private Insurers: Growth Rates In Spending Over Three Decades", *Health Affairs*, Vol. 22, No. 2, pp. 230-237.
- Boothe, P. and M. Carson (2003), "What Happened to Health-Care Reform?", *C.D. Howe Institute Commentary*, No. 193, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/commentary_193.pdf.
- Boychuk, G.W. (2008), "The Regulation of Private Health Funding and Insurance in Alberta Under the Canada Health Act: A Comparative Cross-Provincial Perspective", *SPS Research Papers – The Health Series*, Vol. 1, Issue 1, University of Calgary School of Policy Studies, Calgary.
- Brimacombe, G., P. Antunes and J. McIntyre (2001), *The Future Cost of Health Care in Canada, 2000 to 2020: Balancing Affordability and Stability*, The Conference Board of Canada, Ottawa.
- Bryant, T., C. Leaver and J. Dunn (2009), "Unmet healthcare needs, gender and health inequalities in Canada", *Health Policy*, Vol. 91.
- Canada Health Infoway (2007), 2015: *Advancing Canada's Next Generation of Health Care*, Canada Health Infoway, Toronto, [www2.infoway-inforoute.ca/Documents/Vision_2015_Advancing_Canadas_next_generation_of_healthcare\[1\].pdf](http://www2.infoway-inforoute.ca/Documents/Vision_2015_Advancing_Canadas_next_generation_of_healthcare[1].pdf).
- CHSRF (2001), "Myth: User Fees Would Stop Waste and Ensure Better Use of the Healthcare System", *Mythbusters*, Canadian Health Services Research Foundation, www.chsrf.ca/mythbusters/html/myth4_e.php.
- CHSRF (2005), "Myth: A Parallel Private System Would Reduce Wait Times in the Public System", *Mythbusters*, Canadian Health Services Research Foundation, www.chsrf.ca/mythbusters/html/myth17_e.php.
- Church, J. and N. Smith (2006), "Health reform and privatisation in Alberta", *Canadian Public Administration*, Vol. 39, No. 4 (Winter).
- CNA (Canadian Nurses Association) (2009), *Tested Solutions for Eliminating Canada's Registered Nursing Shortage*, Canadian Nurses Association, Ottawa.
- Commission on the Future of Health Care in Canada (2002), *Building on Values: The Future of Health Care in Canada – Final Report*, Commission on the Future of Health Care in Canada, Saskatoon, <http://dsp-psd.pwgsc.gc.ca/Collection/CP32-85-2002E.pdf>.
- Competition Bureau (2007), *Canadian Generic Drug Sector Study*, Competition Bureau, Ottawa.
- Contandriopoulos, D. and A. Brousselle (2010), "Reliable in their failure: An analysis of healthcare reform policies in public systems", *Health Policy*, 95, pp. 144-152.
- Crivelli, E., A. Lieve and T. Stratmann (2010), "Subnational Health Spending and Soft Budget Constraints in OECD Countries", *IMF Working Paper*, No. WP/10/147, IMF, Washington, D.C.
- Deber, R. (2003), "Health care reform: Lessons from Canada", *American Journal of Public Health*, Vol. 93, No. 1.
- Deber, R. (2008), "Access without Appropriateness: Chicken Little in Charge?", *Healthcare Policy*, Vol. 4, No. 1.
- Deber, R. (2009), "Canada", in J. Rapoport, P. Jacobs and E. Jonsson (eds.), *Cost Containment and Efficiency in National Health Systems: A Global Comparison*, Wiley-VCH, Weinheim, Germany.
- Deber, R., M.J. Hollander and P. Jacobs (2008), "Models of funding and reimbursement in health care: A conceptual framework", *Canadian Public Administration*, Vol. 51, No. 3.
- Donaldson, C., C. Mitton and G. Currie (2002), "Managing Medicare", *C.D. Howe Institute Commentary*, No. 157, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/commentary_157.pdf.

- Doorslaer, E. van (2008), "Equity in Health and Health Care in Canada in International Perspective", in M. Lu and E. Jonsson (eds.), *Financing Health Care: New Ideas for a Changing Society*, WILEY-VCH, Weinheim, Germany.
- Dranove, D., C. Capps and L. Dafny (2009), "A Competitive Process for Procuring Health Services: A Review of Principles with an Application to Cataract Services", *SPP Research Papers – The Health Series*, Vol. 2, Issue 5, University of Calgary School of Public Policy, Calgary.
- Dumont, J.-C., P. Zurn, J. Church and C. Le Thi (2008), "International Mobility of Health Professionals and Health Workforce Management in Canada: Myths and Realities", *OECD Health Working Papers*, No. 40, OECD, Paris.
- Evans, R.G., K.M. McGrail, S.G. Morgan, M.L. Barer and C. Hertzman (2001), "Apocalypse No: Population Aging and The Future of Health Care Systems", *Canadian Journal on Aging*, Vol. 20, Suppl. 1, pp. 160-191.
- Evans, R.G. (2004), "Political Wolves and Economic Sheep: The Sustainability of Public Health Insurance in Canada", in A. Maynard (ed.), *The Public-Private Mix for Health*, The Nuffield Trust, London.
- Flood, C.M. and T. Archibald (2001), "The illegality of private health care in Canada", *Canadian Medical Association Journal*, Vol. 164, No. 6, pp. 825-830.
- Flood, C.M., M. Stabile and C.H. Tuohy (2008), *Exploring Social Insurance: Can a Dose of Europe Cure Canadian Health Care Finance?*, Queen's University School of Policy Studies, Kingston, Canada.
- Fujisawa, R. and G. Lafortune (2008), "The Renumeration of General Practitioners and Specialists in 14 OECD countries: What are the Factors Influencing Variations across Countries?", *OECD Health Working Papers*, No. 41, OECD, Paris.
- Glied, S., A.G. Prabhu and N. Edelman (2009), "The Cost of Primary Care Doctors", *Forum for Health Economics and Policy*, Vol. 12, Issue 1, Article 4 (*Frontiers in Health Policy Research*), The Berkeley Electronic Press, www.bepress.com/fhep/12/1/4.
- Glied, S. (2008), "Universal Public Health Insurance and Private Coverage", *Canadian Public Policy*, Vol. 34, No. 3.
- Government of Quebec (2010), *Budget 2010/11: For a More Efficient and Better Funded Health-Care System*, Government of Quebec, Quebec, www.budget.finances.gouv.qc.ca/Budget/2010-2011/en/documents/MoreEfficient.pdf.
- Government of Saskatchewan (2001), *Caring for Medicare: Sustaining a Quality System*, The Commission on Medicare, Government of Saskatchewan, Regina, www.health.gov.sk.ca/medicare-commission-final-report.
- Hagist, C. and L.J. Kotlikoff (2005), "Who's Going Broke? Comparing Healthcare Costs in Ten OECD Countries", *NBER Working Paper Series*, No. 11933, National Bureau of Economic Research, Cambridge, MA.
- Hartwig, J. (2008), "What drives health care expenditure? Baumol's model of 'unbalanced growth' revisited", *Journal of Health Economics*, Vol. 27, Issue 3, pp. 603-623.
- Health Council of Canada (2005), "The Health Status of Canada's First Nations, Métis and Inuit Peoples", A background paper to accompany *Health Care Renewal in Canada: Accelerating Change*, Health Council of Canada, Toronto, <http://healthcouncilcanada.ca.c9.previewyoursite.com/docs/papers/2005/BkgrdHealthyCdnsENG.pdf>.
- Hollis, A. (2009), "Generic Drug Pricing and Procurement: A Policy for Alberta", *SPS Research Papers – The Health Series*, Vol. 2, Issue 1, University of Calgary School of Policy Studies, Calgary.
- Hurst, J. and L. Siciliani (2003), "Tackling Excessive Waiting Times for Elective Surgery: A Comparison of Policies in Twelve OECD countries", *OECD Health Working Papers*, No. 6, OECD, Paris.
- Hurst, J. (2010), "Effective Ways to Realise Policy Reforms in Health Systems", *OECD Health Working Papers*, No. 51, OECD, Paris.
- Ipsos-Reid (2010a), "Six in Ten Say Canadian Healthcare System is Not Sustainable Because of Costs: Majority (65%) Agrees Raising Taxes isn't the Answer", 8 March, www.ipsos-na.com/news-polls/pressrelease.aspx?id=4709.
- Ipsos-Reid (2010b), "Two in Three Canadians Think It's Feasible That Provincial Health Spending Could Escalate to 70-80% of Budgets Within 20 Years", 6 June, www.ipsos-na.com/news-polls/pressrelease.aspx?id=4805.

- Journard, I., C. André and C. Nicq (2010), "Healthcare Systems: Efficiency and Institutions", *OECD Economics Department Working Papers*, No. 769, OECD, Paris.
- Lafortune, G., G. Balestat and the Disability Study Expert Group Members (2007), "Trends in Severe Disability Among Elderly People: Assessing the Evidence in 12 OECD countries and the Future Implications", *OECD Health Working Papers*, No. 26, OECD, Paris.
- Landon, S., M.L. McMillan, V. Muralidharan and M. Parsons (2006), "Does Health-Care Spending Crowd Out Other Provincial Government Expenditures?", *Canadian Public Policy*, Vol. 32, No. 2.
- Lee, M. (2007), *How Sustainable is Medicare? A Closer Look at Aging, Technology and Other Cost Drivers in Canada's Health System*, Canadian Centre for Policy Alternatives, Ottawa, www.policyalternatives.ca/sites/default/files/uploads/publications/National_Office_Pubs/2007/How_Sustainable_is_Medicare.pdf.
- Léger, P.T. (2008), "Physician Payment Mechanisms", in M. Lu and E. Jonsson (eds.), *Financing Health Care: New Ideas for a Changing Society*, WILEY-VCH, Weinheim, Germany.
- Marchildon, G.P. (2005), *Health Systems in Transition: Canada*, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Copenhagen.
- Marchildon, G.P. (2006), "Pharmacare: Rx for Canadian federalism", *Inroads*, Issue No. 18 (Winter/Spring), pp. 94-108.
- Marchildon, G.P. (2010), "Health Care", in J.C. Courtney and D.E. Smith (eds.), *The Oxford Handbook of Canadian Politics*, Oxford University Press, Oxford, pp. 434-450.
- Matteo, L. Di and R. Di Matteo (2009), "The Fiscal Sustainability of Alberta's Public Health Care System", *SPS Research Papers – The Health Series*, Vol. 2, Issue 2, University of Calgary School of Policy Studies, Calgary.
- McIntosh, C.N., P. Finès, R. Wilkins and M.C. Wolfson (2009), "Income disparities in health-adjusted life expectancy for Canadian adults, 1991 to 2001", *Statistics Canada, Health Reports*, Vol. 20, No. 4, Statistics Canada, Ottawa.
- Monahan, P. (2006), "Chaoulli v Quebec and the Future of Canadian Healthcare: Patient Accountability as the 'Sixth Principle' of the Canada Health Act", *Benefactors Lecture*, 2006, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/benefactors_lecture_2006.pdf.
- Morgan, S. (2008a), "Challenges and Changes in Pharmacare: Could Social Insurance Be the Answer?", in C.L. Flood, M. Stabile and C.H. Tuohy (eds.), *Exploring Social Insurance: Can a Dose of Europe Cure Canadian Health Care Finance?*, Queen's University School of Policy Studies, Kingston, pp. 199-220.
- Morgan, S. (2008b), "Prescription Drug Financing" in M. Lu and E. Jonsson (eds.), *Financing Health Care: New Ideas for a Changing Society*, WILEY-VCH, Weinheim, Germany.
- Morgan, S. et al. (2008), *The Canadian Rx Atlas, 2nd Edition*, UBC Centre for Health Services and Policy Research, University of British Columbia, Vancouver.
- Motiwalla, S.S., C.M. Flood, P.C. Coyte and A. Laporte (2005), "The First Ministers' Accord on Health Renewal and the Future of Home Care in Canada", *Longwoods Review*, Vol. 2, No. 4.
- Newhouse, J.P. and the Insurance Experiment Group (1993), *Free for All? Lessons from the RAND Health Insurance Experiment*, Harvard University Press, Cambridge, MA.
- OECD (2006), "Projecting OECD Health and Long-term Care Expenditures: What are the Main Drivers?", *OECD Economics Department Working Papers*, No. 477, OECD, Paris.
- OECD (2007), *OECD Economic Surveys: Italy*, OECD, Paris.
- OECD (2009a), *Achieving Better Value for Money in Health Care*, OECD, Paris.
- OECD (2009b), *OECD Economic Surveys: Japan*, OECD, Paris.
- OECD (2009c), *OECD Economic Surveys: New Zealand*, OECD, Paris.
- O'Neill, J.E. and D.M. O'Neill (2007), "Health Status, Health Care and Inequality: Canada vs. the US", *NBER Working Papers*, No. 13429, National Bureau of Economic Research, Cambridge, MA, www.nber.org/papers/w13429.
- Orr, D. (2010), "Why Do Some Provinces Spend More on Health Care Than Others?", *Economic Insight*, April.
- Paris, V. and E. Docteur (2007), "Pharmaceutical Pricing and Reimbursement Policies in Canada", *OECD Health Working Papers*, No. 24, OECD, Paris.

- Payne, G., A. Laporte, R. Deber and P. Coyte (2007), "Counting Backwards to Health Care's Future: Using Time-to-Death Modeling to Identify Changes in End-of-Life Morbidity and the Impact of Ageing on Health-care Expenditures", *The Milbank Quarterly*, Vol. 85, No. 2, pp. 213-257.
- Premier's Advisory Council on Health for Alberta (2001), *A Framework for Reform: Report of the Premier's Advisory Council on Health*, Premier's Advisory Council on Health for Alberta, Edmonton, www.assembly.ab.ca/lao/library/egovdocs/alpm/2001/132279.pdf.
- Government of Quebec (2008), *Report of the Task Force on the Funding of the Health System – Getting Our Money's Worth*, Government of Quebec, Quebec, www.financementsante.gouv.qc.ca/en/rapport/pdf/RapportENG_FinancementSante.pdf.
- Robson, W.B.P. (2009), "Boomer Bulge: Dealing with the Stress of Demographic Change on Government Budgets in Canada", *C.D. Howe Institute e-brief*, No. 71, C.D. Howe Institute, Toronto, www.cdhowe.org/pdf/ebrief_71.pdf.
- Rovere, M. and B. Skinner (2010), "Ontario's generic drug pricing debacle: price fixing is not the answer", *Fraser Forum*, June, Fraser Institute, Vancouver, www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/articles/ontarios-generic-drug-pricing-debacle.pdf.
- Ruseski, J. (2009), "Competition in Canadian Health Care Service Provision: Good, Bad, or Indifferent?", *SPP Research Papers – The Health Series*, Vol. 2, Issue 4, University of Calgary School of Public Policy, Calgary.
- Sassi, F., M. Cecchini, J. Lauer and D. Chisholm (2009), "Improving Lifestyles, Tackling Obesity: The Health and Economic Impact of Prevention Strategies", *OECD Health Working Papers*, No. 48, OECD, Paris.
- Senate of Canada (2002), *The Health of Canadians: The Federal Role. Volume Five: Principles and Recommendations for Reform – Part I*, Standing Senate Committee on Social Affairs, Science and Technology, Ottawa, <http://dsp-psd.pwgsc.gc.ca/Collection/YC17-371-1-05E.pdf>.
- Senate of Canada (2007), *Proceedings of the Subcommittee on Population Health, Issue 1 – Evidence, February 22, 2007*, Standing Senate Committee on Social Affairs, Science and Technology, Ottawa, www.parl.gc.ca/39/1/parlbus/commbus/senate/com-e/popu-e/01evb-e.htm?Language=E&Parl=39&Ses=1&comm_id=605.
- Skinner, B.J. and M. Rovere (2009), "Access Delayed, Access Denied: Waiting for new Medicines in Canada, 2009 Report", Fraser Institute, *Studies in Pharmaceutical Policy*, Fraser Institute, Vancouver, www.fraserinstitute.org/WorkArea/DownloadAsset.aspx?id=2154.
- Stabile, M. (2001), "Private insurance subsidies and public health care markets: evidence from Canada", *Canadian Journal of Economics*, Vol. 34, No. 4, pp. 921-942.
- Stabile, M. (2008), "Private Financing Outside the Publicly Funded System" in M. Lu and E. Jonsson (eds.), *Financing Health Care: New Ideas for a Changing Society*, WILEY-VCH, Weinheim, Germany.
- Stancati, M. (2010), "Competitive Care: When Italy's Lombardy Region Pitted Private Hospitals Against Public Ones, the Quality of Care Dramatically Improved", *The Wall Street Journal*, 13 April.
- TD Economics (2010), "Charting a Path to Sustainable Health Care in Ontario – 10 proposals to restrain cost growth without compromising quality of care", *Special Reports*, TD Economics, Toronto, www.td.com/economics/special/db0510_health_care.pdf.
- Vancouver Island Health Authority (2008), *Briefing Note on Funding Methodologies*, prepared for Committee of the Whole, 14 November.
- Wolfson, M. (2009), "On Measuring Outcomes and Productivity in Canada's Health Sector", power point presentation to the OECD mission, Statistics Canada, mimeo.
- Yeo, M., J.C.H. Emery and D. Kary (2009), "The Private Insurance Debate in Canadian Health Policy: Making the Values Explicit", *SPP Research Papers – The Health Series*, Vol. 2, Issue 3, University of Calgary School of Public Policy, Calgary.
- Zarnett, D., P.C. Coyte, E. Nauenberg, D. Doran and A. Laporte (2009), "The Effects of Competition on Community-Based Nursing Wages", *Healthcare Policy*, Vol. 4, No. 3.

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