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OECD Equity Market Review ASIA 2019

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ABOUT THIS REPORT

Stock markets play a critical role in matching companies that need access to external equity capital with investors that are looking for investment opportunities. With a global value of about USD 85 trillion they also play a critical role in securing the long term savings of innumerable ordinary households around the world. Not least, with respect to their retirement income.

Against this background, it is important to note a number of important developments that have reshaped the global stock markets during the past decade. These include the dominance of a smaller number of larger companies in advanced markets and the emergence of Asian companies as the world's largest users of public equity financing. By providing a global picture of how companies use public equity financing since the mid-1990s, this annual OECD report offers a comprehensive and comparable analysis of world developments and the growing role of Asian stock markets.

The report covers the main aspects of the capital market ecosystem in Asia:

- The first part looks at primary equity markets to describe how Asian companies use public equity markets to raise equity capital. This includes data on both initial public offerings and the often neglected use of public equity markets by already-listed companies that choose to raise additional equity capital through a secondary public offering.
- The second part pays special attention to the use of public equity markets by growth companies, including their sectoral distribution, such as technology and energy.
- The third part describes and provides an analysis of the stock exchange landscape in Asia, including their relative size and developments over time.
- The fourth part examines the corporate ownership landscape. It contains information about who the shareholders are and how they own. Special attention is given to the institutional investors and the public sector as owners of publicly listed companies.
- The last part of the report looks at developments with respect to the four main investment banking activities, namely equity underwritings, corporate bond transactions, mergers and acquisitions, and syndicated loans.
- This year's *Focus Chapter* discusses how Asian companies use foreign public equity markets to raise capital and to cross-list their shares.

OECD CAPITAL MARKET SERIES

The report is part of the *OECD Capital Market Series*, which informs policy discussions on how capital markets can serve their important role to channel financial resources from households to productive investments in the real economy.

A set of selected indicators and detailed description of data sources as well as the methodology for data collection are provided in the annexes. Comments are welcome as the content and the methodologies in this report will be further refined in discussions with the participants of the OECD Corporate Governance Committee, the OECD-Asian Roundtable on Corporate Governance and other experts.

The report was prepared by a team led by Mats Isaksson who is Head of the Corporate Governance and Corporate Finance Division of the OECD Directorate for Financial and Enterprise Affairs composed of Serdar Çelik, Adriana De La Cruz, Alejandra Medina, Tugba Mulazimoglu and Yun Tang. The report benefits from the financial support of the Government of Japan.

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ACRONYMS AND ABBREVIATIONS

ADR	American depositary receipt
ASEAN	Association of Southeast Asian Nations
AUM	assets under management
ATS	alternative trading system
CDR	Chinese depositary receipt
CIS	collective investment schemes
CEINEX	China Europe International Exchange
CSRC	China Securities Regulatory Commission
EU	European Union
FCA	United Kingdom Financial Conduct Authority
FTSE 100 Index	Financial Times Stock Exchange 100 Index
GAAP	Generally Accepted Accounting Principles
GDP	gross domestic product
HKEX	Hong Kong Stock Exchange
IMF	International Monetary Fund
IFRS	International Financial Reporting Standards
JPX	Japan Exchange Group
IPO	initial public offering
M&A	mergers and acquisitions
MSCI	Morgan Stanley Composite Index
MSCI EM	Morgan Stanley Composite Emerging Markets Index
MTF	multilateral trading facility
OECD	Organisation for Economic Co-operation and Development
OTC	over-the-counter
QFII	Qualified Foreign Institutional Investor
REIT	real estate investment trust
RQFII	Renminbi Qualified Foreign Institutional Investor
SAFE	State Administration of Foreign Exchange
SE	stock exchange
SME	small and medium-sized enterprise
SPO	secondary public offering (follow-on offering)
STAR	Shanghai Stock Exchange Science and Technology Innovation Board
WTO	World Trade Organization

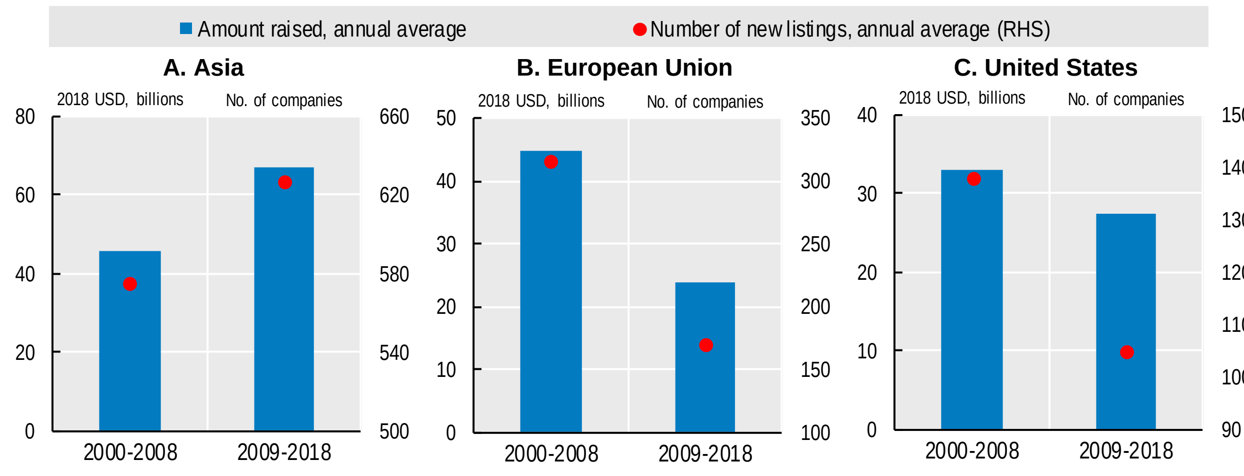
EXECUTIVE SUMMARY

There is a perception that public equity markets are playing a diminishing role in providing risk capital to the corporate sector. The reason is that many advanced economies have experienced a simultaneous decrease in the number of new listings and an increase in delistings. A development that inevitably has resulted in a decline in the overall number of publicly listed companies. The United States, for example, has lost half of its listed companies in the past 20 years. Down from almost 8 000 in 1997 to 4 000 today. Other countries, including France, Germany and the United Kingdom have experienced similar trends.

But before arriving at any general conclusions about the role of public equity markets globally, these developments should be put into perspective. Firstly, publicly traded equity as an asset class – with a global value of around USD 85 trillion - still dwarfs all other market-based investment opportunities that are readily available to the general public. This means that ordinary households directly or through pension funds, mutual funds and other collective investment vehicles heavily rely on public equity markets to protect and increase the value of their savings. On the corporate side, other forms of market-based financing obviously play an important role as providers of corporate finance. But again, the total outstanding value of non-financial corporate bonds, for example, is about USD 13 trillion and the global contribution from private equity funds is estimated to be between USD 3 and 4 trillion. Taken from a wider societal perspective, public equity also gives the unique possibility to a very large number of investors to diversify their risk and lower the costs that are associated with future oriented investments that have uncertain outcomes, such as research and development.

Secondly, it is important to take a global view. While the amount of equity capital raised by US and European companies through IPOs decreased from an annual average of USD 78 billion during the period 2000-2008 to USD 51 billion during the period 2009-2018, the picture in Asia is quite the opposite. As a matter of fact, between the same two periods, the average annual amount of equity capital raised by Asian companies increased from USD 46 billion to USD 67 billion. Additionally, and contrary to the trends in the United States and Europe, also the number of new listings by Asian companies increased. These inverse trends are well illustrated in Figure 1 below.

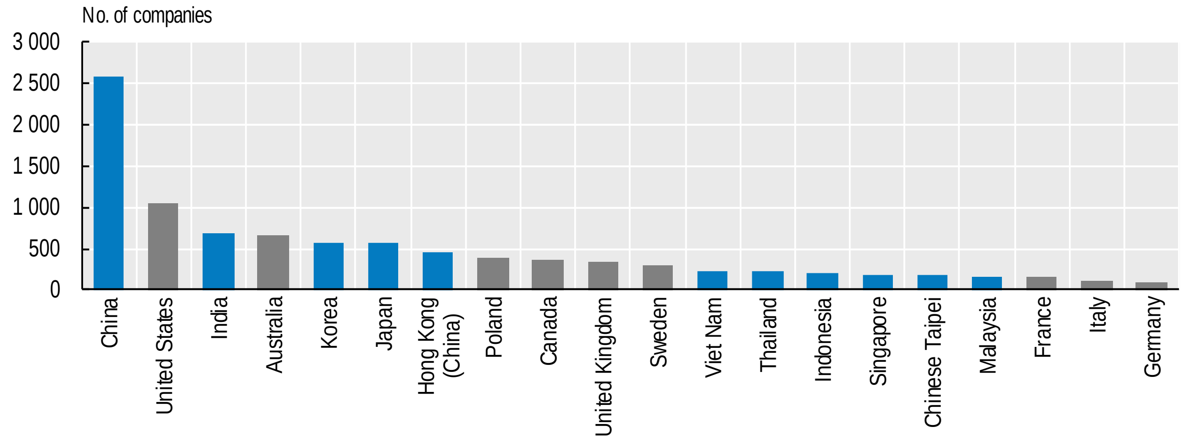
Figure 1. IPOs by Asian, EU and US non-financial companies



Source: OECD Capital Market Series dataset, see Annex for details.

The development in Asia is largely due to a significant increase in the use of public equity markets by companies from the People's Republic of China (China). Figure 2 shows that Chinese companies have indeed been the most frequent users of IPOs during the past decade, with more than twice as many IPOs as the United States. However, Chinese companies are not alone among Asian companies in using public equity markets. India, Korea, Japan and Hong Kong (China) also rank among the top 10 jurisdictions globally when it comes to the number of non-financial companies raising equity capital in the public market. A closer look at the regional IPO activity also reveals that several emerging markets, such as Viet Nam, Thailand, Indonesia and Malaysia, rank higher in terms of IPOs than most advanced economies.

Figure 2. Top 20 jurisdictions by number of non-financial company IPOs during last 10 years



Source: OECD Capital Market Series dataset, see Annex for details.

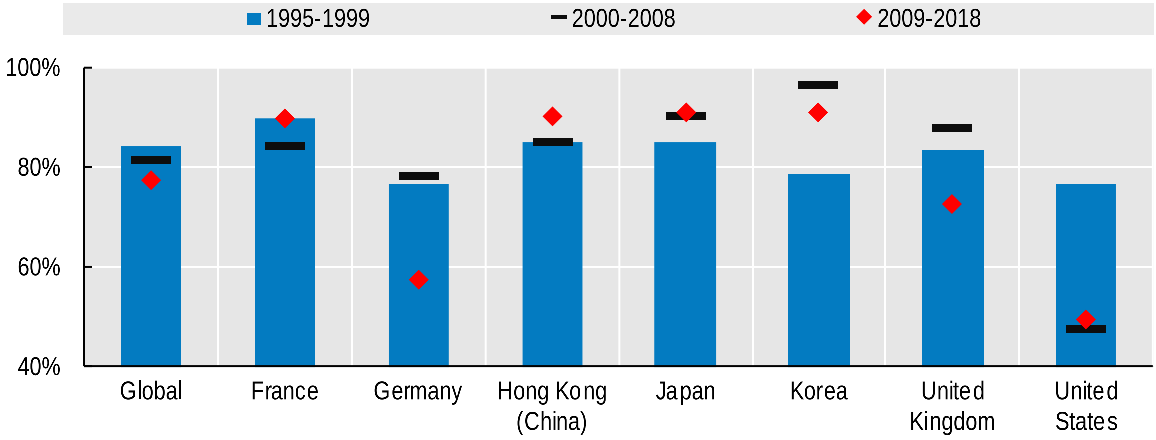
In 2018 alone, 748 Asian companies joined the public equity markets. This was more than 60% of the total number of non-financial company listings worldwide and re-enforced the long-term trend shown in Figure 1. Again, it is not all about companies from mainland China. Companies from India, Hong Kong (China), Japan and Korea together accounted for more than half (54%) of all Asian IPOs and one-third of the world's listings.

The concerns about developments in many advanced economies are not only about the absolute number of IPOs or the amount of equity capital that companies raise. There is also a discussion about the changing character of the companies that use the stock markets as a source of funding. Historically, around 80% of all non-financial companies that made an IPO could be characterised as "growth companies", defined as companies that raise about USD 100M in an IPO with a free float of 25% and a subsequent total market value of USD 400M.

However, a closer look at developments shows that the overall decrease in the number of listed companies in advanced markets during the past two decades to a large extent can be explained by a decrease in the number of growth company listings. In the United States, for example, the share of growth company listings compared to the total number of listings has declined from almost 80% during the period 1995-1999, to around 50% since 2000 (Figure 3). A similar trend can be observed in Germany and to some extent in the United Kingdom. Notably, this development refers to a relative as well as an absolute decline in the number of growth company listings.

Advanced markets in Asia show a different trend. The three largest markets – Japan, Korea and Hong Kong (China) – have all seen an increase in growth company listings compared to the 1990s. In Korea and Japan, 9 out of 10 IPOs in the past decade have been by a growth company. This is well above the global average. Among Asian emerging markets, China and India hosted one-third of the world's growth company IPOs in the past five years. The result is that among the world's growth companies, it is growth companies from the Asian region that are the largest users of primary equity markets.

Figure 3. The share of growth company IPOs in the total number of IPOs by non-financial companies



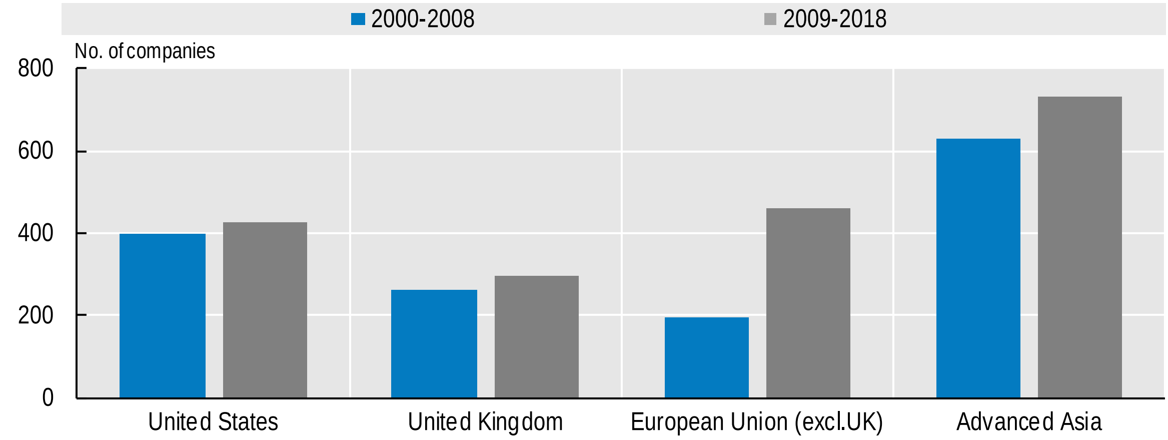
Source: OECD Capital Market Series dataset, see Annex for details.

Despite the decline in the number of listed companies, the total market value of listed companies to GDP has increased in many advanced economy markets over the recent years. This is largely because these markets host a smaller number of larger companies. In the US, for example, the average market value of listed companies has doubled in real terms over the past two decades.

An important feature of public equity markets is that already listed companies can turn to the market for a secondary offering (SPO) when they need more equity capital, for example, to undertake new investments or to bridge a crisis. In contrast to the decline in the number of companies being listed in some advanced markets, the number of non-financial companies taking advantage of the opportunity to make a secondary offering has increased in the past decade. Figure 4 illustrates this by making a comparison with the period 2000-2008. Both the United States and the European Union show this trend. It can be noted that the increase in SPOs coincides with a time when interest rates have been historically low, which made debt financing more favourable and when financial companies made extensive use of secondary public offerings to recapitalise themselves in the wake of the financial crisis. In 2008 and 2009 alone, financial companies raised almost USD 900 billion through secondary public offerings globally. Nevertheless, during the same two years, when the credit market for non-financial companies deteriorated significantly, the non-financial corporate sector managed to raise a record amount of USD 800 billion through SPOs. More than five times the IPO volume. While the relative cost and accessibility of different sources of corporate finance will continue to vary, this experience in the aftermath of the 2008 financial crisis testifies to the importance of the public equity markets as a possible source of finance of last resort for already-listed companies.

Taken together, developments in both advanced and emerging markets have reshaped the characteristics of global stock markets in several ways. Many advanced economy markets are now dominated by a smaller number of larger companies, already-listed companies use public equity markets to raise capital more extensively than new companies and Asian companies have become the world's largest users of public equity markets.

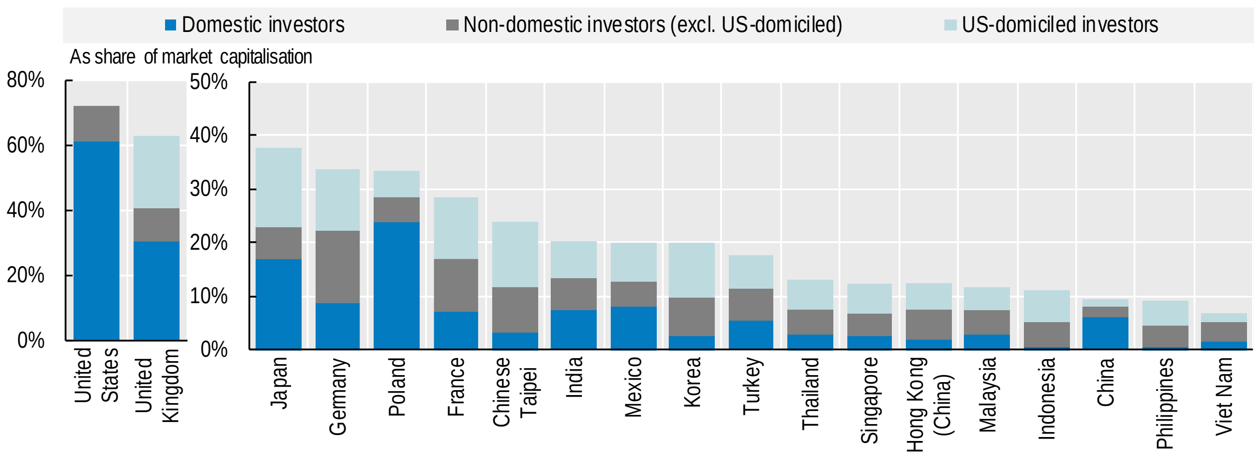
Figure 4. Secondary public offerings by non-financial companies



Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Another important feature of today's stock markets is that they have become more integrated and a growing share of public equity investments are being made across borders. In Japan, for example, foreign ownership of listed stocks increased from 3% to 30% between 1980 and 2017. This development has mainly been driven by institutional investors that successively have increased their exposure to Asian stocks. In almost all Asian jurisdictions today, do non-domestic institutional investors hold a larger share of the public equity market than domestic institutional investors (Figure 5). With the recent and still limited inclusion of the Chinese A-shares, companies from emerging Asian markets already account for 72% of the MSCI Emerging Market Index, which is tracked by a large number of global institutional investors. A continued trend of strong IPO activity in the region and an increasing weight of Asian companies in the global stock market indices would further increase the size of foreign equity portfolio investments in Asia.

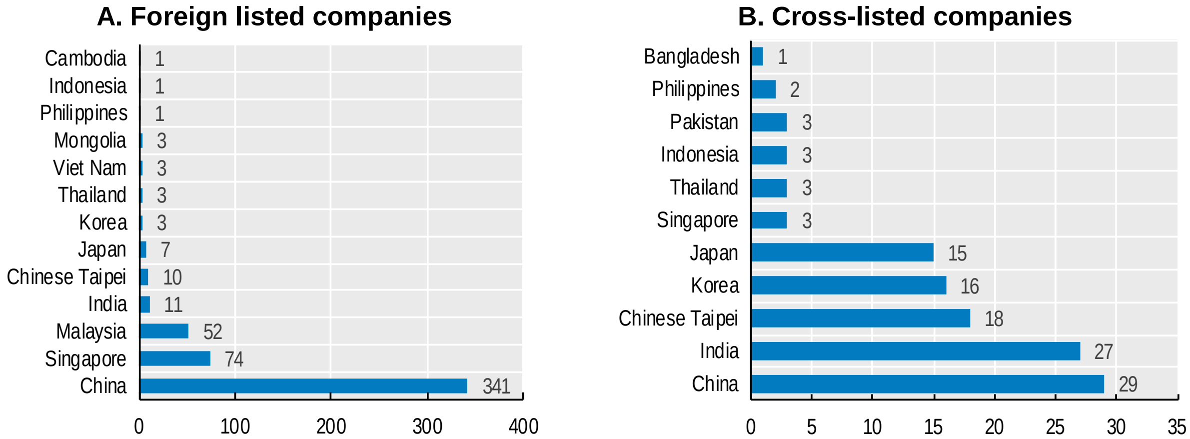
Figure 5. Domestic and non-domestic institutional ownership, as of end 2017



Source: De La Cruz, A., A. Medina and Y. Tang (2019), "Owners of the World's Listed Companies", *OECD Capital Market Series*, Paris

Another important dimension of the global stock market integration is that companies can take advantage of foreign primary equity markets to raise capital. Since the mid-1990s, almost 8 000 companies worldwide have raised a total of USD 1.4 trillion in foreign public equity markets. This amount includes both IPOs and SPOs and is done both through foreign listings, when a company list its shares only on a foreign market, and through cross-listings, when a company lists its shares on its domestic market as well as on a foreign market. As the largest users of public equity markets during the past decade, Asian companies have become important issuers in foreign markets. At the end of 2018, there were 510 Asian companies listed on a market other than the domicile of the company without having a domestic listing. An additional 120 Asian companies were cross-listed on the domestic as well as on a foreign market (Figure 6).

Figure 6. Foreign listed and cross-listed companies in Asia by company headquarters, as of end 2018



Source: OECD Capital Market Series dataset, see Annex for details.

As a result, household savings in other parts of the world in the form of pension funds, insurance companies and other collective investment vehicles have increasingly gone into equity investments in Asian companies. Not only through cross-border portfolio investments but also through investments in Asian companies that have listed abroad.

The global integration of capital markets allows companies to seek finance from a much larger pool of investors who in turn can benefit from investment opportunities beyond their own national borders. With this development however, comes an increased interdependence between investors and corporations from economies with different legal, regulatory, economic and cultural traditions. This calls for a common language when it comes to basic expectations and practices in the area of corporate governance. The *G20/OECD Principles of Corporate Governance* provide a good basis for establishing such an understanding. These Principles, that are endorsed by the economies hosting Asia's largest capital markets, explicitly address issues that relate to the functioning of capital markets and the role of institutional investors and stock exchanges. They therefore serve as a useful reference for the ongoing international policy dialogue that supports a smooth integration of Asia's growing capital markets into the global economy.

PART I. PRIMARY PUBLIC EQUITY MARKETS IN ASIA

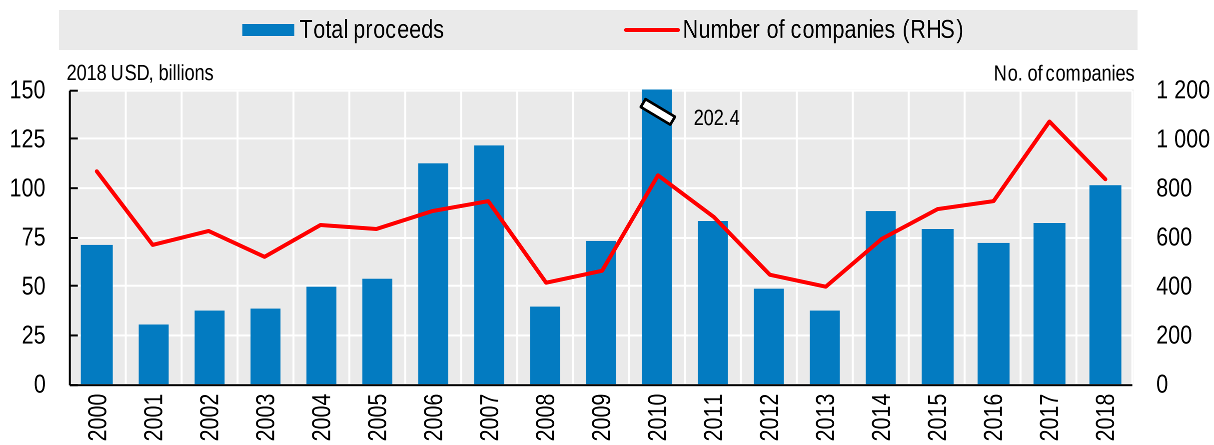
A key economic function of equity markets is to give companies the opportunity to raise equity capital. Considering that equity capital is long-term and risk-willing, it is well-suited to support forward looking investments, such as research and development that contribute to business dynamism and economic growth. In addition, the possibility to buy and sell public equity in a market also allows for a separation between the investment horizon of an individual provider of the capital and the investment horizon of the corporation. This means that long-term business ventures can be financed with relatively shorter term savings.

There are two main ways in which a company can raise equity capital by using the primary public equity market. The first way is through an initial public offering (IPO), which refers to the process through which a company is first introduced and listed on a stock exchange. The other way is through a secondary public offering (SPO or follow-on offering) when an already-listed company again turns to the public equity market to raise additional equity. This part of the report provides an overview of how and to what extent Asian companies have used IPOs and SPOs as sources of equity finance since 2000. It includes cross-country and cross-industry comparisons.

1.1. Trends in initial public offerings

The total amount of equity raised through IPOs by Asian companies as well as the total number of newly listed Asian companies is presented in Figure 7. As seen in the figure, the number of Asian company IPOs shows a stable trend before 2008 with an annual average of 637 IPOs. The sharp decline in the number of global IPOs during the financial crisis was also reflected among Asian companies. Since 2013 however, the number of IPOs has increased quite steadily reaching a peak of 1 074 IPOs in 2017. While the number of IPOs in 2018 decreased compared to 2017, it should be noted that the amount of capital that was raised increased from USD 82 billion in 2017 to USD 102 billion in 2018.

Figure 7. Initial public offerings (IPOs) by Asian companies

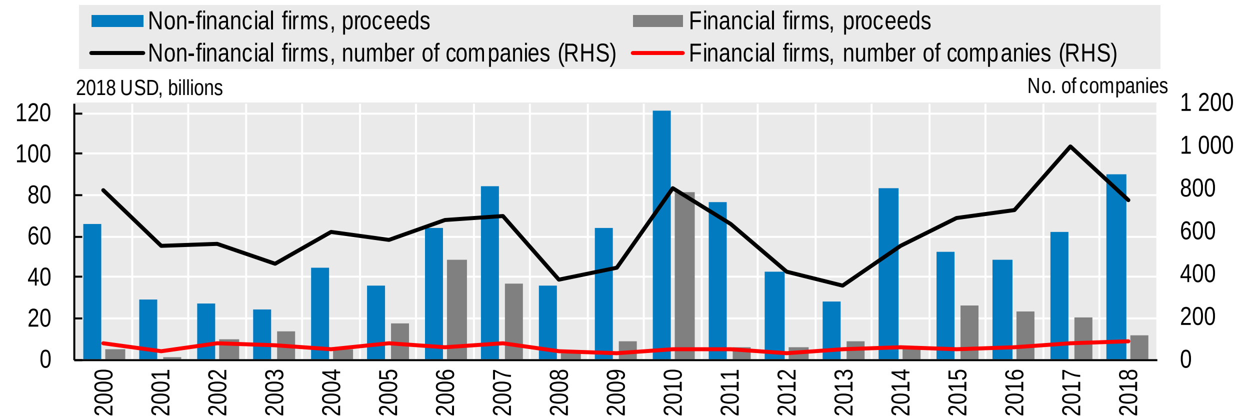


Source: OECD Capital Market Series dataset, see Annex for details.

In fact, the annual average amount of equity raised increased from USD 62 billion during the 2000-2008 period to USD 87 billion during the 2009-2018 period. After a sharp decline in the number and capital raised during the financial crisis, 2010 showed record amounts of capital raised through Asian IPOs. Following a decline between 2011 and 2013, the annual amount of capital again increased in 2014 and has since then remained fairly stable and above the 2000-2008 average.

Less than 10% of the Asian companies that became public between 2000 and 2018 were financial companies (Figure 8). On average, 58 Asian financial firms and 602 non-financial firms went public every year between 2000 and 2018. Following the global financial crisis, the number of financial firms listing decreased and remained around 50 per year until 2016. During 2017 and 2018, there was an increase in the number of financial IPOs when 75 and 89 companies got listed, respectively. Notably, out of the USD 342 billion raised by financial firms during the entire period, almost half of that amount was raised in the three years 2006, 2007 and 2010. Between 2011-2014, the average annual amount was only USD 7 billion. Following an increase in 2015, the financial IPO proceeds have experienced a declining trend

Figure 8. Initial public offerings (IPOs) by Asian financial and non-financial companies

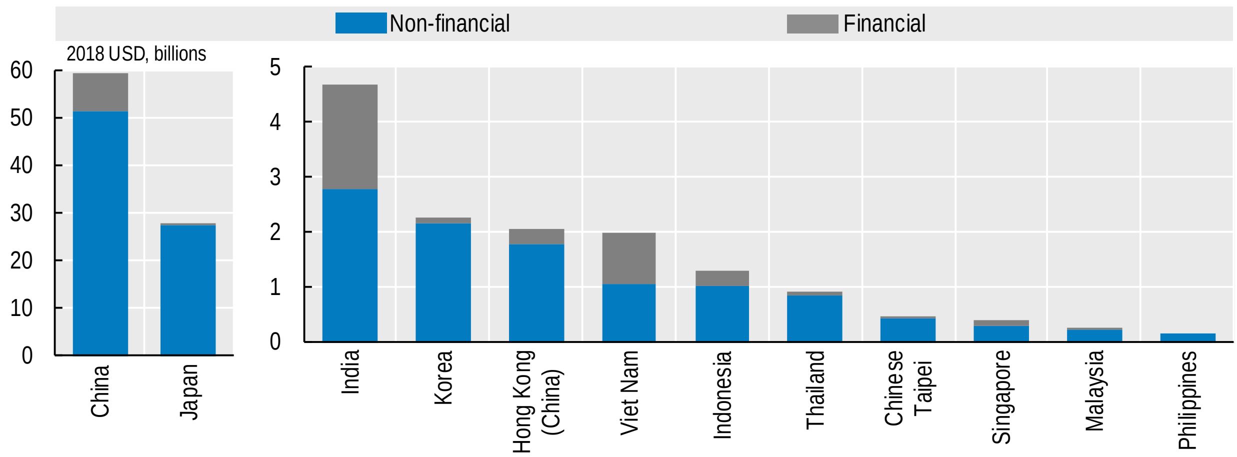


Source: OECD Capital Market Series dataset, see Annex for details.

Non-financial Asian companies accounted for three-quarters of all capital raised in IPOs during the period and over 90% of the number of companies that went public between 2000 and 2018 were non-financial. The total amount of equity capital raised by non-financial Asian companies reached a record level in 2010 with a total amount of USD 121 billion. Looking at the two different periods, the average number of non-financial companies that made an IPO increased from 575 in the period 2000-2008 to 627 in the period 2009-2018. The average annual amount of money raised also increased and was almost 46% higher in the second period, reaching USD 67 billion per year. After a record 999 non-financial Asian company listings in 2017, 748 companies went public in 2018. Contrary to the decrease in financial IPO proceeds during the past three years, non-financial IPO proceeds have instead been increasing since 2015 and reached almost USD 90 billion in 2018.

Focussing on the IPO activity of financial and non-financial companies in 2018, Figure 9 shows that out of the USD 102 billion that was raised through IPOs, 88% of the proceeds (USD 90 billion) were raised by non-financial companies and only 12% (USD 12 billion) by financial companies. Similar to the overall trend since 2000, Chinese companies accounted for the largest share of capital raised via IPOs. In 2018, Japanese companies ranked second with respect to the amount of capital raised via IPOs. It is important to note that the total amount raised in Japan was dominated by a single large non-financial company IPO.[1] India, Korea and Hong Kong (China) were the other three markets among the top five in terms of total proceeds.

Figure 9. IPOs by Asian companies in 2018

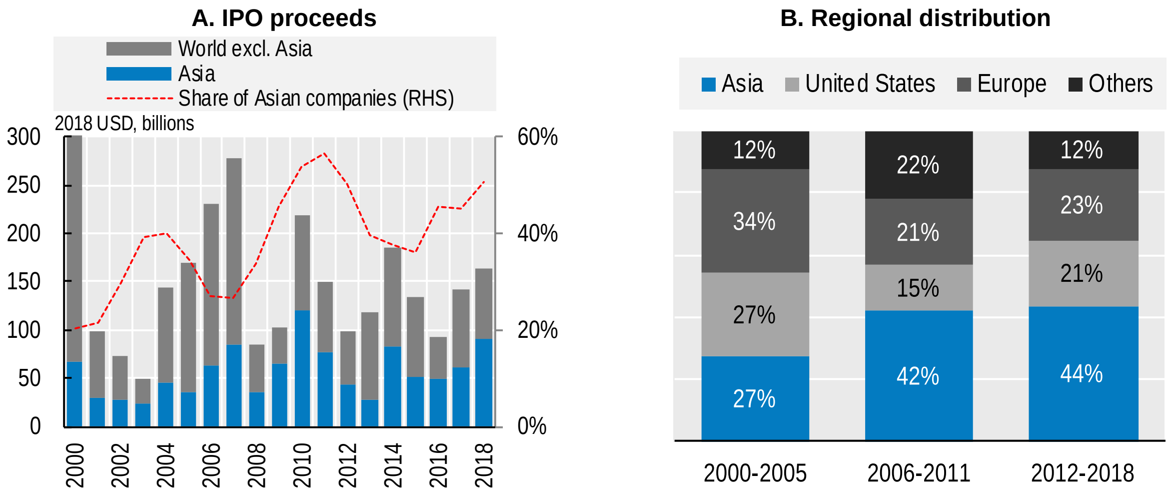


Source: OECD Capital Market Series dataset, see Annex for details.

The increase in the total amount of equity capital raised by Asian non-financial companies after the 2008 financial crisis has also influenced the global distribution of IPOs. Re-enforced by a downward trend in IPOs by US and European companies, Asian non-financial companies have come to dominate the global initial public offerings scene. Panel A of Figure 10 depicts the total amount raised through IPOs by Asian companies and by companies from the rest of the world from 2000 to 2018. It also shows the share of Asian companies in global proceeds. Panel B shows the distribution of global IPO proceeds among the non-financial companies from Asia, the United States, Europe and other countries for three periods. In 2000, the total amount raised by Asian companies through IPOs was less than 30% of the global amount. However, since 2014 there has been a downward trend in the world excluding Asia and a strong growth in the proceeds by Asian company IPOs. As a result in 2018, 51% of all equity raised in the world through IPOs went to Asian companies.

[1] SoftBank Corp. a Japanese telecommunications company and subsidiary of SoftBank Group raised USD 23.5 billion through an initial public offering.

Figure 10. IPOs by non-financial companies



Note: In Panel A, the share of Asian companies is calculated as a three-year moving average.

Source: OECD Capital Market Series dataset, see Annex for details.

When discussing the shift of IPOs towards Asian companies, it is also of interest to look at the relative importance of different Asian economies. Figure 11 shows the average annual amount raised by non-financial companies, during the periods 2000-2008 and 2009-2018. As illustrated by the red horizontal lines, the average annual amount raised in China (Panel A) more than doubled from the first to the second period reaching an annual average of USD 42 billion. The total amount raised by Chinese non-financial companies in 2018 was USD 51 billion and was largely driven by strong IPO activity in the Hong Kong Stock Exchange (HKEX). In fact, 60 Chinese non-financial IPOs took place in HKEX in 2018 raising a record amount of USD 27 billion. This may be explained by the new listing rules introduced by HKEX in April 2018.[2]

In order to give a clearer picture of developments in other Asian markets, Panel B of Figure 11 excludes IPOs by mainland Chinese companies. The red horizontal lines show that the annual average amount raised stayed almost unchanged at around USD 26 billion between the two periods. Overall, throughout the period, Japanese companies[3] have raised the highest amount of equity capital followed by companies from Hong Kong (China), Korea and India. The share of Japanese companies was around 26% of Asian IPO proceeds excluding China between 2000 and 2008, and increased to an average of 33% during the period 2009-2018. In 2018, mainly driven by one large transaction, Japanese IPO proceeds increased six-fold compared to the previous year.

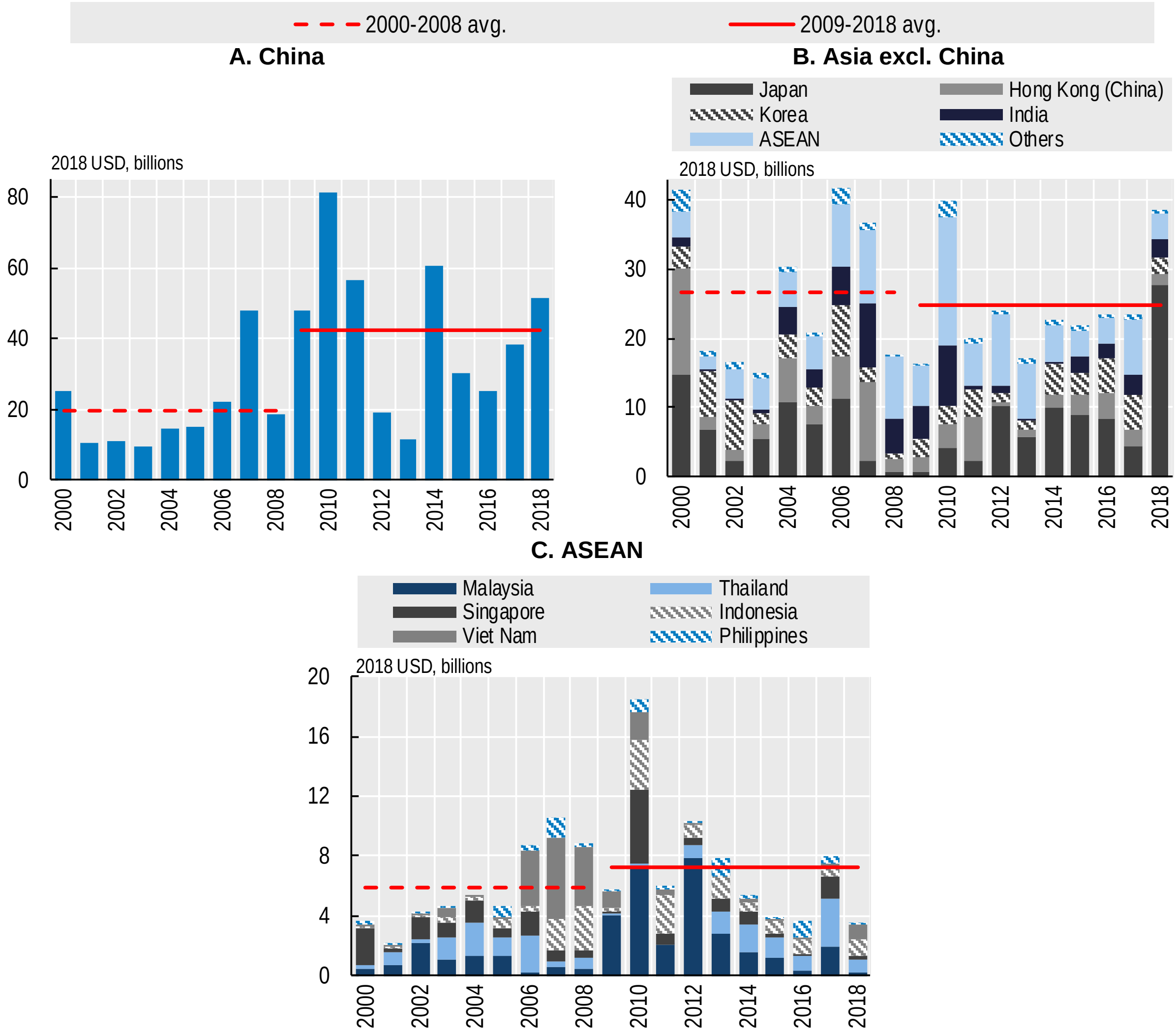
Moreover, between 2000 and 2008, IPOs by non-financial companies from ASEAN countries (Figure 11, Panel C) accounted on average for almost 22% of all Asian IPOs excluding China, with a total amount of USD 53 billion in equity raised. Similar to the trend observed in China, the share of ASEAN IPOs increased to an average of 29% in the period 2009-2018. However, in 2018, the ASEAN non-financial IPOs saw the second lowest issuance volume since 2000 and accounted

[2] The changes introduced to the listing rules in April 2018 by the HKEX allow firms to have dual-class share structure and allow the listing of biotech companies without meeting the requirements of the Main Board financial eligibility test, such as profits of HKD 20 million for the most recent year.

[3] The analysis in this report does not cover over-the-counter (OTC) market listings. JASDAQ in Japan was an OTC market until December 2004, when it had become a regulated stock exchange. IPOs made by JASDAQ listed companies since December 2004 are included in the analysis.

only for 9% of all Asian IPOs excluding China. Companies from Malaysia, Singapore and Indonesia raised record amounts of equity in 2010, but since 2012, with the exception of 2017, a downward trend can be observed. The increase in 2017 was mainly driven by Thai IPOs, whose volume in 2017 was 3 times the amount in 2016. More than 50% of the total amount was raised by 4 energy companies. This included the largest IPO in more than a decade, which was issued by a large energy company (Gulf Energy Development) raising more than USD 700 million.

Figure 11. IPO proceeds based on home jurisdiction of non-financial companies



Source: OECD Capital Market Reviews dataset, see Annex for details.

Since the 2008 global financial crisis, Asian non-financial companies have raised a total amount of USD 707 billion through initial public offerings, accounting for almost half of the equity capital raised worldwide. The development has primarily been driven by Chinese company IPOs that account for more than 62% of the total proceeds raised in the region. In fact, during the last ten years, Chinese companies have raised more equity capital through IPOs than companies from any other jurisdiction in the world.

With a view to make capital markets better serve the real economy, the China Securities Regulatory Commission (CSRC) announced in 2016 that it will reduce the IPO processing time in order to promote mainland Chinese (A-share) IPOs (CSRC, 2016). Due to IPO suspensions in China, a large number of IPO applications were waiting to be processed. In 2017, the CSRC significantly increased the pace of approval process to historical record, approving a total 380 IPOs out of 472 applications processed (SSE, 2019).[4] As a result, fewer IPO applications remained in the pipeline. In 2018, 111 out of the 172 IPO applications processed were approved (SSE,2019). In addition, in October 2017 the CRSC established a new Public Offering Review Committee that is expected to follow stricter standards for IPO approval as committee members are subject to life-long accountability for the IPOs authorised.[5] Due to the stricter standards, the approval rate has dropped from 81% in 2017 to 65% in 2018.

1.2. Trends in secondary public offerings

Fundraising through public equity markets is not limited to initial offerings. Companies that are already-listed frequently tap public markets for additional capital through a secondary public offering (SPO). Secondary offerings can be made several years after the initial offering in order to, for example, re-capitalise the firm or finance a new investment.

In an SPO the company might issue new shares and sell them on the public market, or existing shareholders can decide to sell their privately held shares to the public. A company can also make a mixed offer which combines the issuance of new shares and the sales of existing privately held shares. When the company decides to issue new shares, the collected proceeds will be received by the company and can be used for corporate purposes including financing expansion plans. The newly issued shares will increase the equity capital of the company and the number of shares outstanding. When issuing new shares, existing shareholders who do not participate in the offer may risk dilution of their voting power and the new share issuance could either increase or decrease the free-float of the company’s shares.

When existing shareholders offer their privately held shares to the public the proceeds will go to the shareholder(s) that are selling them. Investors offering their privately held shares in a secondary public offering are usually controlling shareholders, management, board members, venture capital or private equity firms. However, the selling shareholder can also be a company, a common situation in most Asian markets. In that case, the proceeds from the offering will be received by the owner company and not by the listed company. In general, when an offer consists of already issued and privately held shares, the equity capital of the company and the number of shares outstanding will not change. Additionally, the remaining existing shareholders will not suffer from any dilution effect, as their ownership share will not change after the offering. Still, the calculated free float of the company may increase, if more shares become available for regular trading.

This report covers all three types of secondary public offerings using either new shares, already issued and privately held shares or a combination of the two. An analysis of the type of shares offered shows that globally around 25% of the total amount raised through SPOs between 2000 and 2018 was related to a current owner selling part of a holding. This also includes parent companies’ sale of shares in subsidiaries. Such transactions were more common before 2007 compared to the rest of the period. In 2008 and 2009, 90% of the total amount raised through SPOs

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[4] According to SSE(2019), there were 380 IPO approvals out of 472 processed IPO applications in 2017. According to the CSRC (2017a), there were 401 IPO approvals out of 633 processed IPO applications.

[5] According to the CSRC, "No forbidden zones, full coverage, zero tolerance and life-long accountability" will be the guiding principle of the Public Offering Review Committee (CSRC, 2017b).

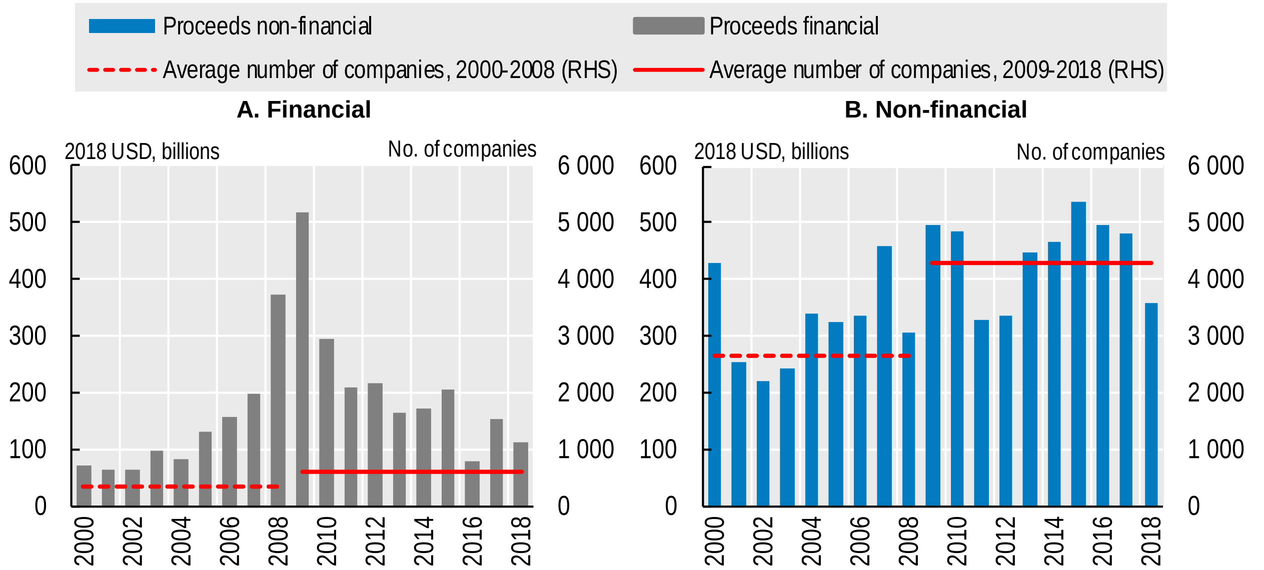
was through new share issuances. In addition, there are differences between countries in terms of the share that the owners sell to the public. In advanced markets around 30% of all SPO proceeds generally come from owner sales of shares, whereas it is around 20% in emerging markets.

Secondary public offerings globally outweigh the capital raised through initial public offerings for both financial and non-financial corporations. While companies worldwide have raised a total of USD 3.7 trillion through IPOs since 2000, they have raised almost USD 11 trillion through SPOs. Notably, in 2008 and 2009 during the global financial crisis, financial companies relied to a significant extent on secondary offerings to raise much needed equity capital. In fact, the only two years when the capital raised by financial companies surpassed the capital raised by non-financial companies was 2008 and 2009. It is important to note that in 2009 alone, the global amount of equity raised through SPOs by financial and non-financial companies reached an historical record of almost USD 1 trillion, suggesting that SPOs represent an important source of equity also in times of financial stress.

Contrary to the uneven regional IPO trends since the financial crisis, both SPO proceeds and the number of companies raising capital through SPOs remained strong globally until 2018 (Figure 12). However, in 2018, SPO proceeds by both financial and non-financial companies decreased almost by one-quarter compared to 2017. This decrease in SPO proceeds is most likely driven by an uncertain global economic outlook and a sluggish global stock market. In fact, the S&P 500 and FTSE 100 indices dropped 6.2% and 12.5% respectively during 2018. Particularly in mainland China, both the Shanghai Stock Exchange Composite Index and the Shenzhen Stock Exchange Composite Index significantly declined, 24.6% and 33.3% respectively. In the same year, SPO proceeds in China halved compared to the proceeds in 2017.

Despite the decrease in SPO proceeds in 2018, comparing the pre- and post-crisis periods, the average annual amount of capital raised through SPOs increased between the periods 2000-2008 and 2009-2018 from USD 462 billion to USD 656 billion. Similarly, the number of companies making a secondary public offering also increased. Since 2009 the average number of companies making an SPO has increased by 64% from 2 995 between 2000 and 2008 to 4 898 between 2009 and 2018.

Figure 12. Global trends in secondary public offerings (SPOs)

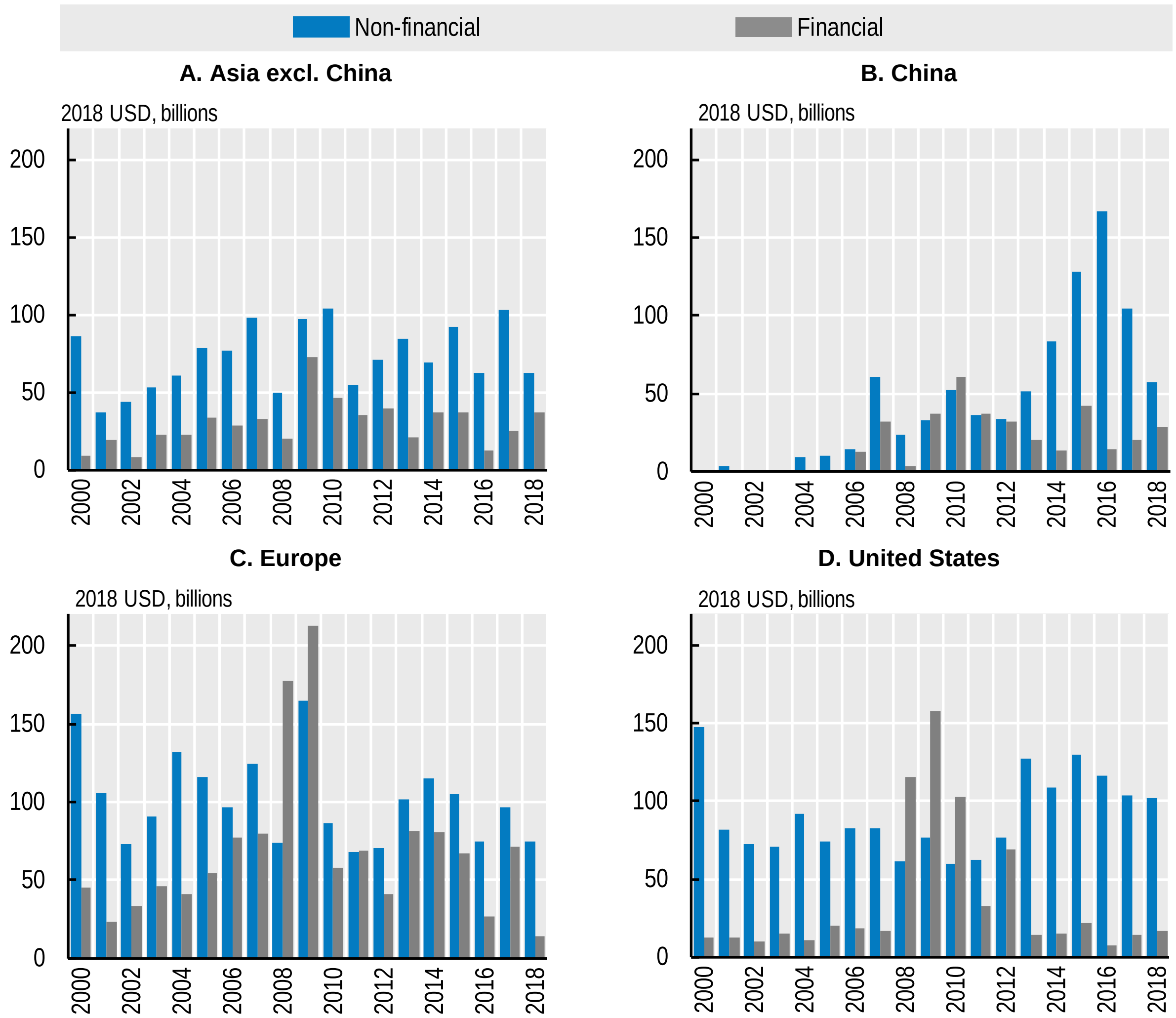


Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Equity capital raised through SPOs has also experienced a significant regional shift since the beginning of the millennium. Asian corporations' global share of capital raised through SPOs has increased from 19% in 2000 to 40% in 2018. As seen in Figure 13, the total capital raised through SPOs by financial corporations in the aftermath of the financial crisis surpassed the amount raised by non-financial companies in Europe and the United States. In fact, in 2008 the share of financial corporations in global SPO proceeds reached the highest level since 2000 at 55% of the total amount. Capital markets performed an important role in supporting the financial sector with large injections of equity capital during the crisis period. In the following years, an overwhelming portion of proceeds have gone to non-financial companies and represented more than 75% of all equity raised through SPOs in 2018.

Despite a surge in global financial company SPOs in 2008 and 2009, the total amount raised by Asian financial company SPOs has not surpassed the amount raised through non-financial company SPOs since 2000. The exception is Japan which followed a similar trend to that of other advanced economies during the past ten years. Japanese financial companies raised a total amount of almost USD 50 billion in 2009, while the total proceeds from IPOs were below USD 1 billion. Following that, SPOs by Japanese financial companies were negligible in 2015 and 2016, reaching a mere USD 2.4 billion and USD 1.2 billion in 2017 and 2018 respectively.

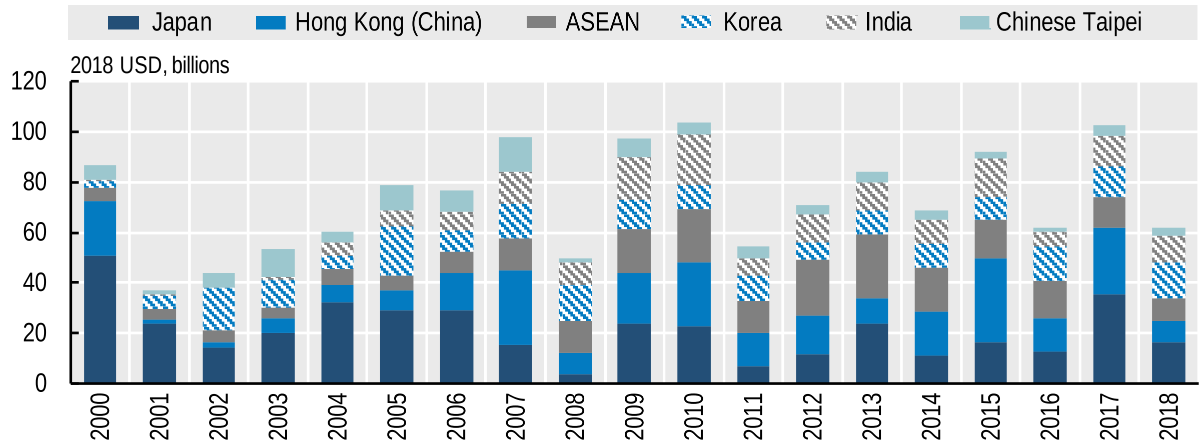
Figure 13. Regional trends in secondary public offerings (SPOs)



Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Asian non-financial corporations have increasingly been using secondary offerings to raise capital. Although the total proceeds from SPOs almost halved in 2018, non-financial Asian companies remarkably increased their use of secondary offerings after 2015 compared to the early 2000s (Figure 14). The surge in total proceeds was not only the result of an increased use of SPOs by Chinese companies but a region-wide phenomenon. For example, while ASEAN countries' average annual issuance volume was only USD 5 billion between 2000 and 2005, it reached USD 13 billion per year between 2015-2018. Another important observation from the figure is that non-financial Korean companies almost regularly tap the SPO market with an annual average of USD 10 billion.

Figure 14. SPOs by Asian non-financial companies, excluding mainland China

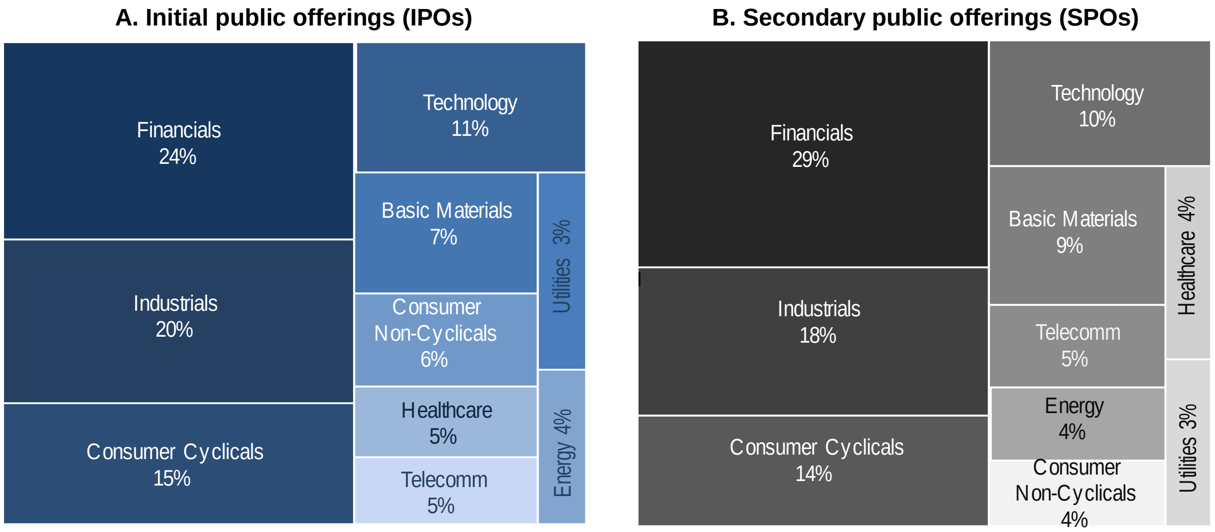


Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

1.3. Sectoral distribution of public equity financing

Figure 15 presents a breakdown of the total proceeds from IPOs and SPOs by Asian companies across industries during the period between 2000 and 2018. It shows that financial companies have been the single largest users of both initial and secondary public equity offerings. With respect to IPOs, they accounted for 24% of all proceeds, followed by industrials (20%). In terms of SPOs financial account for 29%, followed by industrials that account for 18% of all proceeds. The share of technology companies represents around 10% of the total volume for both IPOs and SPOs.

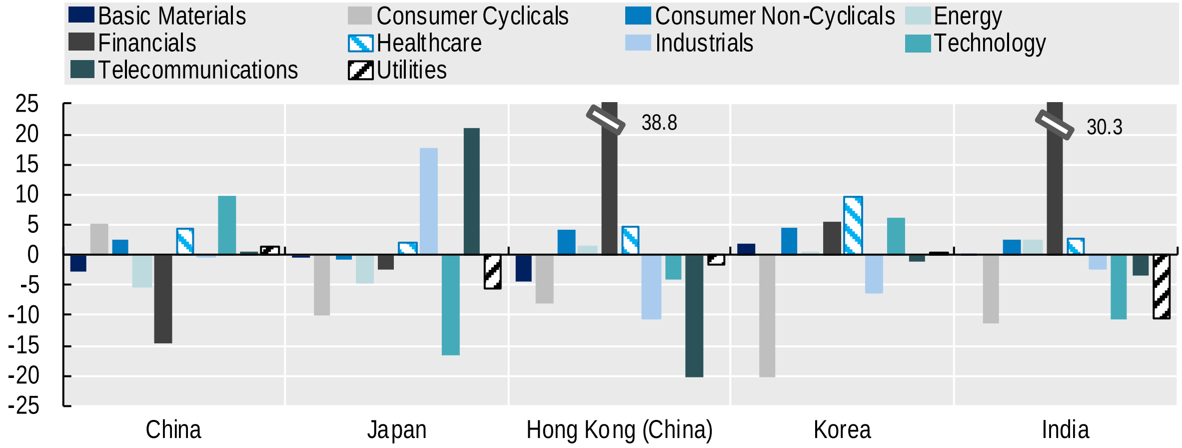
Figure 15. Sectoral distribution of the proceeds from public equity offerings by Asian companies, 2000-2018



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 16 shows the shifts in sectoral distribution of IPOs in five Asian markets before and after the 2008 financial crisis. The largest IPO market in the region, China, has with some exceptions experienced modest changes in sectoral distribution, typically ranging between 2 to 5 percentage points. The two most important exceptions are the financial industry, which dropped 15 percentage points and the technology industry, which gained 10 percentage points. Japan, has experienced a significant shift to industrials at the expense of consumer cyclicals and technology companies. In Hong Kong (China), six out of the nine non-financial industries experienced a decrease in their share of total IPO proceeds, while financials increased its share by 39 percentage points. Similar to Japan, technology experienced a significant drop in India. In Korea, the share of technology and healthcare went up by 6 and 10 percentage points respectively.

Figure 16. Changes in sectoral shares in IPOs, pre-crisis versus post-crisis in percentage points



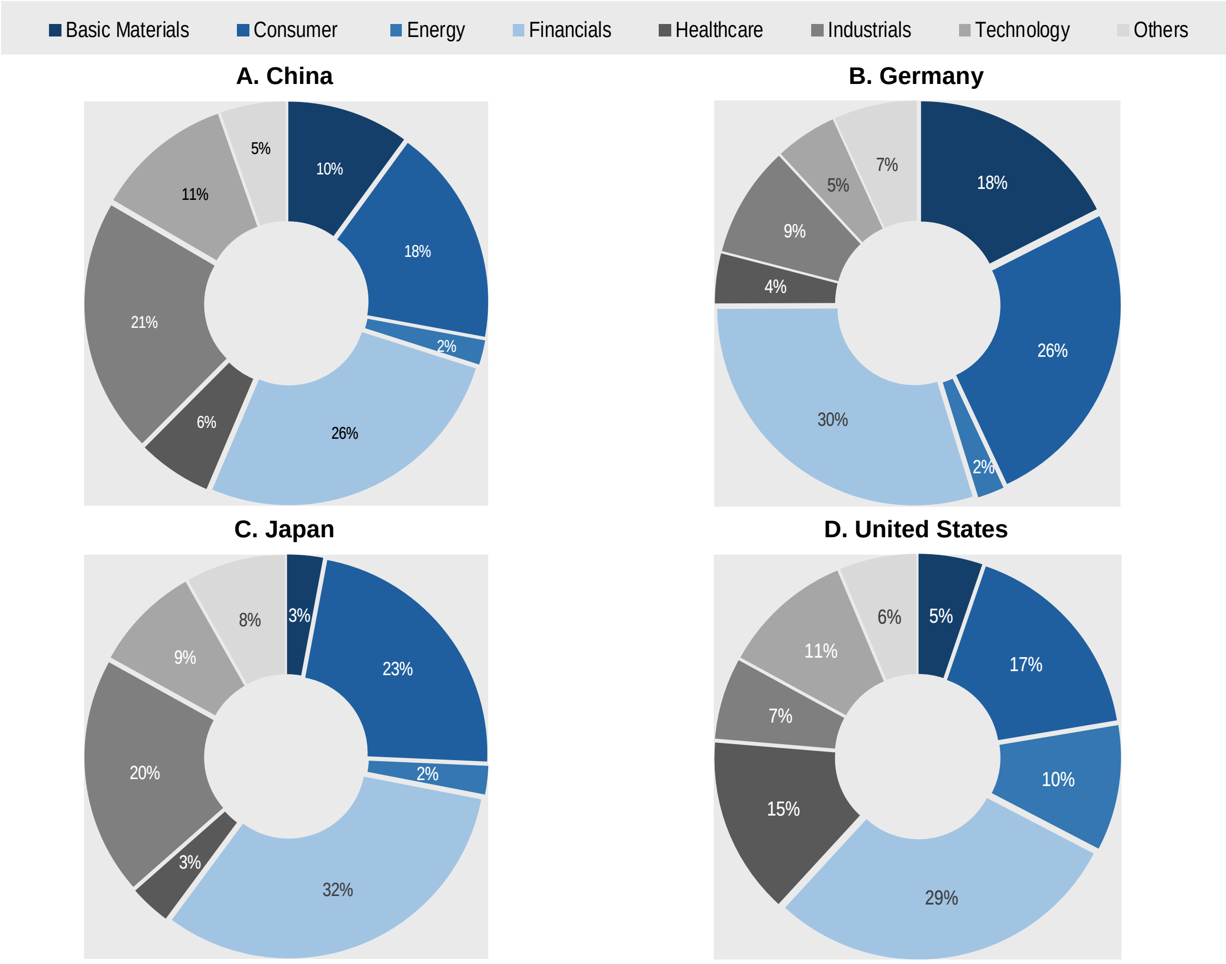
Note: The figure shows the difference between the average sectoral share during the post-crisis period (2010-2018) and the pre-crisis period (2000-2007).

Source: OECD Capital Market Series dataset, see Annex for details.

Figure 17 focuses on the four largest economies in the world in terms of GDP as of end 2018 and exhibits the sectoral distribution of the combined proceeds from IPOs and SPOs over the 2009-2018 period. Together, companies from the four economies raised a total of USD 4 trillion, accounting for almost half of the total amount raised globally between 2009 and 2018. Financials has been the single largest industry in all the four economies accounting for between 32% (Japan) to 26% (China) of the total public equity financing. In China, energy has almost disappeared from the public equity market financing accounting for just 2% of proceeds, whereas in the United States energy accounts for a significant 10% share of the total public equity financing during the 2009-2018 period.

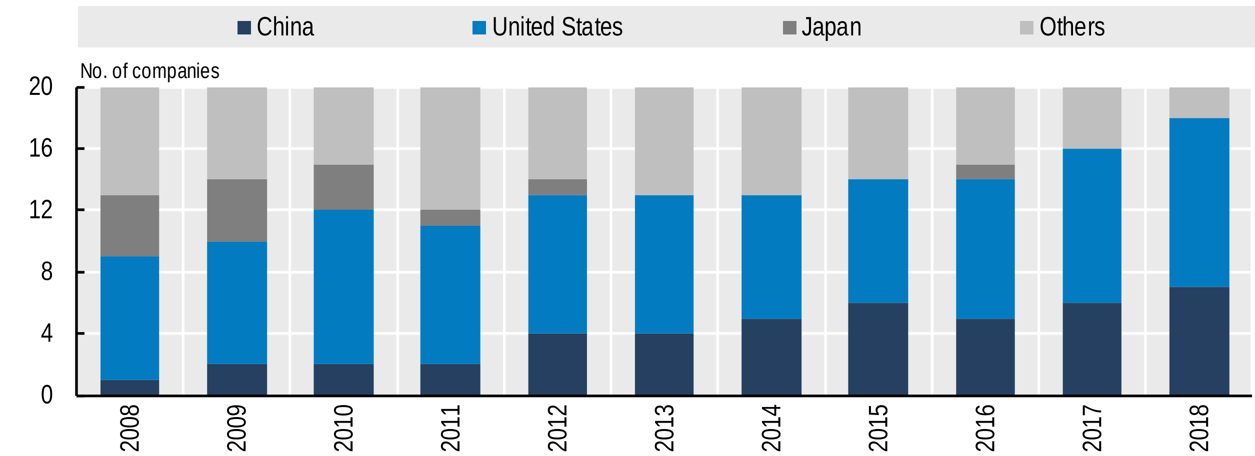
In Japan, technology accounted 9% of the capital raised, whereas in the United States and Germany it accounted for 11% and 5% respectively. In China the share of capital raised by technology companies represented 11% of the total public equity financing. Chinese technology companies not only account for a significant share of the capital raised. They have also increased their presence among the top 20 largest technology companies worldwide since 2008. In 2018, 7 out of the world's largest 20 technology companies by market capitalisation were from China, whereas in 2008 only one Chinese technology company was among the top 20 listed technology companies worldwide.

Figure 17. Sectoral distribution of public equity financing in selected countries, 2009-2018



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 18. Global distribution of the top 20 tech-companies, ranked by market capitalisation



Source: Thomson Reuters Eikon.

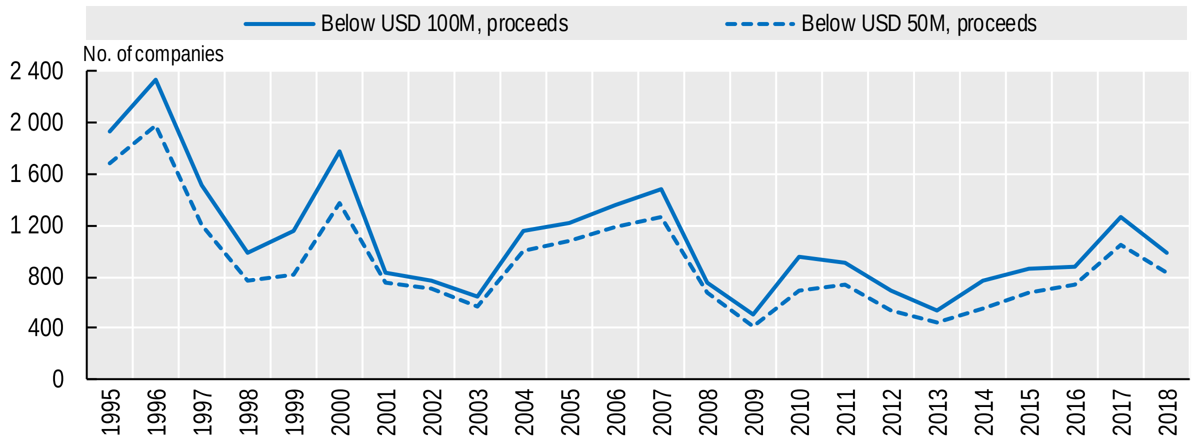
PART II. GROWTH COMPANIES' USE OF PUBLIC EQUITY FINANCING

Companies have different reasons to use public equity financing and become listed on a stock exchange. For established companies, financing mergers and acquisitions and having better external monitoring can be important motives. Relatively smaller and younger companies are often in need of equity capital to finance growth opportunities during periods of limited or uneven cash flow. These growth companies play a critical role in the economy as they may have the potential to challenge status quo and increase business sector dynamism through a constant process of creative destruction. Long-term and patient capital in the form of equity is well suited to help these growth companies to reach their full potential.

This part provides an overview of the use of primary public equity markets by Asian growth companies between 1995 and 2018. It also compares developments in Asia with some other major markets. In this report, growth company IPOs are defined as IPOs of less than USD 100M in real terms. Within this category, the report also identifies IPOs of less than USD 50M. Under the assumption that the average free float ratio for an initial offering is 25%, this means that the average market value of the two groups of growth companies would be below USD 400M and USD 200M respectively.

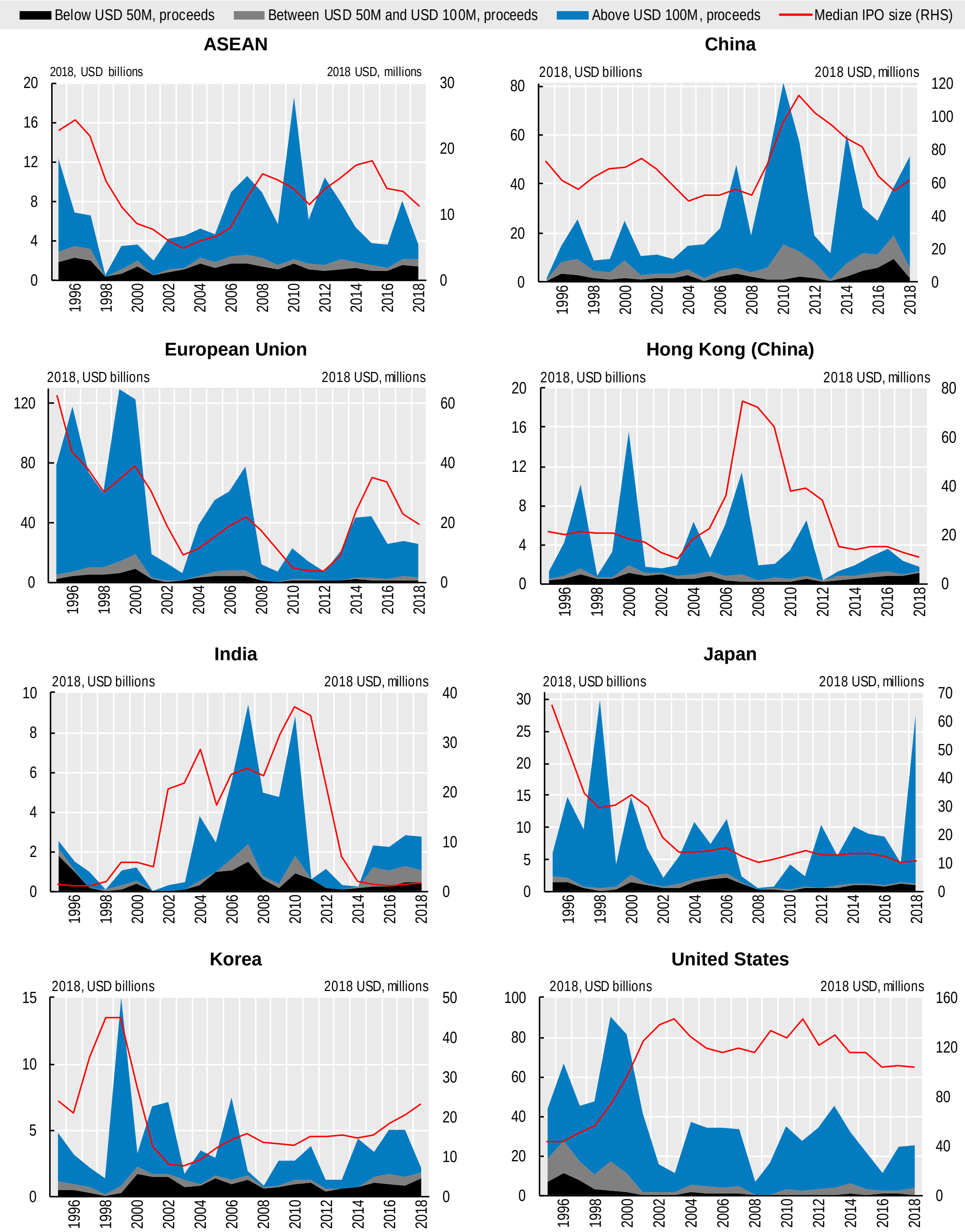
Figure 19 presents the number of growth company IPOs below USD 50M and below USD 100M between 1995 and 2018. During the period 1995-2008 the average annual number of growth company IPOs globally of less than USD 50M (USD 100M) was 1 076 (1 278). During the period 2009-2018 these numbers decreased to 667 (836) companies. After a period of modest increase reaching 1 052 (1 272) IPOs in 2017, the highest number since 2007, the number of growth company IPOs again decreased to 832 (979) in 2018.

Figure 19. IPOs by non-financial growth companies worldwide



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 20. IPOs by non-financial growth companies



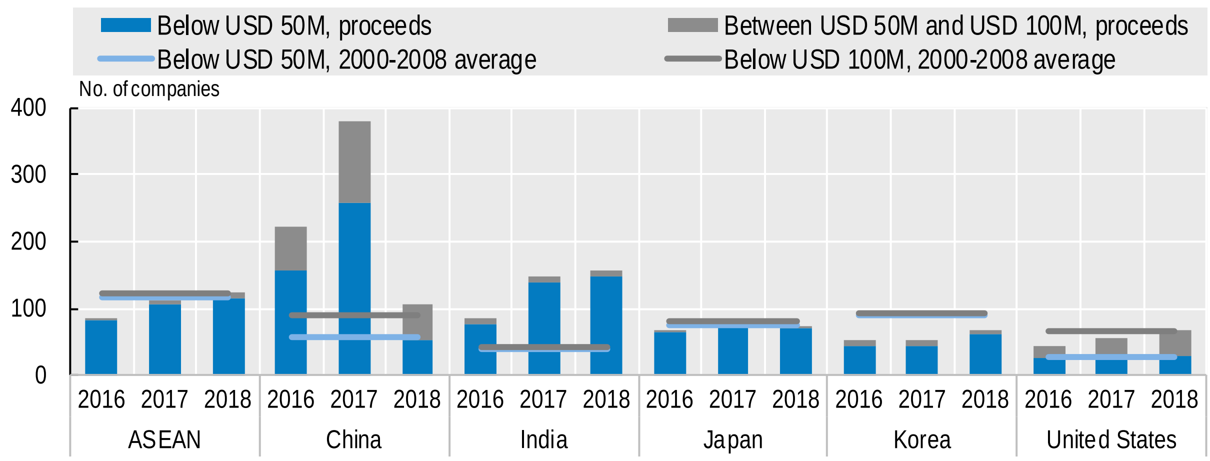
Note: Median IPO size is calculated as a three-year moving average.
Source: OECD Capital Market Series dataset, see Annex for details.

Growth company IPOs follow different trends across markets and regions. Figure 20 provides a comparison between the European Union, the United States, the five largest Asian equity markets and the ASEAN countries as a group. As seen from the figure, IPOs below USD 50M have almost disappeared in the European Union and the United States since 2008. Japan also experienced a significant decrease between 2008 and 2013. But since then, Japanese growth company IPOs – below USD 50M – have rebounded somewhat and raised an annual average amount of almost USD 1 billion during the period 2014-2018. The total amount raised by Korean growth companies has been fairly constant over time, with the exception of 2012. One notable difference between Korea, Japan and China is that in the first two countries the majority of growth company IPOs were below the USD 50M threshold, whereas in China, the majority of growth company IPOs since 2008 have been between USD 50M and USD 100M. In ASEAN, total proceeds from growth company IPOs have been more evenly distributed with respect to the size of the IPO.

As discussed above, the number of growth company IPOs has declined globally over the last 20 years. Figure 21 shows Asian and US growth company IPOs during the past three years compared with the period 2000-2008. Only in China and India did the average number of growth company IPOs in 2016-2018 reach above the 2000-2008 averages for both IPOs less than USD 50M and USD 100M. While Japanese and ASEAN growth company IPOs for the last three years have been close to pre-crisis levels, the number of Korean IPOs was significantly below its 2000-2008 averages.

In 2018, China experienced a significant change with respect to growth company IPOs with a decrease in both numbers and proceeds of almost 80% compared to 2017. After 257 (379) companies raised a total of 9.5 billion (USD 19 billion) in 2017, only 54 (107) growth companies went public in 2018 when IPOs below USD 50M (USD 100M) raised USD 1.7 billion (USD 6 billion). This decline in growth company IPOs follows the general 63% decline in the number of Chinese non-financial IPOs in 2018. These developments might be partially explained by the stricter standards for IPO approval announced by CSRC in late 2017 (PWC, 2019; CSRC, 2017b). In addition, most of the observed decline in growth company IPOs was registered in mainland China exchanges that traditionally hosted growth company IPOs. In fact, total proceeds of non-financial IPOs in mainland China dropped from USD 30.7 billion in 2017 to USD 15.3 billion in 2018, and the share of IPOs of less than USD 50M (USD 100M) also decreased from 29% (59%) in 2017 to 5% (25%) in 2018.

Figure 21. Number of non-financial growth company IPOs



Source: OECD Capital Market Series dataset, see Annex for details.

Public equity offerings are often seen as an important source of funding for growth companies in future oriented industries with relatively high risk. Looking at a sectoral breakdown of growth company IPOs, Table 1 shows that, during the five-year period 2014-2018, industries like technology and healthcare, for example, accounted for 78% of all growth company IPOs below USD 100M in the United States, 50% in the European Union and 43% in Korea. The share of proceeds for the technology and healthcare industries in growth company IPOs was high also in Japan with 40%. Industrials in India, China and Hong Kong (China) and consumer cyclicals in Hong Kong (China), India and Japan represented around 30% of all IPOs under USD 100M. This is considerably higher than in other markets, particularly in the United States.

Table 1. Sectoral breakdown of growth company IPOs as a percentage of total proceeds, 2014-2018

	China	European Union	Hong Kong (China)	India	Japan	Korea	United States
Basic Materials	15%	3%	3%	9%	4%	11%	0%
Consumer Cyclicals	20%	18%	33%	26%	28%	21%	12%
Consumer Non-Cyclicals	6%	5%	14%	10%	6%	12%	3%
Energy	2%	4%	2%	2%	0%	0%	1%
Healthcare	9%	28%	9%	12%	10%	19%	63%
Industrials	32%	17%	33%	34%	21%	14%	5%
Technology	15%	21%	6%	7%	30%	23%	15%
Telecommunications	1%	2%	0%	0%	0%	0%	0%
Utilities	1%	1%	0%	0%	1%	0%	0%

Source: OECD Capital Market Series dataset, see Annex for details.

PART III. ASIAN STOCK EXCHANGES AND SECONDARY PUBLIC EQUITY MARKETS

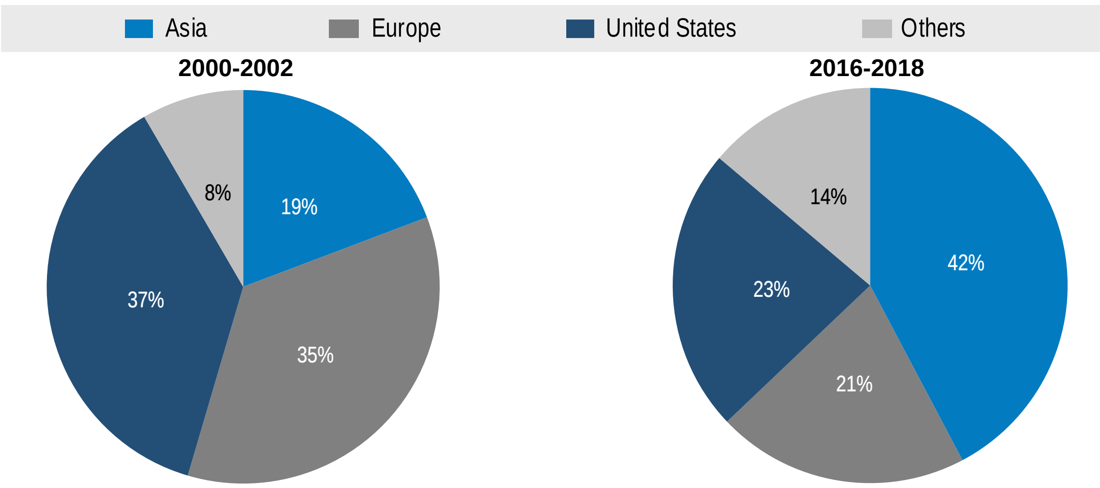
A key element of public equity markets are the marketplaces. Most importantly stock exchanges, that play a critical role in matching companies that need access to external equity capital with investors who are in search of investment opportunities. Stock exchanges also serve some key functions that are also in the public interest. These include ensuring an efficient price discovery process, certain regulatory functions, supervision and sometimes enforcement responsibilities. When designing policies directed to improve the functioning of capital markets it is therefore important to understand how stock markets are structured, how trading venues function and how their role and status have developed over time.

Part I and II of this report has provided an overview of Asian companies' use of public equity financing from the perspective of the nationality of company. This part provides an overall view of the stock exchange landscape in Asia.

3.1. Stock markets in Asia

One important consequence of the increased use of public equity financing by Asian companies has been an increasing role of Asian markets in global equity financing. The share of capital raised in Asian markets has grown steadily during the past 20 years, from representing 19% of the global volume of public equity raised between 2000 and 2002 to 42% during the last 3 years (Figure 22).

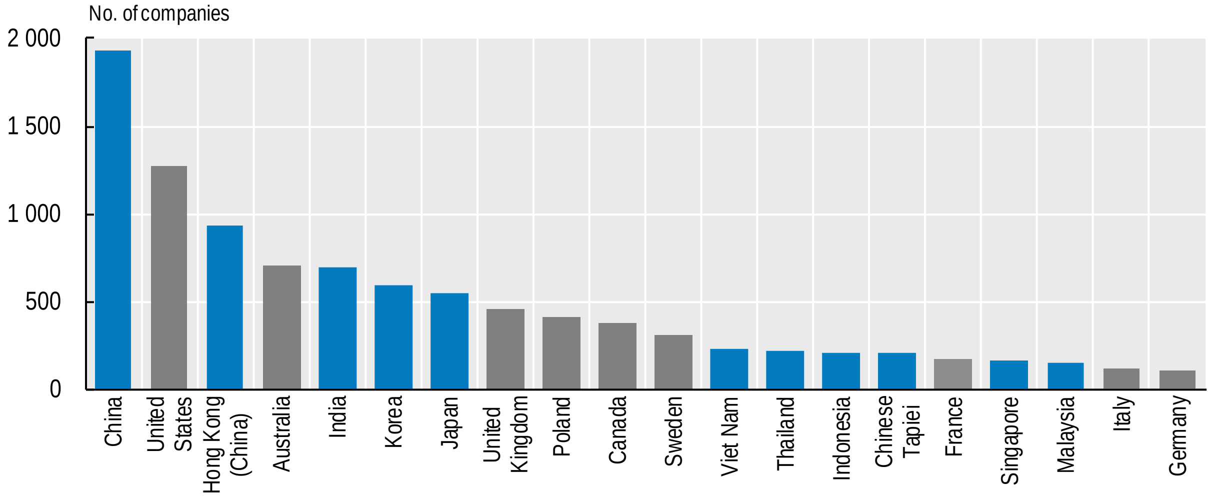
Figure 22. Share of Asian markets in global public equity financing



Source: OECD Capital Market Series dataset, see Annex for details.

The important global role of Asian primary equity markets is even more pronounced when looking at the number of IPOs. As seen in Figure 23, 11 of the top 20 markets in terms of non-financial IPOs globally during the past ten years are in Asia. The Chinese mainland market is by far the largest market with the highest number of listings followed by the United States. Supported by the mainland Chinese company listings, the Hong Kong (China) has been the third largest market with respect to the number of IPOs globally, since 2009.

Figure 23. Top 20 markets by number of non-financial company IPOs, 2009-2018



Source: OECD Capital Market Series dataset, see Annex for details.

3.2. Stock exchanges in Asia

The stock exchange industry in the United States and Europe has experienced important changes since the mid-1990s. Most traditional stock exchanges have either been acquired by another exchange or become part of a stock exchange group. In most cases the parent companies of exchanges have also become publicly listed companies with their shares listed and traded on one or more of their own stock exchanges. At the same time, new venues for trading have emerged, such as alternative trading systems (ATS) in the United States and multilateral trading facilities (MTF) in Europe.

Stock exchanges in developed Asian economies have also been part of this transformation. For example, Japan Exchange Group (JPX) was established in 2013 as a result of the business combination between Tokyo Stock Exchange Group and Osaka Securities Exchange. Today, the parent company of the Tokyo Stock Exchange, the JPX, is listed on the exchange. The stock exchanges in Singapore and Hong Kong (China) are also listed companies. Contrary to the situation in Europe and the United States, developed Asian markets do not face extensive competition from alternative trading venues. In 2015, for example, 33% of all trading in the United States and around 50% of all trading in major European markets took place on off-exchange trading venues (OECD, 2016). In Japan, however, the Tokyo Stock Exchange still accounts for almost all stock trading in domestic listed companies (JSRI, 2016).

In emerging markets the consolidation process of the stock exchange industry has been mostly through M&As at the national level. For example, two stock exchanges in Indonesia merged in 2007 to form the Indonesia Stock Exchange. Also three Pakistani stock exchanges underwent a merger in 2015 and now operate as Pakistan Stock Exchange. While it is a common phenomenon that stock exchanges operating in advanced economies have transformed to become listed on their own exchange, the picture is less homogenous in emerging markets. Stock exchanges in Chinese Taipei, Sri Lanka, Thailand and Viet Nam are still run as state-owned institutions. Also, the two largest stock exchanges in Asian emerging markets, which are both in China, operate as semi-public institutions and are member institutions governed by the CSRC. The stock exchanges in Malaysia, Pakistan and the Philippines, on the other hand, have transformed and are now listed companies on their own markets.

The consolidation of the stock exchange industry at the international level can also be achieved through M&As as well as joint ventures. The China Europe International Exchange (CEINEX) was established in 2015 by the Shanghai Stock Exchange, the Deutsche Boerse Group and the China Financial Futures Exchange as the first trading venue for China – and RMB – related investment products outside of mainland China. It can host the offshore listings of Deutschland Shares (D-Shares) issued by Chinese companies, connecting the financial markets in Europe and China. The launch of CEINEX gives Chinese firms opportunities to reach out to international investors, by providing European investors a direct way to invest in Chinese companies.

In 2016, a Chinese-led consortium, including three Chinese exchanges and two Pakistani financial institutions acquired a 40% share of the Pakistan Stock Exchange.[6] And most recently in 2018, a Chinese consortium of Shanghai and Shenzhen Stock Exchanges bought a 25% stake of the Dhaka Stock Exchange. Similar to developed Asian markets, off-exchange alternative trading platforms are not a significant feature in the rest of Asia.

With respect to securities issuance systems, countries adopt either a registration or an approval system. In the registration system, companies report all information required by the regulator for issuing the securities. The regulator’s role is limited to reviewing whether the information provided fulfil the requirements and standard forms. In the approval system, however, the regulator also examines the firm’s quality before allowing company’s shares to be listed (Hui, 2017).

Similar to the global trends, most Asian markets such as Japan, Korea, Chinese Taipei have adopted the registration system for equity issuances. China on the other hand has been using the approval system for the listing of its A-shares, which requires the approval of the CSRC listing committee for firms to be listed. In June 2019, however, China launched the Shanghai Stock Exchange Science and Technology Innovation Board known as STAR market, which marked the launch of the pilot registration IPO system in China. Instead of getting approval from the regulator, firms applying to be listed on the STAR market are subject to the examination of the Shanghai Stock Exchange. The stock exchange ensures the disclosure of information is in accordance with regulations in force and the CSRC registers the stock once approved by the exchange.

Moreover, listing requirements on the STAR market are more flexible compared to other main boards in mainland China. For example, companies applying for an IPO in the STAR market are required to meet one of five different sets of criteria, whereas companies applying for an IPO on other main boards in mainland China are required to meet all mandatory conditions such as positive profits for the last three years. Flexible listing requirements allow unprofitable high-tech companies to raise capital in their home market, while before these companies could only list on non-domestic markets. Another important feature of the STAR market is the existence of dual-class share structures.[7] By the end of October 2019, there were altogether 40 companies listed on the STAR market and their average market capitalisation was USD 2 billion. Among these companies, 21 are technology companies and 8 are healthcare companies.

Besides creating new market places with different listing requirements, stock exchanges may also introduce changes or exceptions with respect to existing listing regimes. In most of the cases, exchanges undertake such changes in order to remain competitive among their peers (EY, 2009).

[6] These three Chinese exchanges are China Financial Futures Exchange, Shanghai Stock Exchange, and Shenzhen Stock Exchange. Two Pakistani financial institutions are Pak China Investment Company Limited and Habib Bank Limited.

[7] The dual-class share structure in the STAR market allows the issuance of B-shares to founders or executives and these B-shares can have a maximum ten times voting rights compared to A-shares issued to other shareholders.

In 2018, for instance, the Hong Kong Stock Exchange began to permit listings of biotech companies that do not meet any of the Main Board financial eligibility tests and listings of companies with weighted voting right structures which includes dual class shares in order to attract emerging and innovative companies. In addition to those changes, it also established a new secondary listing route for companies that wish to choose Hong Kong (China) as secondary listing venue (HKEX, 2018). Similarly, the Singapore Stock Exchange announced in 2018 new rules to allow company groups to list with dual-class shares (SGX, 2018) and the Shenzhen Stock Exchange announced in 2019 that applicants no longer need to have two consecutive profitable years to issue private placements on ChiNext.

In addition to an overview of the legal status and listing information, Table 2 also presents some key indicators for Asian stock markets. Tokyo Stock Exchange had the highest market capitalisation as of end 2018, followed by the two Chinese exchanges and the Hong Kong Stock Exchange. In terms of the total annual trading volume the Shenzhen Stock Exchange had the highest volume followed by Tokyo Stock Exchange and Shanghai Stock Exchange. The Hong Kong Stock exchange, on the other hand, ranked as fifth after the Korean Exchange. In terms of market capitalisation, 6 out of the world's top 10 stock exchanges as of end 2018 were Asian Stock Exchanges from Japan, China, Hong Kong (China) and India (WFE, 2019).

Table 2. Stock exchanges in the Asia region, as of end 2018

	Stock exchange	Legal status	Self-listing	Market capitalisation (USD billion)	Number of listed companies	Trading volume (USD billion)
Bangladesh	Dhaka SE	Private company	No	40	311	16
	Chittagong SE	Private company	No	0.04	282	1
China	Shanghai SE	State-owned	No	3 919	1 450	6 037
	Shenzhen SE	State-owned	No	2 405	2 134	7 499
Hong Kong (China)	Stock Exchange of Hong Kong	Joint Stock Company	Yes	3 819	2 315	2 340
India	National SE	Joint Stock Company	No	2 056	1 923	1 164
	Bombay SE	Joint Stock Company	No	2 088	5 233	116
Indonesia	Indonesia SE	Private company	No	487	619	106
Japan	Tokyo SE	Joint Stock Company	Yes	5 297	3 657	6 291
Korea	Korea Exchange	Joint Stock Company	No	1 414	2 207	2 508
Malaysia	Bursa Malaysia	Joint Stock Company	Yes	398	912	137
Mongolia	Mongolian SE	State-owned	No	1	198	0.14
Pakistan	Pakistan SE	Private company	Yes	71	558	17
Philippines	Philippine SE	Joint Stock Company	Yes	258	267	29
Singapore	Singapore Exchange	Joint Stock Company	Yes	687	741	222
Sri Lanka	Colombo Stock Exchange	State-owned	No	16	297	1
Chinese Taipei	Taiwan SE	State-owned	No	959	945	967
	Taipei Exchange	State-owned	No	92	766	269
Thailand	Stock Exchange of Thailand	State-owned	No	501	704	388
Viet Nam	Ho Chi Minh SE	State-owned	No	124	373	46
	Hanoi SE	State-owned	No	8	376	8

Source: World Federation of Exchanges and stock exchanges' websites.

Table 3 also shows market capitalisation as share of GDP. When benchmarking against the size of the economy, the ratio of market capitalisation to GDP is the highest in Hong Kong (China), Singapore, Chinese Taipei and India and the lowest in Mongolia, Pakistan and Bangladesh. Table

3 also includes two simple indicators to illustrate stock market liquidity. The first one is the ratio of the total value of shares traded divided by GDP while the second relates the total value of shares traded to the market capitalisation (turnover ratio). Similarly to the stock market capitalisation ratio, turnover ratios for China, Korea, Japan and Chinese Taipei far exceed those of most other markets. The liquidity ratios are the lowest in the Sri Lanka, Philippines, Pakistan, Indonesia and India. Interestingly, with a relatively low market turnover and a high market capitalisation, the turnover ratio of Hong Kong (China) is comparatively low. The same is true for Singapore.

Table 3. Key indicators for Asian exchanges, as of end 2018

	Stock exchange	Market capitalisation/GDP	Total value traded/GDP	Turnover
Bangladesh	Dhaka SE and Chittagong SE	0.14	0.06	0.43
China	Shanghai SE and Shenzhen SE	0.47	1.01	2.14
Hong Kong (China)	Hong Kong Stock Exchange	10.52	6.45	0.61
India	National SE and Bombay SE	1.53	0.47	0.31
Indonesia	Indonesia SE	0.48	0.10	0.22
Japan	Tokyo SE	1.07	1.27	1.19
Korea	Korea Exchange	0.87	1.55	1.77
Malaysia	Bursa Malaysia	1.12	0.39	0.34
Mongolia	Mongolian SE	0.07	0.01	0.15
Pakistan	Pakistan SE	0.23	0.05	0.24
Philippines	Philippine SE	0.78	0.09	0.11
Singapore	Singapore Exchange	1.90	0.61	0.32
Sri Lanka	Colombo Stock Exchange	0.18	0.01	0.04
Chinese Taipei	Taiwan SE and Taipei Exchange	1.78	2.10	1.18
Thailand	Stock Exchange of Thailand	1.03	0.80	0.77
Viet Nam	Ho Chi Minh SE and Hanoi SE	0.55	0.22	0.40

Source: World Federation of Exchanges, stock exchanges' websites and IMF World Economic Outlook database.

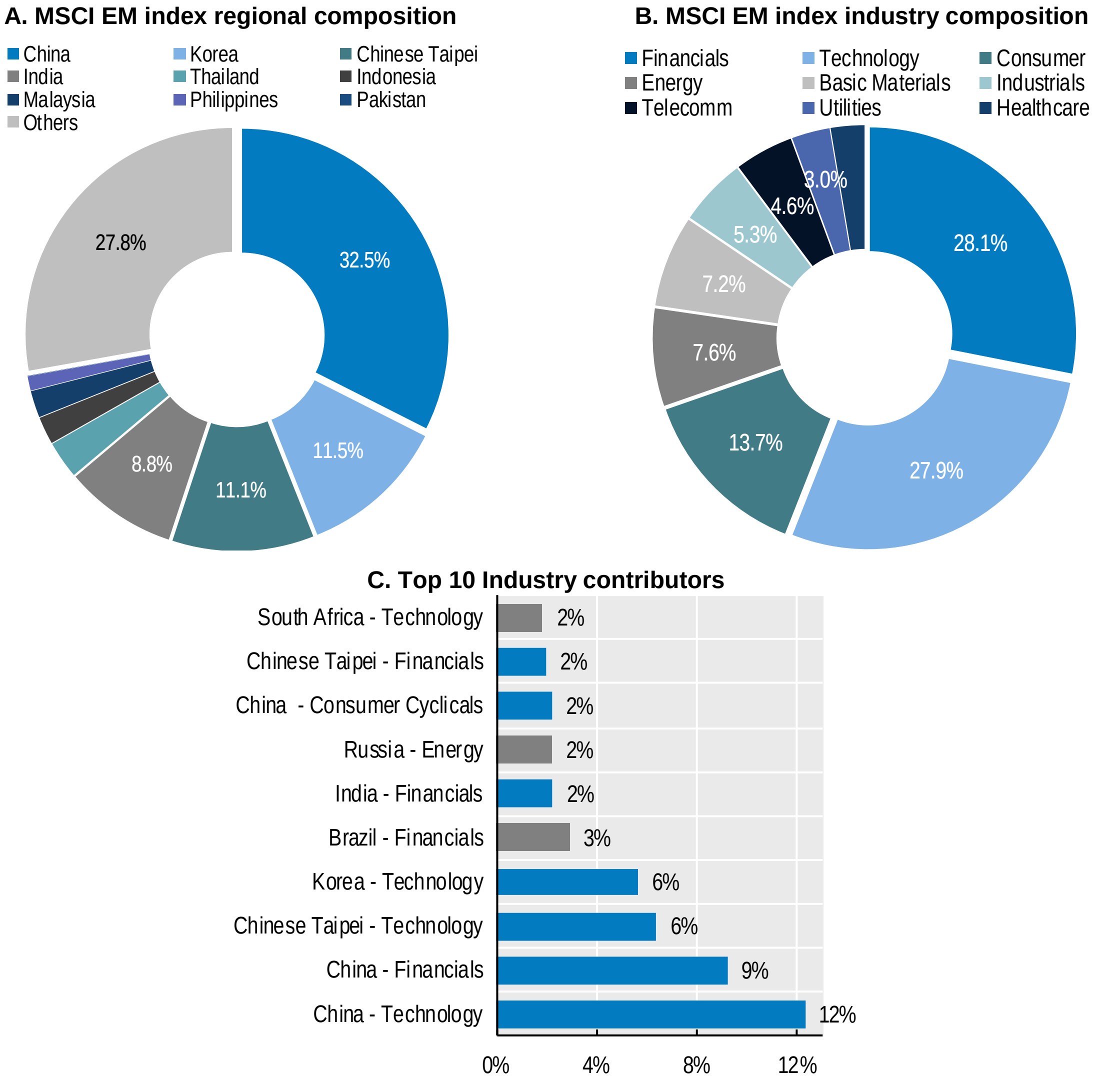
3.3. Regional and global integration of Asian stock markets

Stock markets have four key elements; (1) primary markets where companies offer their securities to investors, (2) secondary markets where these securities are traded, (3) the activities of intermediaries, such as underwriters and brokerage houses, and (4) investors, including institutional investors and asset managers. The integration of national stock markets has several dimensions, including the ability of corporations' to use non-domestic markets for fundraising and the ability of investors buy stocks overseas. It also includes the ability of exchange operators and capital market intermediaries to operate in foreign markets.

The increase in Asian capital markets activity since 2000 has triggered several national and regional initiatives aiming to increase integration within regional and global capital markets. One dimension that reflects Asian markets integration to global capital markets is their inclusion in indices followed by many investors around the world. By the end of October 2019, companies from emerging markets in Asia accounted for 72% of the share in the MSCI Emerging Market Index (MSCI EM Index). China has the largest representation among Asian economies accounting for 32.5% of the index share (Figure 24 Panel A). Other Asian economies like Korea, Chinese Taipei and India account for a significant share of the index as well. The ASEAN economies account for 8.3% share in the index, notably Thailand represents 2.9%, Indonesia 2.2%, Malaysia 2.1% and Philippines 1.1% of the index. From the ASEAN economies Singapore is covered by the MSCI Developed Market Index and Viet Nam has no presence in the MSCI EM Index.

The MSCI EM Index is mainly composed of financials and technology companies (Figure 24 Panel B). In fact, the two industries together account for more than half of the MSCI EM Index. This is driven by Asian companies included in the index. Panel C in Figure 24, shows the top 10 largest economy-industry pairs in the index that account for 47% of the index share. Out of these 10 economy-industry pairs, 7 correspond to Asian economies. Notably, just Chinese financial and technological companies represent 9% and 12% of the index respectively. Technology companies from Chinese Taipei and Korea account each for 6% of the index.

Figure 24. Presence of Asian companies in MSCI EM index, as of October 2019



Source: MSCI Constituents, Refinitiv, see Annex for details.

The integration of Asian economies has also been reflected in allowing access to markets that in the past were only available to domestic investors. This is the case of China where, after a long process, index providers started to include shares listed on mainland Chinese markets (A-shares) to investable indices. Before, investors could buy only shares in Chinese companies listed on the Hong Kong Stock Exchange, the United States or on other non-domestic exchanges. The MSCI EM Index started in May 2018 to partially include A-shares from large Chinese companies in the index. By the end of October 2019, A-shares represented 2.6% of the index and over 1/3 of the

A-shares were financial companies. It is estimated that a full inclusion will result in A-shares representing a 16.2% share of the index (MSCI, 2019). Other index providers have followed the MSCI's decision to include A-shares in their indices. For example, the FTSE and S&P Dow Jones Indices have also started the inclusion of A-shares in their global indices.

Foreign investors were historically restricted from directly investing in the China mainland stock market. They were only allowed to invest in foreign currency denominated shares – known as B-shares – which are less liquid compared to Renminbi-denominated ones. In 2002, China started opening its A-shares market to foreign investors particularly targeting institutional investors. Several programmes were introduced such as the Qualified Foreign Institutional Investor (QFII) and Renminbi Qualified Foreign Institutional Investor (RQFII), which allow foreign institutional investors to participate in the mainland domestic market.

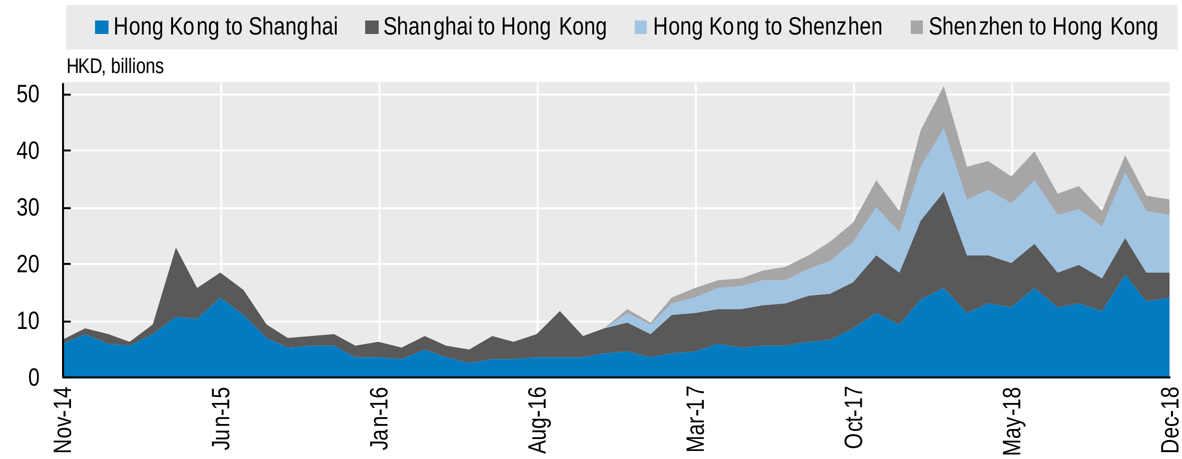
Since the launch of QFII in 2002 and RQFII in 2011, more than 400 institutional investors from 31 countries and regions around the world have invested in China's financial markets using these programmes (SAFE, 2019). When the programmes were introduced, the QFII programme had an initial quota of USD 20 billion and the RQFII programme had RMB 20 billion. Over time, the eligibility requirements for both schemes have been relaxed and the quotas were increased. In January 2019, the total QFII quota was doubled from USD 150 to USD 300 billion while the RQFII quota was set at RMB 1 940 billion. In line with the inclusion of A-shares in major global indices, in September 2019, the State Administration of Foreign Exchange (SAFE) announced the removal of all investment limits of the two programmes to further open up financial markets in China (SAFE, 2019). As a result, qualified investors will no longer be required to apply for any investment quotas from SAFE and they will be only required to register with SAFE. Although the specific date for the removal has not been announced, SAFE has started the amendment of relevant rules and regulations to implement the decision. By the end of October 2019, the total amount of the investment through QFII and RQFII programmes stood around USD 111.4 billion and USD 98.5 billion respectively.

Both QFII and RQFII programmes target institutional investors but not retail investors and institutional investors need to meet certain requirements such as minimum business experience and assets under management to be licensed as institutional investor for the purpose of investing through the programmes. For example, securities companies must have at least five years of industry experience and at least USD 5 billion in assets under management during the most recent accounting year. To provide the opportunity for foreign retail investors and unlicensed institutional investors, China has also launched the Stock Connect Programme to complement the two programmes.

In 2014, the Stock Connect Programme was initiated under the Mutual Market Access Programme between the Hong Kong and Shanghai Stock exchanges, which provides, among other investors, non-Chinese retail investors with access to mainland Chinese stocks. Later in 2016, a similar programme was introduced between the Hong Kong and Shenzhen Stock exchanges. Under these two stock connect programmes, international investors, both institutional and retail, are able to access the mainland China market via the Hong Kong Stock Exchange, while mainland investors can trade Hong Kong H-shares via Shanghai/Shenzhen exchanges. However, there are still certain limits to the daily trading volumes. The maximum daily trading volume was originally set to be RMB 13 billion for the Northbound trading (from Hong Kong into Shanghai/Shenzhen) and RMB 10.5 billion for the Southbound trading (from Shanghai/Shenzhen to Hong Kong), which was increased to RMB 52 billion and RMB 42 billion respectively in May 2018 to meet the increasing investor demand, especially after the inclusion of Chinese A-shares in the MSCI index. Moreover, mainland investors are required to have at least RMB 0.5 million in their trading account balance to participate in the programmes. These two programmes are the first ones enabling bilateral flows in and out of mainland China. They not only enable foreign retail investors to invest in mainland China market, but also provide a less-restricted mechanism for institutional investors, providing them an additional channel and easier access to the market.

Figure 25 illustrates the average daily trading volume through the stock connect programmes between the two mainland exchanges and the Hong Kong Exchange. As seen from the figure, there has been an increase in the trading volume since 2014, the total turnover volume through the stock connect has increased from HKD 2.6 trillion (USD 336 million) in 2015 to HKD 8.4 trillion (USD 1 067 million) in 2018. Importantly, it has not only increased international investors' access to mainland stocks, but also mainland investors' access to Hong Kong listed stocks. Indeed, while the share of mainland to Hong Kong trading volume was 30% of the total in 2015, it increased to 34% in 2018.

Figure 25. Stock Connect average daily trading volume



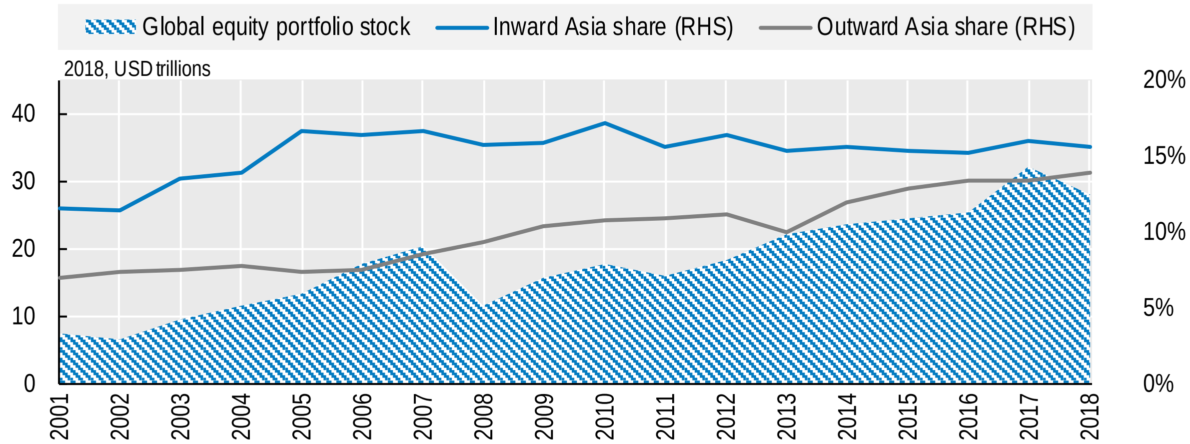
Source: Hong Kong Stock Exchange.

In addition to these regional connect programmes, in June 2019, the London-Shanghai Stock Connect was launched. The programme allows certain companies listed either on the Shanghai Stock Exchange or the London Stock Exchange to issue depositary receipts, which represent ownership of their shares, on the other exchange. First of its kind, the programme enables investors on the Chinese mainland to access international stocks within China not being subject to domestic capital controls, and also paves the way for listed companies in China to raise capital abroad through instruments that are linked to their domestic shares. In addition, the programme enables international investors to access China A-shares from outside China through international trading and settlement practices (LSE, 2019).

Within the programme, A-share listed companies in Shanghai with a market capitalisation over RMB 20 million can issue Global Depository Receipts (GDRs) upon the approval by both the CSRC and the United Kingdom Financial Conduct Authority (FCA), which includes production of a full English FCA approved prospectus. The securities can then be traded on the London Stock Exchange's International Order Book and follow London's rules, and trading and settlement practices. The Connect programme also enables Chinese investors to invest directly in London listed companies through a similar mechanism. Chinese institutional and qualified individual investors will be able to trade in Chinese Depositary Receipts (CDRs) of London listed companies, which must have a market capitalisation of more than RMB 20 million and have been listed on the London Stock Exchange for at least three years. The CDRs will be traded on the Main Board of the Shanghai Stock Exchange. The programme also allows Chinese investors, for the first time, to access non-Chinese companies directly in their home market using all the rules and mechanisms of the Shanghai Stock Exchange (LSE,2019).

The trend towards greater foreign investor participation has not been limited to the Chinese stock market. For example, Tokyo Stock Exchange, the largest exchange in the region by total market capitalisation as of end 2018, has also seen a surge in foreign ownership of listed shares. Foreign investors share, mostly institutional investors, has increased from 6% to 30% between 1980 and 2016 (BoJ, 2018). To gain further insight about the cross-border portfolio investments Figure 26 shows that the global stock of cross-border equity portfolio investments and the Asia participation in the investments. The cross-border equity portfolio investments have increased from USD 7.4 trillion in 2001 to USD 28 trillion in 2018. Asia's share of outward equity portfolio investments increased from 8% in 2001 to 14% in 2018, while the inward share increased from 12% in 2001 to 16% in 2018, making Asia a net recipient of cross-border equity portfolio investments.

Figure 26. Global cross-border equity portfolio investment



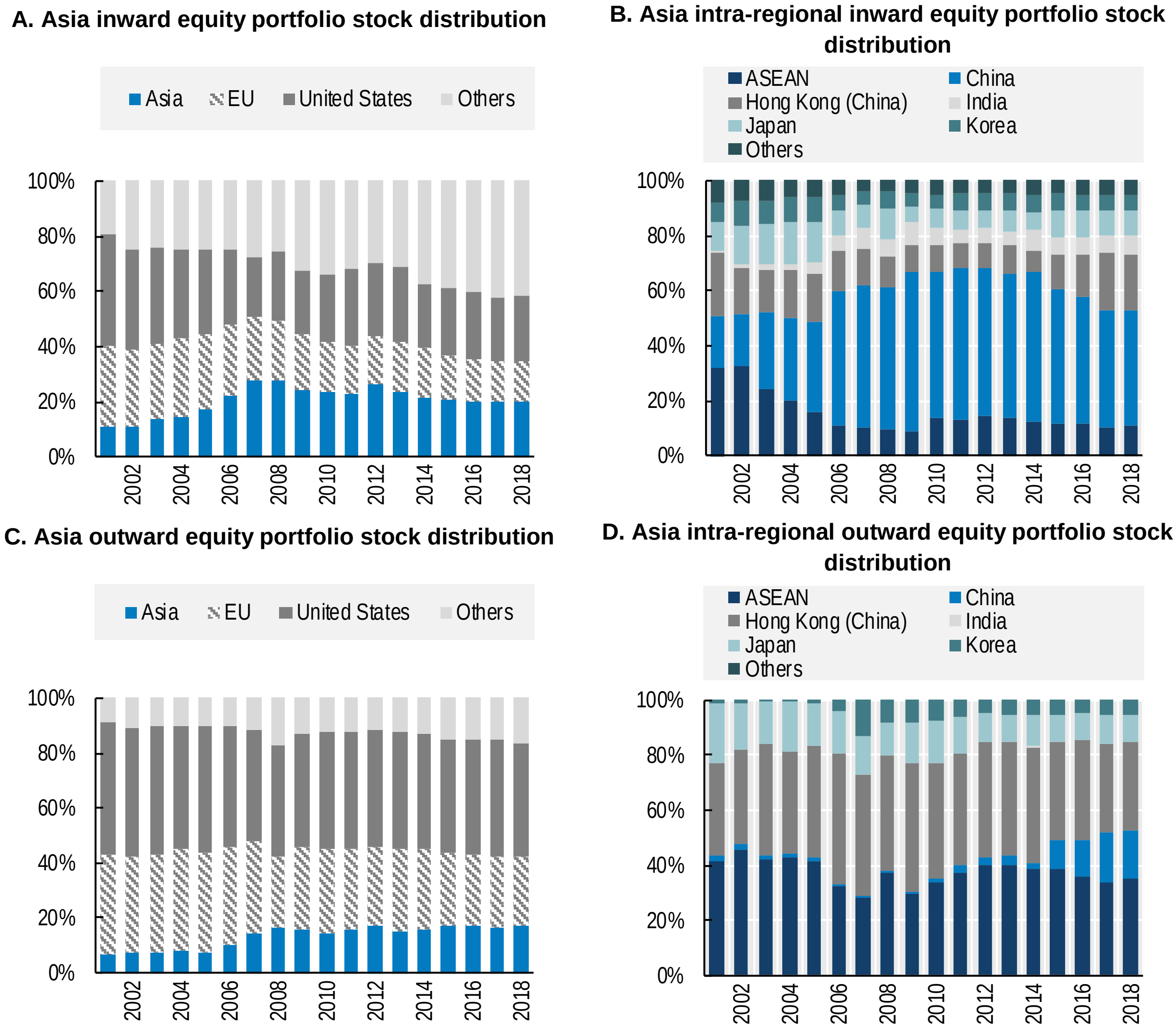
Source: Coordinated Portfolio Investment Survey, IMF.

Figure 27 provides a detailed picture of the composition of Asia's inward and outward equity portfolio investments. As shown in Panel A, since 2001, the equity portfolio investments from the European Union in Asia have declined over time. US equity portfolio investments in Asia were on a declining trend until 2007 when its share stabilised around 25% of total inward investment in Asia. The Asia intra-regional inward investment went from representing 11% in 2001 to 20% in 2018. Panel B in Figure 27 shows the composition of the Asian intra-regional inward equity portfolio stock distribution. As seen in the figure, the share of intra-regional inward stock invested in Chinese equities has steadily increased from representing 19% in 2001 to 42% of in 2018. At the same time, the share of intra-regional inward stock invested in equity in Hong Kong (China) has shown a more stable trend accounting for 20% in 2018. In terms of the regional distribution, Hong Kong (China) and China together represent over half of the inward investments in the region.

When looking at the Asian outward equity portfolio investment in Panel C, one notice that the US stock market is the preferred destination for Asian equity portfolio investments representing on average over 40% of the Asian outward stock. Markets in the European Union attracted in 2018 25% of the Asian outward equity portfolio investments. However, it is important to note that Asian investors' allocation to Asian market has doubled over the past decade. Panel D in Figure 27 shows the composition of the Asian intra-regional outward equity portfolio stock distribution. Overall, the ASEAN region and Hong Kong (China) have contributed to the largest share – on average 77% –

of the total Asia outward equity portfolio investment. China has started to participate more actively in outward portfolio equity investment only after 2015.

Figure 27. Distribution of Asian equity portfolio investment stock



Source: Coordinated Portfolio Investment Survey, IMF.

An important initiative at the regional level has been the ASEAN's initiative for regional capital market integration. The aim is to strengthen regional growth by improving financial intermediation, capacity and risk management as well as lowering vulnerabilities to external shocks and market volatility. In order to achieve that, the ASEAN Capital Market Forum (ACMF) was established in April 2004. An implementation plan, proposed by the ACMF, was endorsed by ASEAN Finance Ministers in 2009, including a roadmap with strategic initiatives until 2015. This included three broad themes: (1) creating an enabling environment for regional integration; (2) creating of the market infrastructure and regionally focused products and intermediaries; (3) strengthening the implementation process. By the end of 2015, key milestones had been reached, facilitating cross-border activities such as fundraising, the distribution of products and services, and enlarging ASEAN's investor base (ASEAN Capital Markets Forum, 2016). Those milestones have been summarised as:

- *Implementation of ASEAN Disclosure Standards and Streamlined Review Framework for Common Prospectuses:* Setting a single set of disclosure standards for prospectuses and synchronising the review process of prospectuses for securities offering or listing applications to drive more cohesiveness in regulations and practices.
- *ASEAN Trading Link:* Creating trading links between stock exchange to improve regional market infrastructure and connectivity to attract greater investor participation.
- *ASEAN Corporate Governance Scorecard:* Regularly assessing and publishing of corporate governance standards and practices in the region to improve investor confidence.
- *ASEAN Collective Investment Schemes (CIS):* Creating sufficient product diversity to promote ASEAN asset classes.
- *Expedited Entry of Secondary Listings:* Reducing the time limit between two listings for companies seeking a secondary listing to increase the pool of ASEAN asset classes.

In order to further enhance regional integration, the ACMF set up the ACMF Vision 2025 “of being an inter-connected, inclusive and resilient ASEAN capital market”, covering two action plans over a 10-year period. For the first phase 2016-2020, six key priorities have been identified: (1) Improving regional infrastructure and connectivity; (2) strengthening cohesiveness in regulations and practices; (3) promoting ASEAN asset classes; (4) fostering the mobility of professionals; (5) increasing investor participation; and (6) promoting stakeholder interaction, co-operation and co-ordination. By the end of 2020, the achievements of the first phase will be evaluated, forming the basis for the establishment of the second phase 2021-2025.

Overall, the developments so far suggest that, while the pace of regional integration has increased in recent years, Asian stock markets remain more integrated with global stock markets than at a regional level. The majority of intra-regional cross-border equity portfolio holdings are concentrated in a few Asian economies, with transactions from and to Hong Kong (China) and China accounting for more than half of the intra-regional total.

PART IV. OWNERSHIP LANDSCAPE AND INVESTORS IN ASIA

The incentives, investment strategies and commercial business models of investors in public equity markets influence both the allocation of capital among different business opportunities and the effectiveness of corporate governance rules and practices. When designing rules with respect to the functioning of public equity markets and corporate governance it is therefore important to understand the ownership structure of listed companies. This includes both the overall distribution of ownership among different categories of owners, such as private corporations, strategic individuals, institutional investors, public sector and retail investors, as well as the degree of ownership concentration and control by different shareholders at the company level. This part provides a summary of the corporate ownership structures in both dimensions. The analysis covers 12 Asian jurisdictions and selected non-Asian markets for comparison. The analysis is based on a dataset that contains ownership information for the 100 largest companies by market capitalisation in each market as of the end of 2018.

4.1. Categories of owners in Asian listed companies

Much of the legal and economic doctrine that underpins corporate governance policies still assumes the classical case of direct ownership by a physical person where incentives among market participants stem from a simple relationship between a company and an individual physical owner. However, in today's world, ownership is often dominated by different kinds of profit-maximising intermediaries that invest on behalf of the ultimate beneficiaries. These institutional investors, such as pension funds, insurance companies and investment funds, all have their own business models and vary greatly with respect to their incentives to exercise their corporate governance functions in an informed manner. Other important categories of owners are non-financial companies and the public sector, which in several Asian countries hold substantial stakes in publicly listed companies.

As seen from Table 4, there are notable differences between markets with respect to the distribution of share ownership among different categories of owners. In the United Kingdom and the United States, institutional investors dominate by holding 60% and 66% of the total capital respectively. While they are not as dominant as they are in the United States and the United Kingdom, institutional investors also play a prominent role in India, Japan, Chinese Taipei and Korea. In India, Indonesia, Singapore, the Philippines, Viet Nam and some other emerging markets, such as Turkey, corporations are important owners holding between one-third and half of all capital. In Hong Kong (China), Korea, Malaysia and Thailand corporations are also significant and hold on average 21% of all shares.

From an aggregate regional perspective, private corporations are on average the most important owners in large listed Asian companies holding on average 25% of the capital. This indicates the strong presence of company groups. The second largest category of owners is the public sector, holding on average 21% of the capital. This is mainly the result of large privatisation programmes during the past 25 years. Notably in China, Hong Kong (China), Malaysia and Viet Nam, where the public sector is still an important owner with average holdings ranging between 28% and 52% of the capital.

The third largest category of owners in the Asian large listed companies is institutional investors. Globally, the share of institutional investors in equity markets has been on the rise since the early 2000s, and their presence is increasing also in Asia where institutional investors at the end of 2018 accounted for 16% of the ownership in the largest companies. However, there are considerable variations among the twelve markets. In Japan, institutional investors hold on average 39% of the capital in the largest 100 listed companies while they only hold 6% of the capital in Viet Nam's 100 largest listed companies. The increased integration of Asian capital markets with global markets has given foreign institutional investors the opportunity to increase their participation in the region. And today, most of the institutional ownership in Asian markets is attributed to foreign institutional investors who on average hold 13% of the capital.

Table 4. Ownership of large listed companies by category of owner, as of end 2018

	Private corporations	Public sector	Institutional investors	Strategic individuals
China	9%	52%	10%	4%
Hong Kong (China)	19%	25%	16%	12%
India	32%	18%	24%	7%
Indonesia	36%	18%	10%	14%
Japan	16%	15%	39%	1%
Korea	22%	13%	21%	8%
Malaysia	22%	42%	12%	6%
Philippines	48%	2%	9%	17%
Singapore	32%	11%	13%	10%
Chinese Taipei	16%	8%	27%	4%
Thailand	20%	21%	13%	15%
Viet Nam	30%	28%	6%	12%
Asia average	***25%***	***21%***	***16%***	***9%***
France	15%	8%	28%	12%
Germany	18%	6%	29%	7%
Mexico	21%	1%	19%	33%
Poland	18%	20%	28%	9%
Turkey	36%	23%	15%	8%
United Kingdom	5%	7%	60%	2%
United States	3%	3%	66%	4%

Note: The table shows market capitalisation weighted average ownership by categories of owners. Calculations are based on ownership data for the 100 largest listed companies in each market.

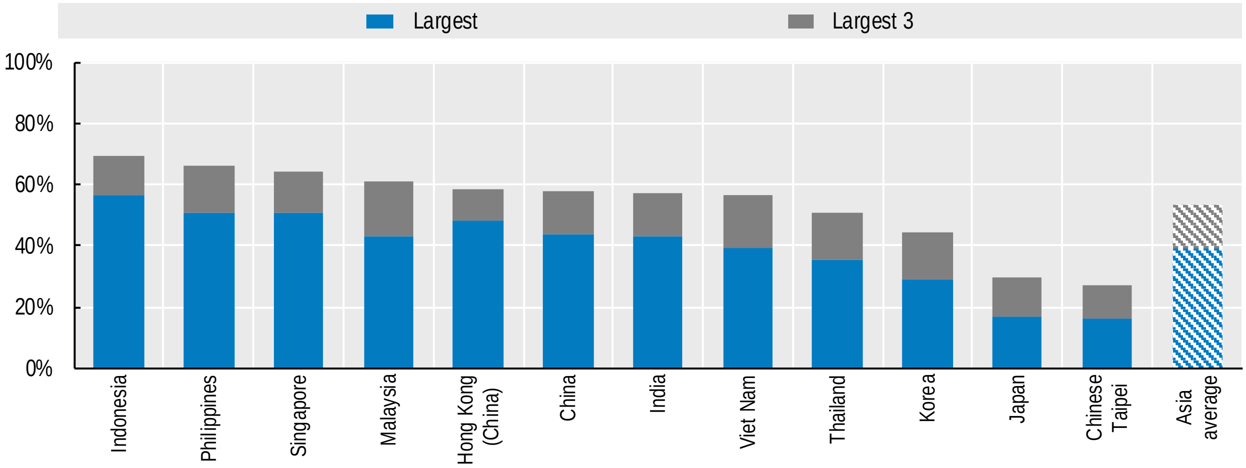
Source: OECD Capital Market Series dataset, FactSet, see Annex for details.

4.2. Ownership concentration at company level

The traditional focus of corporate governance has been on the agency problem where a very large number of shareholders have problems coordinating their actions to monitor the hired executives. Having a large controlling owner would in principle overcome this problem. But it also gives rise to other types of governance challenges, including the treatment of minority shareholders and the risks that controlling shareholders may extract undue benefits from the company at the expense of other shareholders.

In order to illustrate the degree of ownership concentration at the company level, Figure 28 shows the average holdings of the single largest and 3 largest shareholders in the 100 largest listed firms in each market. Indonesian corporations display the most concentrated ownership at the company level with the 3 largest shareholders holding an average of 70% of the capital in each company. Indonesia is followed by Philippine companies with 66% and companies from Singapore and Malaysia with 64% and 61%, respectively. Japanese and Chinese Taipei corporations have the least concentration of ownership at 30% and 27%, respectively. In 9 out of the 12 Asian markets, the 3 largest shareholders on average hold the majority of the company's capital.

Figure 28. Ownership concentration at company level, as of end 2018

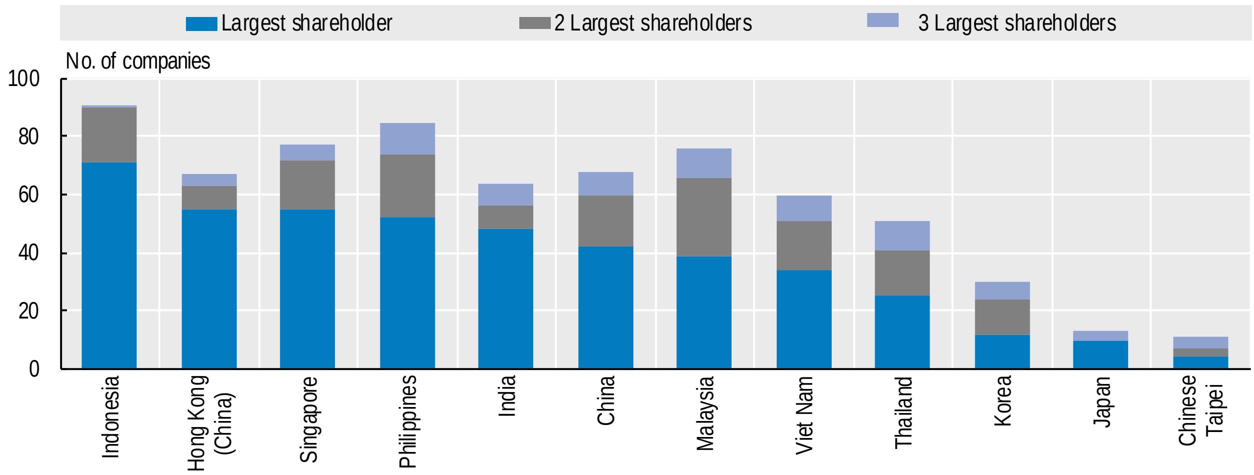


Note: The figure shows average percentage owned by the single largest and 3 largest holders. Calculations are based on ownership data for the 100 largest listed companies in each market.

Source: OECD Capital Market Series dataset, FactSet, see Annex for details.

Figure 29 shows the number of companies out of the 100 largest companies where the largest shareholder alone holds at least 50% of the capital. It also shows the number of companies where the 2 and 3 largest shareholders together hold at least 50% of the capital. Defining the controlling owner as somebody who holds more than 50% of the capital, in Indonesia, for example, 71 out of the 100 largest companies measured by market capitalisation have a single controlling owner. In 90 companies, the two largest owners together hold more than 50% of the capital and in 91 out of the 100 largest companies, the three largest shareholders hold more than 50% of the capital.

Figure 29. Companies with controlling shareholders, as of end 2018



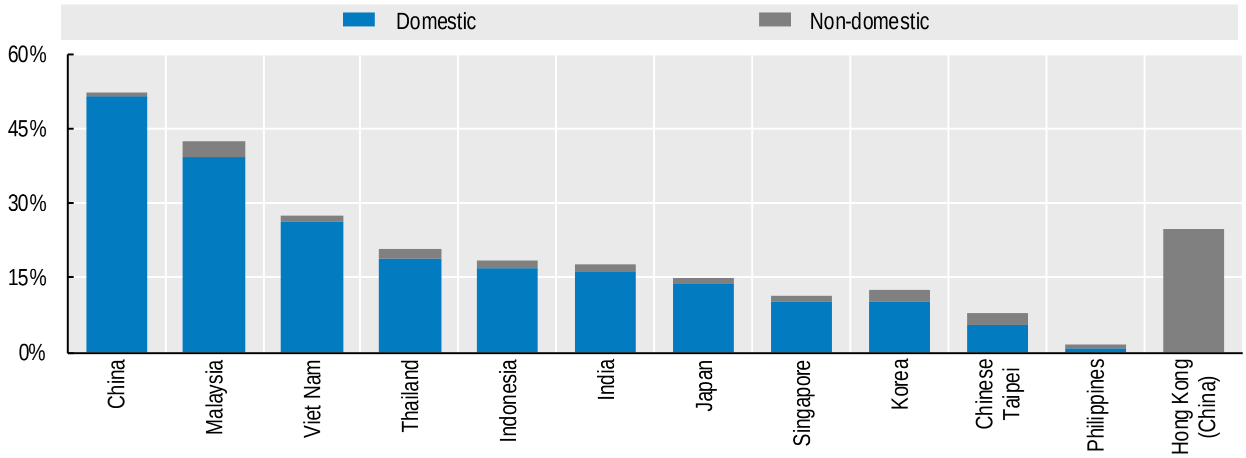
Note: The figure shows the number of companies (out of the largest 100 listed companies in each market) where the single largest, two largest and three largest shareholders hold at least 50% of the capital.

Source: OECD Capital Market Series dataset, FactSet, see Annex for details.

4.3. Public sector as owner

Partial privatisations through public equity market listings have resulted in a growing presence of public sector ownership in stock markets. In many cases, privatisation through stock market listings has not led to any change in control and today the public sector has controlling stakes in a large number of Asian listed companies. In China, Malaysia, Viet Nam, Hong Kong (China) and Thailand the public sector holds on average 34% of the capital of the largest listed companies (Figure 30). In almost all Asian markets shown in the figure, the majority of the public sector ownership has a domestic origin. The exception is the Hong Kong (China) market, where domestic public ownership is less than non-domestic public sector ownership represented by Chinese government ownership.

Figure 30. Public sector ownership in Asia, as of end 2018

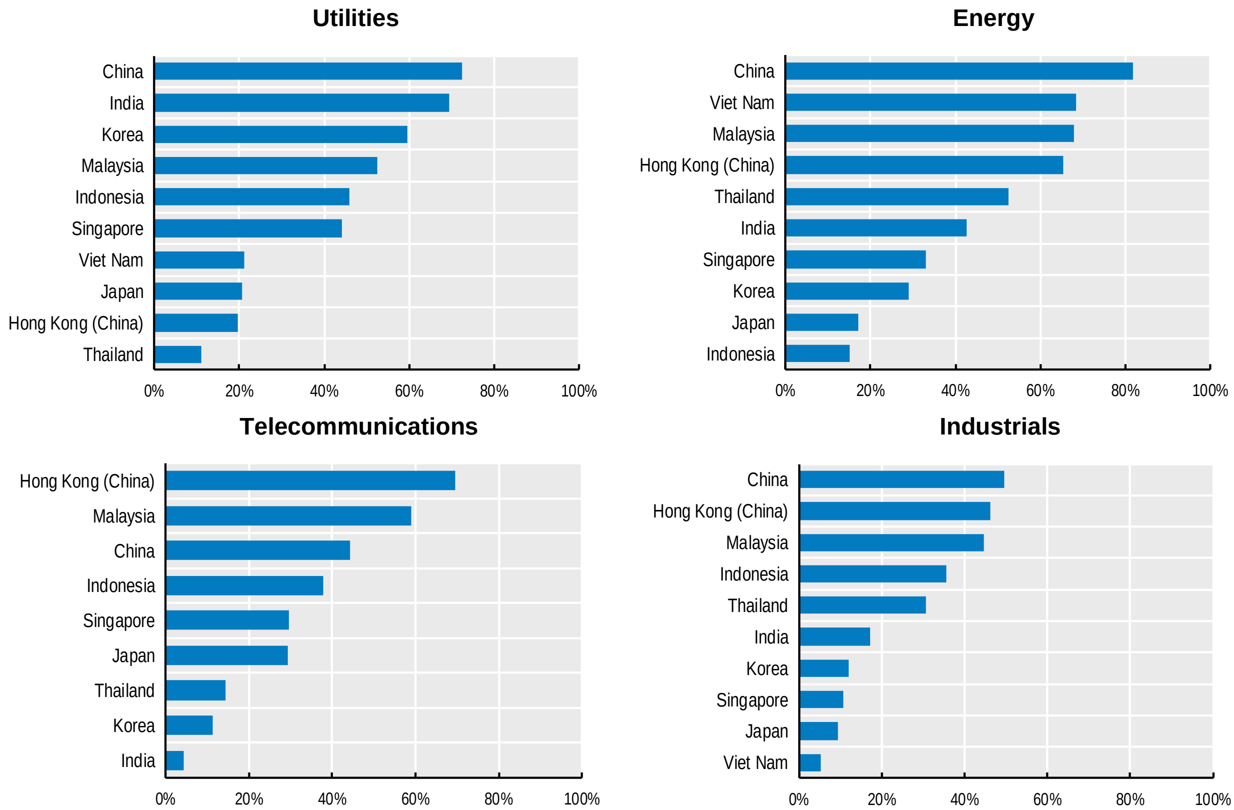


Note: The table shows market capitalisation weighted average ownership for the public sector. Calculations are based on ownership data for the 100 largest listed companies in each market.

Source: OECD Capital Market Series dataset, FactSet, see Annex for details.

With respect to the industry distribution of public sector ownership, the public sector has traditionally held large stakes in the utilities and energy sectors. Figure 31 shows the presence of public sector ownership in key sectors for the 100 largest non-financial listed companies in 10 Asian markets. Overall energy, telecommunications and utilities account for the largest concentration of public sector ownership. In China, India and Korea the public sector holds on average over 60% of the equity of the listed utilities corporations. The public sector also shows a significant presence in the energy industry holding on average more than 50% of the equity capital in half of the markets.

Figure 31. Public sector ownership by industry, as of end 2018



Note: The table shows market capitalisation weighted average ownership for the public sector in key industries. Calculations are based on ownership data for the 100 largest listed companies on each market.

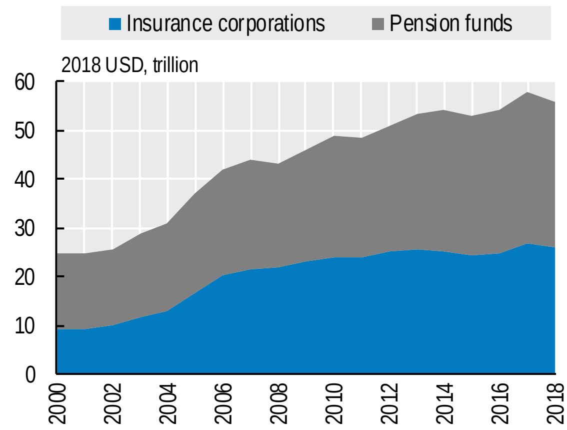
Source: OECD Capital Market Series dataset, FactSet, see Annex for details.

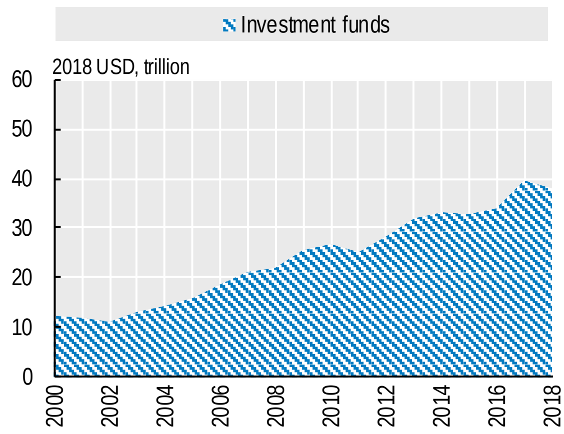
4.4. Institutional investors as owners

The role of institutional investors in public equity markets has increased significantly in recent decades. In OECD economies the traditional institutional investors, such as pension funds and insurance companies, have more than doubled their combined total assets under management from USD 25 trillion in 2000 to USD 56 trillion in 2018 (Figure 32 Panel A). Investment funds have also grown from USD 12 trillion in 2000 to USD 38 trillion in 2018. Pension funds have reached a significant size also in some Asian economies. As seen in Figure 32 Panel C, in two advanced Asian markets, Singapore and Hong Kong (China), funded pension systems have reached a significant size accounting for 80% and 41% of GDP respectively (OECD, 2019). In Emerging Asian markets, the size of funded pension funds has not yet reached such significant levels.

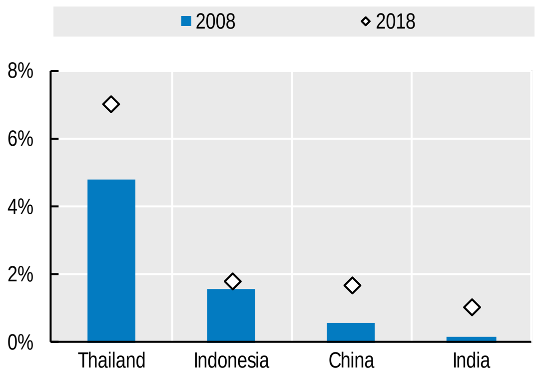
Figure 32. Assets under management by institutional investors

A. Assets under management (AUM) by institutional investors in OECD countries

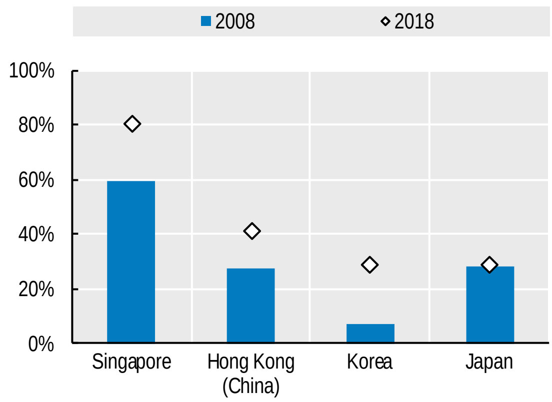




B. AUM in funded pension system in Emerging Asian markets, as share of GDP



C. AUM in funded pension system in Developed Asian economies, as share of GDP

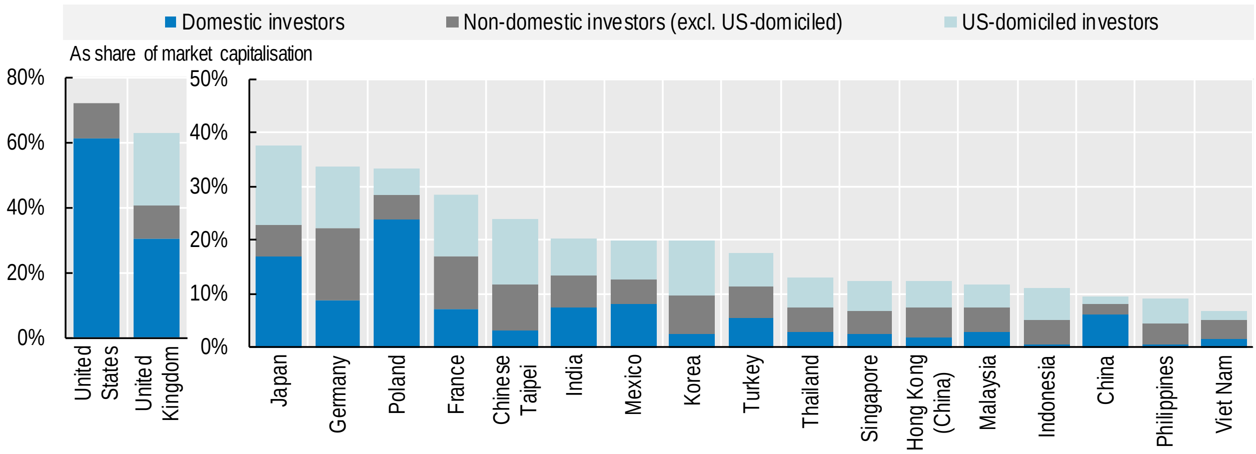


Note: Data in Panel A refers to 2018 or latest available. Data in Panels B and C refers to 2008 or earliest available and 2018 or latest available.

Source: OECD Institutional Investors Database, OECD Pension Markets in Focus 2019.

The increasing role of institutional investors in Asia has also been fostered by greater integration of Asian markets to global capital markets. Institutional investments do not only correspond to domestic investors. As a result of the growth in assets managed by institutional investors, they have become important shareholders worldwide. As the largest institutional investors are domiciled in the United States, Figure 33 splits the institutional ownership into domestic institutional investors, non-domestic institutional investors (excl. US-domiciled investors) and US-domiciled institutional investors across different markets. As illustrated in the figure, in markets like the United States and the United Kingdom institutional investors hold over 60% of the total market capitalisation. In Asia institutional investors on average hold about 16% of the equity capital. Most of this capital (11%) is held by foreign institutional investors. In the Philippines, 93% of all institutional ownership is attributed to foreign institutional investors. With the exception of China, in all Asian markets over two-thirds of the institutional ownership are non-domestic investors. Among the Asian markets, the lowest share of institutional ownership is found in Viet Nam where institutional investors only hold 5% of the capital. Institutional investors are most prevalent in Japan, holding 37% of the capital in all listed companies.

Figure 33. Domestic and non-domestic institutional ownership, as of end 2017



Source: De La Cruz, A., A. Medina and Y. Tang (2019), "Owners of the World's Listed Companies", *OECD Capital Market Series, Paris*

PART V. INVESTMENT BANKS AND UNDERWRITING IN ASIAN PUBLIC EQUITY MARKETS

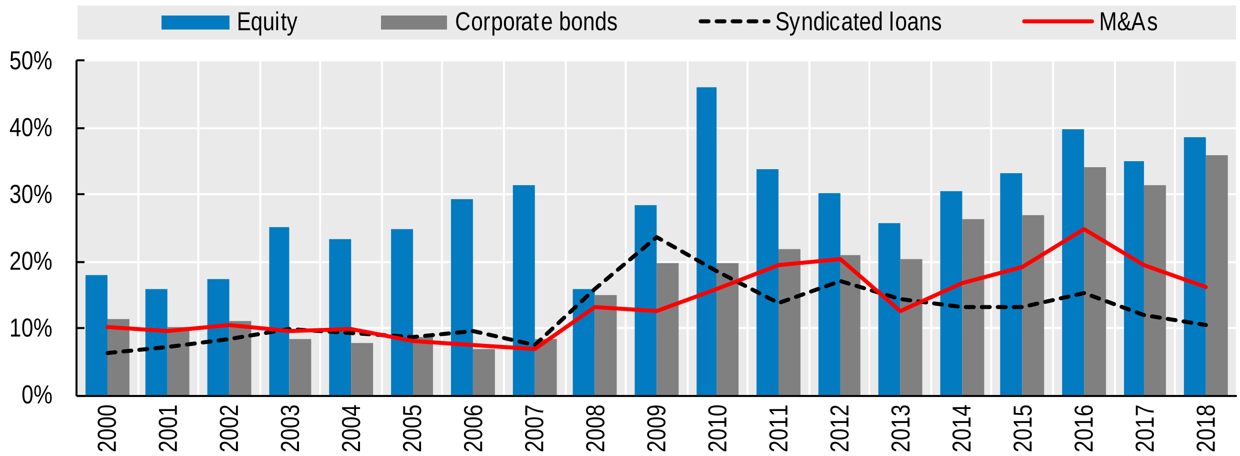
Investment banks perform a number of functions in capital markets. Their main services include the underwriting of debt and equity, syndicated loans and advisory services in mergers and acquisitions (M&As). The underwriting process mainly consists of origination, distribution, risk bearing and certification. During the process, the underwriter advises the issuing firm on the type, timing and pricing of the securities, prepares the required documentation and forms a banking syndicate that markets and distributes the securities to investors.

This part provides an overview of the changing landscape of investment banking activities in Asian capital markets, with a particular focus on equity markets. It also illustrates some trends with respect to the development of national and regional investment banking activities.

5.1. Trends in Asian investment banking activities and the global landscape

The investment banking industry has experienced important developments since the financial crisis. Notably, Asia has become a more important market for investment banking services that to a larger extent are provided by banks from the region. This may be seen as a logical consequence of the fact that Asian companies have become the largest issuers of public equity globally. As shown in Part III of this report, these share issues are mostly done on domestic stock exchanges, turning Asia into a major market for equity underwriting. The growth of Asian capital markets has also resulted in an increasing use of other investment banking services, such as corporate bonds underwriting, syndicated loans and M&A advisory services. Between 2000 and 2007, about 10 per cent of the global volume of activities in all these three areas were attributed to Asia. Figure 34 shows that a decade later Asia's global share in M&A advisory services reached to 16% and tripled to 36% for corporate bonds underwriting.

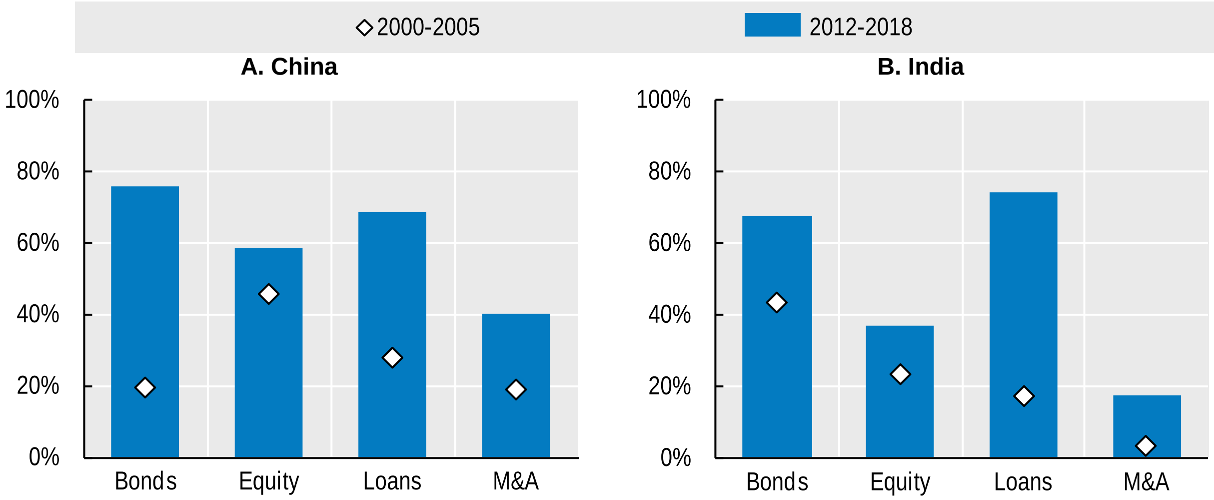
Figure 34. Asia in global capital markets, as share of global volume



Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

The increase in Asian investment banking volumes has been coupled with an increase in the use of services from domestic banks. In China and India, for example, Figure 35 shows that domestic banks during the 2012-2018 period have gained market share in all of the four investment banking activities compared to the 2000-2005 period. The increase has been most marked in corporate bond underwriting and syndicated loan activities.

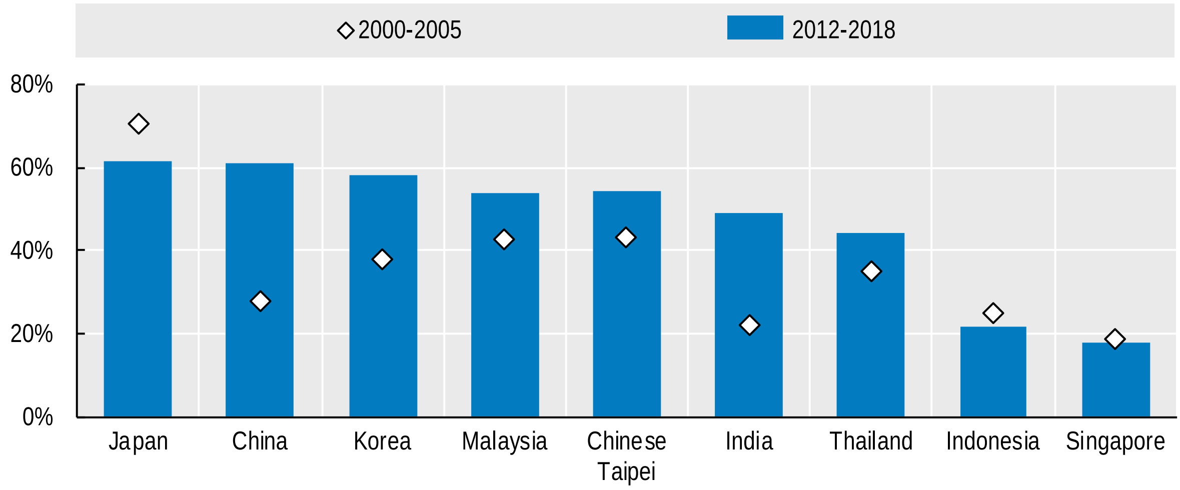
Figure 35. Domestic market share of Chinese and Indian banks



Note: Chinese investment banking activities refers to mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

A similar trend has been observed also in other Asian markets where the share of local investment banks has increased. Figure 36 provides an overall measure of the market share of domestic banks for nine markets and across all four investment banking activities. With the exception of Indonesia, Japan and Singapore, the market share of domestic banks has increased compared to the 2000-2005 period. China, India and Korea have all witnessed an average increase of more than 20 percentage points in the market share of domestic banks across all four capital market activities.

Figure 36. Market share of investment banks in their home market



Note: Chinese investment banking activities refers to mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

The growth of Chinese capital markets and the increasing presence of domestic banks means that Chinese banks today have a significant market share of Asian investment banking. Table 5 shows the changes in market share for 100 largest investment banks that are active in Asia based on the origin of the bank with a breakdown between the four main investment banking activities. While Chinese banks increased their share in Asia by 19 percentage points in public equity markets – both in initial and secondary offerings – Japanese banks have lost 17 percentage points. In addition, Japanese banks have experienced a decrease in market shares in the other three activities, most notably in corporate bond underwriting.

Banks from the rest of Asia have experienced more modest changes compared to Chinese, Japanese and North American banks. Banks from India and ASEAN region have grown their market share in almost every segment. It may be worth noting that Indian banks have grown 6 percentage points in syndicated loans underwriting. European banks have experienced a 3 percentage point drop in their market share for corporate bond and a 2 percentage point drop with respect equity underwriting together with a slight decrease in M&A advisory services. Korean banks saw a 2 percentage point drop in corporate bonds underwriting and minor increases in equity and M&A services.

Table 5. Changes in Asian market shares for the top 100 banks, post-crisis versus pre-crisis in percentage points

Origin of the bank	Equity	Mergers and acquisitions	Corporate bonds	Syndicated loans
ASEAN	0.34	-0.64	0.42	0.82
China	19.34	13.62	38.01	13.26
Europe	-1.67	-0.06	-3.17	-8.54
India	1.36	0.55	1.30	6.24
Japan	-17.39	-8.28	-29.38	-5.03
Korea	0.86	0.11	-2.21	-0.52
North America	-1.68	-5.67	-3.18	-8.57
Others	-1.16	0.38	-1.79	2.34

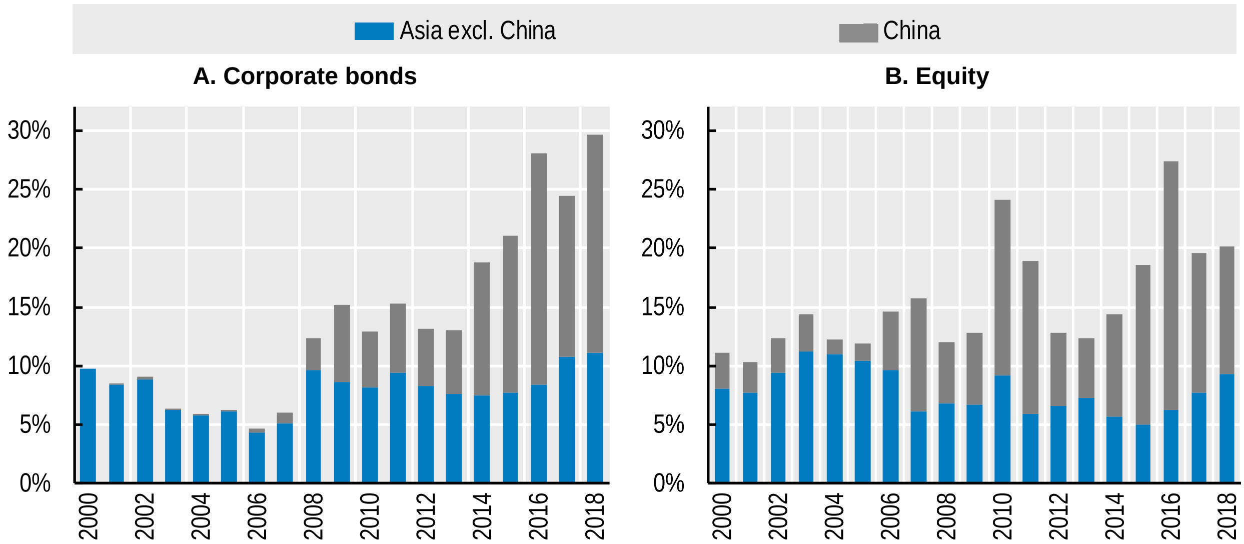
Note: The table shows the difference between the average share in transaction volume during the post-crisis period (2010-2018) and the pre-crisis period (2000-2007). Chinese investment banking activities refers to mainland China and Hong Kong (China) together.

Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Considering that Asian capital markets have grown relatively faster than the rest of the world and the fact that they are increasingly serviced by Asian banks, it is not surprising that Asian – particularly Chinese – banks have also increased their share of global investment banking activities. In 2018, around 20% of global corporate bonds underwritings and 11% of equity underwritings worldwide were served by Chinese banks. These numbers can be compared to the modest global market shares of 0.04% and 1.5% respectively in 2005 (Figure 37).

The increased presence of Chinese banks has not only been driven by the growth of Asian capital markets. It has also been supported by a series of reforms implemented by the Chinese Government. In 2014, the State Council released the "Guiding Principles for the Healthy Development of Capital markets" containing eight goals for capital market development. One set of goals was to develop a multi-level equity market by reforming the stock issuance registration system, expanding the motherboard and SME board market and by giving self-regulatory functions to the stock exchange. It was also an important objective to actively develop the bond market by improving the competitiveness of underwriters, standardising credit rating systems and improving the issuance system (The State Council, 2014).

Figure 37. Global market share of Asian investment banks



Note: Chinese investment banking activities refers to mainland China and Hong Kong (China) together.

Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Following the release of the guiding principles, the CSRC issued a revised regulatory framework for the implementation of these goals. To promote the competitiveness of intermediaries the CSRC published in 2014 the document "Opinions of Further Promoting the Innovative Development of Securities Institutions" (CSRC, 2014). Importantly for investments banks, the document states as its first measure to support a modern and competitive investment banking industry by improving its financial services capabilities and providing support to improve its functions, broaden financing, develop cross-border business channels, among others. In addition, in early 2015 CSRC broaden the possibilities for bond financing by allowing unlisted companies to issue corporate bonds in the public market (CSRC, 2015). The CSRC has also increased the pace of approval process for IPOs significantly by reducing the application cycle from 2-3 years to around one year in 2017 (CSRC, 2018). These reforms have contributed to a rapid increase in the issuance of corporate bonds and IPOs of which domestic investment banks have serviced the lion's share.

Despite the growth of Chinese investment banks, their presence in overseas markets is still quite limited. And when Chinese firms tap into foreign markets to raise capital they typically tend to use international, non-Chinese, investment banks. As an example, out of 252 Chinese corporations that became listed in the United States between 2000 and 2018, only 27 companies used a Chinese investment bank, while almost two-thirds of these corporations used US banks as underwriters.

Further integration between Chinese and global capital markets is likely to increase the presence of foreign investment banks in China. In April 2018, the newly released "Administrative Measures for Foreign-Invested Securities Companies" allows foreign investors to gain control of joint ventures in securities companies as the ownership limit has been raised from 49% to 51% (CSRC, 2018). These new measures also extend the business-scope of foreign-funded securities companies to include securities brokerage, investment consulting and asset management businesses. In October 2019, the CSRC announced that the foreign ownership limits on securities companies will be completely removed starting December 1, 2020, while for mutual fund companies the removal will start on April 1, 2020. By the end of October 2019, three foreign securities companies have been approved to increase their minority stake to a majority of 51%.

As indicated in Figure 37 above, the growing presence of investment banks from Asia has also come to influence the global investment banking landscape during the last decade. As illustrated in Table 6, banks from the United States and Europe have, during the period 2010-2018, lost market share in equity underwritings, corporate bonds underwritings and syndicated loans compared to the 2000-2007 period. European banks (excluding the United Kingdom) have lost market shares in all four investment banking activities, while UK banks have seen a slight increase, notably in M&A activities. In addition, Japanese banks have experienced a decline in equity underwritings and M&A activity, while Asian banks (excluding China and Japan) have slightly increased their global presence across all four investment banking activities. Again, this is mainly driven by the relatively faster growth of Asian capital markets that are predominantly serviced by Asian banks.

Table 6. Changes in global market shares for the top 100 banks, post-crisis versus pre-crisis in percentage points

Investment banks region of origin	Equity	Mergers and acquisitions	Corporate bonds	Syndicated loans
China	8.06	2.68	10.56	2.54
Japan	-2.81	-0.93	0.47	5.35
Asia excl. China & Japan	0.62	0.30	1.49	1.66
Europe excl. UK	-6.86	-6.85	-3.49	-1.85
Rest of the World	1.04	0.66	1.31	1.58
United Kingdom	0.17	2.13	-2.38	-2.07
United States	-0.22	2.00	-7.97	-7.21

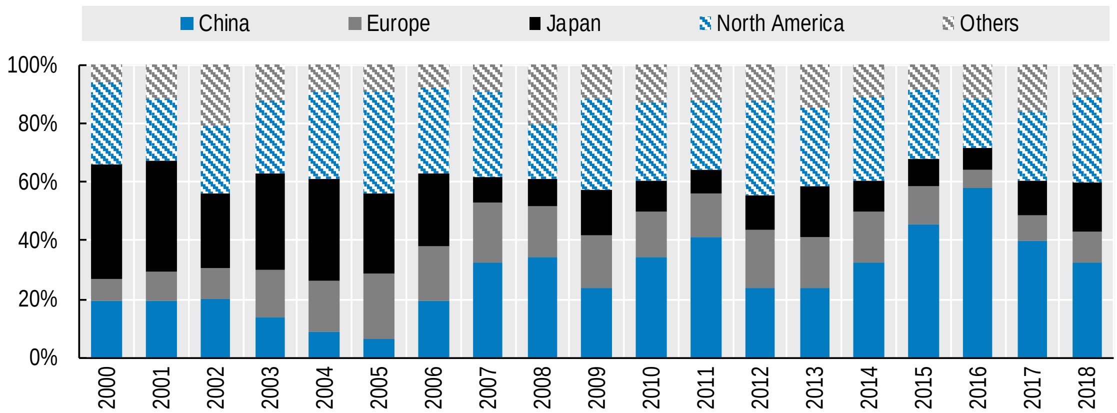
Note: The table shows the difference in the share of the top investment banks by their region of origin in global transactions between post-crisis period (2010-2018) and pre-crisis period (2000-2007). Chinese investment banking activities refers to mainland China and Hong Kong (China) together.

Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

5.2. Trends in underwriting in Asian equity markets

Since 2005, Chinese banks have experienced a considerable increase in equity underwritings and in 2016 almost six out of every ten dollars raised in equity deals in Asia were underwritten by a Chinese bank (Figure 38). However, there has been a decrease in the share of Chinese banks underwriting activity since then. The relative drop in Asian equity underwritings by Chinese banks in 2018 can partly be explained by the decline in the volume of equity offerings, in particular the marked decline in SPOs in the Chinese market. Seen over a longer period of time, Figure 38 shows that the relative importance of Japanese investment banks in Asian equity underwritings decreased substantially since 2000 but that it has experienced a slight increase for the last few years.

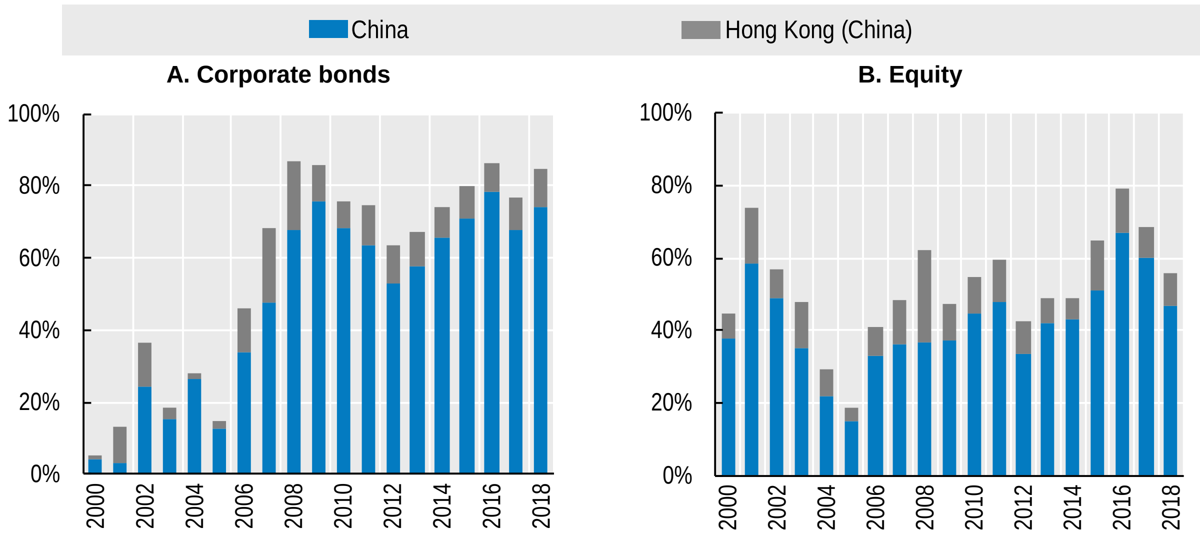
Figure 38. Top 100 investment banks in Asia, as share of equity transaction volume



Note: Chinese investment banking activities refers to mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Figure 39 shows that most of the domestic equity and corporate bond underwriting activity that take place in China and Hong Kong (China) are served by banks headquartered in mainland China and Hong Kong (China). While those banks mainly serve domestic Chinese market, their role in underwriting securities outside of Asia is quite limited. For instance, in Indonesia, Chinese Taipei and Singapore, the top three markets where the Chinese investment banks are active, the share of equity underwriting activities of Chinese banks are 6.3%, 4.3% and 2.9% of the total equity over the period 2000-2018 respectively.

Figure 39. China and Hong Kong (China) investment banks domestic underwriting activities



Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

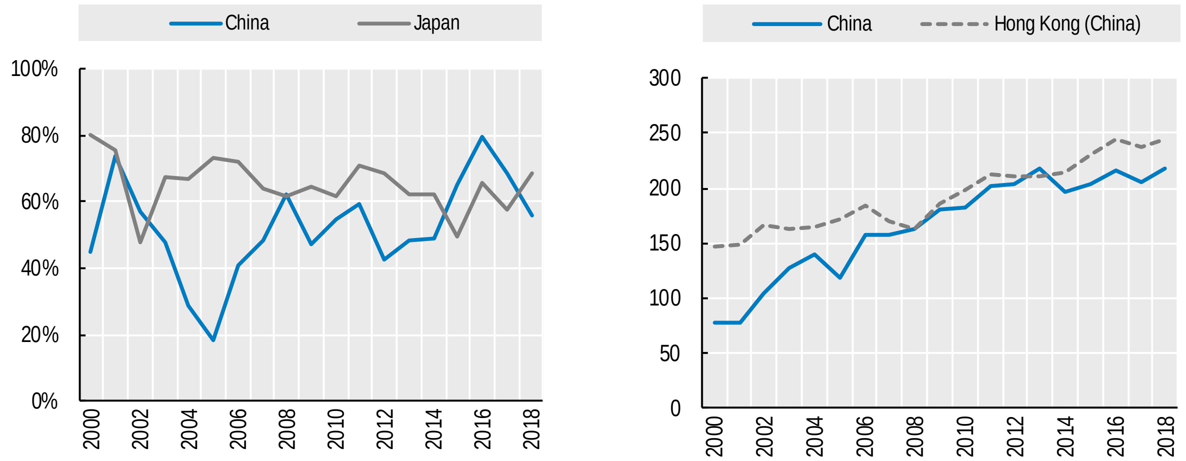
Taking a closer look at the Chinese market for equity underwriting, Figure 40 shows that during the period 2000-2005, Chinese investment banks lost a substantial share of the business, from 74% in 2001 to 18% in 2005. Ever since, Chinese investment banks have continuously regained presence in domestic equity underwriting activities where they had a market share of 79% in 2016. A similar level to what they had in the beginning of the millennium. In 2017 and 2018, however, they experienced a decline, having a 69% and 56% market share, respectively. Also in Japan are underwriting activities dominated by domestic investment banks. While there has been a slight decrease in their market share in the last few years, they still accounted for almost 70% of all equity underwritings in 2018. Investment banks headquartered in the United States also have a prominent role in the Japanese underwriting market with an average market share of about 27% during the period 2000-2018.

China committed to liberalising the financial services industry after joining the WTO in 2001. This initiative was followed by regulatory changes and by the emergence of sizeable deals. As a result, China has attracted many foreign investment banks and has also fostered the emergence of new Chinese investment banks. Among foreign banks, North American and European banks have gained significant share in China and Hong Kong (China) in underwriting activities. Panel B in Figure 40, shows the number of unique banks appearing in the equity, bonds, loans and M&A league tables each year for China and Hong Kong (China) separately. The number of banks operating has almost tripled in China between 2000 and 2018. Similarly, but to a lesser extent, the number of investment banks in Hong Kong (China) has grown 66% between 2000 and 2018. At the same time, the share of the top 5 investment banks underwriting IPO deals in China has been on a downward trend.

Figure 40. Domestic investment banking activity and number of investment banks

A. Share of investment banks in their domestic equity market

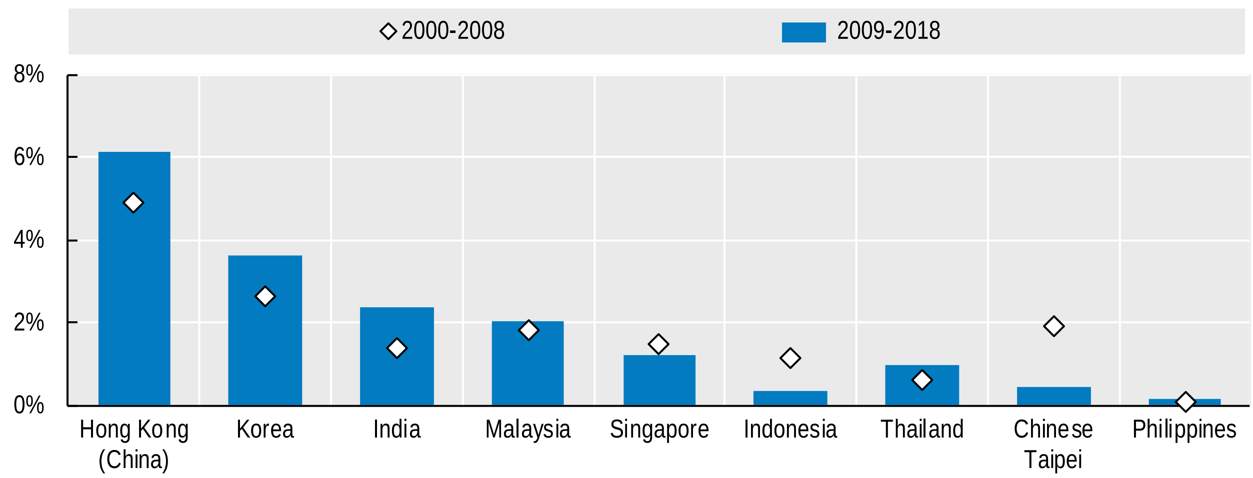
B. Number of investment banks



Note: Chinese investment banking activities in Panel A refers to mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Banks headquartered in other Asian jurisdictions than China and Japan have also come to play a more important role in Asian capital market activities. As shown in Figure 41, most of them have in the last ten years increased their market share compared to the period 2000-2008. Hong Kong (China) has seen the largest rise in market share, which is partly driven by Chinese companies' issuance in Hong Kong (China). Indian investment banks have also benefited from its growing capital markets and its business has grown two-fold compared with the period 2000-2008. Almost all ASEAN economies with the exception of Singapore and Chinese Taipei experienced a rise in their share of the Asian equity underwriting market. In particular, Indonesia – the largest economy in ASEAN – has more than doubled its market share compared to the previous period due to the rapid development of its domestic equity market. Banks from Chinese Taipei, however, have experienced a significant drop in the market share due to declining issuance volumes in its domestic stock market. Korean banks have kept their place as the third largest regional underwriters of equity in Asia.

Figure 41. Asian market share of regional investment banks in equity underwriting



Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

OECD Equity Market Review of Asia 2019

FOCUS CHAPTER

How Asian companies use foreign public equity markets and cross-listings

BETTER POLICIES FOR BETTER LIVES

HOW ASIAN COMPANIES USE FOREIGN PUBLIC EQUITY MARKETS AND CROSS-LISTINGS

Companies raise money from primary public equity markets to recapitalise, finance their expansion and long-term investments, including research and development. When they raise money from public equity markets, they are not limited to their domestic capital markets. Actually, since the mid-1990s almost 8 000 companies worldwide have raised a total of USD 1.4 trillion from foreign public equity markets. This includes both initial public offerings (IPO) and secondary public offerings (SPO) by companies that are already listed. It is done through both foreign listings, when a company lists its shares only on a foreign market, and through cross-listings, when a company lists its shares on the domestic market as well as on a foreign market at the same time.

Being the largest users of public equity markets during the last decade, Asian companies have also become important issuers in foreign markets. At the end of 2018, there were 510 Asian companies listed on a market other than the domicile of the company and without having a domestic listing. An additional 120 companies were cross-listed on domestic and foreign markets.

This chapter starts by discussing the rationales for listing on foreign stock markets and recent developments that influence these rationales. It then presents data that maps the foreign and cross-listed firms around the world by the end of 2018. The following section takes a longer term perspective and provides an overview of capital raising activities through IPOs and SPOs in foreign markets from 1995 to 2018. Sections 4 and 5 provide a similar exercise focusing only on Asian companies.

1. Companies' rationale for using foreign markets

A company's decision to list on a foreign market can be motivated by different factors, the most important being an underdeveloped domestic capital market, accessing a wider range of investors, better financing terms and improving corporate reputation by adhering to internationally accepted corporate governance standards.

By the end of 2018, there were almost 40 000 listed companies on stock exchanges around the world. Table 7 classifies listed companies into three groups depending on their listing status: (1) companies that are listed on their domestic market only; (2) companies that are listed on a foreign market only; and (3) companies that are cross-listed on their domestic market and on one or more foreign market(s). As seen in the table, 96% of the world's companies are listed only on their domestic market. The remaining 4% are split between foreign (3%, 1 366 companies) and cross-listed (1%, 393 companies) companies. However, despite representing only 1% of the total number of listed companies worldwide, cross-listed companies account for 12% of the global market capitalisation. This highlights the fact that cross-listed companies mainly consist of larger companies with access to a broader investor base.

Table 7. The world's listed companies by listing venue, as of end 2018

	Number of companies	As % of listed companies	As % of market capitalisation
Domestic listed companies only	37 667	96%	84%
Foreign listed companies only	1 366	3%	4%
Cross-listed companies	393	1%	12%
TOTAL	39 426	100%	100%

Note: China is considered as mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, see Annex for details

It is worth mentioning that companies listed on European multilateral trading facilities (MTFs)[8] regulated by a stock exchange are excluded from the analysis. Europe has introduced a framework that allows companies to be "admitted-to-trading" in an organised way on trading facilities that are not regulated markets. Under this regime, a company's stock can trade on an MTF at the request of an investor or the company itself without a listing with prospectus. It is also possible for companies, in particular smaller companies, to raise capital on MTFs. Since this is a particular feature with respect to European trading venues that are not classified as regulated market, companies traded on MTFs are excluded from the analysis.

Although the majority of stock market listings result from an initial public offering, companies do not necessarily need to raise money to become listed on a stock exchange. It could also be done, for example, by transferring from another market or by direct listing without fundraising. At the same time, companies also delist from the stock market, which makes the number of listed companies at any given time different from the sum of companies that have done initial public offerings.

In order to analyse the trends in fundraising through initial and secondary public equity offerings, Table 8 shows both the number of companies that have used public equity markets to raise money and the amount of capital they have raised worldwide in domestic and foreign markets during the period 1995-2018. When a company raises equity capital in the market where its headquarters is located, the capital raising activity is defined as domestic. Similarly, when the capital raising activity happens in a market other than its domestic market it is considered as foreign. Overall, between 1995 and 2018, a total amount of USD 1.4 trillion was raised in foreign markets. This represents 8% of the USD 17.4 trillion that companies raised in total. The table also shows that the number of companies raising capital on domestic markets via IPOs and SPOs increased by 50% from 30 194 to 45 544, the number of companies using foreign markets increased by 16% from 2 276 to 2 650. Importantly, during the last decade, the share of total equity capital raised in foreign markets almost halved compared to the first period.

[8] "'MTF' means a multilateral system, operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non-discretionary rules – in a way that results in a contract in accordance with Title II of this Directive" (Directive 2014/65/EU, Article 4).

Table 8. Global trends in public equity issuance in domestic and foreign markets

	1995-2002	2003-2010	2011-2018
Amount of capital raised (USD billion)	**4 588**	**6 610**	**6 136**
Domestic markets (USD billion)	4 104	6 085	5 766
Foreign markets (USD billion)	484	526	370
Number of companies raising capital	**32 470**	**42 815**	**48 194**
Domestic markets	30 194	39 844	45 544
Foreign markets	2 276	2 971	2 650

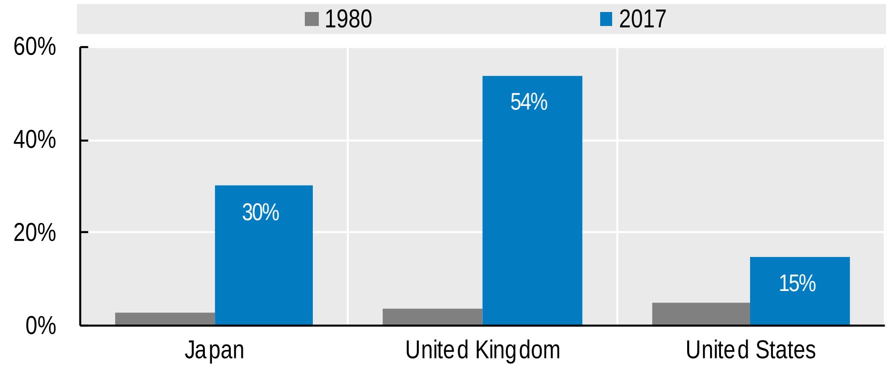
Note: China is considered as mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, see Annex for details.

Several factors might have contributed to the relative decline in the use of foreign stock markets. A key development has been the rapid improvement of domestic capital markets in many emerging markets. This is not only related to improvements in the capital market infrastructure, such as trading platforms and clearing and settlement systems, but also in terms of the emergence of domestic institutional investors and investment banking services. At the same time, technological advances and liberalisation of national capital flow regimes, have facilitated cross-border public equity investments. Developments in communication technology may also have made the geographical location of a trading venue less important while information technologies drastically have decreased the cost and time required for processing and disseminating large amounts of information, such as orders and quotes (OECD, 2016). Today, trading in a company's shares regularly takes place in multiple domestic and foreign venues, in addition to the stock exchange where the company's shares are actually listed. In the past when the listing and trading venues were identical, foreign investors wanting to invest had to go through a burdensome process of buying the foreign currency and opening a foreign brokerage account.

The investor landscape has also changed. In recent decades, the role of institutional investors in public equity markets has increased significantly. The presence of these large pools of capital has greatly contributed to the use of cross-border investments as a means of portfolio diversification as they have the scale and technology to absorb the costs associated with investing in foreign listed companies. Private institutional investors today own about 41% of all equity capital in the world's listed companies and stand for over 50% of all cross-border investments in publicly listed companies (De La Cruz, Medina and Tang, 2019).

As a result, many economies have seen a significant increase in ownership by foreign investors. As illustrated in Figure 42, foreign ownership in Japan, for example, increased from 3% to 30% of all public equity between 1980 and 2017. And today, on average, at least 30% of public equity investments within markets globally come from foreign investors (De La Cruz, Medina and Tang, 2019). This has significantly reduced the need to use foreign stock markets to access a wider range of investors.

Figure 42. Changes in foreign ownership in Japan, the United Kingdom and the United States



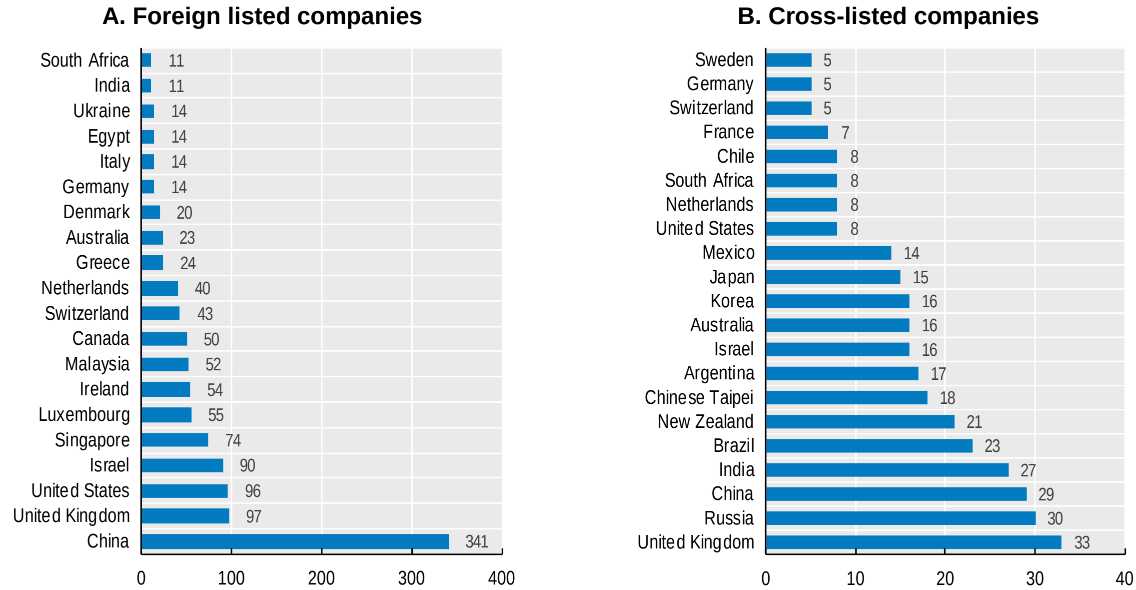
Source: Japan, Flow of Funds, Bank of Japan; United Kingdom, Ownership of UK quoted shares, Office for National Statistics; United States, Financial Accounts, L. 223 Corporate Equities, Federal Reserve.

2. Global overview of foreign and cross-listed companies

Out of the world's 39 426 listed companies in 2018, 1 366 had chosen to list their shares on a stock market located in a different jurisdiction than where their headquarters are located. An additional 393 companies are cross-listed on at least one foreign market along with their domestic market. Panel A in Figure 43 shows the origin of the companies that only have a foreign listing and Panel B shows the origin of companies that are cross-listed. As seen in the figure, 341 Chinese companies are listed on a foreign market as their primary listing venue. Almost one hundred US and UK headquartered companies are also listed on foreign stock exchanges, followed by Israel and Singapore with 90 and 74 companies respectively.

Most cross-listed companies first list their shares on the domestic market and later conduct a secondary listing on a foreign market. Out of 393 cross-listed companies globally, more than half of them are domiciled in ten jurisdictions. United Kingdom has the highest number of cross-listed companies (33) followed by Russia, China and India. It is important to note that in 22 cases, companies are cross-listed on more than one market without being listed on their home market.

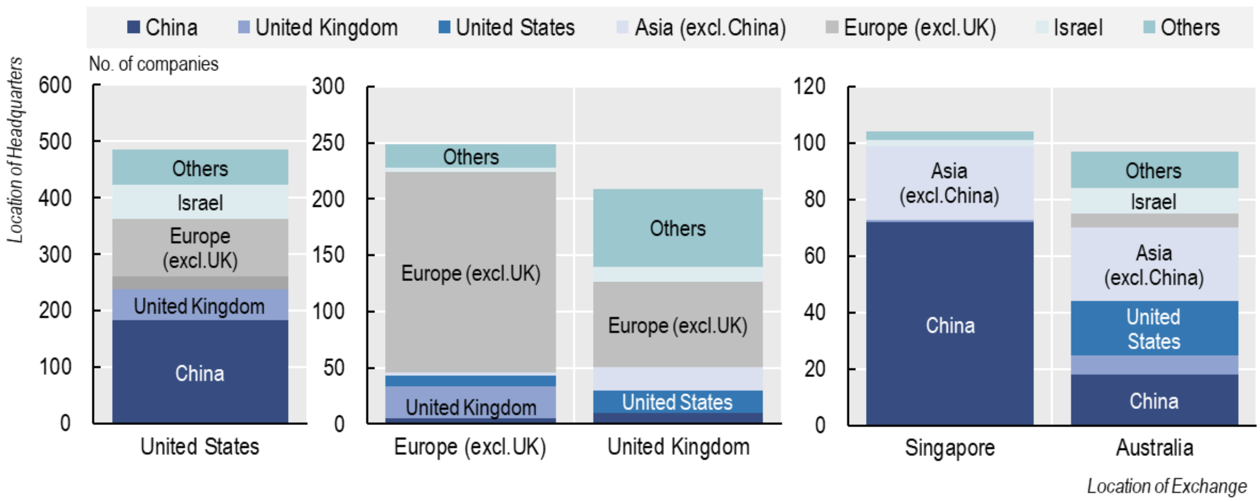
Figure 43. Foreign listed and cross-listed companies by company headquarters, as of end 2018



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 44 displays the distribution of the domicile nation of the foreign listed companies in the top five stock markets in terms of number of foreign listed companies. These five markets host almost 85% of all foreign listings. As shown in the previous figure, companies from China represent the largest share of foreign listings. According to Figure 44, US stock exchanges host more than half of the Chinese foreign listed companies (183). The Singaporean stock market also appears to be a popular destination for Chinese listings. The second most important geographical origin of foreign listed companies is Continental Europe. Notably, more than half of continental European companies with a foreign listing have chosen another Continental European market to list their shares. Other destinations are the United States (103) and the United Kingdom (75). Except for Chinese companies, most Asian companies are not listed on the US market but on the Singaporean and Australian markets. An important jurisdiction with respect to the origin of foreign listings is Israel, which has 60 companies listed in the United States and 14 in the United Kingdom.

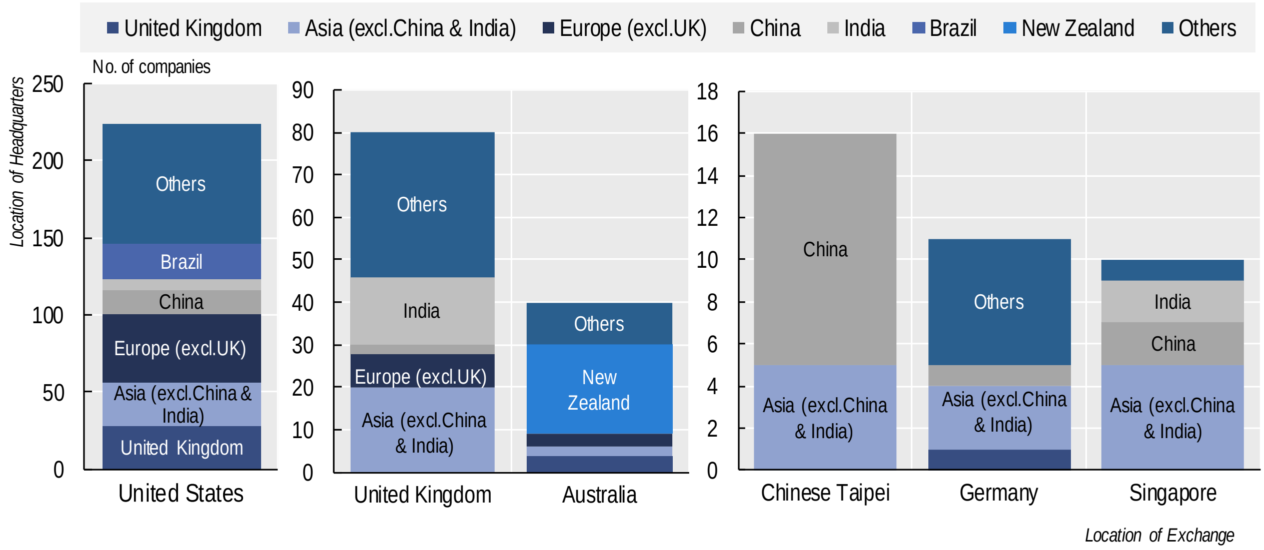
Figure 44. Number of foreign listed companies on selected markets, as of end 2018



Note: China is considered as mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, see Annex for details.

As mentioned above, cross-listed companies are defined as companies that list their shares on an additional market after already having a primary listing on a stock exchange. As seen in Figure 45, almost all 393 cross-listed companies are listed on six markets. In terms of regional distribution, Asia, excluding China, has the highest number of cross-listed companies, mainly on the US and UK markets. Continental European companies are also mainly cross-listed in the United States (45) and in the United Kingdom (8). Chinese and Brazilian company listings in the United States, Indian company listings in the United Kingdom and New Zealand listings in Australia are other important examples.

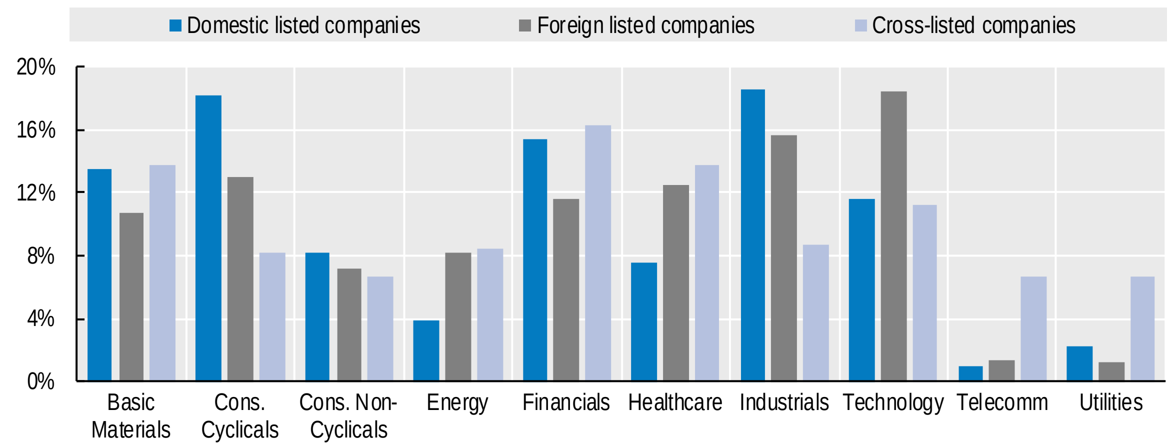
Figure 45. Number of companies cross-listed on selected markets, as of end 2018



Note: China is considered as mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, see Annex for details.

To understand if foreign listed companies and cross-listed companies is an industry driven phenomenon, Figure 46 plots the industry profile for domestic listed companies, for foreign listed companies and for cross-listed companies. Within the group of domestic listed companies, industrials and consumer cyclicals account for 19% and 18% respectively and are followed by financials that account for 15% of the total number of listed companies. Compared to domestic listings, the share of technology, healthcare and energy industries are higher for foreign listed companies. In addition to financials and basic materials, telecommunications and utilities industries have relatively higher shares among cross-listed companies.

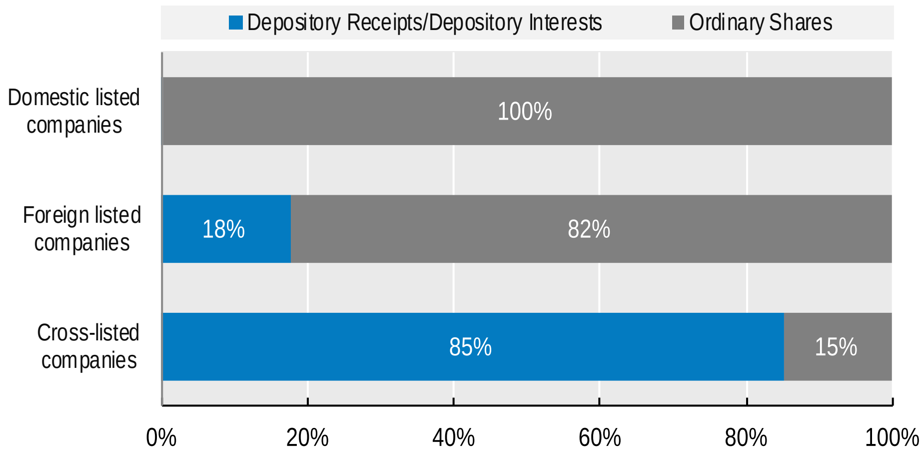
Figure 46. Industry distribution of listed companies by number of companies, as of end 2018



Source: OECD Capital Market Series dataset, see Annex for details.

Companies that list or cross-list on foreign markets can do it either by issuing ordinary shares or depository receipts. Figure 47 shows the type of security issued by different categories of listed companies. Companies with a domestic listing only use ordinary shares to do so. However 18% of the companies that have a foreign listing only issued depository receipts. On the other end, the majority of cross-listings are done by issuing depository receipts.

Figure 47. Issue types for listed companies and cross-listed companies, as of end 2018



Source: OECD Capital Market Series dataset, see Annex for details.

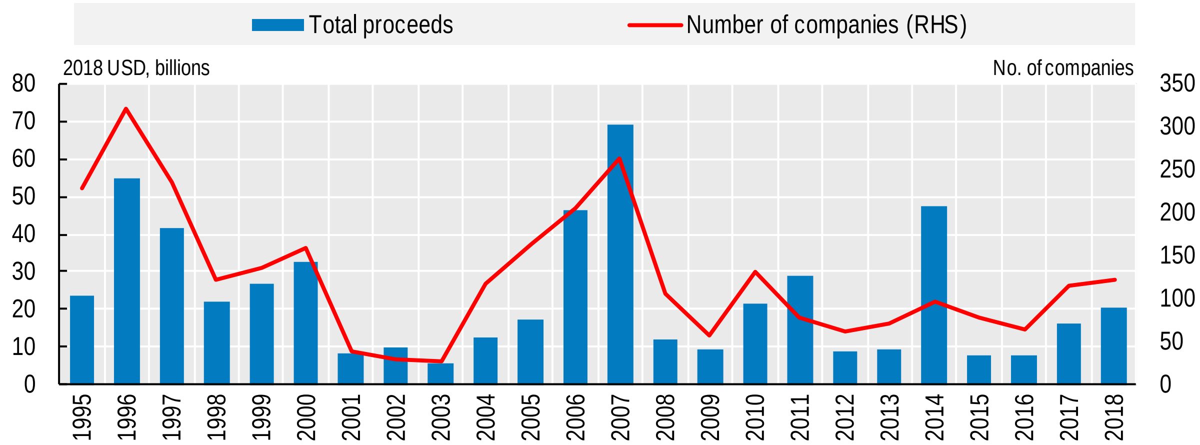
Depositary receipts can be created, in general, when a foreign company or an investor holding the underlying securities delivers them to a depositary bank or a custodian in the foreign company's home jurisdiction. In the case of sponsored depositary receipts, is the foreign company that negotiates directly with the depositary bank in the market where the depositary will trade. The depositary bank becomes responsible for recordkeeping, sale and distribution of shares and dividends, among others. However, for unsponsored depository receipt issuances issuer companies are not involved in the process. Moreover, since unsponsored issuances of depositary receipts lack any fundraising for the company, the analysis in this chapter only cover sponsored issuances. Depositary receipts issued in the United States, the United Kingdom and Australia represent 90% of total depositary receipts. Within the range of sponsored depository receipts, they differ in terms of the information required to be disclosed and how they are regulated by the securities market authority where they trade.

3. Global trends in foreign IPOs and SPOs

To arrive at a more comprehensive understanding of how companies use foreign public equity markets, this section provides an overview of the trends in their capital raising activities on domestic and foreign markets from 1995 to 2018.

Figure 48 shows the amount of capital raised through foreign IPOs as well as the number of companies raising capital on foreign markets. One observation from the figure is that before 2008, the number of foreign IPOs and the amount of capital raised fluctuated more compared to the period after 2008. The number of foreign listings reached its highest value in 1996 with 321 companies and was then on a declining trend until 2003. From 2004 to 2007, foreign IPOs increased both in terms of the amount of capital raised and the number of companies. After reaching a peak of USD 69 billion in 2007, the amount of proceeds plunged to USD 12 billion in 2008. Since 2007, the annual average number of companies dropped from 188 between 2004 and 2007 to 89 companies. During the same period, not only the number of companies conducting an IPO on foreign markets decreased, but also the average capital raised in foreign IPOs dropped from USD 36 billion to USD 17 billion. It is important to note that there has been an upward trend in the past two years as the capital raised more than doubled and the number of companies increased from 65 in 2016 to 122 in 2018.

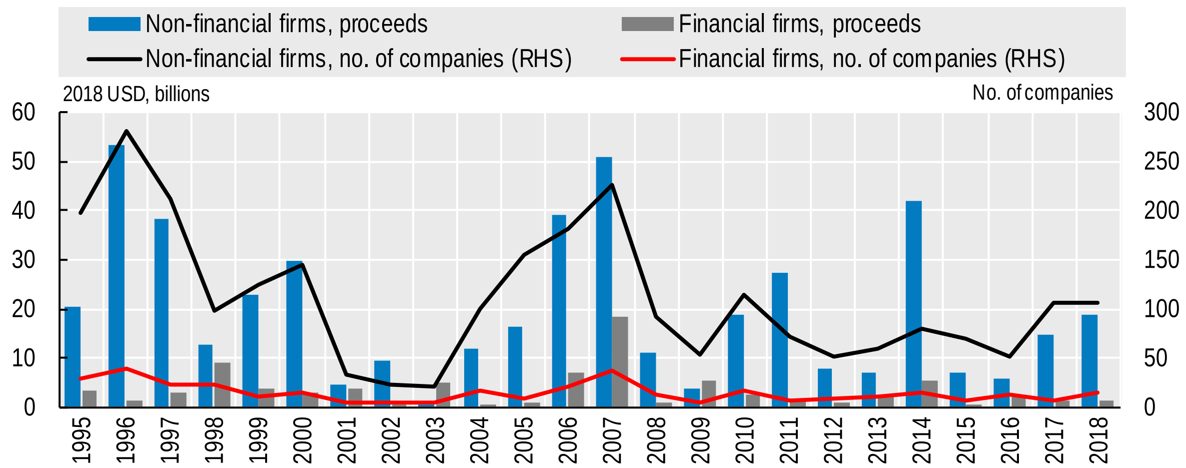
Figure 48. Foreign initial public offerings



Source: OECD Capital Market Series dataset, see Annex for details.

In addition to the overall picture provided in Figure 48, Figure 49 identifies foreign IPOs by financial and non-financial companies separately. Between 1995 and 2018, on average, 15 financial and 111 non-financial firms went public in foreign markets each year. Following the global financial crisis, the number of foreign IPOs by financial companies fell to 4 and the number of non-financials to 53 in 2009. In 2018, the number of foreign IPOs by financial companies increased compared to the previous year, while the number of non-financials remained almost the same. Over the entire 24-year period shown in the figure, non-financial companies raised about 85% (USD 475 billion) of all public equity capital that companies raised in foreign markets through IPOs.

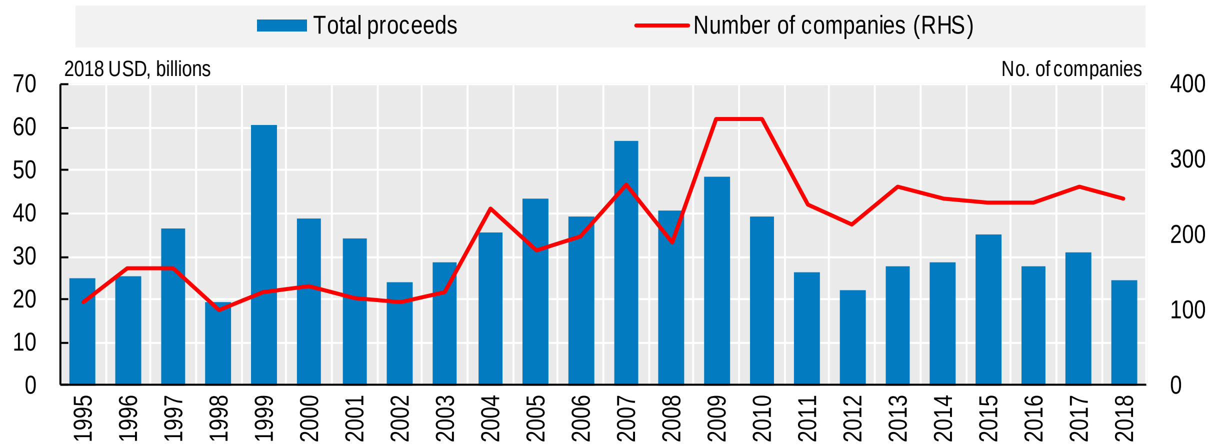
Figure 49. Foreign IPOs by financial and non-financial companies



Source: OECD Capital Market Series dataset, see Annex for details.

Companies can also raise capital in foreign markets through secondary public offerings (or follow-on offerings). Figure 50 provides the total amount of capital raised through foreign SPOs as well as the number of companies that have conducted an SPO in a foreign market. The amount of capital raised in foreign markets reached its highest values in 1999 and 2007 with USD 61 billion and USD 57 billion respectively. Compared to foreign IPOs (Figure 48), foreign SPOs show a more stable trend since 2010. Between 1995 and 2010, the annual capital raised in foreign markets through SPOs was, on average, USD 37 billion and decreased to USD 28 billion between 2011 and 2018. On the other hand, while only 110 companies raised capital through foreign SPOs in 1995, the number of companies taking advantage of this possibility more than doubled to 248 in 2018. Indeed, the increase in the number of companies combined with the decrease in the amount of capital raised throughout the period show that more companies raise capital through SPOs but in smaller amounts.

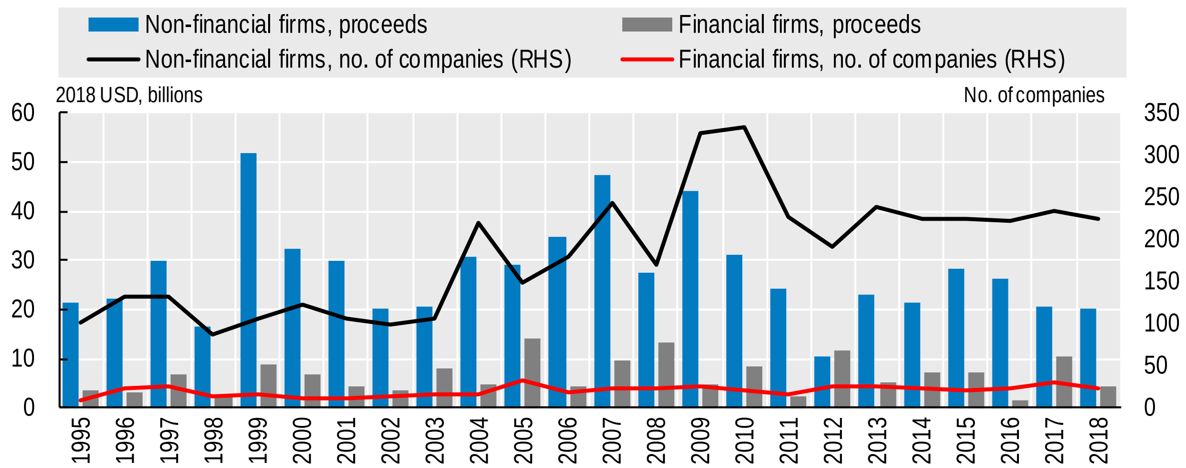
Figure 50. Foreign secondary public offerings



Source: OECD Capital Market Series dataset, see Annex for details.

Between 1995 and 2018, an annual average of 20 financial and 183 non-financial firms raised capital through SPOs in foreign markets. During the same period, the total amount of capital raised by financial and non-financial firms was USD 156 billion and USD 664 billion respectively (Figure 51). It is important to note that most of the increase in the number of SPOs after 2008 is attributable to non-financial companies.

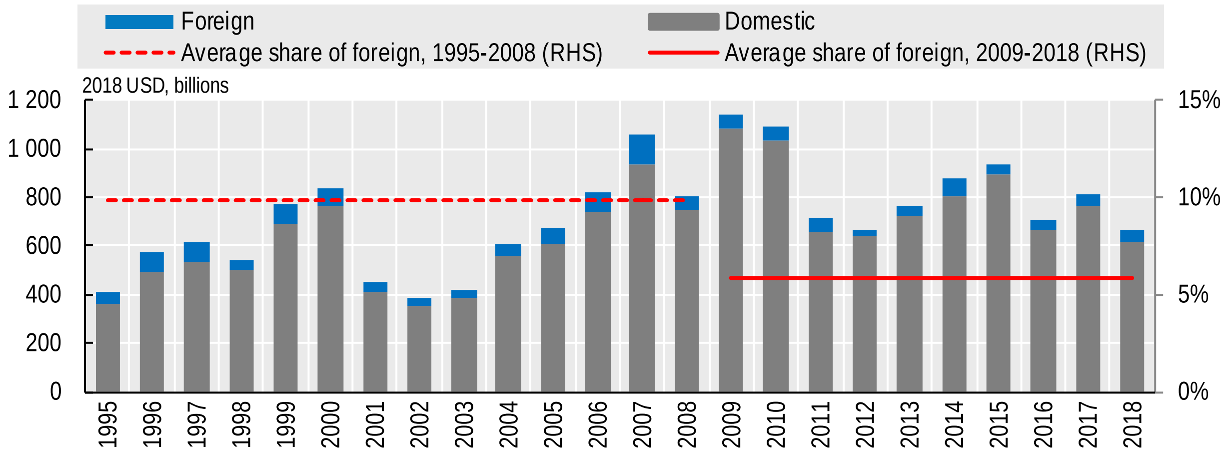
Figure 51. Foreign SPOs by financial and non-financial companies



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 52 presents the total combined amount of capital raised through IPOs and SPOs between 1995 and 2018 both in domestic and foreign markets and the average share of foreign offerings compared to the total amounts in two periods. From 1995 to 2018, companies raised USD 1 380 billion in foreign markets and USD 17 335 billion in domestic markets through IPOs and SPOs. The share of the amount raised in foreign markets was on average 8% over the entire period. While the average share of capital raised in foreign markets was around 10% before 2009, only 6% of all capital was raised in foreign markets after 2009. Throughout the entire period, the share of foreign SPOs in the total amount of SPOs was almost stable around 7%, whereas the share of foreign IPOs in total IPOs moved in a more cyclical trend with an average of 10%.

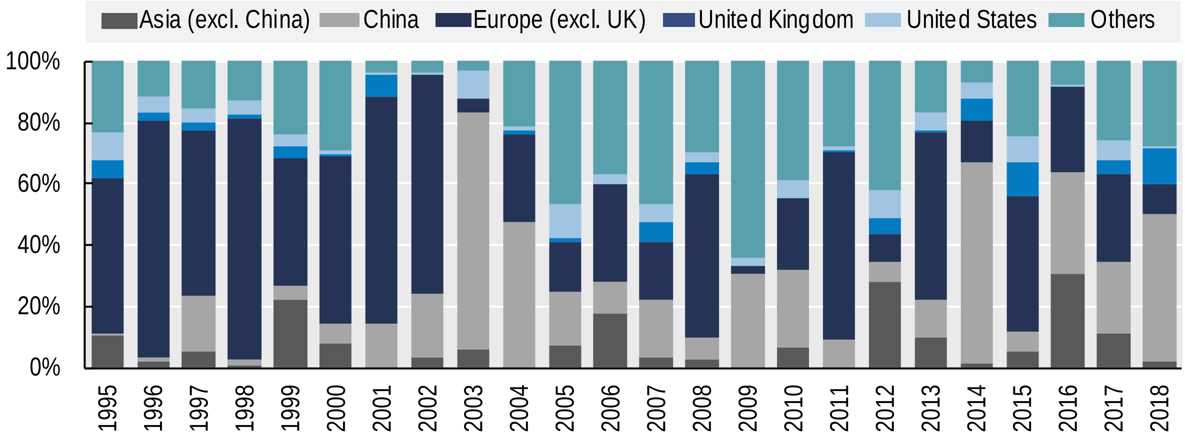
Figure 52. Domestic and foreign capital raising activities worldwide



Source: OECD Capital Market Series dataset, see Annex for details.

For a more detailed look at the market and regional level, the following two figures identify the nationality of the companies making an IPO in foreign markets and the markets these companies select for their IPOs. Figure 53 shows the share in foreign listing proceeds of companies from Asia (excl. China), China, the United States, Europe (excl. UK), the United Kingdom and other countries since 1995. Until 2003, companies from Europe (excl. UK) were the largest users of foreign market listings, they raised on average 63% of all capital proceeds between 1995 and 2002. Since 2003, however, their share followed a rather volatile trend with an average around 27%. Among the European foreign IPOs between 1995 and 2018, companies from Greece raised the highest amount in foreign markets and most of it was raised before 2000. The second highest amount in total European IPOs was raised by Swiss companies that accounted for almost 16% of all European foreign market IPOs between 1995 and 2018. While Asian companies have become the largest users of equity markets in the last decade, their historical share in foreign markets was rather modest except for 2003 and 2014 when Chinese companies raised on average 72% of all the capital raised in foreign markets. Between 2016 and 2018, Chinese companies' foreign IPOs accounted for 35% of the total global value of foreign IPOs. In contrast, between 1995 and 2018, US companies' average share in foreign IPOs was 5% and in 2018 it was less than 1%.

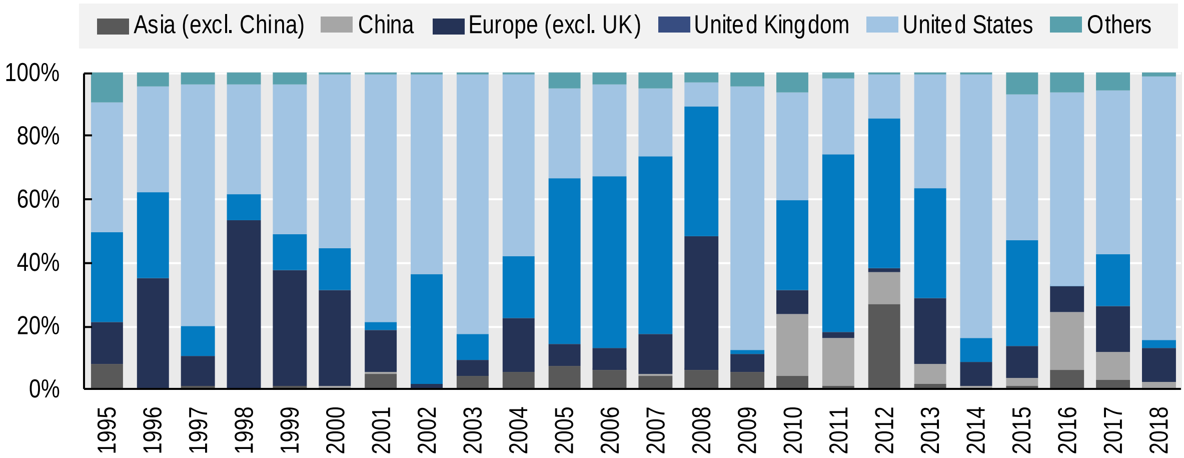
Figure 53. Distribution of foreign IPO proceeds by company headquarters



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 54 shows the distribution of foreign IPO proceeds by market where the IPO took place. Stock markets in Europe (excl. UK), the United Kingdom and the United States hosted most of the foreign IPOs throughout the entire period providing an annual average of 90% of the capital that companies raised in foreign markets. Between 1995 and 2004, the US market had a dominant position in foreign IPOs but was replaced by the UK market in most of the years between 2005 and 2013. Since then, the US market has again become the main destination for foreign listings.

Figure 54. Distribution of foreign IPO proceeds in selected markets



Source: OECD Capital Market Series dataset, see Annex for details.

Table 9 presents the 10 largest foreign IPOs since 2000. In line with the overall picture provided in Figure 54, the table shows that large companies deciding to conduct their IPO in a foreign market have mainly selected the US and the UK markets. Among the largest foreign market issuers, 3 companies from Switzerland raised capital in the United States and the United Kingdom.

Table 9. Largest 10 foreign IPOs between 2000-2018

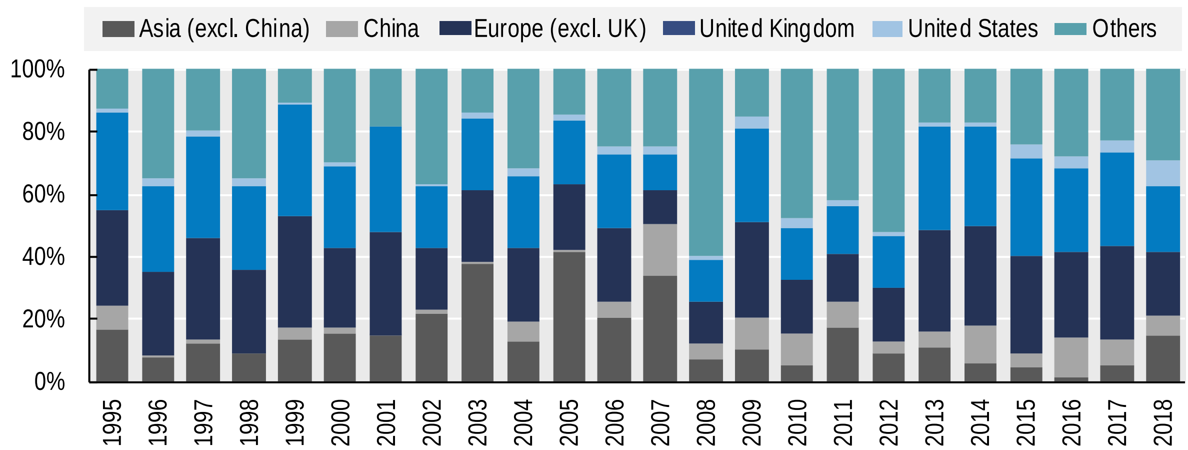
Year	Company	Headquarters	Industry	IPO location	Proceeds (USD millions)
2014	Alibaba Group Holding Ltd	China	Technology	United States	25 032
2011	Glencore PLC	Switzerland	Basic Materials	United Kingdom	9 763
2006	Lotte Shopping Co Ltd	Korea	Consumer Cyclicals	United Kingdom	3 030
2002	Alcon AG	Switzerland	Healthcare	United States	2 532
2007	Nyrstar NV	United Kingdom	Basic Materials	Belgium	2 504
2008	New World Resources NV*	Netherlands	Energy	Czech Republic	2 496
2018	iQIYI Inc	China	Telecommunications	United States	2 424
2002	Xstrata Ltd	Switzerland	Basic Materials	United Kingdom	2 398
2000	Airbus SE	Netherlands	Industrials	France	2 353
2018	PagSeguro Digital Ltd	Brazil	Technology	United States	2 266

Note: *New World Resources NV is headquartered in the Netherlands and 56% of its revenues were from the Czech Republic as of end 2015.

Source: OECD Capital Market Series dataset, see Annex for details.

Figure 55 illustrates the distribution of foreign secondary public offering proceeds by already-listed companies worldwide by company headquarters. Companies from Europe (excl. UK) and the United Kingdom used foreign markets to raise capital via SPOs consistently over the entire period. The exceptions are 2007 and 2008 and the period between 2010 and 2012. On average throughout the entire period, they accounted for almost 40% of all capital raised in foreign markets. The share of Asian companies in foreign SPOs is higher than their share in IPOs. Notably, Asian companies account for 25% of the capital raised through foreign SPOs over the entire period and almost 1/3 of this amount was raised by companies from Chinese Taipei. In addition, companies from China accounted for 28% and companies from India and Korea together accounted for another 28% of all Asian foreign SPOs. It is worth noting that half of the total amount under the "others" category was raised by companies from Canada and Brazil.

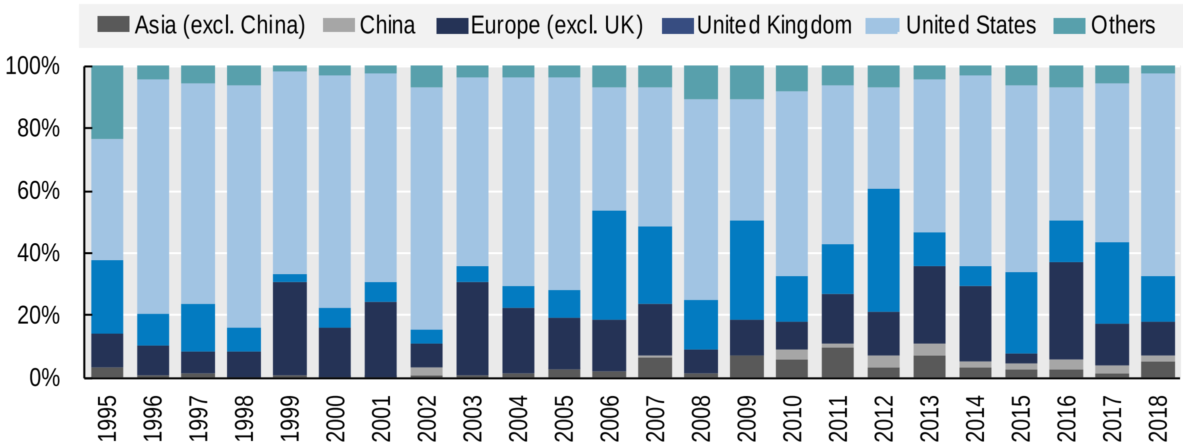
Figure 55. Distribution of foreign SPO proceeds by company headquarters



Source: OECD Capital Market Series dataset, see Annex for details.

With respect to the distribution of foreign SPO proceeds among markets, the picture is more homogeneous over time. The United States appears as the largest market for foreign SPOs during the entire period with an average of 60% of the total global volume. Notably, companies from Europe (including UK) and Asia received 35% and 25% respectively of the proceeds raised in the United States. The second most popular venue for foreign SPOs has been European markets as they provided one-third of the capital raised via foreign SPOs. The UK market was the main destination among the European markets. Similar to foreign IPOs, almost half of the capital raised via foreign SPOs in continental European markets was raised by companies from other continental European countries.

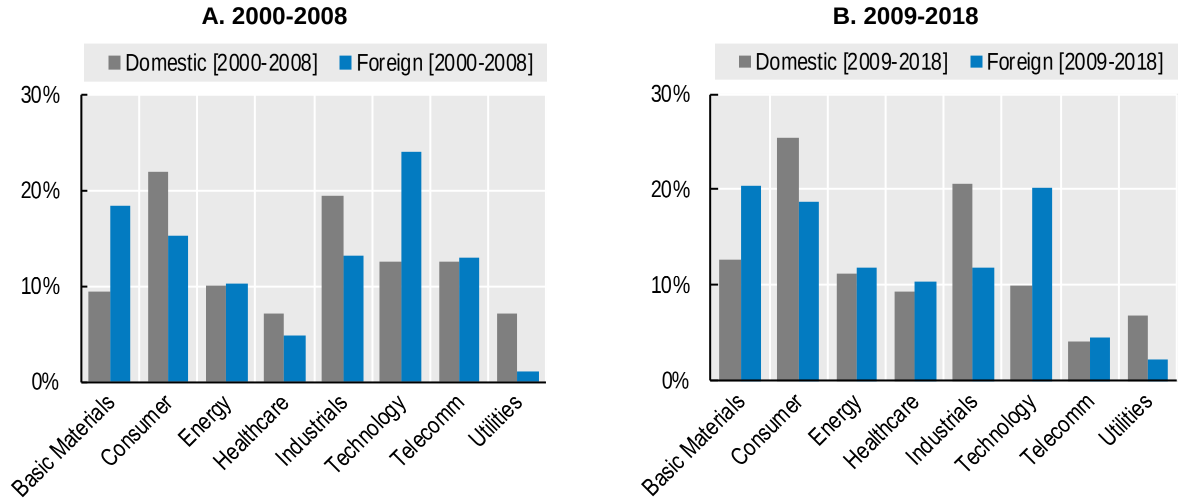
Figure 56. Distribution of foreign SPO proceeds in selected markets



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 57 provides the industry distribution of public equity offerings of both IPOs and SPOs excluding financial firms for domestic and foreign offerings in two periods. The picture is similar for the top four industries in both periods. While the domestic share of consumer and industrials in public equity offerings is significantly higher than their share in foreign public equity offerings, the reverse is true for the basic materials and technology industries.

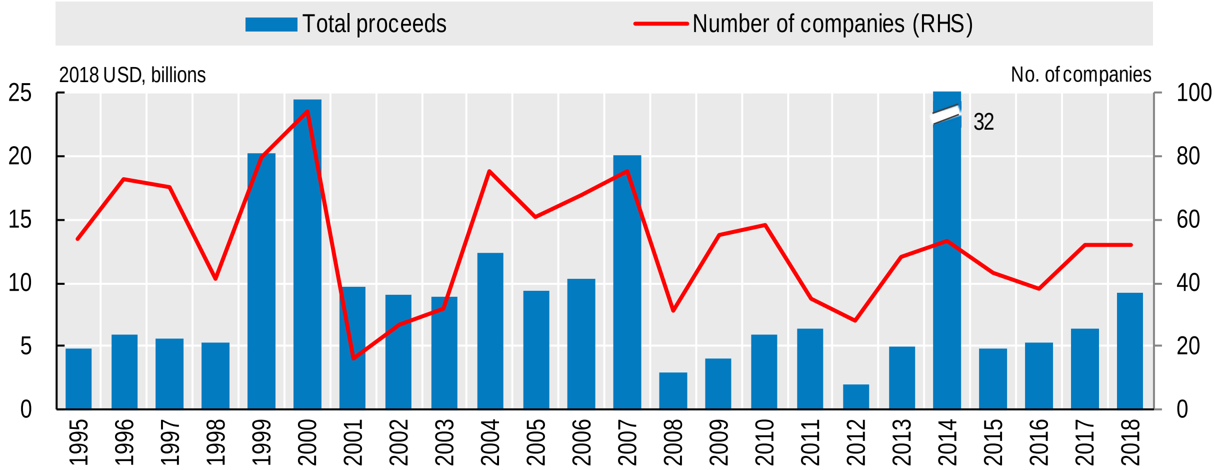
Figure 57. Industry distribution for domestic and foreign public equity offerings



Source: OECD Capital Market Series dataset, see Annex for details.

As shown in Figure 57, before 2009, companies from the technology industry had the highest share in terms of using foreign markets. However, during the latter period, the amounts raised by technology firms declined in both nominal and relative terms. In order to have a closer look at the specific trend for the technology industry, Figure 58 depicts all the 200 public equity offerings made by technology companies on foreign markets between 1995 and 2018. With the exception of 2014, when the Chinese company Alibaba alone raised USD 25 billion, the period after 2008 has generally seen lower levels of technology company offerings than the pre-2008 period. In 1999 and 2000 they raised a total of USD 45 billion. In 2018 technology companies raised almost USD 10 billion, which corresponds to 20% of all the foreign market public equity offerings globally.

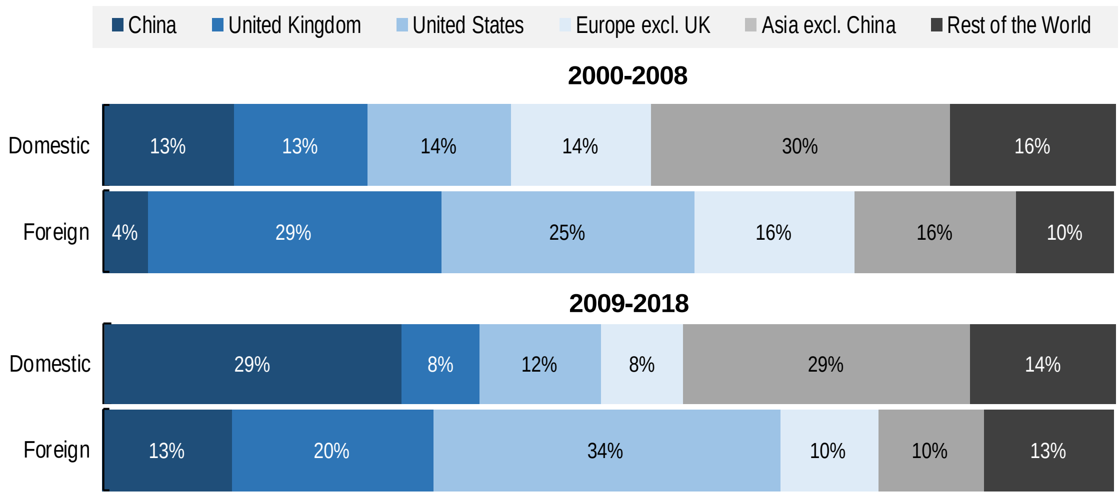
Figure 58. Technology companies` public equity offerings on foreign markets



Source: OECD Capital Market Series dataset, see Annex for details.

The following figures show the use of underwriters in domestic and foreign equity offerings. Figures 59 and 60 present how often investment banks from different regions took part in an IPO or SPO offering respectively during the periods 2000-2008 and 2009-2018. As seen in Figure 59, US and UK banks were engaged in the vast majority of foreign IPO deals in both periods. This is largely compatible with Figure 54 showing that the US and UK markets are the largest providers of capital in foreign IPOs. Companies raising capital on these markets in most cases also used a local investment bank. Despite their importance in foreign IPOs, US and UK banks' share in domestic IPO deals was less pronounced during the period 2000-2008. The significant portion of underwritings by Asian banks in domestic offerings since 2000, is mainly driven by the high number of equity offerings in Asian markets during the last 20 years. In fact, in both periods, one-third of all domestic offerings were underwritten by investment banks from Asia (excl. China). As the number of Chinese domestic offerings increased, Chinese banks also increased their participation in domestic IPOs, from 13% during the 2000-2008 period to 29% during the 2009-2018 period.

Figure 59. Underwriting activities in IPOs by bank headquarters

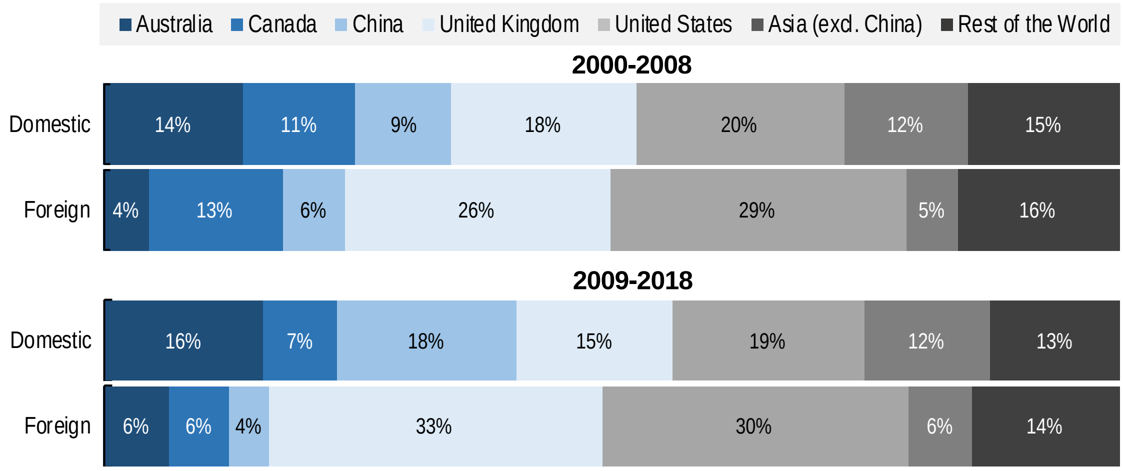


Note: A transaction is included only if the corresponding manager information is available.

Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details

As shown in Figure 60, banks from the United Kingdom and the United States have dominated as underwriters in both foreign and domestic SPO offerings. Together, they covered one-third of all domestic SPOs and around 60% of all foreign SPOs. Again, their dominant position with respect to foreign SPOs mirrors the fact, presented in Figure 56, that 73% of the total foreign SPOs proceeds was raised in the UK and US markets. It is worth noting that while UK banks increased their share in foreign SPOs from 26% to 33% after 2009, the share of Canadian banks decreased by 7 percentage points respectively compared to the pre-2009 period.

Figure 60. Underwriting activities in SPOs by bank headquarters



Note: A transaction is included only if the corresponding manager information is available.

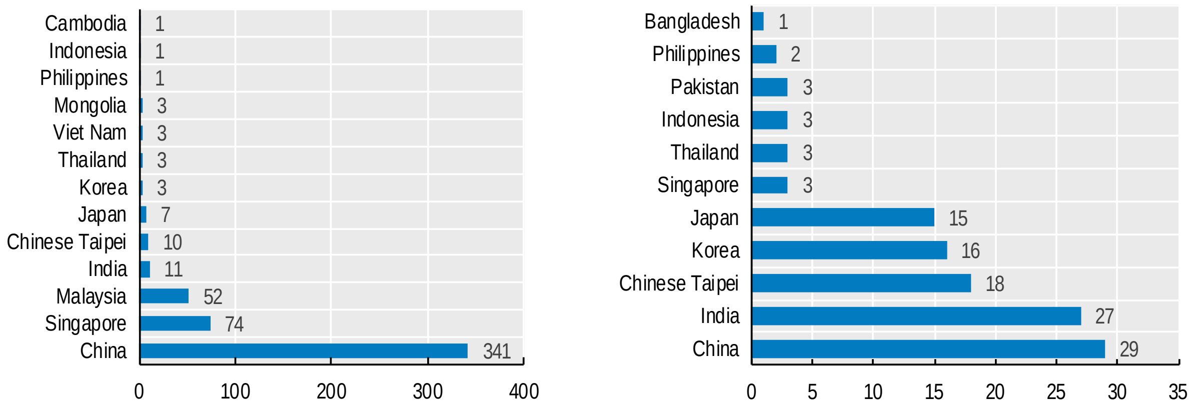
Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

4. Asian foreign listed and cross-listed companies overview

By the end of 2018, there were 510 Asian companies that had their primary listing on a foreign market. This corresponds to 37% of the total number of companies in the world that are listed abroad. As shown in Panel A in Figure 61, there were 341 Chinese companies listed on foreign markets, followed by 74 Singaporean companies and 52 Malaysian companies. In the case of Singapore, 12% of all listed companies correspond to foreign listed companies. For China and Malaysia, foreign listed companies accounted for 6% and 5% respectively of the total number of listed companies from each economy.

A total of 120 Asian companies were cross-listed in 2018, representing 31% of all cross-listed companies in the world. Almost all Asian cross-listed companies already had a primary listing in their home market before they also listed their shares on a foreign market. As shown in Figure 61 Panel B, 29 Chinese companies were cross-listed on foreign markets, followed by India and Chinese Taipei with 27 and 18 cross-listed companies respectively.

Figure 61. Foreign and cross-listed companies in Asia by company headquarters, as of end 2018



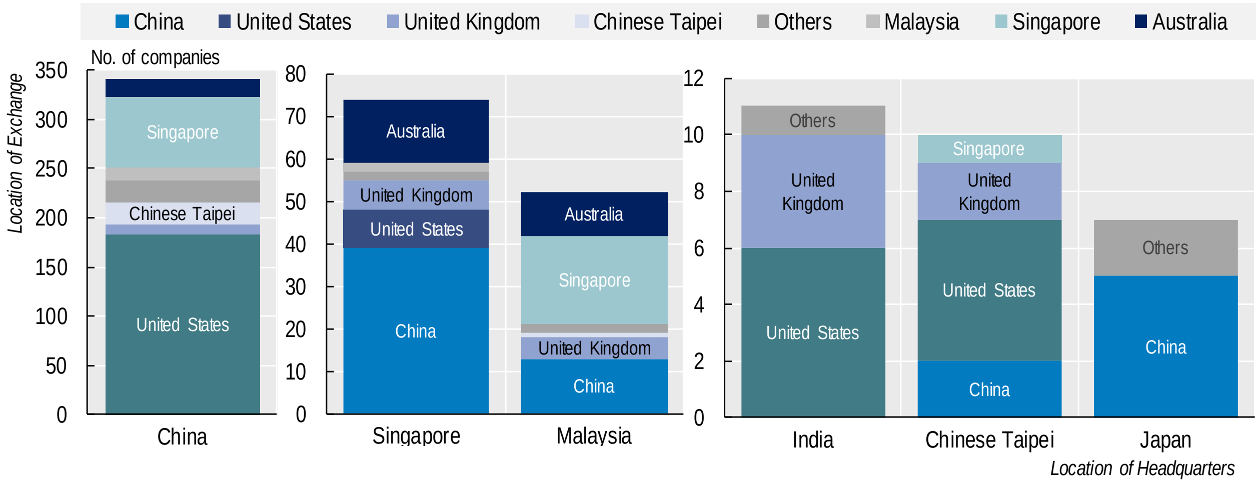
Note: China is considered as mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, see Annex for details.

China has been an important provider of both foreign and cross-listed companies. An important factor for Chinese companies' overseas listings might have been the sometimes lengthy approval process in their home market. It normally takes at least one year for IPO applications to be processed by the Listing Committee of the CSRC and the rejection rate in 2018 was over 30%. Moreover, there are mandatory conditions that companies need to meet to apply for an IPO in the Chinese market, such as positive net profits for the last three fiscal years, as well as requirements with respect to cumulative net profits and cumulative cash flows.

With an objective to make the domestic market more attractive for innovative companies, the Chinese government launched the Shanghai Stock Exchange Science and Technology Innovation Board (STAR market) in June 2019. The market has more flexible listing requirements to support companies from the technology industry to list on the mainland China market. Specifically, companies that apply for an IPO in the STAR market are required to meet one of the five different sets of criteria regarding company value, revenue, profitability, etc. At the same time, it is the first regulated market in mainland China that allows unprofitable companies to be listed. It also allows dual-class share structures. Importantly, a new IPO approval system has been introduced for STAR listings. Instead of the Listing Committee of the CSRC, the Shanghai Stock Exchange is in charge of the approval process and the CSRC is responsible only for the registration process. By the end of October 2019, there were altogether 40 companies listed on the STAR market and their average market capitalisation was USD 2 billion. Among these companies, 21 are technology companies and 8 are healthcare companies.

With respect to the host markets of choice for foreign listed companies, Figure 62 displays the preferred host markets of foreign listed firms from selected countries. For example, most Singaporean companies chose to do their foreign listings in China, Australia, the United States and the United Kingdom. Chinese companies, the largest users of foreign markets, mainly chose the United States and Singapore as their primary host markets. Most Malaysian companies have chosen Singapore as their host market when they undertake a foreign listing.

Figure 62. Asian companies listed on foreign markets, as of end 2018

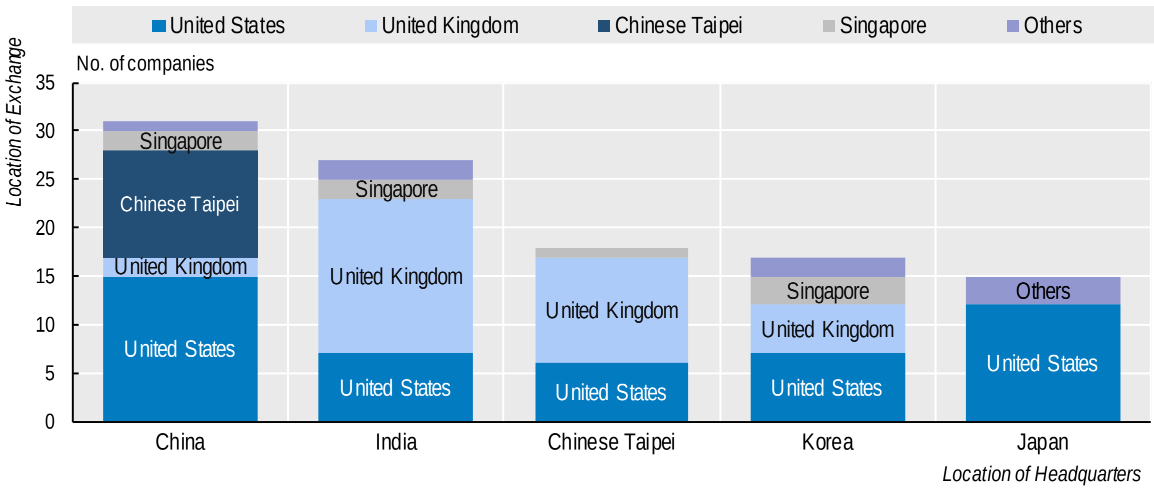


Note: China is considered as mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, see Annex for details.

It should be noted, that the top three host markets – the United States, Singapore and China – are home to more than 70% of all foreign listed Asian companies. The US market is by far the most popular foreign market for Asian companies as 205 companies have chosen to list their shares on the US market. Following the United States, Singaporean and Chinese stock markets ranked second and third in attractiveness for hosting Asian companies with 98 and 62 foreign listings respectively. Australia has also attracted to its market a handful of companies from Singapore, Malaysia and China.

Asian companies also make up a significant portion of the world's cross-listed companies. By the end of 2018, 120 out of the world's 393 cross-listed companies came from Asia. Figure 63 shows the stock exchanges where companies from selected Asian countries have cross-listed their shares. Chinese companies rank first among Asian cross-listed companies and they have mainly chosen the United States (15) and Chinese Taipei (11). Indian companies have cross-listed their shares mainly on the UK market. A number of companies from Korea and Chinese Taipei have cross-listed their shares in the United States or the United Kingdom.

Figure 63. Asian companies cross-listed on foreign markets, as of end 2018

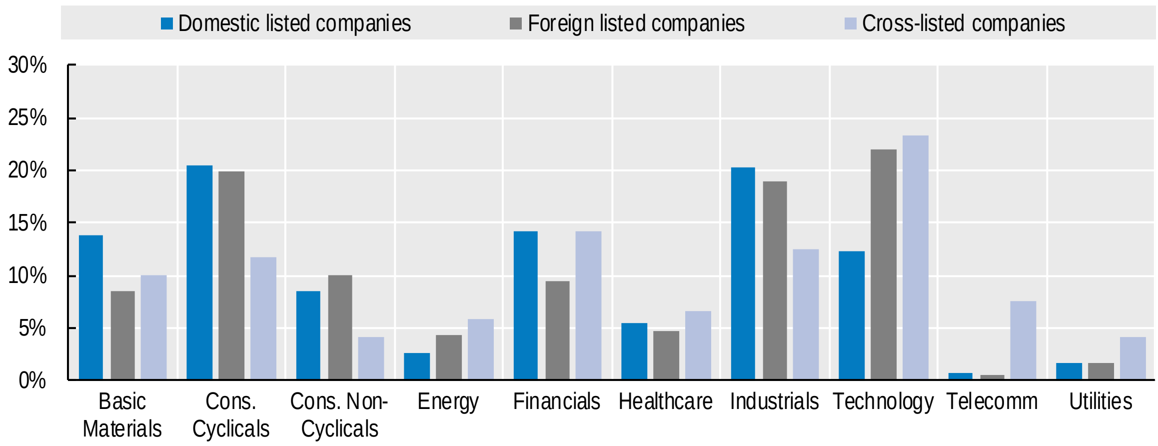


Note: China is considered as mainland China and Hong Kong (China) together.
Source: OECD Capital Market Series dataset, see Annex for details.

While being an important source of companies that undertake foreign listings, Asian capital markets have not attracted companies from the rest of the world to list on their exchanges. In fact, there are only two companies with non-Asian origin that have a cross-listing in Asia. Both of them are domiciled in Australia and cross-listed in Singapore. Even among the 120 Asian cross-listed companies, only 27 of them are hosted by Asian stock exchanges. Only two Asian markets concentrate these cross-listed companies. Interestingly, Chinese Taipei is the most popular destination hosting 16 cross-listed Chinese companies. Singapore follows with 9 cross-listed companies. China and India host one cross-listed company each.

The industry distribution of foreign listed and cross-listed Asian companies follows the same pattern as the global one shown in Figure 64. Energy and technology companies are over-represented among both foreign listed and cross-listed companies compared to their share among domestic listed companies. However, the relative portion of technology companies that have gone for a foreign listing is higher. In Asia, technology companies represent 22% of the foreign listed companies and 23% of the cross-listed companies compared to a modest 12% of the Asian domestically listed companies. Moreover, the fact that global share of technology companies among foreign listed companies was 18% and 14% for cross-listed companies re-enforces the impression that Asian technology companies tend to rely more on foreign listings that technology companies in general.

Figure 64. Industry distribution of Asian listed companies, as of end 2018

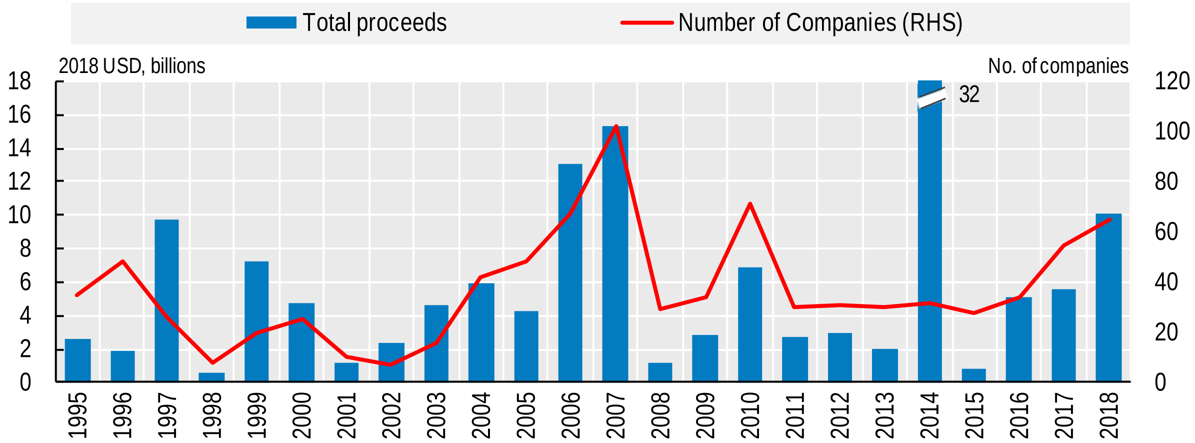


Source: OECD Capital Market Series dataset, see Annex for details.

5. Asian companies' capital raising activities on foreign markets

During the past decade, Asian companies have increased the amount of money raised through both IPOs and SPOs in domestic as well as in foreign markets. Figure 65 shows the total amount of equity raised through foreign IPOs by Asian companies and the total number of companies making a foreign IPO between 1995 and 2018. Similar to the trend in global foreign IPOs, one can identify three distinct periods when the number of companies and the amount of capital raised in foreign markets were particularly significant: 2001-2007, 2008-2010 and 2015-2018. In 2007, more than 100 Asian companies raised a total of USD 15 billion in foreign markets. During the 2008-2018 period, the value of proceeds fluctuated more than in the 2000-2007 period, showing a peak in volume in 2014 driven by Alibaba's IPO, the largest IPO in history. Overall, Asian companies raised USD 146 billion in foreign markets through IPOs, of which around USD 108 billion –equivalent to 74%– is attributable to Chinese companies. Korean and Singaporean companies ranked second and third, raising USD 9 billion and USD 7 billion respectively during the same period.

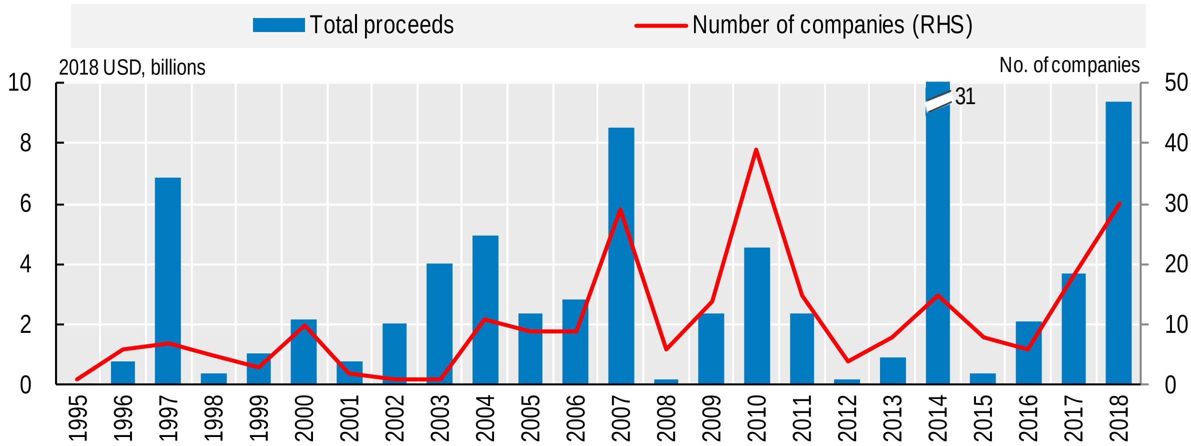
Figure 65. Foreign initial public offerings by Asian companies



Source: OECD Capital Market Series dataset, see Annex for details.

Chinese foreign listings have mainly been in the United States. In fact, between 1995 and 2018, on average, 80% of the total proceeds of Chinese foreign IPOs came from the US stock market. As a result, Chinese companies accounted for 37% of all foreign IPOs in the United States during the same period. As seen in Figure 66, Chinese IPOs in the United States mainly started to pick up after 2004. However, since more than 50 Chinese companies listed on the United States market were either delisted or halted from trading in 2011 and 2012, the IPO activity was quite limited in the following few years. The important exception was Alibaba's IPO in 2014. In 2018, 30 Chinese companies made an IPO in the United States. This is the highest number since 2010 when 39 Chinese companies went public in the United States.

Figure 66. Foreign IPOs of Chinese companies in the United States



Source: OECD Capital Market Series dataset, see Annex for details.

Table 10 shows the largest 10 IPOs made by Chinese non-financial companies in the United States. The list is mainly dominated by firms from the technology sector.

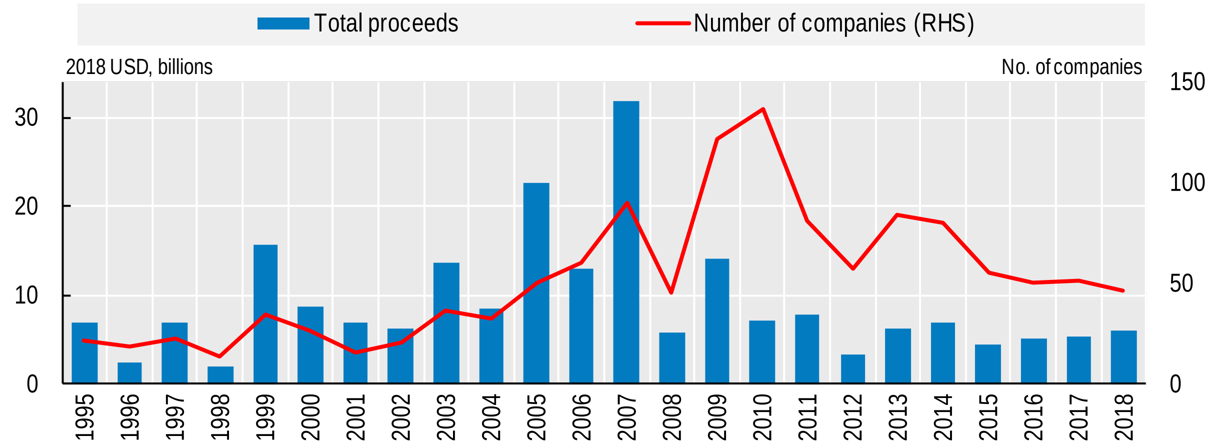
Table 10. Largest 10 Chinese non-financial company IPOs in the United States

Year	Company	Industry	Proceeds (USD millions)
2014	Alibaba Group Holding Ltd	Technology	25 032
2018	iQIYI Inc	Telecommunications Services	2 424
2014	JD.com Inc	Consumer Cyclicals	2 047
2004	Semiconductor Manufacturing International Corp	Technology	1 803
2018	Pinduoduo Inc	Technology	1 626
2002	China Telecom Corp Ltd	Telecommunications Services	1 452
2016	ZTO Express (Cayman) Inc	Industrials	1 406
2018	Nio Inc	Consumer Cyclicals	1 152
2018	Tencent Music Entertainment Group	Technology	1 066
2007	Giant Interactive Group Inc	Technology	1 045

Source: OECD Capital Market Series dataset, see Annex for details.

Figure 67 shows the total amount of capital that Asian companies raised in foreign markets through an SPO as well as the total number of SPOs during the period 1995-2018. While the amount of capital raised in foreign markets increased until 2008, the annual amounts have since then established themselves at a lower level. The number of Asian companies making foreign SPOs increased quite steadily until 2010. And after a sharp fall in 2012, the annual number of foreign SPOs by Asian companies has established itself at a somewhat higher level than the pre-2008 era. Overall, Asian companies raised around USD 218 billion in foreign markets through SPOs, of which more than two-thirds were raised between 1995 and 2007 when the average annual amount was USD 11 billion. Since then, the average annual amount raised decreased to USD 7 billion. With respect to the origin of the foreign SPOs, companies from Chinese Taipei raised the highest amount of capital totalling USD 69 billion, followed by Chinese companies with USD 61 billion and Indian companies with USD 33 billion.

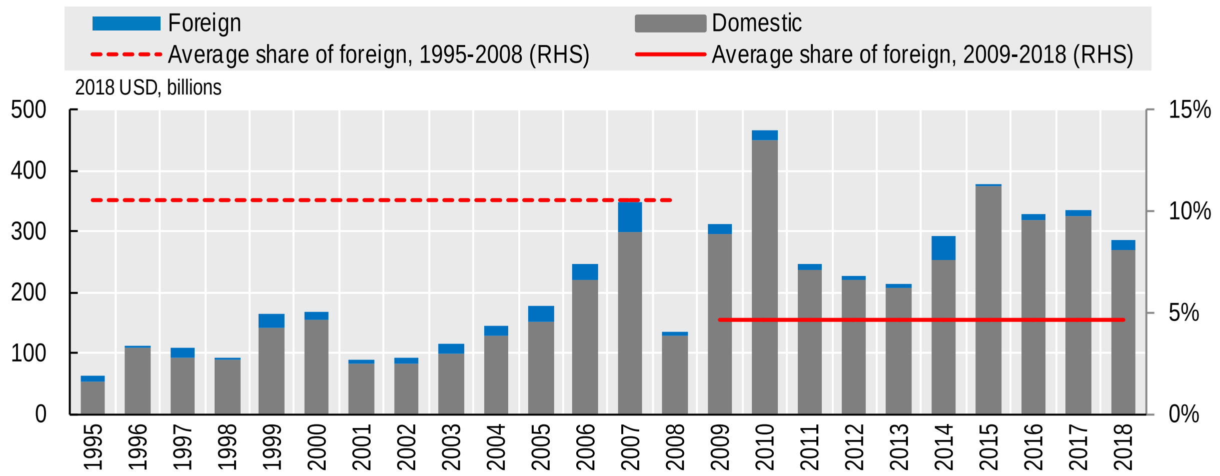
Figure 67. Foreign secondary public offerings by Asian companies



Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Figure 68 shows the total amount of capital raised by Asian companies through IPOs and SPOs between 1995 and 2018 both in domestic and foreign markets and the average share of proceeds from foreign offerings for two periods. Asian companies raised USD 364 billion in foreign markets and USD 4 790 billion in domestic markets through IPOs and SPOs. For the whole period the average annual share of capital raised through foreign offerings was about 8%. However, as indicated by the red horizontal lines, the average share of capital raised in foreign markets decreased from around 11% before 2009, to around 4.6% in the period 2009-2018.

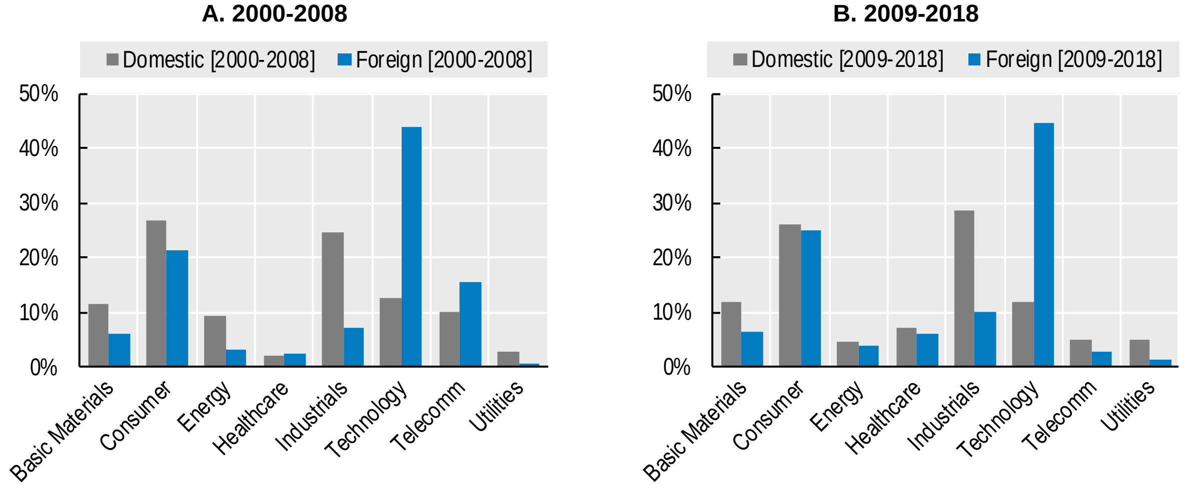
Figure 68. Domestic and foreign market capital raising activities of Asian companies



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 69 shows the combined industry distribution of IPO and SPO proceeds from domestic and foreign offerings during the two periods 2000-2008 and 2009-2018. While, the technology industry accounts for the largest share in foreign offerings during both periods, domestic markets are dominated by companies from industrials and consumer industries. In foreign markets, technology companies are followed by consumer companies in the amount of capital raised over the entire period.

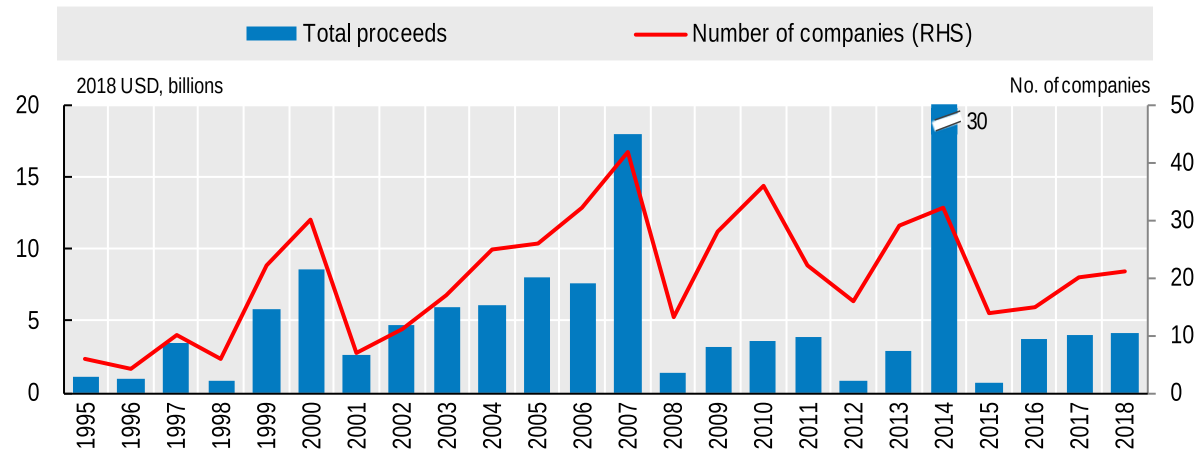
Figure 69. Industry distribution for Asian domestic and foreign public equity offerings



Source: OECD Capital Market Series dataset, see Annex for details.

The public equity offerings by Asian technology companies represented one-third of the proceeds raised by both financial and non-financial companies in foreign markets. Figure 70 takes a closer look into technology companies capital raising activities. Almost 500 Asian technology companies conducted a foreign IPO or SPO between 1995 and 2018 raising in total USD 132 billion. This corresponds to half of all the capital raised by the world's technology companies in foreign markets (Figure 58). The amount of capital raised by Asian technology companies peaked in 2014 as result of Alibaba's IPO. Since 2016, the trend has been more stable with an average of 20 companies raising USD 4 billion a year.

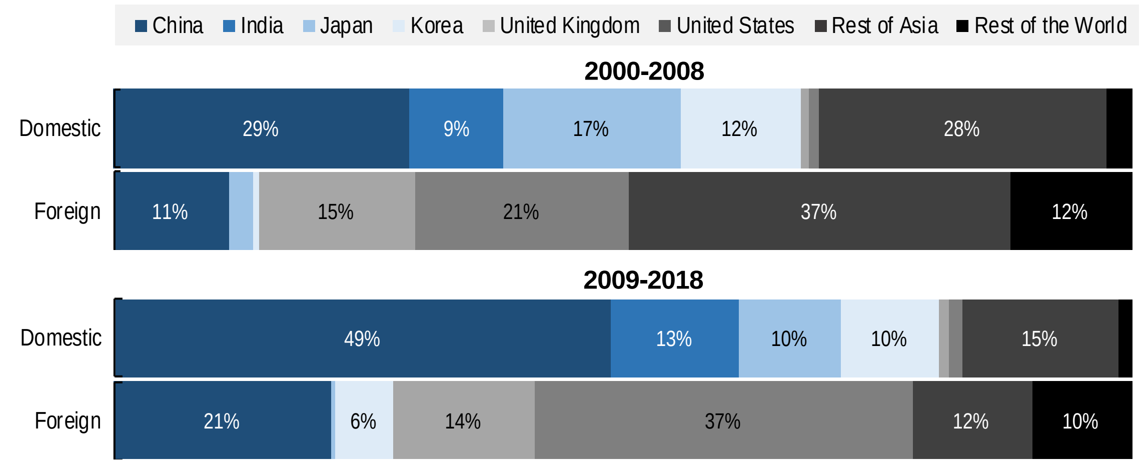
Figure 70. Asian technology public equity offerings in foreign markets



Source: OECD Capital Market Series dataset, see Annex for details.

Figure 71 shows the nationality of the investment banks that have assisted Asian companies in underwriting their IPOs. One important observation is that after 2008, Chinese investment banks increased their share significantly in underwriting both domestic and foreign IPO deals. As a result, Chinese investment banks have become dominant players in domestic deals. During the period 2009-2018, they underwrote 49% of the domestic IPOs compared to only 29% during the period 2000-2008. At the same time, they also increased their share in foreign IPO underwriting from 11% to 21% between two periods. US banks also increased their share in underwriting Asian foreign IPOs, from 21% between 2000 and 2008 to 37% during the period 2009-2018. In the meantime, the share of banks based in the Rest of Asia experienced a 25 percentage points drop.

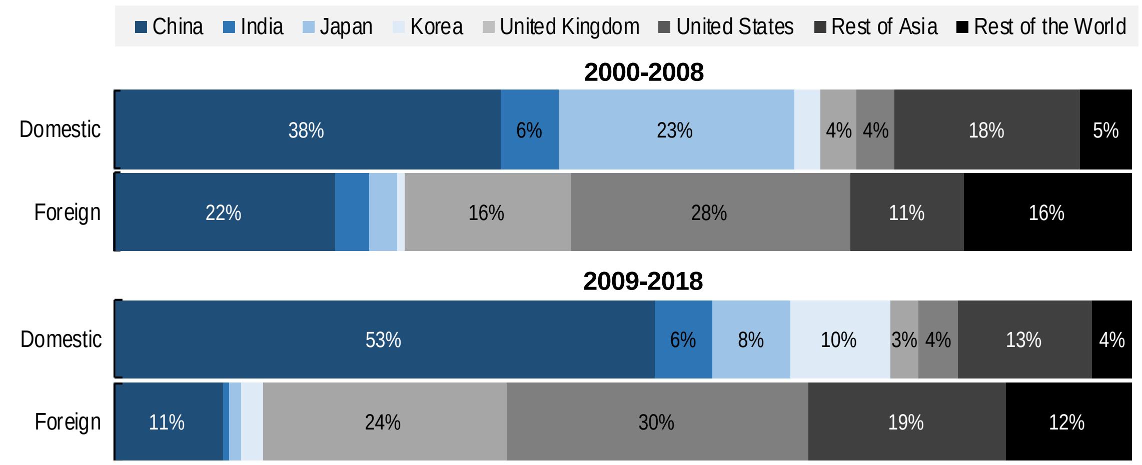
Figure 71. Underwriting activities in Asian IPOs by bank headquarters



Note: A transaction is included only if the corresponding manager information is available.
Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Figure 72 shows the nationality of the investment banks that have assisted Asian companies in underwriting SPOs. Similarly to the IPO underwriting picture (Figure 72), Chinese banks gained in importance in domestic IPOs from 38% during the first period to 53% during the second period. Mainly at the expense of Japanese banks that lost 17 percentage points in domestic SPOs.

Figure 72. Underwriting activities in Asian SPOs by bank headquarters



Note: A transaction is included only if the corresponding manager information is available.
Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex for details.

Mainland Chinese company listings in Hong Kong (China)

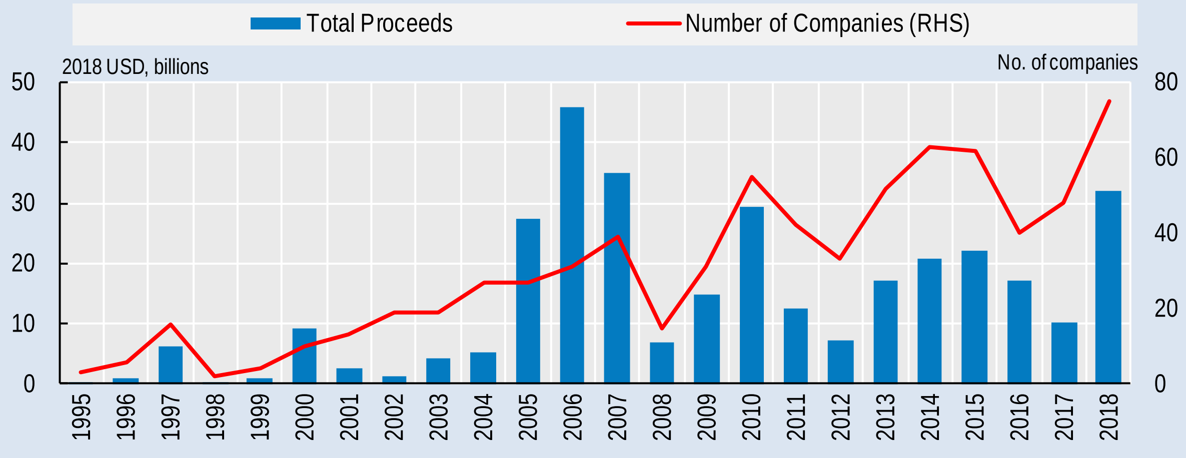
In this chapter, references to Chinese companies and markets include both mainland China and Hong Kong (China). For example, a mainland Chinese company listing on the Hong Kong Stock Exchange is considered as a domestic listing and as a domestic capital raising activity.

However, listed companies on stock exchanges in mainland China and in Hong Kong (China) are subject to different rules and regulations. For example, while companies listed on mainland China have to go through a lengthy approval process, the listing process in Hong Kong (China) is relatively short and companies are subject to fewer mandatory requirements regarding their profitability. Moreover, the share of foreign investors, in particular foreign institutional investors, in the Hong Kong (China) market is significantly higher than in the mainland Chinese markets.

By the end of 2018, there were 652 mainland Chinese companies listed only on the Hong Kong Stock Exchange. In addition, 117 companies were cross-listed on Hong Kong (China) and mainland China.

When it comes to capital raising activities, the stock market in Hong Kong (China) is one of the largest providers of equity capital to mainland Chinese companies. Figure 73 provides the volume of total capital raised by mainland Chinese companies in Hong Kong (China) as well as the number of companies making an initial public offering. Between 1995 and 2018, the total amount of capital raised by mainland Chinese companies was USD 331 billion corresponding to 40% of all capital raised by mainland Chinese companies via IPOs over the period.

Figure 73. IPOs of mainland Chinese companies in Hong Kong (China)



Source: OECD Capital Market Series dataset, see Annex for details.

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ANNEX 1 – ASIAN PUBLIC EQUITY MARKET DATA

A. Initial public offerings by home jurisdiction of the company

Table A.1. Proceeds, 2018 USD, millions

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bangladesh	39	102	237	196	149	128	171	61	83	19	64
Cambodia	0	0	0	0	23	0	20	6	9	28	0
China	18 799	53 354	116 571	60 616	23 416	18 177	65 583	49 378	44 839	46 712	59 514
Hong Kong (China)	2 097	3 146	27 331	7 348	493	1 519	1 870	2 794	3 991	2 784	2 047
India	5 607	4 782	9 461	1 523	1 405	384	310	2 306	4 309	10 825	4 689
Indonesia	2 976	512	3 651	2 544	1 156	1 749	782	903	1 064	687	1 294
Japan	1 380	694	17 107	2 327	10 563	6 188	10 167	15 741	8 576	4 879	27 835
Korea	1 064	3 120	9 603	3 771	1 294	1 294	4 432	3 821	5 163	6 980	2 275
Malaysia	444	4 039	7 246	2 033	8 182	3 083	1 603	1 166	315	1 905	244
Mongolia	35	0	862	0	0	0	0	0	0	0	10
Pakistan	78	10	61	20	6	27	50	73	26	105	50
Philippines	321	0	863	296	856	1 496	313	119	1 047	476	153
Singapore	487	136	4 975	757	521	980	956	275	1 357	1 545	390
Sri Lanka	5	16	26	239	9	8	14	8	8	22	0
Chinese Taipei	294	243	1124	476	366	592	475	653	397	681	469
Thailand	786	234	220	194	806	1 542	1 991	1 426	981	3 253	906
Viet Nam	4 955	3 168	3 076	575	122	188	167	130	183	1 494	1 998

Source: OECD Capital Market Series dataset, see Annex 2 for details.

Table A.2. Number of companies

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bangladesh	12	8	8	7	16	10	20	10	7	5	12
Cambodia	0	0	0	0	1	0	1	1	1	1	0
China	99	169	454	336	190	71	208	296	306	489	206
Hong Kong (China)	22	31	36	39	23	42	42	55	68	81	99
India	40	23	65	39	29	40	56	72	101	179	173
Indonesia	18	14	22	25	21	28	23	16	15	35	55
Japan	48	20	22	35	51	55	76	91	82	86	92
Korea	48	63	71	67	30	39	57	83	62	61	75
Malaysia	20	11	29	22	15	17	15	12	18	19	28
Mongolia	4	0	1	0	0	0	0	0	0	0	4
Pakistan	8	3	5	3	3	3	5	4	3	5	3
Philippines	2	1	3	6	5	8	5	4	4	4	1
Singapore	17	17	21	19	18	21	22	13	19	30	25
Sri Lanka	3	3	8	16	3	2	5	2	2	4	0
Chinese Taipei	12	15	16	22	13	24	12	20	20	22	26
Thailand	11	18	11	10	19	28	36	31	23	39	20
Viet Nam	50	67	79	40	14	9	8	5	21	14	18

Source: OECD Capital Market Series dataset, see Annex 2 for details.

B. Sectoral distribution of initial public offerings

Table B.1. Distribution of IPOs among different industries, 2018 USD, millions

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Basic Materials											
Volume	4 861	5 994	18 595	9 948	3 473	1 665	2 952	3 607	4 209	6 686	2 523
Share	12%	8%	9%	12%	7%	4%	3%	5%	6%	8%	2%
Consumer Cyclicals											
Volume	5 412	16 273	19 441	17 719	8 528	3 831	12 287	9 955	10 577	14 269	15 668
Share	14%	22%	10%	21%	17%	10%	14%	13%	15%	17%	15%
Consumer Non-Cyclicals											
Volume	3 631	3 963	8 994	6 178	4 544	8 143	10 213	4 367	2 791	4 604	3 374
Share	9%	5%	4%	7%	9%	22%	11%	6%	4%	6%	3%
Energy											
Volume	4 092	3 038	11 021	3 652	869	1 590	2 038	739	533	557	623
Share	10%	4%	5%	4%	2%	4%	2%	1%	1%	1%	1%
Financials											
Volume	2 767	9 013	81 306	6 239	6 104	8 662	5 809	26 671	23 473	20 379	12 076
Share	7%	12%	40%	8%	12%	23%	7%	34%	32%	25%	12%
Healthcare											
Volume	494	4 398	10 885	6 556	3 762	1 958	2 524	6 214	8 029	4 735	4 493
Share	1%	6%	5%	8%	8%	5%	3%	8%	11%	6%	4%
Industrials											
Volume	12 567	16 985	37 370	17 977	16 940	8 462	13 615	17 783	15 165	19 352	11 001
Share	32%	23%	18%	22%	34%	23%	15%	23%	21%	23%	11%
Technology											
Volume	1 531	3 571	12 358	7 914	3 445	2 366	34 868	4 723	6 341	9 044	16 703
Share	4%	5%	6%	10%	7%	6%	39%	6%	9%	11%	16%
Telecommunications											
Volume	78	3 988	615	1 419	923	2	111	659	133	299	35 057
Share	0%	5%	0%	2%	2%	0%	0%	1%	0%	0%	34%
Utilities											
Volume	3 933	6 334	1 829	5 315	776	676	4 486	4 120	1 098	2 468	419
Share	10%	9%	1%	6%	2%	2%	5%	5%	2%	3%	0%

Note: Industry classification is made based on Thomson Reuters Industry Classification (TRBC).

Source: OECD Capital Market Series dataset, see Annex 2 for details.

C. Largest initial public offerings by Asian companies

Table C.1. Largest 20 IPOs between 1990-2018

Company	Jurisdiction	Exchange	Industry	Year	Proceeds (USD, millions)
Alibaba Group Holding Ltd	China	New York	Technology	2014	25 032
Softbank Corp	Japan	Tokyo	Telecommunications Services	2018	23 349
Agricultural Bank of China Ltd	China	Hong Kong /Shanghai	Financials	2010	22 121
Industrial & Commercial Bank of China Ltd	China	Hong Kong /Shanghai	Financials	2006	21 969
AIA Group Ltd	Hong Kong (China)	Hong Kong	Financials	2010	20 491
NTT Docomo Inc	Japan	Tokyo	Telecommunications Services	1998	18 052
Bank of China Ltd	China	Hong Kong	Financials	2006	11 186
Dai-ichi Mutual Life Insurance Co	Japan	Tokyo	Financials	2010	11 159
East Japan Railway Co	Japan	Tokyo	Industrials	1993	9 914
Japan Tobacco Inc{JT}	Japan	Tokyo	Consumer Non-Cyclicals	1994	9 576
China Construction Bank Corp	China	Hong Kong	Financials	2005	9 227
Japan Airlines Co Ltd	Japan	Tokyo	Industrials	2012	8 474
Postal Savings Bank Of China	China	Hong Kong	Financials	2016	7 627
DDI Corp	Japan	Tokyo	Telecommunications Services	1993	7 591
China Tower Corp Ltd	China	Hong Kong	Telecommunications Services	2018	7 492
China State Construction Engineering Corp Ltd	China	Shanghai	Consumer Cyclicals	2009	7 343
China CITIC Bank Corp Ltd	China	Hong Kong /Shanghai	Financials	2007	6 495
China Railway Engineering Corp	China	Hong Kong	Consumer Cyclicals	2007	5 877
Japan Post Holdings Co Ltd	Japan	Tokyo	Industrials	2015	5 726
China Railway Construction Corp	China	Shanghai	Industrials	2008	5 706

Source: OECD Capital Market Series dataset, see Annex 2 for details.

Table C.2. Largest 10 IPOs in 2018

Company	Jurisdiction	Exchange	Industry	Year	Proceeds (USD, millions)
Softbank Corp	Japan	Tokyo	Telecommunications Services	2018	23 349
China Tower Corp Ltd	China	Hong Kong	Telecommunications Services	2018	7 492
Xiaomi Corp	China	Hong Kong	Technology	2018	5 431
Meituan Dianping	China	Hong Kong	Consumer Cyclicals	2018	4 856
Foxconn Industrial Internet Co Ltd	China	Shanghai	Technology	2018	4 260
iQIYI Inc	China	Nasdaq	Telecommunications Services	2018	2 424
Pinduoduo Inc	China	Nasdaq	Technology	2018	1 626
Mercari Inc	Japan	Tokyo	Cons. Cyclicals	2018	1 188
Nio Inc	China	New York	Cons. Cyclicals	2018	1 152
Ping An Healthcare & Technology Co Ltd	China	Hong Kong	Telecommunications Services	2018	1 118

Source: OECD Capital Market Series dataset, see Annex 2 for details.

D. Secondary public offerings by home market of the company

Table D.1. Proceeds, 2018 USD, millions

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bangladesh	0	0	0	0	0	0	13	0	0	142	44
Cambodia	0	0	0	0	148	168	0	0	128	0	5
China	27 374	69 992	112 921	73 806	66 316	71 263	97 289	170 436	181 553	124 666	85 937
Hong Kong (China)	9 102	22 773	28 355	14 561	33 766	12 269	28 190	49 432	14 438	28 288	12 459
India	14 611	19 211	25 259	13 701	23 105	17 469	14 938	24 998	11 109	25 880	36 116
Indonesia	6 994	3 368	11 823	6 632	3 807	4 991	3 700	2 935	3 480	3 777	2 902
Japan	13 289	74 668	49 015	18 136	11 797	27 405	17 772	16 914	13 301	38 205	17 774
Korea	16 652	16 517	12 336	16 297	8 035	12 212	12 572	11 956	15 330	14 244	15 605
Malaysia	2 180	6 624	6 094	3 358	4 999	4 931	8 551	6 090	4 472	4 382	1 449
Mongolia	0	0	0	0	89	0	225	0	0	0	35
Pakistan	127	0	121	286	12	68	811	1 286	484	381	231
Philippines	658	2 334	2 195	2 235	5 260	6 639	3 157	2 381	2 064	3 077	5 129
Singapore	2 209	11 478	2 795	3 025	3 511	5 265	5 185	3 736	2 220	1 191	1 565
Sri Lanka	2	60	197	354	114	276	157	144	29	565	454
Chinese Taipei	2 600	10 187	5 609	7 450	5 931	7 073	5 021	5 266	1 807	4 671	4 040
Thailand	658	1 321	4 148	2 815	9 598	5 718	5 148	3 414	5 240	2 773	1 655
Viet Nam	1 048	1 325	1 882	1 476	539	763	886	1 136	426	992	458

Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex 2 for details.

Table D.2. Number of SPOs

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bangladesh	0	0	0	0	0	0	1	0	0	4	3
Cambodia	0	0	0	0	2	1	0	0	1	0	1
China	111	206	284	222	176	346	479	714	658	485	285
Hong Kong (China)	170	410	455	264	261	306	429	540	321	273	174
India	161	269	353	230	270	299	260	230	233	269	250
Indonesia	24	23	48	35	41	25	16	10	17	15	31
Japan	158	213	159	116	109	197	171	168	120	179	161
Korea	749	750	446	303	249	251	302	364	462	357	418
Malaysia	53	56	88	91	98	106	141	134	93	134	99
Mongolia	0	0	0	0	1	0	2	0	0	0	2
Pakistan	1	0	7	14	3	3	13	11	13	21	19
Philippines	45	29	22	35	43	41	24	14	10	15	23
Singapore	65	134	123	70	98	133	102	77	90	82	81
Sri Lanka	2	14	28	23	17	12	13	15	9	22	20
Chinese Taipei	38	94	90	68	67	64	63	57	41	63	64
Thailand	48	37	50	41	51	93	82	58	44	51	47
Viet Nam	25	82	161	66	26	46	69	68	36	38	4

Source: OECD Capital Market Series dataset, Thomson Reuters Eikon, see Annex 2 for details.

ANNEX 2 – METHODOLOGY FOR DATA COLLECTION AND CLASSIFICATION

A. Public equity data

The dataset is based on transaction and/or firm-level data gathered from several financial databases, such as Thomson Reuters Eikon, Thomson Reuters Datastream, FactSet and Bloomberg.

Considerable resources have been committed to ensure the consistency and quality of the dataset. Different data sources are checked against each other and, whenever necessary, the information is also controlled against original sources, including regulator, stock exchange and company websites and financial statements. The dataset will be continuously updated following a strict protocol in terms of definitions provided below.

Regional coverage and classification

The dataset includes information about all initial public offerings (IPO) and secondary public offerings (SPO or follow-on offering) by financial and non-financial companies from 17 Asian economies. This currently amounts to 21 029 IPOs for the period from January 1990 to December 2018, and 32 740 SPOs for the period January 1990 to December 2018.

All public equity listings following an IPO, including the first time listings on an exchange other than the primary exchange, are classified as an SPO. If a company is listed on more than one exchange within 180 days, those transactions are consolidated under one IPO.

The country breakdown is carried out based on the domicile country of the issuer. In the dataset, country of issue classification is also made based on the stock exchange location of the issuer.

The OECD does not have an official country classification. However, there are several country classification methods adopted by international organisations or credit rating and index companies. The review will follow the IMF country classification, which takes into account multiple criteria, including per capita income level, export diversification, and degree of integration into the global financial system. The classification of Asian economies based on IMF methodology is presented in Table 2.1.

Table 2.1. IMF classifications

	Advanced economies	Major advanced economies (G7)	Other advanced economies	Emerging market and developing economies	Emerging and developing Asia	ASEAN
Bangladesh				X	X	
Cambodia				X	X	X
China				X	X	
Hong Kong (China)	X		X			
India				X	X	
Indonesia				X	X	X
Japan	X	X				
Korea	X		X			
Malaysia				X	X	X
Mongolia				X	X	
Pakistan				X		
Philippines				X	X	X
Singapore	X		X			X
Sri Lanka				X	X	
Chinese Taipei	X		X			
Thailand				X	X	X
Viet Nam				X	X	X

Currency conversion and inflation adjustment

The IPO and SPO data, and related financial statement data such as total assets before offering, are collected on a deal basis via commercial database in current USD values. The information is aggregated at the annual frequency and in some tables presented at the year-industry level.

Inflation adjustment, or "deflation", is the result of dividing a monetary time series by a price index, such as the Consumer Price Index (CPI), GDP deflator, Producer Price Index (PPI), among others. The deflated series are said to be expressed in constant USD values whereas the original series were measured in nominal USD or current USD. Inflation is often a significant component of apparent growth in any series measured in USD or any other currency. By adjusting for inflation, the real growth in the series in uncovered.

The issuance amounts in this report are presented in 2018 USD adjusted by US CPI.

The thresholds for identifying growth company IPOs -USD 50M and USD 100M- are fixed in 2010 USD adjusted by US CPI.

Industry classification

Financial data providers usually have multiple industry classifications for each company. However, in general only one or a few classifications are available for most companies. The data presented in this report uses Thomson Reuters Business Classification (TRBC).

The main economic sectors and their industry groups are the following:

Table 2.2. Industry classification

Economic Sector	Industry Group
Basic Materials	Chemicals Construction Materials Containers / Packaging Metal / Mining Paper / Forest Products
Cyclical Consumer Goods / Services	Automobiles / Auto Parts Homebuilding / Construction Supplies Hotels / Entertainment Services Household Goods Leisure Products Media / Publishing Retailers - Diversified Retailers - Specialty Textiles / Apparel
Energy	Coal Energy Related Equipment / Services Oil / Gas Renewable Energy
Financials	Banking Services Insurance Investment Banking / Investment Services Real Estate Operations
Healthcare	Biotechnology / Medical Research Healthcare Equipment / Supplies Healthcare Providers / Services Pharmaceuticals
Industrials	Aerospace / Defence Air Freight / Courier Services Airline Services Commercial Services / Supplies Construction / Engineering / Materials Machinery / Equipment / Components Marine Services Rails / Roads Transportation
Non-Cyclical Consumer Goods / Services	Beverages Food / Drug Retailing Food / Tobacco Personal / Household Products / Services
Technology	Communications Equipment Computers / Office Equipment Semiconductors / Semiconductor Equipment Software / IT Services
Telecommunications Services	Telecommunications Services
Utilities	Electric Utilities Gas Utilities Utilities - Multiline Utilities - Water / Others

Foreign criteria identification

In the Focus Chapter, a foreign capital raising activity refers to a company raising equity capital in a different market than where its headquarters are located. In this section, mainland China and Hong Kong (China) are considered as China. This currently amounts to 3 500 companies raising equity capital through foreign IPOs for the period from January 1990 to December 2018, and 5 224 companies raising equity capital through SPOs for the period January 1990 to December 2018.

Exclusion criteria

With the aim of excluding IPOs and SPOs by trusts, funds and special purpose acquisition companies the following industry categories are excluded:

- Financial companies that conduct trust, fiduciary and custody activities
- Asset management companies such as health and welfare funds, pension funds and their third-party administration as well as other financial vehicles
- Companies that are open-end investment funds
- Companies that are other financial vehicles
- Companies that are grant-making foundations
- Asset management companies that deal with trusts, estates and agency accounts
- Special Purpose Acquisition Companies (SPACs)
- Closed-end funds
- Real Estate Investment Trusts

Listings on an over-the-counter (OTC) market are also excluded.

In terms of security types, the public offerings of “units” and “trust” are also excluded.

Transactions without any proceeds (such as market/segment/stock exchange changes and admissions to trading without any fundraising) are excluded.

B. Investment banking data

The investment banking data uses as the main source of information the Thomson Reuters League Tables. Each table offers information about the top 100 investment banks in the selected region, their ranking in the table, total gross proceeds allocated to that bank, the market share for each bank and the number of deals in which the bank was involved during the selected period of time.

Inclusion criteria

The information is collected for Bonds (including High Yield, Investment Grades, and Emerging Markets); Equity (includes Initial Public Offerings and Secondary Public Offerings); Syndicated Loans; and Mergers and Acquisitions (M&A). Information is retrieved on an annual basis from 2000 to 2018. Each table provides information for the top 100 investment banks involved in underwriting each of the above mentioned securities. The allocation method chosen is equal to each bookrunner, which means that if there is a USD 1 billion loan and 2 bookrunners on the deal they will get USD 500 million each.

Regional coverage and classification

Data are collected by security at global, regional and market level. For the global analysis information is collected for the following eight regions of activity: Global; United States; United Kingdom; China; Japan; Europe excluding United Kingdom; Asia excluding China and Japan; and the Rest of the World.

For the Asia analysis, the information is collected for Asia and the selected markets included in the region were: Bangladesh, Cambodia, China, Hong Kong (China), India, Indonesia, Japan, Korea, Laos, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand and Viet Nam. Note that information for Viet Nam is not available before 2006.

Identification of the banks' origin and region

A full list containing each unique bank in the sample is created to identify its country of origin. The list of unique bank names contains almost 6 thousand banks. Their nation of origin is assigned based on the location of the headquarters. Sources of information such as FactSet, Thomson Reuters, Bloomberg and banks websites/annual reports are used to identify banks' origin nation.

C. Ownership data

The main source of information is FactSet Ownership database. This dataset covers companies with a market capitalisation of more than USD 50 million and accounts for all positions equal to or larger than 0.1% of the issued shares. All Japanese companies are covered, regardless of market value.

To complement the information with additional market information Thomson Reuters is also used. For each of the countries covered in the sample the information about the 100 largest companies by market capitalisation −as of the end of 2018− is collected.

In a second step, the information for the reported owners as of the end of 2018 is collected for each company. Some companies can have up to 5 000 records in the list of owners. Each record contains the name of the institution, the percentage of outstanding shares owned, the investor type classification, the origin country of the investor, the ultimate parent name, among others. Each owner record is re-classified into the following investor categories: Private Corporations, Public Sector, Institutional Investors, Strategic Individuals and Other free-float including retail investors. When the ultimate parent was recognised to be a central or local government, the investor record is by default classified as Public Sector. Public pension funds (OECD, 2005) that are regulated under public sector law and sovereign wealth funds are also classified as Public Sector.

Regional coverage and classification

The analysis covers the following markets: Brazil, China, Chinese Taipei, Germany, France, Hong Kong (China), India, Indonesia, Japan, Korea, Malaysia, Mexico, Philippines, Poland, Russia, Singapore, Thailand, Turkey, Viet Nam, United States and United Kingdom.

Currency conversion and inflation adjustment

Data are collected as of end of 2018 in current USD and no adjustment was made.

Industry classification

For each company in the sample the TRBC Economic Sector classification from Thomson Reuters is used.

D. Foreign listed companies and cross-listed companies

The dataset is based on information gathered from Thomson Reuters Eikon. Information about all primary listings and dual-listings on all exchanges in the world was collected. Each company can issue shares in different markets and each security has a single ISIN code assigned. Note that each share with the same ISIN code can be listed on several exchanges for trading purposes with different RICs. The *Primary Quote Flag* is used to eliminate from the sample the listing for trading purposes only. For shares having the same ISIN code but different RICs code, only observations identified as the primary quote (*Primary Quote Flag* equals to 1) are kept to ensure that there is only one observation for each listed share. As each company can list its shares on more than one exchange, the *Primary Instrument Flag* is used to identify the primary listing instrument. For companies with different ISIN codes, observations with *Primary Instrument Flag* equal to 1 are identified as primary share and other observations are identified as secondary share.

Industry classification

The data presented in this report uses Thomson Reuters Business Classification (TRBC). The main economic sectors and their industry groups can be found in Table 2.2

Exclusion criteria

The exclusion process follows the same criteria in Part A of Annex.

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