GROWTH COMPANIES, ACCESS TO CAPITAL MARKETS AND CORPORATE GOVERNANCE

OECD REPORT TO G20 FINANCE MINISTERS AND CENTRAL BANK GOVERNORS

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Growth Companies, Access to Capital Markets and Corporate Governance

OECD Report to G20
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EXECUTIVE SUMMARY

This report is about the relationship between corporate governance and corporate access to capital markets. The focus is on growth companies that have the potential to escape a static state of being a small or medium-sized enterprise. Based on company-level data, the report provides an extensive empirical overview of how corporations enter and use public equity markets and corporate bond markets. It looks at the functioning of these markets, the investors that use them and the companies that provide them with services, such as credit ratings. From the perspective of growth companies, shortcomings and initiatives for improvements are identified and discussed.

Growth companies play a critical role for economic development. Not least for economies that want to advance along the global value chains and where self-employment and SME employment primarily is a second best solution in the absence of larger firms that are more innovative, more productive and provide better paid jobs.

But growth requires investment and long-term investment requires patient capital. It is therefore essential that companies that have the potential to grasp commercial opportunities of scale and scope have access to equity capital. The reason is that, compared to other forms of funding, equity capital allows companies to undertake forward looking investments with uncertain outcomes in tangible as well as intangible assets, such as research, development and innovation.

In order to get access to public equity markets corporations need to meet investor expectations with respect to corporate governance practices. They need to establish a formal structure of procedures, rights and responsibilities that make investors willing to provide money and make the original owners willing to share ownership with a new circle of outsiders. The Principles of Corporate Governance (the Principles)\(^1\) provide the elements of such a framework. They also provide guidance for policy makers and regulators on how to assess, design and improve corporate governance related laws and regulation. The Principles provide recommendations in a number of critical areas such as the rights of shareholders, institutional investor practices, the functioning of stock markets, the role of stakeholders, corporate disclosure and the responsibilities of the board of directors. Importantly, they also address the quality of supervision and enforcement.

Using data from more than 150,000 individual transactions, this report provides an overview of how corporations have used public equity markets and corporate bond markets. In emerging markets there is a marked increase in the number of companies that use public equity markets for the first time through an initial public offering (IPO). Since 2008, about half of all equity capital that has been raised through IPOs worldwide has been raised by companies from emerging markets. With respect to corporate governance, a large portion of these new publicly traded companies have a rather concentrated ownership structure with a dominant owner.

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\(^1\) See (OECD, 2015b), \textit{OECD Report to G20: G20/OECD Principles of Corporate Governance}
In advanced economies there are two major trends with respect to IPOs. First, there is a successive decrease in the number of new companies that use public equity markets as a source of funding. Between 2008 and 2014 there were on average 432 companies per year entering the stock market for the first time compared to 1,170 during the period 1994-2000 and 853 companies between 2001 and 2007. Second, the companies that actually use public stock markets tend to be larger than they used to be. These trends have raised concerns about growth companies access to public equity markets.

The report discusses a number of factors that may explain this development. These include an increase in regulatory and compliance costs related to a stock exchange listing; the investment behaviour and incentives of institutional investors and other capital market intermediaries such as market makers, and; changes in the business models of the stock exchanges themselves.

The report also shows that entering the public stock market is not only important with respect to the equity capital that companies can raise at the time of the initial public offering. Within four years after they first entered the stock market, 37% of smaller growth companies raised additional equity capital through a secondary public offering (SPO).

Entering the stock market and establishing a formal corporate governance structure also increases the opportunities to tap other sources of capital, notably the corporate bond market. A vast majority of corporations that use corporate bond markets are already listed on a stock exchange or are a subsidiary of a listed company. Also, nearly 50% of all listed companies that issue corporate bonds for the very first time during the periods 5 years prior and after their IPO date do it within 3 years after they entered the stock market.

While corporate bonds have become an increasingly important source of funding for corporations worldwide, the public corporate bond markets are still dominated by large established companies. The report looks at a number of possible barriers for smaller growth companies to issue bonds. These include the fee structures among service providers, such as rating agencies and underwriters; investment strategies among institutional investors and incentives among market makers. The report provides an update of national initiatives aiming to promote bond issues, including the promotion of private placements coupled with simplified procedures and documentation.

This report illustrates the importance of good corporate governance for access to capital and greater financial flexibility. This is of particular importance to forward looking growth companies with a need for long-term investments that sometimes have an uncertain outcome. The Principles of Corporate Governance provides a useful benchmark for assessing and developing a corporate governance framework that serves this purpose. For the corporate governance framework to be effective however, it is also necessary to address the ability and willingness of investors and other market participants to make informed use of all the information and the rights that they are provided with. That would include a closer look at how growth companies are affected by the practices and incentives of ever larger institutional investors and financial market service providers but also by the functioning of stock and bond markets themselves.
PART I. INTRODUCTION AND OVERVIEW

In market economies, the business corporation is a key engine for development and economic growth. Not only do societies rely on corporations for the everyday supply of goods and services. Through investments in research, innovation, human resources and fixed capital, corporations also contribute to address long-term global challenges in areas such as clean energy and public health; improving the quality of life for people around the world.

Figure 1. The share of the corporate sector in investment and employment (2013)

A. Investment as % of GFCF

B. Employment as % of total labour

Notes: (1) Investment: Corporate sector investment as a percentage of gross fixed capital formation (GFCF). (2) Employment: Total corporate sector employment = Total labour force - (unemployment + own-account worker + contributing family workers + workers not classifiable + public sector excluding SOEs).

Source: OECD, ILO, World Bank.

Of particular interest for economic development are the growth companies. These are companies that escape a static state of being a small or a medium-sized enterprise. Instead, they manage to realise their full potential by grasping commercial opportunities of scale and scope. During this process of continuous investment, growth companies contribute to innovation, productivity and net job creation. Growth companies also play an important role in challenging established corporations and business practices. As competitors they force established corporations to be more creative and as role models they stimulate new entrepreneurs.

2 There exist various definitions of “growth companies”. In the Eurostat-OECD Manual on Business Demography Statistics (2007) they are defined as “All enterprises with average annualised growth greater than 20% per annum, over a three year period should be considered as high-growth enterprises. Growth can be measured by the number of employees or by turnover.” The Jumpstart Our Business Startups Act (JOBS Act) in the US defines an “emerging growth company” as any issuer that had total annual gross revenues of less than USD1 billion during its most recently completed fiscal year. There have been other definitions used by financial industry or in academic studies. For example, Fidelity Growth Company Fund, a mutual fund invests in public equities, defines them as companies that offer the potential for above-average growth, which may be measured by factors such as earnings or revenue.
Providing an economic environment that supports growth companies is therefore a key policy priority with long-term and economy wide benefits. Particularly for countries that want to advance along the global value chains and where SME employment mainly is a second best solution in the absence of larger firms that are more productive and provide people with better paid jobs.

An important condition for corporations to grow is that they have access to capital for investment in tangible as well as intangible assets. This requires first of all that capital markets are fit for purpose. That actors and institutions in capital markets, such as banks, investment funds and stock markets, have the incentives to properly serve their fundamental role to provide the real economy with capital and to monitor how well this capital is used once it is employed in individual companies. But access to capital also requires that the companies themselves adapt their corporate governance practices to the expectations of external investor who need assurances with respect to the quality of issues such as financial reporting standards, disclosure routines and the board of directors. The expectations from external investors will vary with the kind of capital they are asked to provide.

Since the company’s growth journey typically includes changes in the way that the corporation finances itself, it also includes a successive adaption to new corporate governance standards. And the transition from one stage to another may sometimes be a challenge, requiring the introduction of new routines, structures and competencies. New accounting rules may have to be applied, the board composition may have to change and communication with shareholders and other stakeholders need to be developed. But once the company has improved its corporate governance standards - once a certain threshold is passed - the company has reached a new level of institutionalisation, which provides it with new opportunities, not least with respect to capital market access and financial flexibility.

To be sure, not all companies will make use of all the sources of financing that capital markets provide. And for many of those growth companies that actually succeed to grow large, access to capital markets and increased financial flexibility has at some stage played an important role.

1.1. Not all money is the same

The capital that corporations use differs in a number of ways. Some kinds of capital are suitable for short term use and some can be used for longer and more uncertain undertakings. Different types of capital also differ with respect to the conditions upon which they can be obtained. Ordinary bank loans for example, may only be obtainable if the company can provide low risk collateral, for example in the form of real estate. Such capital may seriously constrain the kind of investments and risk that the company can assume.

The unique character of equity capital

Of particular importance for long-term investment and growth is equity capital. The reason is that equity has some distinct characteristics that give it a special role as a source of financing compared to other forms of external capital, such as bank loans and trade credit.

First of all, an injection of equity capital is eternal. Once it is provided it cannot be withdrawn by the individual capital provider - the shareholder. This is obviously in sharp contrast to temporary capital injections, for example bank loans, which in emerging markets have an average maturity of 2.8 years (Group of Thirty, 2013). After that, the borrower must be ready to pay back the loan.

Second, equity capital is patient in the sense that any fixed interest or a given rate of return is not guaranteed. The providers of equity will be paid only after all other stakeholders, such
as employees, suppliers, tax authorities and creditors have been paid. This means that among capital providers, the equity owners will be the first to assume the cost if a business venture goes wrong.

Third, since equity only receives the residual profits, equity capital is typically more risk-willing than other forms of external capital, which normally receive a given return regardless of how well the company is doing. This characteristic of equity is particularly important for future oriented companies where the outcome of research, innovation, product development and market entry is uncertain and the willingness to take risk is important.

The eternal, patient and risk-willing nature of equity capital means that supply and access to equity capital is not only of importance to the individual company. The existence of enough equity capital is actually of systemic importance to the very structure and long-term dynamics of an economy’s business sector. Importantly, the availability of equity opens up for a gradual shift in a country’s industrial structure from companies that are constrained in their development by short term credits and loans that often require low-risk collaterals in terms of fixed assets, towards more future oriented, innovative, knowledge-based and human-capital intensive enterprises that can advance along the global value chains.

The importance of retained earnings

With respect to the corporation’s capacity to invest, it is important to recognise that the amount of equity capital available is not necessarily limited to the amount of equity that shareholders’ provide when the corporation is first set up. Instead, every year, corporate profits that are not paid out to the shareholders in the form of dividends or share buybacks are kept in the company as retained earnings. These retained earning can be viewed as a continuous injection of new equity capital from the shareholders and play a major role in the ability to finance investments in both tangible and intangible assets.

In advanced economies between 1995 and 2010, it is estimated that on average 66% of corporate investments were financed by shareholder capital in the form of retained earnings. In emerging market economies on the other hand, only 25% of corporate investments were financed by retained earnings (Group of Thirty, 2013). Figure 2 provides an aggregate overview of the relative distribution of different sources of financing for non-financial listed companies in all G20 countries, with shareholder’s equity and retained earnings accounting for about 40 percent.

Equity capital as corporate currency

In addition to serving as a direct source for financing investment, equity also provides the corporation with its own currency, which in turn may increase the company’s financial flexibility. Equity may, for example, be used to finance acquisitions and as a means of payment for performance based remuneration and incentives schemes, sometimes in the form of stock options. In a growth company context, such remuneration schemes may be particularly suitable to human-capital intensive enterprises, which may have negligible current earnings during the start-up phase but have ambitious employees who, in exchange for possible future profits, are willing to work hard, take risks and invest their talents in the company’s long-term success.
Last but not least, access to a functioning equity market can also allow founders and early supporters of growth companies, such as venture capital firms, to turn their initial investment in the company into cash. Without this possibility to exit, financiers and employees of smaller growth companies may be less willing to lock-in their money and time during the critical growth period of the enterprise. The money they receive through the exit may sometimes be used to start up new companies or invest in other existing businesses. Obviously, they can also sell the enterprise directly to an existing larger company. And as a matter of fact, large firms continuously acquire small promising enterprises that may either complement or compete with their own business. While this may be the best solution in some cases, it has also been argued that large scale acquisitions of smaller growth companies by established firms can hamper the development of new large independent and possibly competing enterprises in the economy. Access to a functioning public equity market at least provides founders and early backers with an alternative option if they prefer the enterprise to survive and grow as an independent company.

**Equity capital in a macroeconomic context**

The role of equity capital has also been addressed from a macroeconomic perspective. Studies by the IMF (2015) and OECD (Cournède et al., 2015) about the role of the financial sector for economic growth conclude that the composition of finance matters. Looking at developments over a fifty year period, the OECD report finds that "more credit to the private

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**Figure 2. Aggregate balance sheet of non-financial listed companies in G20 countries (2013)**

<table>
<thead>
<tr>
<th>A. Assets</th>
<th>B. Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash, 14%</td>
<td>Accounts payable, 8%</td>
</tr>
<tr>
<td>Receivables, 11%</td>
<td>Other current liabilities, 11%</td>
</tr>
<tr>
<td>Inventories, 8%</td>
<td>Short-term debt, 7%</td>
</tr>
<tr>
<td>Other current assets, 3%</td>
<td>Long-term debt, 23%</td>
</tr>
<tr>
<td>Subsidiaries, 3%</td>
<td>Other long-term liabilities, 11%</td>
</tr>
<tr>
<td>Tangible assets, 36%</td>
<td>Shareholders's equity, 20%</td>
</tr>
<tr>
<td>Other assets (intangibles etc.)</td>
<td>Retained earnings, 18%</td>
</tr>
<tr>
<td>29%</td>
<td>Minority interest, 2%</td>
</tr>
</tbody>
</table>

*Source: Thomson Reuters, OECD calculations.*

3 There has been a significant number of acquisitions by some large established companies in more intangible-asset-intensive industries over the last decades, which has raised some concerns about the ability of growth companies to develop and expand as independent companies. According to the US Commerce Department data, the share of young companies as percentage of total number of companies in the US decreased from 50% to 34% in the last thirty years.
sector slows growth in most OECD countries, but more stock market financing boosts growth". When this is the case, it underlines the importance that equity markets must be fit for their purpose to serve their role as providers and efficient allocators of equity to growth companies. To ensure that equity market structures and institutions serve this role is not only a concern for countries with developed capital markets. It is at least as relevant to those countries that are currently in the process of developing their stock markets and for that purpose have the advantage of learning from the last 20 years experiences of more developed economies.

1.2. Corporate use of public equity markets

As mentioned above, a company’s growth journey includes a number of different stages; not least with respect to finance. For many companies, one of the most important steps is when they first reach out to seek external equity capital funding from a wide and anonymous circle of investors. This is typically done through an initial public offering when the company’s shares are also listed for public trading on a stock exchange. This process is typically associated with more demanding and standardised corporate governance requirements, for example with respect to financial reporting, disclosure and shareholder rights.

A shift from developed to emerging markets

Between 1995 and 2014 approximately 27,000 companies around the world made an IPO raising a total of USD 3.5 trillion in equity capital. During the same period some companies also left the public stock market and the net result is that today there are approximately 50,000 listed companies worldwide. 26,000 of these companies are listed in emerging markets.

In the 20 year period between 1995 and 2014, two general trends stand out: The number of IPOs in advanced economies has decreased considerably while the number of IPOs in emerging markets has increased. Between 1995 and 2000 there were on average 1,170 non-financial company IPOs per year in advanced economies raising USD 145 billion. This was followed by a decline in the period 2001-2007 and a further drop during the period 2008-2014 when the average number of non-financial company IPOs was just 432 per year raising USD 63 billion.

Figure 3. Initial public offerings by US and European non-financial companies

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

4 This report follows IMF’s country classification of advanced economies and emerging markets and developing countries.
In emerging markets however, the amount of equity capital raised through IPOs more than doubled from an annual average of USD 23 billion during the period 1995-2000 to USD 65 billion in the period 2008-2014. Since 2008, 51% of all equity capital raised through IPOs worldwide has been raised by companies from emerging markets. The numbers for emerging markets are dominated by Chinese companies who since 2008 stood for 62% of all equity capital raised in emerging markets.

Despite the increase in emerging market IPOs, the McKinsey Global Institute projects a future shortage of equity capital in emerging markets, particularly in China. Based on a moderate GDP growth scenario they estimate an accumulated demand of more than USD 18.4 trillion compared with an estimated supply of USD 8.2 trillion. The result would be a USD 10.2 trillion equity gap by 2020. One of the main means suggested in the report for increasing the supply of equity capital and closing this gap is improvements in corporate governance.

![Figure 4. Initial public offerings by Chinese and other emerging market non-financial companies](image)

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

From a corporate governance perspective it is relevant to note that the free float (the portion of a company’s shares that is subject to regular public trading) is often relatively low and the degree of ownership concentration in individual companies consequently relatively high in most emerging markets, including China. This may raise different kinds of corporate governance issues than those that have dominated the debate in countries where the ownership structure is more fragmented among a large number of owners who each hold a relatively small stake. There has been, for example, less emphasis on the relationship between owners and managers and more attention to the relationship between majority and minority owners.

**Fewer and larger companies go public**

Looking at IPO developments from the perspective of smaller growth companies there is a marked decline in small company IPOs, particularly in the US and Europe. In the period 1994-2000, IPOs smaller than USD 100M together represented 21% of all public equity capital raised in advanced economies. This share has declined almost monotonically since 2004 and was in 2014 down to only 11%. Which means that not only has the average annual number of companies that make an IPO decreased substantially from 1,170 to 432. The companies that actually do make an IPO tend to be larger when the access the public equity market.
In the US for example, the average size of an IPO doubled from USD 123 million during the period 1995-2000 to USD 257 million during the period 2001-2014. Under the assumption that the average free float for an initial public offering was 25%, this means that the average market value of companies they first use the public stock market, in real terms, increased from USD 500 million during the period 1995-2000 to about USD 1 billion during the period 2001-2014. This trend towards fewer and larger IPOs is less pronounced in emerging economies where smaller companies have reached significant levels of public equity market financing in the last seven years.

Several explanations have been suggested for the downward trend in advanced economy IPOs. These include increased regulatory burdens as well as unintended consequences of stock market re-regulation that discouraged market-making in small cap stocks and aggravated the inherent illiquidity of small-cap stocks. Other explanations focusing on the investors’ side point to an increased use of indexing that pays little attention to the performance and prospects of individual companies.

An increased use of dark pools and high frequency trading has also been suggested to divert investors’ attention and analytical resources away from potential growth companies and towards spending money on developing sophisticated algorithms, co-location services and individual data feeds that make it possible to trade just milliseconds before competitors. In short, some of the explanations refer to the increased regulatory burden (for example in terms of reporting and compliance) on companies that want to make an IPO and stay listed. Others emphasise changes in investment strategies and trading practices and yet others highlight the changing business models of stock exchanges. It is likely that all of these factors in varying degrees play a role and require further examination.

**Companies using public equity markets after their IPO**

As discussed above, passing the IPO threshold may for many companies increase their financial flexibility by further improving their access to capital finance. One immediate effect of the IPO is that once a company’s shares are listed for public trading, the company can again turn to the public and raise additional equity capital through a secondary public offering. The amount of equity raised through secondary offerings is by no means marginal or negligible. As a matter of fact, during every year since 2005, secondary offerings by already listed non-financial companies have raised more equity capital than initial public offerings.

**Figure 5. Initial public offerings and secondary public offerings by growth companies (2014 USD, billions)**

![Graph showing initial public offerings and secondary public offerings by growth companies](image)

**Notes:** Growth Companies are grouped in line with their IPO sizes which are less than USD 100 million. Their SPOs are followed within ten years following their IPOs and noted under growth company SPOs.

**Source:** Thomson Reuters, OECD calculations. See Annex 1 for details.
As shown in Figure 5, this relationship also exists for smaller growth companies with an initial public offering of less than USD 100M. In advanced economies, the amount of equity capital that these firms raise through SPOs has always been larger (and some years substantially larger) than what they raised through the IPO.

Importantly, our data also shows that within four years after their IPO, 37% of the smaller growth companies used their position as a listed company to follow up with a secondary public offering. The equivalent portion for companies with an initial public offering larger than USD 100M was 41%. This marginal difference between companies of different sizes indicates that even if fewer small companies have become publicly listed, the ones that actually do make an IPO can continue to tapping public equity markets more or less to the same extent as larger companies; again, underlining the importance of overcoming the “barriers to initial stock market entry”.

### 1.3. Corporate use of bond markets

Entering the public equity market is often a first step for accessing other forms of market-based finance, in particular corporate bonds. As a matter fact, Figure 6 shows that between 60-70 percent of all non-financial companies in emerging markets that issue corporate bonds are already listed companies or subsidiaries of a listed company. In advanced economies 87% of all public bond issues are done by companies that are listed or subsidiaries of a listed company. Also, nearly 50% of all listed companies that issue corporate bonds for the very first time during the periods 5 years prior and after their IPO date do it within 3 years after they entered the stock market.

**Figure 6. Listing status of corporate bond issuers in emerging markets**

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

**A global surge in corporate bond issues**

Globally, corporate bonds have become an increasingly important source of finance also for non-financial companies. As a result, the total value of outstanding corporate bonds reached USD 10.4 trillion in 2014. This is almost three times as much as in 2000 and reflects a successive increase in bond issues both in emerging and advanced economies.

In emerging markets, the use of corporate bonds was overall, a negligible source of external financing 15 years ago. Back in 2000, non-financial corporations issued USD 23 billion worth of corporate bonds and the aggregate value of outstanding bonds amounted to USD 162 billion. Fifteen years later the outstanding stock of non-financial corporate bonds had
increased 10 times and reached USD 1.6 trillion. Another USD 1.5 trillion of outstanding bonds has been issued by financial companies. The single most important emerging market country with respect to corporate bonds is China.

Starting from a higher volume of non-financial corporate bonds in advanced economies, the relative increase has been less dramatic, but still more than doubled, from USD 3.4 trillion in 2000 to USD 8.8 trillion in 2014. While companies from advanced economies still dominate the corporate bond market, their global share of outstanding bonds issued by non-financial corporations decreased from 95.4% in 2000 to 84% in 2014.

Bonds issued after the 2008 financial crisis have been characterised by a marked increase in higher risk non-investment grade bonds, which in 2014 accounted for about 16% of all corporate bond issues. This is up from between 4-8% before 2008.

**Figure 7. Outstanding amounts of non-financial company corporate bonds in advanced and emerging economies**

Source: Thomson Reuters, Bloomberg, OECD calculations. See Annex 1 for details.

**Bonds as a means of financial flexibility**

Following the financial crisis in 2008, when bank credits tended to be more restricted, there was also a marked increase in the number of non-financial companies that issued bonds for the very first time. This was the case in both advanced and emerging economies. In the immediate financial crisis period 2008-2010, companies that never issued bonds before also increased their share of total bond issues. The proceeds raised by such crisis related bond issuers increased from 17% to 37% in advanced economies and from 50% to 62% in emerging economies. In 2010, almost 80% of the bond issuers in emerging markets had never issued a bond during the 5 year period prior to the 2008 financial crisis.

An analysis of the documentation relating to 13,000 individual bond issues by non-financial companies shows that reducing indebtedness has become an increasingly important reason for issuing bonds. Hence, in order to benefit from low interest rates companies have replaced existing debt with cheaper borrowing through corporate bonds. The other dominant, and almost equally important, motive for issuing bonds is re-financing. This can either refer to re-financing outstanding bonds or bank loans. However, since the outstanding amount of non-financial corporate bonds was relatively low before 2008, it is reasonable to assume that a significant part of what is classified as re-financing in fact was also attributable to retiring existing bank loans and other debt.
**Shorter maturities in emerging markets**

While the injection of equity capital can be characterized as eternal with only a residual claim on corporate earnings, corporate bonds obviously have a defined lifetime (maturity) and a pre-defined claim on corporate earnings in the form of interest. Compared to bank loans however, corporate bonds typically have a longer maturity. Globally, the average maturity for non-financial corporate bonds issued in 2014 was around 8 years.

Behind these aggregate numbers are some marked differences between advanced and emerging economies. The longest average maturities are found in the US where they, since 2008 have been between 11 and 14 years for investment grade bonds. In emerging market economies the average maturity for investment grade bonds have during the same period been between 5.3 and 6.8 years. This can be compared with the average maturity for bank loans in emerging markets, which is 2.8 years.

**Figure 8. Average maturities for corporate bonds issued by non-financial companies (years)**

![Diagram showing average maturities for corporate bonds issued by non-financial companies from 2000 to 2014.]

*Source: Thomson Reuters, OECD calculations. See Annex 1 for details.*

Although corporate bonds typically have a longer maturity than ordinary loans, they eventually have to be paid back. As of end 2014, non-financial companies in emerging markets will, in the following six years to 2020, have to pay back or re-finance almost USD 1 trillion of outstanding bonds. This need for financing comes in addition to any needs they have to finance investments. If this coincides with a successive increase in interest rates the result will be higher borrowing cost. This also underlines the importance of access to well-functioning equity markets.

**Corporate bonds markets are still dominated by large companies**

Despite the overall surge in corporate bond issues and the increase in corporations that issue bonds for the first time, the use of public corporate bond markets mainly remain the privilege of large companies. The share of issuers with an asset size of less than USD 250M has actually decreased quite substantially since 2000 when 6.8% of all corporate bond issuers had an asset size of less than USD 250M to around 2% in 2014. Moreover, there has also been an increase in the median value of corporate bond issues, both in advanced and emerging economies.

The situation looks a bit different with respect to private placements in advanced economies where the median size of bond issues has actually decreased somewhat in the last decade. There is also a marked difference in size between private placement bonds and public
issues, which tend to be about twice as large. In emerging economies however, private placements and public bond issues seem to follow each other quite closely with respect to size.

Against this background, there have been a number of national initiatives to improve the conditions for smaller companies to issue bonds, including the encouragement of private placements. There is also a discussion about the effects of the fee structures among intermediaries and secondary market conditions facing smaller corporate bond issuers.

1.4. Corporate governance and access to capital markets

Corporate governance is not an end in itself. That is why the Principles of Corporate Governance (the Principles) were developed to serve broader economic objectives. Most importantly, to facilitate corporate access to capital that can be used for investments that in turn result in higher productivity and sustainable economic growth.

An essential function of a good corporate governance framework is that it provides investors and companies with a common and credible framework of rights and responsibilities that is supported by the rule of law, effective supervision and enforcement powers. The key policy elements for providing this framework are company law and securities regulation. It may also include voluntary standards and commitments developed by business community itself.

*Growth and the benefits of a formal governance structure*

Together, the mandatory and voluntary corporate governance rules provide a formal, institutional structure that is understandable and predictable to all of those that deal with the company. The existence of such an institutional structure of rights and obligations is of fundamental importance for safeguarding the transfer of financial savings into productive investments in the real sector. Without it, savers will not be ready to hand over their money to be used by the company at discretion and the company’s original owner(s) will not be willing to open the company up and to share influence and profits with new shareholders.

The need for a formal and institutional structure becomes most obvious when the original limited circle of shareholders in a growth company seeks external equity financing from the general public. That is, when the company makes an initial public offering and its shares are listed for public trading on a stock exchange. This is also why the Principles primarily focus on companies with shares that are publicly traded.

Based on the experiences of policy makers, regulators, market participants and other stakeholders, the Principles provide guidance across six main areas. Implemented and adapted to country specific circumstances they contribute to the credibility and predictability that is needed for transparent and effective capital markets. The Principles start by focusing on the overall quality of the regulatory framework, its consistency, the role of market institutions, such as stock exchanges and the quality of supervision and enforcement. A second chapter is devoted to the rights of shareholders the equitable treatment of shareholders and their key ownership functions. In light of developments in corporate ownership and market structures during the last decade, a special chapter is devoted to the role of institutional investors, stock markets and other intermediaries, such as proxy advisors. The Principles also have a special chapter on the role of stakeholders, including employees and creditors. There is quite an extensive chapter on the disclosure and transparency, which is an important pillar in any credible corporate governance framework. The last chapter of the Principles is devoted to the responsibilities of the board of directors.

Making an IPO and implementing the required corporate governance practices, for example in terms of transparency and disclosure, is an important step for any company in its own
right. But it also means that the company has passed a certain threshold in terms of its formal structure, which may facilitate access also to other forms of external finance. For example, in this report we find a strong positive relationship between a company’s public listing and its issuing of corporate bonds. In emerging markets, between 60-70 percent of all corporations that issue corporate bonds are also listed on a stock exchange or are subsidiaries of a listed company. So, not only does the IPO provide immediate access to equity capital, the formalised corporate governance structure that follows may also increase the company’s financial flexibility and make it possible to ensure more sustainable access to other forms of market based-finance at a lower cost.

In the process of formalising its corporate governance structure, the corporation obviously needs to develop skills in a vast range of areas from financial reporting to external communication and internal controls. Through a wider circle of board members and shareholder proposals, it may also receive new influences with respect to its management and strategic orientation. For many companies, this may in itself contribute to improved performance and entrepreneurial drive.

In a wider context of business sector development, the introduction of a formal corporate governance structure can be seen as an extension of the - sometimes long - general process to formalise corporate activities. This process starts already when the company first moves from the informal to the formal economy, which has gains not only in terms of employment conditions and tax collection for example, but also in terms of productivity. The 2014 OECD Economic Survey of Turkey (OECD, 2014) for example, concluded that “Stronger trust in a rule-based business environment would encourage faster growth of foreign direct investment firms, which would contribute to productivity gains, inclusive growth and non-debt creating absorption of foreign savings.”

**Flexibility should mean better not lower standards**

Since both corporations and investors differ, the Principles recognize that corporate governance rules and regulations should be flexible enough to meet the needs of corporations that are operating under widely different circumstances. This is of particular relevance to growth companies where the Principles acknowledge that flexibility and proportionality in terms of corporate governance requirements may be necessary depending on factors, such as the company’s ownership structure and stage of development.

Such flexibility in terms of an individual company’s corporate governance should not be interpreted as a need for less demanding rules or the acceptance of sub-standard corporate governance practices. Rather, it should be used to adapt corporate governance practices to the specific needs of both investors and corporations. Corporate governance practices - not least in growth companies - need to strike a balance between the expectations of outside investors on the one hand and the preferences of the original owner(s) on the other hand. If investors’ demand and/or the regulatory burdens are considered excessive by the original owners, the company may decide to stay away from rising outside equity and perhaps even limit their ambitions to grow. The result will be that growth opportunities will not be realised and that investors will lose the opportunity to share in the future wealth creation of the company.

One particular example where the matching of expectations is important is when the original founder(s) and owner(s) want to retain strategic control of the company also after the IPO by using different classes of shares with different voting rights. Google is only one such example. When Google made their IPO in 2004, the public was offered shares with lower voting rights than the original owners and in the formal IPO letter the founders explicitly
declared that: “New investors will fully share in Google’s long term economic future but will have little ability to influence its strategic decisions through their voting rights.”.  

When such control mechanisms are motivated and rational (investor may actually see control by the original entrepreneurs as an asset) they can, for example, be balanced by more demanding provisions with respect to minority protection and stricter voting rules on issues where minority shareholders may be negatively affected. The Principles provide guidance on how to reach such a balance.

When it comes to mandatory corporate governance requirements, the challenge for policy makers is to understand what requirements are of systemic importance for incentives and market confidence on the one hand and what can be left to market participants to agree on a case by case basis. What works well in one company or for one investor may not necessarily be generally applicable or be of systemic economic importance. The fact that jurisdictions have come to different conclusions in this respect and that the regulatory framework evolves, illustrate that the answer is not always straightforward and depends on a range of other factors, such as the quality of the judiciary and the effectiveness of the enforcement system.

**The role of institutional investors and service providers**

The advantages of good corporate governance in terms of access to capital do not only depend on the company itself. Importantly, they also depend on the ability and the willingness of investors to make informed use of the rights that they are provided with.

During the last decade, shareholder rights have been strengthened in most countries and there is a general trend to empower the shareholder meeting in the corporate decision-making process, for example with respect to board nominations and remuneration policies. Important requirements have also been added with respect to reporting and disclosure. Today, the discussion on shareholder participation is instead focused on the actual quality of monitoring and engagement by the shareholders themselves.

The market economy relies on shareholders to price and allocate equity capital among different business opportunities. And since they are assumed to have a self-interest in the performance of the company, it is also assumed that they seek as much and varied information as possible about the company’s prospects. This ownership function is socially beneficial, since it improves capital allocation in the economy and a constant and active search also for companies that have a real potential to grow.

However, today’s shareholder community is increasingly dominated by institutional investors that apply passive investment strategies and use indexed investment vehicles such as mutual funds and exchange traded funds. These strategies are based on a pre-defined set of criteria with respect to what companies to buy and help the investors to reduce transaction costs for trading and advisory fees for corporate analysis. Once the criteria for inclusion in the index are established, a passive index strategy gives the investors little incentive to pay attention to variations in the fundamental potential of individual companies, including smaller growth companies. Since many of the indexed investment vehicles also need to remain liquid, the inclusion in the index of small company stocks is less likely compared to large companies.

As a result of a passive or indexed investment strategy, many large institutional investors carry out their corporate governance engagement – including voting - by buying services from specialised firms. As one large institutional investor put it “Since we invest by index, we..."
vote by index” (Lowenstein, 1991). As the profit maximizing service providers naturally wants to minimise their costs, expensive individual firm level analysis may again be sacrificed in favour of standardised benchmarks that provide little scope for variations and appreciation of the quality of corporate governance in individual firms.

It is likely that a system where business models and incentives are biased towards passive and indexed investment strategies tend to disadvantage smaller growth companies that will get less attention and lower liquidity, regardless of their corporate governance record. As a result the stocks may be harder to launch through an IPO and also mispriced during irregular trading.

Shareholders that for some reason do not find it worthwhile to inform themselves or to exercise any monitoring of corporate performance are obviously ill equipped to serve the wider economic role of improving capital allocation and corporate performance. Instead, their role in the economy would be limited to providing capital. This has given rise to a discussion about the possibility to differentiate dividends and/or shareholder rights between on the one hand those shareholders that contribute capital, information and monitoring and, on the other hand, those shareholders that only contribute capital. This discussion may be of particular relevance for smaller growth companies where the costs and efforts associated with active and engaged ownership may be proportionally higher.

The Principles recognise that a lack of shareholder engagement may lead to a box-ticking approach and recommend that institutional investors that act in a fiduciary capacity disclose their corporate governance and voting policies, as well as the process they have in place to use their voting rights. The Principles also recommend that proxy advisors disclose and minimize the conflicts of interest that might compromise the integrity of their analysis or advice.

Stock exchanges and growth companies

Stock exchanges have traditionally served the important role of matching companies that need access to equity capital with investors that are in search for investment opportunities. But as described in Section 1.2 above, advanced economies have experienced a dramatic decrease in initial public offerings and the size of the companies that actually do an IPO has increased. Some commentators seek the explanation to this trend in the development of stock markets and stock exchanges themselves. In particular that the inherent illiquidity disadvantage of small company stocks has been aggravated by the new business model of stock exchanges and regulatory changes, resulting in fewer small size IPOs.

Since the 1990s many of the largest stock exchanges in advanced economies have undergone a profound change from mutual, not-for-profit associations to profit-maximizing corporations that themselves are publicly listed. Changes in the regulatory framework have also brought increased competition between traditional stock exchanges and alternative trading venues. As of 1 June 2015 there were 13 regulated exchanges in the US and more than 80 alternative trading venues.

These changes have been accompanied by a shift in the revenue structure of stock exchanges. Importantly, revenues from trading have increased substantially. In the late 1990s revenues from trading represented about 40% of their income. And in 2012, revenues from trading had increased to 61%. During the same period, revenues related to the listings of new companies on the other hand, decreased from 16% to only 6%.

Another important source of income for today’s stock exchanges is information technology and data services, which in 2014 represented 20% of all revenues. This would include services provided to high-frequency traders and other algorithmic traders, which requires
high liquidity and typically focus their interest on liquid stocks in larger companies. At the London Stock Exchange the stocks of the 100 largest companies in terms of market capitalization represented more than 80% of all stock trading every year during the period 2001-2011. Trading in the FTSE Small Index companies on the other hand represent less than one percent of all trading.

Considering that revenues from trading and the provision of services to high frequency and algorithmic traders that focus on liquid stocks make up the lion’s share of revenues, it is not unreasonable that the very business models of many modern stock exchanges have made the listing of small companies relatively less important.

The Principles recognise the important role of well-functioning stock exchanges, not only for their ability to exercise corporate governance but also as watchdogs for upholding acceptable standards. Special attention is given to the quality and access to market information, including fair and efficient price discovery, and to how the particular business models of stock exchanges affect their incentives and ability to carry out functions with respect to standard setting, supervision and enforcement of corporate governance rules. Policy makers and regulators should therefore assess the proper role of stock exchanges and trading venues with respect to these functions and how their business models affect their incentives to carry them out.

**Bondholders and corporate governance**

While the corporate governance discussion traditionally has focused on the relationship between equity providers (shareholders) and the corporation, it is obvious that other forms of financing also require a formalisation of rights and obligations with respect to how the company is managed. In the case of loans, this is typically done on a case-by-case basis by the credit institutions’ loan officers, sometimes with the support of credit ratings carried out by recognised credit rating agencies on behalf of the company.

![Figure 9. The role of equity and bondholders in corporate governance](source)


With respect to bondholders, their corporate governance tools resemble those of shareholders in a publicly listed company in the sense that they have the possibility to both sell their bonds (exit) and to make their voice heard. The principal differences in how shareholders and bondholders use exit and voice are illustrated in Figure 9. Compared to
shareholders, bondholders typically use their voice only at specific events, primarily when the bond contract is established and in the case of default. In terms of exit, liquidity is typically lower for corporate bonds and holding periods by investors considerably longer.

An important and specific governance feature for bonds is the bond contract (the indenture). The bond contract is in principle unique to the bond and through a list of covenants defines the bondholder’s rights, enforcement powers and any restrictive conditions with respect to issues such as dividends to shareholders and share buybacks. The covenants can therefore be seen as a governance tool with negotiated, pre-established rules. Based on a sample of 13,000 unique bond issues between 2000 and 2013, the OECD has calculated a covenant protection index, which shows a successive and marked decrease in covenant protection since 2005 (OECD, 2015a).

In case of breach of covenants, the bondholders may take action and seek remedies. Traditionally, bondholders have been fairly passive with respect to the oversight and enforcement of violations of the covenants. Also the bond trustees, who at least in theory are responsible for detection or facilitating the detection of possible breeches of covenants is reported to be fairly passive. In recent years, however, a number of specialized hedge funds have emerged that hire specialists only for the purpose of identifying actual and potential violation of covenants and taking action in order to make a windfall profit from accelerated payments or settlements.

As mentioned initially, the corporate governance discussion has mainly been focused on the relationship between shareholders and the company. However, the Principles also point to the need for effective enforcement of creditor rights. It remains to be seen how developments in this respect in larger and more mature bond markets can contribute to develop a middle-ground between totally passive and aggressive activism. In an era of non-bank financial intermediation, the formation of such a community of informed and motivated bondholders may be of particular importance for supporting the critical segment of medium-sized growth companies.
PART II. GROWTH COMPANIES USE OF PUBLIC EQUITY MARKETS

When companies seek external financing in the form of equity capital they can either reach out to private pools of capital, for example in the form of private equity firms or turn to the public equity markets. The market where companies actually raise money by offering shares to the general public is referred to as the primary public equity market. The primary market serves both initial public offerings by new companies and secondary public offerings that are made by companies whose shares are already publicly traded. As described in Part I, an injection of equity capital is eternal, which means that once it is provided it cannot be withdrawn by the individual shareholder. However, the organised public equity market, allows individual shareholders to sell their stocks to other investors without reducing company’s equity capital. For every equity share in the company that is sold, there must also be a buyer. This trading of shares takes place on what is referred to the secondary equity market.

This part starts with an overview of the use of primary public equity markets by new listings and already listed companies since the mid-1990s. By looking at cross-industry and cross-country comparisons, it discusses the ability of equity markets to provide risk capital to growth companies. Part II ends with a discussion on how recent developments in public equity markets with respect to the business models of stock exchanges and institutional investors and investment strategies have affected the ability of public equity markets to serve growth companies.

2.1. Recent trends in primary public equity markets

Globally, the average annual amount of equity raised through initial public offerings (IPOs) by non-financial companies has declined in the last 20 years. Also the average number of companies who make an IPO has declined. Behind this global trend are some differences between advanced and emerging economies.

As for advanced economies Figure 10 shows the annual average number of companies that made an IPO in the period 1994-2000 was 1,152. That number fell to 853 in the period 2001-2007 and to just 432 per year in the period 2008-2014. This decrease in the number of companies has been accompanied by a significant decline also in the real value of money raised through IPOs over the three periods; from USD 145 billion in the period 1994-2000, to USD 87 billion in the period 2001-2007 to USD 63 billion in the period 2008-2014.

During the same period however, non-financial companies in emerging markets significantly increased their use of public equity markets. The total amount of capital raised almost doubled in real terms from USD 24 billion in the period 1994-2000 to 45 billion in the period 2001-2007. In the period 2008-2014 it increased another 40%, reaching an annual average of USD 65. The number of emerging market companies that made an IPO has also considerably increased in the same period.6

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6 The high number of emerging market company IPOs in the period 1994 and 1996 is almost totally explained by the exceptionally high number of Indian non-financial IPOs (2,496 transactions in the three year period).
As a consequence of these developments, the portion of all global equity raised by companies from emerging markets has increased substantially. In the period 1994-2000 the value of IPOs by non-financial companies from emerging markets represented about 14% of the global total. This increased to 34% during the period 2001-2007. And since 2008, most of the equity raised globally (51%) has been by companies from emerging markets. It is important to note that this shift is mainly explained by an increase in Chinese IPOs. Since 2008, Chinese companies stood for 62% of the total amount of equity raised by non-financial companies in emerging markets. More detailed analysis of the numbers reveals that if China is excluded, the total amount of equity raised by companies from emerging markets has actually decreased since 2008 compared to the period 2001-2007. This decrease is nevertheless smaller than the decrease observed in advanced economies.

**Decline in small company IPOs**

A second important observation with respect to growth companies is the dramatic decline in small company IPOs in advanced economies, particularly in the US and Europe. Figure 11 displays the non-financial company IPO trends in advanced economies with respect to the size of the issue. The data reveals that both the absolute amount of equity raised by growth companies as well as their relative share in total amount has decreased considerably over the last twenty years. In the period 1994-2000, IPOs smaller than USD 100M represented 19% of all money raised. Since 2004 however, this portion has declined almost monotonically and only amounted to 11% in 2014.

Table 1 provides a comparison between these growth company IPOs in advanced and emerging markets. It shows that, despite the dominance of Chinese companies, the shift in global IPOs towards emerging markets is not limited to large companies. Smaller companies from emerging markets have actually reached significant levels of equity market financing over the last seven years. It is worth noting that since 2000, the average size of growth companies going public in emerging economies has been larger than their counterparts in advanced economies. Combining Figure 11 and Table 1 reveals that not only are there fewer companies using public equity markets in advanced economies, but the ones that actually make an IPO are larger when they enter the stock market.
Figure 11. The decline in growth company IPOs in advanced economies

![Graph showing the decline in growth company IPOs in advanced economies from 1984 to 2014.](image)

*Source:* Thomson Reuters, OECD calculations. See Annex 1 for details.

### Table 1. Growth company IPOs in advanced and emerging economies (2014 USD, million)

<table>
<thead>
<tr>
<th></th>
<th>GLOBAL</th>
<th>ADVANCED ECONOMIES</th>
<th>EMERGING ECONOMIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001-2007</td>
<td>2008-2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2001-2007</td>
<td>2008-2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2001-2007</td>
<td>2008-2014</td>
<td></td>
</tr>
<tr>
<td>Total value of IPOs with size less than USD 100M (USD, million)</td>
<td>245,951</td>
<td>133,767</td>
<td>117,394</td>
</tr>
<tr>
<td>Share of all IPOs (%)</td>
<td>21%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>Number of IPOs with size less than USD 100M</td>
<td>10,479</td>
<td>6,449</td>
<td>4,143</td>
</tr>
<tr>
<td>Share of all IPOs (%)</td>
<td>84%</td>
<td>79%</td>
<td>70%</td>
</tr>
<tr>
<td>Average IPO size of growth companies</td>
<td>23.5</td>
<td>20.7</td>
<td>28.3</td>
</tr>
</tbody>
</table>

*Notes:* All amounts are based on non-financial company transactions.

*Source:* Thomson Reuters, OECD calculations. See Annex 1 for details.

#### 2.2. Public equity markets as a continuous source of financing

Once a company has passed the threshold of the initial public offering, the status of being a listed company provides the opportunity to raise additional equity capital through a secondary public offering (SPO) or a follow-on issue. Such offerings can be made several years after the initial public offering in order to finance, for example, a new phase of expansion. Like retained earnings, secondary offerings are often neglected when discussing the possibilities of long-term, patient funding that equity provides.

As a matter of fact, our data show that every year since 2000, global SPO proceeds and the number of companies that made an SPO exceeded the respective amounts and numbers related to IPO activity. Of particular interest may be that in the first year following the 2008 financial crisis, already listed non-financial companies from advanced economies raised a record level of USD 376 billion through secondary public offerings. This was more than 12 times the amount that companies raised through IPOs in the same year. Similarly, the amount of equity raised by emerging market companies through SPOs has exceeded IPO
proceeds since 2008 and reached USD 150 billion in 2014, which was more than twice the amount of equity raised through IPOs (Figure 12).

**Figure 12. Global trends in secondary public offerings (SPOs) by non-financial companies**

![Graph showing global trends in secondary public offerings](image)

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

If we focus on growth companies, the picture is somewhat similar to the overall trend. Figure 13 illustrates the total public equity financing of growth companies with an initial public offering of less than USD 100M over the last decade. The figure shows the total amount of equity these companies raised through their IPO plus the amount of equity they raised through SPOs within ten years following their IPOs.

Again, in every year shown in the figure, SPO proceeds of companies from advanced economies exceed IPO proceeds. Although, there has been a significant decline in growth company IPOs, when SPOs are added, public equity markets still provided a total of USD 317 billion in new equity capital to the companies that actually entered the stock market. Companies in emerging markets more than doubled their total use of public equity markets in the last five years.

**Figure 13. Total public equity financing of growth companies (2014 USD, billions)**

![Graph showing total public equity financing of growth companies](image)

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

In section 2.1 we noted an increased bias towards large companies with respect to initial public offerings. There are fewer IPOs and once the IPO takes place the issuing company tends to be larger. Figure 14 is an attempt to analyse if such a bias also exist in terms of secondary offerings, which are made after the growth company actually passed the threshold of getting listed.

In section 2.1 we noted an increased bias towards large companies with respect to initial public offerings. There are fewer IPOs and once the IPO takes place the issuing company tends to be larger. Figure 14 is an attempt to analyse if such a bias also exist in terms of secondary offerings, which are made after the growth company actually passed the threshold of getting listed.
The figure shows the extent to which growth companies with an IPO of less than USD 100M also make a secondary offering in the following years. For example, the figure shows that in the first year following their IPO, 11% of growth companies, made a secondary offer. For companies with an IPO size larger than USD 100M the ratio was 17%. Four years after the IPO, 37% of all growth companies and 41% of large companies had used the opportunity to raise money through a secondary offering.

An important observation from Figure 14 is that once they are actually listed, it seems that small and large companies have similar access to public equity markets through secondary offerings. This is contrary to the declining use of public equity markets by small companies in the form of IPOs. Fewer growth companies actually become listed, but once they pass the threshold and become listed, they steadily continue to tap the public equity market at a rate similar to that of larger companies. This can be interpreted as an indication that the hurdle for growth companies initial access to public equity markets is higher compared to large ones.

**Figure 14. Proportion of non-financial companies making an SPO following their IPOs (%)**

Notes: Figure represents the ratio of listed companies making an SPO just after their going public. The ratio increases in a cumulative way by years after the IPO date of each listed firm. Growth Companies are grouped in line with their IPO size less than USD 100 million. Their SPOs are followed and noted under growth company SPOs.

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

To further analyse public equity markets’ role in providing finance, Figure 15 focuses on already listed companies that made a secondary public offering during the three years following the 2008 financial crisis, a period when there was a general tightening of corporate credits. The figure identifies a company as a crisis issuer if it did not make any SPO over the 5-year period from 2003 to 2007, but made an SPO during the crisis period 2008-2010. Based on this classification, the figure shows the total proceeds raised by crisis issuers and other issuers in each year and the number of crisis issuers as a percent of the total number of non-financial issuers.

The data reveals that in advanced economies, the amount of equity raised by crisis issuers in 2008 represented 42% of all secondary offerings that year. In 2010 the portion of equity raised by crisis issuers had increased to 58%. The number of crisis issuers also increased and in 2010, two thirds of all issuers were crisis issuers. In emerging markets, in terms of both proceeds and number of companies, crisis issuers represented more than 80% of all issuers in 2008 and 2010.
2.3. Sectoral breakdown of public equity financing

As pointed out in Part I, equity is often an important source of funding for growth companies in future oriented industries with relatively high risk. In Figure 16 all IPOs in emerging as well as advanced economies since 2000 have been broken down with respect to sector. Furthermore, a distinction has been made between IPOs that are larger and smaller than USD 100M.

The breakdown of data shows that for large IPOs, differences in the distribution between sectors in advanced and emerging economies are quite small with finance being the single largest user of equity markets in both groups of countries, followed by energy, power and industrials. Industries like high technology, telecom and healthcare also show fairly similar shares in advanced and emerging markets when we look only at the large IPOs larger than USD 100M.

However, this similarity vanishes when we look at the sector distribution of IPOs that are smaller than USD 100M, particularly when it comes to high technology and healthcare, which mainly consists of pharmaceuticals, biotechnology and healthcare equipment and supplies. In advanced economies 43% of all equity capital raised through smaller IPOs between 2000 and 2014 went to the high technology and healthcare sectors. This is more than double the portion of high technology and healthcare IPOs by smaller companies in emerging markets. Together, companies from these two sectors raised about 20% of all small IPO related equity.

In China, however, high technology and healthcare represented almost 30% of all IPOs under USD 100M. This is considerably higher than the emerging market average and closer to that of some advanced economies.
Panel A of Table 2 shows industry developments over time with respect to growth company IPOs, with US and China presented separately from the other advanced and emerging markets. This data reveals that the dominance of high technology companies in the US during the period from 1997 to 2002, with a share close to 50% has been replaced by the healthcare industry in the two subsequent periods. In other advanced economies, total proceeds from IPOs were more evenly distributed among industries.

One notable difference between China and other emerging market economies is the increasing share of companies in the high technology sector. After a consistent increase since the beginning of 1990s, their share reached 22% in 2014. Excluding China, consumer products sector has the highest share among emerging economies, followed by industrials and materials sectors.

As discussed above, globally every year since 2000, the total amount of money raised by non-financial companies through SPOs exceeded the total amounts raised by IPOs. When the sectoral breakdown of growth company SPOs is considered, Panel B of Table 2 clearly
demonstrates the differences among four country groups. Similar to their share of total IPO proceeds, the healthcare sector in the US has dominated the secondary offerings with a share of 57% over the last five years. While healthcare and high technology are the two leading sectors in the US, materials and energy sectors lead in other advanced economies. As for emerging economies, again the consumer products sector dominates the market. Meanwhile, industrials and high-technology in China, and materials, industrials and real estate in other emerging economies are other major sectors in growth company SPO markets.

Table 2. Sectoral breakdown of growth company IPOs and SPOs as a percentage of total proceeds

<table>
<thead>
<tr>
<th>A. Sectoral breakdown of IPOs</th>
<th>B. Sectoral breakdown of SPOs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US</strong></td>
<td><strong>Non-US advanced</strong></td>
</tr>
<tr>
<td><strong>High technology</strong></td>
<td>26.1</td>
</tr>
<tr>
<td><strong>Consumer</strong></td>
<td>47.3</td>
</tr>
<tr>
<td><strong>Industrials</strong></td>
<td>24.5</td>
</tr>
<tr>
<td><strong>Materials</strong></td>
<td>15.3</td>
</tr>
<tr>
<td><strong>Healthcare</strong></td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Energy &amp; power</strong></td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Retail</strong></td>
<td>8.5</td>
</tr>
<tr>
<td><strong>Media &amp; entertainment</strong></td>
<td>8.1</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>5.8</td>
</tr>
</tbody>
</table>

**Source:** Thomson Reuters, OECD calculations. See Annex 1 for industry classification and details.

2.4. Overcoming the information threshold

A major challenge for any company that wants to access the public equity market is obviously to communicate the value of the company to outside investors. While the hard facts and numbers may be easy enough to present in an objective fashion, there is also a great deal of tacit information or subjective judgment involved. And since company founders and managers are seen to have an incentive to overestimate the business prospects of the company, getting the attention of investors and a correct evaluation requires both solid information and good communication skills.

This is often a particular challenge for smaller companies with shorter track records, little media attention, less analyst coverage, and less detailed and sometimes less reliable financial statements. An obvious way to improve information to investors is to provide additional and more detailed information - both before and after the IPO. Such an increase and widening of disclosure and reporting requirements may appear as a win-win solution, which improves corporate communication and enhance investor confidence. However, it has
been argued that some of the increased demands with respect to corporate disclosure and reporting that followed major corporate governance scandals in large multinational corporations are not necessarily relevant for small growth companies. The relative cost burden of compliance with uniform rules is also higher for smaller than for larger companies. This development has also raised some concerns that a regulatory burden was created for smaller companies that has discouraged them from using public equity markets (Weild, 2013). The costs and efficiency of corporate reporting and compliance requirements have been addressed by many countries since the 2008 financial crisis. For example, the US Congress in 2012 passed the Jumpstart Our Business Startups Act (JOBS Act) aiming at easing the regulatory process for passing the listing threshold and lowering the costs to remain listed. Another prominent example has been the regulatory changes in the UK following the Kay Review of UK Equity Markets and Long-Term Decision Making in 2012.

2.5. Getting the attention of large institutional investors

Reducing information asymmetries in equity markets is not only associated with the availability and quality of information in the market, but also with the willingness and ability of investors making use of that information.

Most OECD countries have experienced a dramatic increase in institutional ownership of publicly listed companies over the last decades. Figure 17 demonstrates the distribution of outstanding public equity investors in the United States, Japan and the United Kingdom. In all three markets, the share of retail investors is much lower than the share of institutional investors. While physical persons still play an important role in the US by holding 37% of all public equity, there has been a dramatic decline in their share compared to the mid-60s when their share was 84%. Similarly, in the UK, the share of retail investors has decreased from 54% to 11% over the same period (OECD, 2015).

Figure 17. Public equity investors in the US, Japan and UK (2013)

This long term structural shift towards institutional ownership of public equity has been coupled with the extensive use of passive investment strategies and indexed investment vehicles, such as mutual funds and exchange traded funds (ETFs). Such strategies, which are based on clearly pre-defined set of criteria, help investors by reducing transaction costs and advisory fees. Since the first ETF backed on S&P500 was issued in the US in 1993, ETFs has grown considerably both in terms of numbers and total assets under management. Only in the last ten years, they grew more than 5 times from USD 416 billion in 2005 up to
USD 2.5 billion in 2014. In the past decade, institutional investors seeking to gain or shed exposure to broad market indices, particular sectors or geographical regions, or specific rules-based investment strategies find that ETFs provide a convenient, cost-effective tool to achieve these objectives (ICI, 2015).

Another important development in equity markets has been the significant growth of high-frequency trading (HFT) and other electronic trading methods. It has also been argued that the dominance of HFT exacerbates the illiquidity problem small company stocks face in equity markets. For example, trading in small companies stocks has significantly decreased in the UK, which coincides with the increase in ETFs and HFT during the second half of the last decade (Friederich and Payne, 2011).

Since the composition of the index investment vehicles, including ETFs, is based on predefined criteria, they do not motivate investors to pay attention to fundamentals of individual companies. Indices and index products may be used to reduce information asymmetries similar to the use of ratings in corporate bond markets, which is addressed in Part III. Given the illiquid nature of small company stocks and appetite of index products for high-liquid instruments, however, their inclusion in indices is less likely compared to large companies.

2.6. Changing business model of stock exchanges

Traditionally, stock exchanges in advanced economies were established by brokers and operated – sometimes under a special charter – as not-for-profit industry associations. In emerging markets with relatively recent capital markets, governments have often played a role in organising stock exchanges, often in the form of government institutions or state owned corporations.

In the wake of stock market deregulation and technological advancements, both models have, since the 1990s undergone profound changes towards private for profit corporations. Today, stock exchanges are often themselves profit-maximizing publicly traded corporations on their own market with a wide range of shareholders.

The current situation is summarised in Table 3, which shows that the process of privatisation has been almost completed for developed markets; and, today almost all major stock exchanges are listed companies on their own markets. The mutual organisational model based on brokers’ membership has almost disappeared in advanced economies.

The situation in emerging economies is less homogeneous. While stock exchanges in Brazil, Indonesia, Mexico and Russia are listed companies, the exchanges of Turkey and Saudi Arabia are run as state-owned enterprises. Furthermore, the largest emerging market stock exchanges in China operate as semi-public institutions and are membership institutions directly governed by the China Securities and Regulatory Commission (CSRC).

Deregulation and technological advancements have not only impacted the organisational form of stock exchanges, but competition as well. Today, in many economies trading of securities are allowed to be executed in alternative trading venues in addition to traditional stock exchanges. This includes internalisation of orders by brokers without exposing to market and non-exchange electronic trading platforms such as alternative trading systems (ATSs - US) and multilateral trading facilities (MTFs - Europe). The main differences between ATSs and exchanges in the US, for example, are that ATSs do not necessarily

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7 Source: ETFGI
provide public information on the best prices available to their traders, do not set rules governing the conduct of their subscribers and are regulated as broker-dealers not as stock exchanges (Tuttle, 2013). As of 1 June 2015, in addition to 13 regulated exchanges, there were more than 80 alternative trading venues in the US.\(^8\)

Table 3. Overview of major stock exchanges (2014, USD million)

<table>
<thead>
<tr>
<th>Name</th>
<th>Legal status</th>
<th>Number of listed companies</th>
<th>Market capitalization</th>
<th>Daily trading volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian SE</td>
<td>Listed company for profit</td>
<td>2 073</td>
<td>1 288 708</td>
<td>2 908</td>
</tr>
<tr>
<td>BM&amp;FBOVESPA</td>
<td>Listed company for profit</td>
<td>363</td>
<td>843 894</td>
<td>2 615</td>
</tr>
<tr>
<td>BME Spanish Exchanges</td>
<td>Listed company for profit</td>
<td>3 452</td>
<td>992 914</td>
<td>3 960</td>
</tr>
<tr>
<td>Borsa Istanbul</td>
<td>State-owned/ Demutualized for profit</td>
<td>227</td>
<td>219 763</td>
<td>1 474</td>
</tr>
<tr>
<td>BSE India</td>
<td>Demutualized for profit</td>
<td>5 542</td>
<td>1 558 300</td>
<td>494</td>
</tr>
<tr>
<td>Buenos Aires SE</td>
<td>Non-profit association</td>
<td>101</td>
<td>60 142</td>
<td>20</td>
</tr>
<tr>
<td>Bursa Malaysia</td>
<td>Listed company for profit</td>
<td>905</td>
<td>459 004</td>
<td>583</td>
</tr>
<tr>
<td>Deutsche Börse</td>
<td>Listed company for profit</td>
<td>670</td>
<td>1 738 539</td>
<td>5 347</td>
</tr>
<tr>
<td>Euronext</td>
<td>Listed company for profit</td>
<td>1 055</td>
<td>3 319 062</td>
<td>7 022</td>
</tr>
<tr>
<td>Hong Kong Exchanges</td>
<td>Listed company for profit</td>
<td>1 752</td>
<td>3 233 031</td>
<td>6 158</td>
</tr>
<tr>
<td>Indonesia SE</td>
<td>Listed company for profit</td>
<td>506</td>
<td>422 127</td>
<td>375</td>
</tr>
<tr>
<td>Japan Exchange Group</td>
<td>Listed company for profit</td>
<td>3 470</td>
<td>4 377 994</td>
<td>19 858</td>
</tr>
<tr>
<td>Johannesburg SE</td>
<td>Listed company for profit</td>
<td>380</td>
<td>933 931</td>
<td>1 304</td>
</tr>
<tr>
<td>Korea Exchange</td>
<td>Demutualized for profit (in progress)</td>
<td>1 864</td>
<td>1 212 759</td>
<td>5 283</td>
</tr>
<tr>
<td>LSE Group</td>
<td>Listed company for profit</td>
<td>2 752</td>
<td>4 012 882</td>
<td>10 037</td>
</tr>
<tr>
<td>Mexican Exchange</td>
<td>Listed company for profit</td>
<td>147</td>
<td>480 245</td>
<td>616</td>
</tr>
<tr>
<td>Moscow Exchange</td>
<td>Listed company for profit</td>
<td>257</td>
<td>385 927</td>
<td>693</td>
</tr>
<tr>
<td>NASDAQ OMX</td>
<td>Listed company for profit</td>
<td>2 782</td>
<td>6 979 172</td>
<td>48 560</td>
</tr>
<tr>
<td>NASDAQ OMX Nordic Exchange</td>
<td>Listed company for profit</td>
<td>787</td>
<td>1 196 725</td>
<td>2 617</td>
</tr>
<tr>
<td>NSE India</td>
<td>Demutualized for profit</td>
<td>1 708</td>
<td>1 520 925</td>
<td>2 507</td>
</tr>
<tr>
<td>NYSE</td>
<td>Listed company for profit</td>
<td>2 466</td>
<td>19 351 417</td>
<td>62 968</td>
</tr>
<tr>
<td>Oslo Exchange</td>
<td>Demutualized for profit</td>
<td>220</td>
<td>219 370</td>
<td>504</td>
</tr>
<tr>
<td>Saudi Stock Exchange - Tadawul</td>
<td>State-owned/ Demutualized for profit</td>
<td>169</td>
<td>483 116</td>
<td>2 270</td>
</tr>
<tr>
<td>Shanghai Stock Exchange</td>
<td>Government association / non-profit</td>
<td>995</td>
<td>3 932 528</td>
<td>24 711</td>
</tr>
<tr>
<td>Shenzhen Stock Exchange</td>
<td>Government association /non-profit</td>
<td>1 618</td>
<td>2 072 420</td>
<td>24 102</td>
</tr>
<tr>
<td>Singapore Exchange</td>
<td>Listed company for profit</td>
<td>773</td>
<td>752 831</td>
<td>796</td>
</tr>
<tr>
<td>SIX Swiss Exchange</td>
<td>Private Company for profit</td>
<td>276</td>
<td>1 495 314</td>
<td>2 963</td>
</tr>
<tr>
<td>Taiwan SE Corp.</td>
<td>Private Company for profit</td>
<td>880</td>
<td>850 943</td>
<td>2 754</td>
</tr>
<tr>
<td>The Stock Exchange of Thailand</td>
<td>Government association /non-profit</td>
<td>613</td>
<td>430 427</td>
<td>1 268</td>
</tr>
<tr>
<td>TMX Group</td>
<td>Listed company for profit</td>
<td>3 761</td>
<td>2 093 697</td>
<td>5 397</td>
</tr>
</tbody>
</table>

Notes: Market data are obtained from WFE Annual Query Tool Data. As for legal status information, Stock Exchange Fact Sheets of SSE Initiative are taken into consideration. Daily trading volume data cover electronic order book trading.


The developments regarding privatisation and competition described above have also been accompanied by a shift in the revenue structure of stock exchanges. Notably, the importance of revenues related to trading has increased by 50% from 40% of total revenues in 1997 to 61% in 2012. Figure 18 also shows that the share of revenues from listing new companies has decreased steadily. In 2012, revenues from new listings represented only 6 % of all revenues; down from 16% in 1997. This change in the business models (revenue structure) of stock exchanges has probably been re-enforced by the emergence of new investor types.

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that apply more frequent trading methods based on sophisticated software and the surge in derivatives trading.

**Figure 18. The change in revenue structure of stock exchanges**

![Graph showing the change in revenue structure of stock exchanges from 2007 to 2012 with categories for Listing, Trading, Services, and Financial Income.]

*Note:* (1) Including clearing fees for derivatives.

*Source:* World Federation of Stock Exchanges

More detailed data on the revenue structure of listed stock exchanges based on their publicly available financial statements is presented in Figure 19. The share of revenues from listing and issuer services, which consists of new listing fees including fees from ETFs and fees paid by existing listed companies, is 8%. This is consistent with the data from the World Federation of Exchanges (WFE) above. Revenues from cash, capital markets, derivatives trading and OTC markets are the largest category with a total share of 48%.

**Figure 19. Segmented revenue structure of listed stock exchanges (aggregated revenues, 2014)**

![Segmented revenue structure graph showing Cash and capital markets at 25%, Derivatives and OTC markets at 23%, IT and market data services at 20%, Post trade services at 15%, IT and market data services at 15%, and Others at 5%.]

*Notes:* Revenue data from 16 listed stock exchanges: ASX, BM&FBOVESPA, Bursa Malaysia, Deutsche Boerse, Euronext, Hong Kong Exchanges, ICE (NYSE), JPX, Johannesburg SE, LSE, Moscow Exchange, Nasdaq OMX, Singapore Exchange and TMX Group.

*Source:* Thomson Reuters and official websites of stock exchanges.

The trading in equity markets is fairly concentrated with the stocks of larger companies in terms of market capitalisation having a major portion of total trading volume. A study by Friederich and Payne (2011) finds that one hundred stocks on the London Stock Exchange (LSE) with the highest market capitalisation (FTSE 100 index companies) make up more
than 80% of total equity trading volume in every year over the period from 2001 to Q1 2011. The share of FTSE Small Index companies\(^9\) was around 2% during the period between 2001 and 2005 but experienced a decline afterwards that has brought it down to less than 1% in 2010 and 2011. WFE data confirms that in most stock exchanges trade in the most traded 5% of companies accounts for more than 50% of all trade.\(^{10}\) Considering the growing importance of trading revenues for stock exchanges, it is not unreasonable to assume that growth companies have become less attractive for profit-maximising stock exchanges.

\(^9\) FTSE Small Cap index represents 351st to the 619th largest listed companies on the London Stock Exchange main market.

\(^{10}\) World Federation of Exchanges, Annual Query Tool, Market Concentration, 2013.
PART III. GROWTH COMPANIES USE OF CORPORATE BOND MARKETS

Access to public equity markets is one step that can help growth companies finance expansion and obtain greater flexibility with respect to capital structure and capital costs. Such flexibility and diversity may be important for growth companies that may otherwise fall victim of unrelated tightening of bank credits. Passing the threshold of an IPO may also open up opportunities for accessing other forms of market-based finance, such as corporate bonds. And while not all publicly listed companies issue bonds, most companies that issue bonds are publicly listed.

Since growth companies typically have a higher default probability and are more opaque relative to well-established companies, they are more seriously affected when bank lending tightens. This makes it critical for them to create a diversified source of funding to be able to finance their activities and growth without disruption.

3.1. The IPO and the use of corporate bond markets

In order to get an understanding of the relationship between passing the IPO threshold and corporate use of the bond market, Figure 20 shows the number of IPO companies that issued a corporate bond during the 5 years prior to their IPO date and 1 year afterwards. The dataset covers all 29,047 non-financial companies going public between 1990 to 2013 and all corporate bond issues between 1980 to 2014.

Figure 20. Number of IPO firms issuing bonds around the IPO Date

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

The analysis reveals that in the 5th year prior to their IPO, 124 companies issued corporate bonds. About half of these companies (64) were first time corporate bond issuers. During the period leading up to the IPO date, both the number of first time issuers and the number of returning issuers increase successively. In the year immediately following the IPO, there is a 112% increase in the number of first time issuers from 196 to 415. Likewise, the number of returning issuers increased from 158 to 230.
Figure 21 below looks at the more lasting effects of the IPO by analysing corporate bond issues up to 5 years after the IPO. While the number of first time issuers decreases somewhat during this period, the overall number of companies that issue bonds during the 5 year period after their IPO remain around 500 per year.

**Figure 21. Number of IPO firms issuing bonds around the IPO Date**


Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

A number of explanations have been offered for why being listed could help companies access the corporate bond market. First, because public companies already publish their financial statements in accordance with regulatory rules and requirements, the reproduction of these statements for the bond prospectus and the following periodic disclosure do not constitute an additional cost. Likewise, management’s prior experience with public securities offering is likely to reduce the preparation time to offer bonds. Moreover, listed companies are typically subject to stricter corporate governance requirements, which, in the eyes of investors, make them less prone to the classical debt-related moral hazard concerns. Last, the fact that the company’s shares are already publicly traded makes it less costly for underwriters to get investor attention. This explanation is supported by some empirical evidence pointing to a positive correlation between firm visibility and the probability of bond market access (Faulkender and Petersen, 2006). There is also evidence to suggest that the same positive relationship holds for listing, bank credits and syndicated loans (Pagano et al., 1998; Schenone, 2010; Saunders and Steffen, 2011).

Against this background, it may not be surprising to find that an overwhelming majority of all corporate bond issues are made by companies that are listed on a stock exchange. Figure 22 presents the number of public and private bond issues by non-financial companies in advanced and emerging economies between 2000 and 2014, and the portion of these bond issues that were made by listed companies and their subsidiaries.

The data shows that in advanced economies, an average of 87% of public bond issues and 75% of all private bond issues each year are made by listed companies. We also note that since the 2008 financial crisis the share of listed companies has been declining slightly.

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11 Note that lengthening the time span causes IPOs after 2009 to be excluded.
possibly as more private companies turn to the bond market in the face of bank deleveraging.

Listed companies also dominate bond issues in emerging markets. On average, almost 70% of public bond issues each year are made by listed companies. With the exception of the 2008 financial crisis, when their share in private bond placements dropped significantly, the share of listed companies in the public and private bond markets is about the same.

**Figure 22. Status of corporate bond issuers: listed vs. private**

A. Advanced economies

B. Emerging economies

*Source: Thomson Reuters, OECD calculations. See Annex 1 for details.*

### 3.2. Recent trends in the primary corporate bond markets

In the aftermath of the 2008 financial crisis, the use of corporate bonds has become an increasingly important source of finance for non-financial companies. This is true for companies both in advanced and emerging economies. In many cases, corporate bonds have provided an opportunity for companies to replace existing debt with cheaper borrowing and also to refinance their existing bank loans in times of reduced bank exposure to the non-financial corporate sector.

Figure 23 shows the total global amount of proceeds received by non-financial companies from public and private bond issues during the last 15 years. The annual amount of money non-financial companies raised through bond issues increased from an average of USD 828 million in the 2000-2007 period to an average of USD 1,473 million in the post-crisis period.

This trend holds for both advanced and emerging economies. Although companies from advanced economies clearly dominate the primary corporate bond market throughout the entire period, the increase is more marked in emerging economies. While companies from advanced economies doubled the amount of money raised, there was an 11-fold increase in the amount of money raised by companies from emerging economies. In the period 2000-2007 companies in emerging economies raised an annual average of USD 66 million compared to an annual average of USD 266 million in the period 2008-2014.
The increase in the annual *amount* of money raised through corporate bonds by non-financial companies is accompanied by a parallel increase in the *number* of companies entering the corporate bond market. Before 2008, an average of 228 non-financial companies from emerging markets tapped the corporate bond market compared to an average of 663 companies per year in the period following the financial crisis. 2013 was the peak year with 1,196 emerging market companies issuing bonds. In a similar fashion, the number of corporate bond issuers in advanced economies has more than doubled in the post-crisis period, from 1,034 in 2008 to 2,093 in 2014.

### 3.3. Broadening of financing options

It has been argued that one reason behind the marked increase in corporate bond issuance after the 2008 financial crisis was a decrease in the willingness and ability of banks to lend due to stricter regulation and lower risk appetite. To fill this gap companies that had never issued bonds before started to look for alternative financing options.
Figure 24 shows the number of *first-time* non-financial issuers every year between 2000 and 2014. In the period 2000-2007 an average of 123 non-financial companies in emerging markets entered the corporate bond market each year. In the 2008-2014 period, this figure almost tripled to 351, with a peak of 764 first-time issuers reached in 2013. Similarly, the number of first-time issuers in advanced economies has shown an almost monotonic increasing trend since the crisis and reached a maximum of 772 in 2014.

The role of corporate bond issues as an alternative source of funding may also be illustrated by looking at the number of companies that issued corporate bonds in immediate relation to the decrease in bank credits associated with the 2008 financial crisis. Such *crisis issuers* are defined as companies that did not issue any bonds during the 5-year period prior to the 2008 financial crisis but issued at least one bond during the 2008-2010 period.

Figure 25 shows a marked increase in the amount of money raised by crisis issuers in 2009. In advanced economies, their share of total corporate bond proceeds increased from 17% in 2008 to 37% in 2010 and in emerging economies from 50% to 62%. In 2010 half of the bond issuers in advanced economies were crisis issuers and in emerging economies this figure was almost 80%. There is at least some anecdotal evidence that, for some first-time issuers in the UK, a bank helped arrange bond issues, whose proceeds were used to pay down outstanding loans to the same bank. (Pattani et al., 2011)

3.4. Size matters

Given the recent growth of the primary corporate bond market, it is natural to ask if it is also a viable alternative for growth companies in their financing needs. Particularly, since an analysis of companies in our bond database, which have their asset size data available, points to a decline in the median size of bond issuers around the time of the 2008 crisis.

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A company is defined as a first-time issuer if its bond issue in a given year is its first issue since January, 1980.
Panel A of Figure 26 shows the asset size of non-financial corporate bond issuers in advanced economies during the last 15 years. In 2000, companies with a total asset size of less than USD 250 million accounted for 6.8% of the total number of companies issuing corporate bonds. Since then, the portion of smaller issuers declined steadily until the 2008 financial crisis when it increased from 2.5% to 5.2%. This may in part be attributable to companies substituting bank loans for corporate bonds.

This development has been accompanied by a marked increase in median issuer size from USD 3.3 billion in 2000 to a peak of USD 7.5 billion in 2008. And while the median issuer size decreased in 2010 and averaged approximately USD 5.9 billion in the subsequent period the data suggest that the corporate bond market is mainly confined to large firms. Panel B of Figure 26 displays the development in emerging economies with a clear decrease in the share of smaller issuers and a marked increase in the median size of issuers. Again, the financial crisis was followed by a fall in the median size of bond issuers but it takes place later than in advanced economies.

Figure 26. Asset size of non-financial corporate bond issuers

A. Advanced economies

B. Emerging economies

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

Looking at the size of the bond issue rather than the size of the issuing company in Figure 27 shows that in both advanced and emerging economies there has been a decline in the share of smaller issues and also an increase in the median size of publicly issued bonds. A slight increase in the portion of smaller issues can nevertheless be noted in the wake of the financial crisis.

13 In a given year, an average of 61% of non-financial issuers in advanced economies have asset size data available. This figure is 49% in emerging economies.

14 A study by Pattani et al. (2011) on the non-financial UK companies’ use of capital markets also shows that the number of first-time bond issuers in the UK rose sharply in 2009 and that these new issuers tended to be smaller and lower-rated than existing ones.

15 Note that the numbers provided about smaller issuers constitute a lower threshold since the analyses here are carried based only on those issuers with asset size available.
In the UK and the European Union, improving the private placement market has been suggested as a partial solution to ease access of smaller businesses to the bond market (Breedon et al., 2012; European Commission, 2015). According to Panel A of Figure 27, the average public bond issue made by non-financial companies in advanced economies had a size of USD 132 million in 2000. This figure sharply increased in the following years and peaked at USD 323 million in 2009. With the crisis, we observe a decline in median issue size, reaching USD 221 million in 2014. By contrast, the median size of private placements has been between USD 90 to 190 million, and reached back to its initial level of approximately USD 100 million in 2014. Given the large gap between the median issue size in the public bond and private placement market (USD 121 million in the most recent year), accessing the private placement market could indeed be a more attainable goal for relatively small advanced-economy companies.

![Figure 27. Size of issues in public and private bond markets](image)

Panel B reveals that the difference between private placement and public bond issues is less evident in emerging economies. On average, the median size of a public bond is greater than that of a private placement prior to the crisis and smaller after the crisis. We observe an overall increase in the median issue size up to 2011-2012, and a sharp decline in the following two years. This supplements the evidence regarding the fall in median issuer size observed in the last two years.

Given the evidence in Figures 26 and 27 and despite the decline in average issuer and issue sizes in the last few years, primary corporate bond market can still not be considered a widespread source of finance for growth companies.

### 3.5. Overcoming the information barrier

As discussed in Part I above, access to external funding comes with increased demands on disclosure and reliable corporate information. To meet these demands, corporations first of all need to build their own internal capacity. They will need people that are skilled in accounting, financial reporting, etc. and a formal structure that is understandable to the outside public. When accessing capital markets, they also rely on external service providers.
such as investment banks and rating agencies that help establish and disseminate corporate information to potential investors.\textsuperscript{16}

While such services play an important role, they also come at a cost. A UK-based report by Breedon et al. (2012) cites high advisory and legal costs associated with issuance as a main barrier for mid-sized issuers to enter the private placement market. It is estimated that upfront legal fees can add up to more than £120,000 and that standardisation can lower these costs by as much as 75%. A lack of standardised processes and documentation has also been cited by the European Commission (2015) as a barrier to the development of pan-European private placement market. In the following two sections we are addressing direct and indirect costs that are related to credit rating and underwriting services.

**Credit ratings fees**

There is ample evidence in the literature that the availability and the level of credit ratings matter for companies’ access to bond markets. Both in terms of the cost of capital and the amount of capital raised.\textsuperscript{17}

Since they operate on a commercial basis, credit rating agencies typically require a fee for assigning the initial rating and an annual fee for its maintenance during the life of the bond issue. These fees are usually based on the size of the issue and differ very little between the leading rating agencies. Sometimes, rating agencies may offer discounted fees for frequent issuers. There is also a practice of charging an additional one-time fee for first-time issuers (Langohr and Langohr, 2009).

According to Standard & Poor’s (a major rating agency) disclosure of their rating fees in 2015\textsuperscript{18}, the agency charges up to 6.15 basis points of the transaction value for most transactions involving industrial and financial services companies in the US. There is also a minimum fee of USD 92,250. This means that for issues smaller than USD 150 million, the issuer will actually pay more than the 6.15 basis points.\textsuperscript{19} The current minimum fee contrasts the more achievable fee of USD 25,000 at the start of the century (White, 2001). The high ratings fees have recently lead to strong reactions among large European companies cancelling their contracts with the two largest credit rating agencies, citing their pricing policies (Dohms, 2014).

\textsuperscript{16} An additional measure to mitigate information problems is to structure debt contracts in such a way to better align the interests of managers with those of debtholders by restricting actions that may be taken while the debt is still outstanding. For this measure to be effective, the investors should closely monitor the borrower to be able detect any covenant breaches and promptly take action. Çelik et al. (2015) argue that the business models of traditional bond investors are not compatible with detecting and enforcing bond covenants, causing such covenants to be not of much help in the corporate bond context.

\textsuperscript{17} Tang (2009) shows that better ratings improves corporate access to capital markets in terms of both the cost and amount of debt issued, which in turn allow companies to make more capital investments and have faster asset growth. Based on a UK sample, Pattani et al. (2011) shows that having a credit rating increases the probability of a first-time bond issue by 9 times. Furthermore, a survey of 392 CFOs by Graham and Harvey (2001) reveals that credit ratings are one of the most important factors influencing debt issuance, with 57% of chief financial officers citing ratings to be important or very important in determining debt policy.

\textsuperscript{18} See [www.standardandpoors.com/usratingsfees](http://www.standardandpoors.com/usratingsfees) website for the latest version of S&P’s ratings fees disclosure report.

\textsuperscript{19} Note that S&P charges “up to” 6.15 basis points, suggesting that the percentage fee may be lower than this figure, in some cases. Then the breakeven point would even be higher than the USD 150 million that we calculated.
The existence of a fee structure with a considerable fixed cost (the minimum fee and in some cases, the additional fee for first time issuers) for getting a rating by an established rating agency is obviously a disadvantage for smaller growth companies aiming at smaller bond issues.

The level of rating is obviously related to the corporation’s cost of capital. From the perspective of growth companies it is interesting to note that Faulkender and Petersen (2006) report a strong positive correlation between company size and bond rating. Similar evidence follows from our corporate bond database. Table 4 presents differences in terms of bond characteristics based on company size. We group companies into two groups depending on their inflation adjusted asset size prior to the offering. For companies larger than USD 250 million, 32% of the bonds are not rated by the top 3 rating agencies (i.e., S&P, Moody’s and Fitch). For companies smaller than USD 250 million, twice as many bond issues (62%) are not rated by the top 3 rating agencies.

Table 4 also shows that even if the smaller companies actually obtain a rating for their bond issue, they are likely to face lower ratings and thereby higher capital costs. Assigning a value of 1 to the lowest possible rating (C) and 21 to the highest possible rating (AAA for S&P and Fitch and Aaa for Moody’s), we find that, on average, larger bond issuers are given a BBB rating, while smaller companies smaller companies on average get a BBB-, which is just above the so-called investment grade threshold. Controlling for other characteristics that may affect credit ratings, Alp (2013) finds that a one-standard-deviation increase in size increases the credit rating by 1.3 points.

Table 4 also shows that bonds issued by small companies have an average maturity of 4.86 years, whereas average bond maturity for companies with an asset size greater than USD 250 million is 8.21 years. The shorter maturity helps to mitigate default risk. As an additional check over default risk, investors appear to be twice more likely to ask for a guarantee for bonds issued by smaller companies. Furthermore, small company bonds are less likely to be callable (a probability of 11% for small vs. 31% for large companies), suggesting that investors are less willing to take the call risk for this group of companies.

<table>
<thead>
<tr>
<th>Tranche Level</th>
<th>(I) Assets &gt; USD 250M</th>
<th>(II) Assets &lt; USD 250M</th>
<th>(II)-(I) Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not rated by top 3 agencies</td>
<td>32%</td>
<td>62%</td>
<td>30% ***</td>
</tr>
<tr>
<td>Average rating</td>
<td>13.29</td>
<td>12.21</td>
<td>-1.09 **</td>
</tr>
<tr>
<td>Years to maturity</td>
<td>8.21</td>
<td>4.86</td>
<td>-3.35 ***</td>
</tr>
<tr>
<td>Callable</td>
<td>31%</td>
<td>11%</td>
<td>-19% ***</td>
</tr>
<tr>
<td>Guaranteed</td>
<td>5%</td>
<td>10%</td>
<td>5% ***</td>
</tr>
</tbody>
</table>

Notes: The first two columns provide the means of the issue characteristic for the two subgroups formed based on firm size. The third column provides the difference between the means provided in first two columns and the results of the t-test, assessing the equality of the means. ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively.

Source: Thomson Reuters, OECD calculations. See Annex 1 for details.

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20 Inclusion in this table is subject to the availability of asset size variable and the comparison variable.

21 In the case of different ratings assigned to the same corporate bond by different rating agencies, the average of the ratings was used in the analysis.

22 Alp (2013) defines size as the NYSE market capitalisation percentile (i.e., the fraction of NYSE firm with capitalisation less than or equal to the company in consideration in a given year).
Underwriting fees

Underwriting a corporate bond issue involves assuming an intermediary role by buying the newly issued bonds from the issuer and selling them to investors and other dealers. Helping issuers in preparing the necessary documentation for the issue, structuring the issue with respect to potential investor demands and pricing the issue are other critical tasks that underwriters assume. In addition to these services, investment banks also help companies reach a broader investor base compared to what they can reach on their own, by marketing and selling the bond to their large network of clients. The reputation of the underwriter is often seen as an implicit certification of the quality of the bond, which may be of particular importance for growth companies that are less known to investors.

The fees that financial institutions charge for underwriting consist of a fee to the lead service provider, fees to co-service providers, and the selling concession offered to the selling group. The sum of these fees is sometimes referred to as the gross spread. In our 2000-2014 corporate bond database, investment grade bonds issued by non-financial companies are charged a median gross spread of 0.4%. The fees for non-investment grade were 1.4% of the value of the issue, suggesting an extra compensation for underwriters to sell riskier issues.23

Prior literature documents a significant negative relation between issue size and underwriter fees, expressed as a percent of total proceeds or the principal amount of issue (Lee et al., 1996; Yasuda, 2005; Ang and Zhang, 2006; Livingston and Williams, 2007). Altınkılıç and Hansen (2000) note that this negative relation is observed at the lower end of issue sizes, reflecting the distribution of fixed costs over the proceeds. Given economies of scale in underwriting, growth companies may find underwriting services too costly up to a sufficiently large issue size, which may not be attainable or desirable by them.

Consistent with our finding above, evidence from the prior literature suggests that underwriting spreads are negatively related to credit ratings. Prior studies also find that fees are higher for first-time bond issuers and for more volatile issuers and lower for frequent issuers. Furthermore, repeat business with the same investment bank leads to a decline in underwriter fees, suggesting that underwriters obtain company-specific information that is useful in subsequent bond issues.24 Because growth companies are likely to be more volatile and less credit worthy, and because they are not likely to tap the bond markets frequently, they will face higher underwriting spreads compared to their well-established counterparts, especially when they are entering the market for the first time.

An additional aspect for the underwriter is the marketability of the issue to potential investors. If the issuer is a well-established and recognised company in the bond market, the risk of underwriting the issue is low, since the probability of actually being able to sell the bonds is high. By contrast, it is harder and more costly to distribute a bond issued by a growth company, which is less well known to the market, as investor interest will typically be low and extra effort will be needed to inform and convince potential investors. Marketability risk in this respect is likely to decrease with the intensity of company’s previous activity in capital markets. Livingston and Miller (2000) argue that marketability risk is directly and

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23 The analysis is based on observations with the gross spread field available and is carried out on a tranche basis. Spread information is available for 32% of investment grade tranches and 17% of non-investment grade tranches.

24 For more detailed information, please refer to the following studies: Jewell and Livingston, 1998; Altınkılıç and Hansen, 2000, Livingston and Miller, 2000; Livingston and Zhou, 2002; Yasuda, 2005; Fang, 2005; Ang and Zhang, 2006; Livingston and Williams, 2007.
positively related to the investment risk that bond investors face, which consist of default risk, liquidity risk, interest risk, and call risk. Hence, one can expect that as such risks associated with the issue increase, investment banks will become less willing to underwrite the issue and so will require a higher compensation.

Box. 1. The working of secondary corporate bond markets

In contrast to the secondary equity market, the vast majority of corporate bond trades are executed over the counter with dealers assuming a central role. The share of electronic trading platforms has only recently started to increase but still remains limited compared to its share in the equity market. It is estimated that electronic trading accounts for only 24% of corporate bond trading volume in the US (TABB Group, 2014) and 29% in the EU (McKinsey & Company and Greenwich Associates, 2013). Furthermore, while these platforms are typically used to execute smaller trades, larger trades continue to be executed through dealer intermediation.

One structural reason for dealer dominance in this market is that at any point in time there are a vast number of distinct corporate bond issues outstanding, making it hard to find a counterparty that is willing to trade exactly the same amount of the same corporate bond at any given time. This calls for intermediary market makers who by holding an inventory of bonds are able to provide liquidity by buying and selling on their own account.

Holding such an inventory is obviously connected with costs and risks and the willingness of dealers to uphold this intermediary role has decreased considerably in the US and the EU since the 2008 financial crisis (Hill, 2014; Çelik et al., 2015). Primary dealer corporate bond inventories in the US have fallen by 80% between 2006 and February 2015 (OECD, 2015). The decline in bond inventories in the post-crisis period was attributed to lower risk appetite among dealers after the crisis and to the effects of new regulations. Basel III has discouraged banks from holding onto corporate bonds since their higher risk level requires more capital. This effect may be more pronounced for small companies since they are likely to have lower ratings, and so higher risk weights. Consistent with this expectation, Randall (2015) reports that liquidity gets worse when dealers’ inventory costs increase, and that this effect is stronger for bonds with lower credit ratings.

Post-crisis regulations discouraging banks from holding risky corporate bond issues and from trading on their own account have also led dealers to execute client orders on an agency basis rather than providing a genuine market-making service. For each client order, a dealer has to choose between (i) “pairing” the trade, by offloading all or part of it immediately in the inter-dealer market, or (ii) assuming the inventory risk and leaving the order “unpaired”. Based on data from US secondary markets, Randall (2013) reports a steady increase in the share of paired trades over the period from 2004 to 2010. By the end of 2010, approximately 60% of customer orders were at least partially offloaded in the inter-dealer market and over 40% were completely offloaded. This recent development may cause dealers to have a preference for intermediating trades in bonds, for which a counterparty can easily be found in the secondary market. Since issue sizes of growth companies are typically smaller, finding such a counterparty may be harder for this group of issuers.

Secondary corporate bond markets are also characterised by infrequent trading. Çelik et al. (2015) report that only around 16% of all outstanding bonds trade on an average day in the US and among those that actually trade, less than 5% trade more than 20 times a day. One reason for this illiquidity is that corporate bonds, due to their even cash flow structure, are frequently used for passive investment strategies and long-term liability matching purposes.

As investors demand additional compensation for illiquidity, the costs of issuing new bonds for companies rise, punishing companies for a factor unrelated to their creditworthiness or business prospects. According to a survey by Hill (2014), worsening liquidity conditions have led bond investors to re-evaluate their investment approach. A number of buy-side participants have stated that liquidity could become a determining factor in investment decisions, even more so than characteristics such as maturity or creditworthiness.
Box 1. The working of secondary corporate bond markets (cont.)

MarketAxess Research (2013) shows that there is a positive monotonic relationship between corporate bond liquidity and issue size. BlackRock (2014) has argued for a minimum issue size of USD 750 million to ensure future secondary liquidity of the issue. This relation between issue size and bond liquidity may cause the illiquidity premium faced by growth companies to be higher since such companies are unlikely to reach a critical issue size.

Another suggestion by BlackRock to improve liquidity conditions in the secondary market is the standardisation of corporate bond issuance. If companies issue bonds with similar sizes and maturities at pre-determined times, this will decrease the number of distinct corporate bond issues outstanding in the market, and so will make it easier to match sellers with buyers (Prager et al., 2013). European Commission (2015) also argues that a lack of standardisation may hamper the development of a liquid secondary market and also of electronic trading venues. On the other hand, while acknowledging that such standardisation could potentially be a good idea, all issuers reviewed by Hill (2014) state that they still need the flexibility to time the market, including taking advantage of smaller issues or private placements, rather than issuing a limited number of jumbo bonds. Reserving this flexibility may be especially relevant for growth companies as the timing and amount of their financing needs may be less predictable compared to larger, more established companies.

Another important challenge in the secondary corporate bond market is providing post-trade transparency, i.e. disseminating information on recently completed trades to the public. Given the dominance of OTC trading in this market, achieving trade transparency requires a centralised mechanism. A remarkable example of a centralised post-trade transparency system is TRACE in the US, which became operative in 2002. In Europe, where a move towards post-trade transparency is being considered, market participants are concerned that too much transparency may have a counterproductive impact on liquidity, as it will decrease the ability of dealers to offload their positions without showing their hands to other market participants (Hill, 2014). A recent study by Asquith et al. (2013) based on TRACE data shows that these concerns are not without merit. The authors find that transparency leads to a significant decrease in trading activity at the illiquid, high-risk end of the corporate bond market, where we can expect growth company bonds to be located.

Initiatives to lowering entry barriers

One avenue that has been developed to provide smaller and growth companies with access to bond financing is private placement. The largest market for private placements is the United States, where the private placement market provides a number of distinct characteristics.

First, the private placement market typically allows for smaller bond issues than the public bond market. This is reflected in Panel A of Figure 27. In advanced economies, the median size of bond issues as private placements has always been considerably smaller than bonds that have been issued in the public market. Second, due to less burdensome reporting and registration procedures and the absence of a mandatory credit rating, the cost affiliated with a private placement is lower. The absence of an SEC registration requirement also speeds up the process from initiating to actually issuing a private bond placement.

It has also been argued that private placements lead to a closer relationship between the company and their bond investors. A relationship that can be particularly valuable for growth

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25 Instead, private placements are usually rated by the National Association of Insurance Commissioners (NAIC), since such ratings are required by insurance companies.
companies that may be concerned with disclosing the details of their growing business to a wider circle.

While medium-sized companies from the EU for many years have used the US private placement market to raise funds through corporate bonds, there are also initiatives to develop the European private placement market.

A recent French initiative is the Euro Private Placement (Euro PP) market with an explicit objective to provide financing for mid-sized companies. An important feature that distinguishes a Euro PP bond from a publicly traded bond is the contractual conditions (including covenants) between issuers and investors, which are more similar to bank loans. Through negotiations, the conditions can be tailored to the needs of the individual company. Similar to the US private placement market, in the Euro PP market issuers are not required to be rated, disclosure requirements are less strict, the market is limited to professional investors, and offers flexibility in issue sizes. Unlike in the US however, a Euro PP can take the form of a bond issue or a loan and can also be listed on an exchange. It is estimated that between 2012 and year-end 2014, a total of EUR 9.8 billion has been raised by Euro PPs through 115 issues.

Germany’s Schuldschein market has similar regulatory and institutional characteristics as the French and US private placement markets: shorter and standardised documentation, no rating requirement, shorter time to issue, lower minimum issue size, confidentiality and flexibility of terms and conditions.

Another recent initiative to facilitate access to capital markets for growth companies is the Italian ELITE programme, which was launched by Borsa Italiana in 2012. The aim is to educate non-listed SMEs with strong growth outlooks about long-term financing alternatives and to make them more visible and market friendly. In 2014 the ELITE programme was extended to cover also larger growth companies with an ambition to become more international. In April 2014, London Stock Exchange (LSE) started offering the ELITE programme to UK companies. At the end of the same year, LSE extended the scope to all of Europe and in April 2015, the first cohort of companies from other European countries was added to the program. As of April 2015, more than 250 companies were included in the ELITE programme, 15 companies publicly listed, 15 have completed a deal with a private equity firm and 50 have entered into joint ventures or have been bought and 10 have issued a bond raising a total of EUR 300 million.

The 10 bond issues by ELITE companies were all mini-bonds offered on the professional segment of Borsa Italiana’s ExtraMOT market, which lists commercial paper, bonds and project bonds. This new segment, named ExtraMOT PRO, reserved for professional investors was launched in March 2013 for listed and unlisted Italian companies of any size. The objective in developing this new segment was to allow companies to take advantage of the tax benefits offered by the Development Decree (Decree-Law No.83/2012), adopted in 2012. While the first issuers to tap the ExtraMOT PRO market were large companies reaching large issue sizes, smaller companies gradually entered the market with issues in the range of EUR 5 to 50 million. As of March 2015, 86 companies have their bonds listed on ExtraMOT PRO, bringing the total number of listed instruments to 100.

26 The average issue size in the Euro PP market declined from EUR 152 million in 2012 to EUR 60 million in 2014.


28 Although Schuldschein loans are clearly classified as a capital markets instrument in practice, in legal terms they are not securities. They are medium to long-term loans that are structured in such a way that they are as similar to bonds as possible.
and total capital raised to EUR 5 billion (Borsa Italiana, 2015). In the wake of this development, a number of funds focusing on mini-bonds have been established, a development that is likely to increase investors’ interest in mini-bonds. Kraemer-Eis (2014) reports that, as of June 2014, there were already 25 funds focusing on Italian mini-bonds and private debt with a combined fundraising target of approximately EUR 4.45 billion.

The only listing requirements of ExtraMOT PRO are to publish annual financial statements according to Italian GAAP or IFRS for the past two years (the last of which is supposed to be audited) and to provide an admission document with some essential information, such as description of and risk factors associated with the issue, information on the issuer, its management, governance and principal shareholders. Listings on ExtraMOT PRO are also exempt from the Prospectus Directive and the listing fee is only EUR 2,500 per financial instrument and it is not recurrent. After admission, companies are supposed to publish audited financial statements and disclose any price-sensitive information or any technical information related to the characteristics of the instruments. A credit rating is not necessary, but if one is obtained, it should be disclosed. In order to minimize costs for the issuer, such as underwriting and advisory fees, no sponsor or listing partner is required.29

Another European alternative marketplace for corporate bonds is the Oslo based Nordic Alternative Bond Market (Nordic ABM), established in 2005. Nordic ABM is exempt from EU directives and provides similar conditions for issuers as the Italian ExtraMOT PRO, by offering a simpler and faster process for admission to listing and by not requiring official ratings or IFRS-compliant financial reports. Furthermore, and contrary to issuers in the stock market, Nordic ABM issuers are not expected to establish an audit committee or to issue any corporate governance reports. On the other hand, Nordic ABM requires issuers to appoint an investment bank and its post-issuance disclosure rules are broadly identical with its regulated counterpart, the Oslo Børs. Nordic ABM allows issuers to target both the general public (Nordic ABM Retail) and professional investors (Nordic ABM Professional). As of 2014, there were 1,058 bonds listed on Nordic ABM.30

The German SME bond market is commonly referred to as the Mittelstand market. Stuttgart Börse was the first to establish a bond market targeted to SMEs in 2010, and was rapidly followed by exchanges in Düsseldorf, Frankfurt, Munich and Hamburg-Hanover. Bonds are sold to both retail and institutional investors, without an investment bank necessarily underwriting the issue. Buyers among the institutional investors are usually small- and mid-sized insurance companies and pension funds (Investment Europe, 2012). Most Mittelstand bonds have a credit rating from a BaFin-approved credit rating agency. As of April 2015, 194 bonds had been issued by 149 different companies, raising a total amount of nearly EUR 7 billion. Out of the 194 bonds, 34 bonds with a value of almost EUR 1 billion have defaulted. Furthermore, the recovery rate from these bonds is estimated to average only 15%. Retail investors have claimed that the real risks associated with these bonds were not adequately disclosed. While some of the defaults can be attributed to industry-specific circumstances in the renewable energy market, others were due to misrepresentation of financial accounts, or due to the weak credit quality of issuers at the time of the issue (Zank et al., 2015; Bryant and Vasagar, 2015).

As a result of reduced investor confidence, the Mittelstand bond market has experienced a slowdown in the last year. To restore investor confidence, Mittelstand bonds are now more

29 For more information on ExtraMOT PRO, see London Stock Exchange Group’s presentation on this market: http://www.borsaitaliana.it/pro-link/brochureextramotpro.en_pdf.htm
likely to include covenants. Whereas bond indentures contained an average of only 1 covenant in 2010, they had an average of 3.5 covenants in 2013, although the quality of the covenants may still be an issue. Exchanges have also increased transparency requirements for a listing and rating agencies have adapted their methodologies to be more forward looking (Zank et al., 2014; Zank et al., 2015).

China established an SME private placement bond market in 2012, which has attracted a significant number of issuers. Similar to the SME private placement markets in other countries, the Chinese market has less demanding conditions and issuance compared to public bond markets, and does not require bonds to have ratings. Furthermore, as opposed to other publicly offered corporate bonds in China, privately placed bonds do not have strict requirements on the issuers’ net assets or profitability (Ping, 2013).

3.6. Bond investors

Corporate bonds are primarily held by institutional investors. OECD (2015a) reports that by year-end 2013, US households directly held 19% of all corporate bonds while the rest was held by insurance companies, pension funds, mutual funds, banks and other legal entities. The share of household ownership in Japan and the UK are even lower. In Japan, where the largest corporate bond investors are banks and other financial institutions, only 5% of corporate bonds are held directly by households; while in the UK, direct household participation in the corporate bond market is almost non-existent.

Figure 28. Corporate bond investors in the US, Japan and the UK (2013)

Source: OECD Business and Finance Outlook 2015

The current low interest rate environment since 2008 has put bond investors on a quest for yield. While the yield on benchmark US Treasury bond has declined from 6% in 2000 to around 2% in 2015, the return expectations of US public pension funds for example, have remained largely unchanged. Other categories of large institutional investors have similar expectations, which are hard to meet by investing only in minimum risk assets (Wheatley, 2015).

One way in which the search for yield manifests itself is the increasing share of non-investment grade bonds. Non-investment grade issuance by non-financial companies, which in 2008 represented 6% of all bond proceeds increased to 26% in 2014. A similar trend is observed in emerging economies, where the share of non-investment grade issuance increased from 4% in 2008 to 16% in 2014. Furthermore, according to Çelik et al. (2015), the contracts of non-investment grade bonds today have only half the covenant protection they had 10 years ago. Investors, in their search for yield, appear to have traded their governance rights and covenant protection for higher expected returns.

Note that US households also invest indirectly in corporate bonds through their investment in bond funds.
Although the increased risk appetite of bond investors has opened bond markets to a broader set of companies, the overall effect on access to bond markets for smaller companies has been limited. As displayed in Figure 26 in Section 3.4 the average annual percentage of non-financial issuers with asset size less than USD 100 million (USD 250 million) in advanced economies amounts to only 1.2 (2.3) percent of all issuers during the period 2008-2014 period. In emerging markets, the portions of issuers with an asset size below USD 100 million and USD 250 million are 1.6% and 4.3% respectively.

An important determinant of institutional investors’ apparent lack of interest in bonds issued by smaller companies is that they do not appear to fit the institutions’ portfolio and investment strategies. The majority of non-bank investors surveyed in Association for Financial Markets in Europe (AFME, 2013) state that lending directly to SMEs does not fit their business model. This is mainly because of the small size of such issues, the revolving nature of borrowing, the need for local origination capabilities coupled with an increased number of credit analysts. Many investors view credit analysis as key to investing in this asset class, but consider such analysis extremely difficult and costly, relative to the small size of the issues and the large number of companies that need to be evaluated. Survey respondents expected banks to remain primary lenders to SMEs.

The primary investment strategy of insurance companies (who generally are large bond investors), is to match assets and liabilities with respect to their relative duration and liquidity structure, aiming to meet future claims of their policyholders. Data from National Association of Insurance Commissioners (NAIC) in Table 5 shows that for US insurance companies the portfolio composition remained remarkably constant during the ten-year period 2005 to 2014, despite significant changes in economic conditions. Throughout the period, bonds as an overall asset class make up around 70% of their total portfolio. The share of corporate bonds in the bond portfolio, however, has increased steadily during the same period, from 44% in 2005 to 53% in 2014. Approximately 94% of the bond portfolio is made up of investment grade bonds. The allocation across NAIC ratings appears to be fairly constant over time, particularly with respect to non-investment grade ratings. Table 5 indicates that there is little room for growth companies, which are likely to be non-rated or low-rated, to increase their share in the highly rating-dependent bond portfolios of insurance companies.

Since mutual funds and pension funds have long been allocating a significant portion of their investments based on passive investment strategies, the investment criteria presented in their prospectuses are typically made up of readily available characteristics, such as investment/non-investment grade. This business model typically precludes the ability and analytical resources required for investing in non-rated growth companies.

Even if institutional investors were willing to analyse the credit worthiness of growth company bonds in-house, they would face obstacles, since the financial statements are not generally prepared based on widely accepted accounting standards like IFRS or US GAAP. Moreover, information on the company’s prior borrowing and repayment behaviour, which is an important determinant of credit worthiness, is usually available only to their banks.

In view of these obstacles, European Commission (2015) has suggested that common, simplified and high quality accounting standards for smaller companies listed on certain trading venues, like MTFs, could make them more attractive to investors. In addition, European Commission (2015) notes that since around 25% of all companies in Europe and 75% of owner-managed companies do not have a credit score the development of standardised credit quality information may also help SMEs to attract funding. One successful initiative in this respect has been taken by Banque de France (BDF), which rates 280,000 companies per year, 90% of which are SMEs, based on data from financial institutions, financial statements, and courts as well as qualitative information. Unlike the
business model for commercial rating agencies where the issuer pays for the rating, it is the customers (notably commercial banks) who pay to obtain the BDF rating (Schirmer, 2013). A similar credit rating system for SMEs was also developed in Austria (ECB, 2014).

Table 5. Insurance industry investment portfolio composition in the US

<table>
<thead>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Assets (USD billion)</td>
<td>4,328</td>
<td>4,624</td>
<td>5,023</td>
<td>5,229</td>
<td>5,351</td>
<td>5,540</td>
<td>5,762</td>
</tr>
</tbody>
</table>

**Asset Mixes**

Bonds: 71% 68% 70% 69% 68% 68% 67%
Preferred Stocks: 1% 2% 1% 0% 0% 0% 0%
Common Stocks: 10% 9% 10% 11% 11% 12% 12%
Mortgages: 7% 7% 6% 6% 7% 7% 7%
Other: 11% 14% 13% 13% 14% 13% 14%

**Bond Type Distribution**

Corporate Bonds: 44% 43% 49% 50% 52% 53% 53%
Other Bonds: 56% 57% 51% 50% 48% 47% 47%

**NAIC Designation (%)**

| NAIC 1 | 71% | 70% | 68% | 68% | 68% |
| NAIC 2 | 23% | 24% | 26% | 27% | 26% |
| Sum Total Investment Grade | 94% | 94% | 94% | 95% | 94% |
| NAIC 3 | 3% | 3% | 3% | 3% | 3% |
| NAIC 4 | 2% | 2% | 2% | 2% | 2% |
| NAIC 5 | 1% | 1% | 1% | 1% | 1% |
| NAIC 6 | 0% | 0% | 0% | 0% | 0% |
| Sum Total Non-Investment Grade | 6% | 6% | 6% | 5% | 6% |

Source: NAIC, Capital Markets Weekly Special Reports related to insurance industry investment portfolio asset mixes for years 2010-2014.

Another factor that may restrict smaller companies’ access to bond markets is the mark-to-market requirements imposed on institutional investors, which creates a bias towards a need to hold liquid securities (Breedon et al., 2012, Lugaresi, 2014). Liquidity is also essential for mutual funds and ETFs, as they typically promise easy access to and exit from the bond markets. Given the positive relationship between issue size and liquidity of a corporate bond, bonds with issue sizes that are attainable by growth companies are likely to suffer more from illiquidity, making them less attractive to some institutional investors.
References


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Annex 1

Methodology for data collection, classification and analysis

Public equity data

Initial public offering (IPO) and secondary public offering (SPO) data are based on original OECD calculations using data obtained from Thomson Reuters Thomson One New Issues Database. IPO and SPO data exclude Real Estate Investment Trusts (REITs), investment funds, special purpose acquisition companies, over-the-counter (OTC) markets and unit/trust offerings.

The IPOs of companies that were listed in an organised market after the IPO but currently traded in OTC markets are included. SPO covers all share issues of listed companies after an IPO. The country breakdown was carried out based on the domicile country of the issuer. Issuance amounts are in 2014 USD adjusted by US GDP deflator.

Corporate bond data

Corporate bond data are based on original OECD calculations using data obtained from Thomson Reuters Thomson One New Issues Database. Primary corporate bond data exclude sukuk bonds, convertible bonds, preferred shares and bonds with an original maturity less than 1 year or an issue size less than USD 1 million.

Outstanding amounts are calculated based on annual net issuance amounts. Annual net issuance amount is the difference between gross issuance amount and amount retired due to maturing or called bonds. Actual call date data obtained from Bloomberg were used in net issuance calculations. The country breakdown was carried out based on the domicile country of the issuer. Issuance amounts are in 2014 USD adjusted by US GDP deflator.

Equity and bond issuance behaviour around the IPO date

To explore the equity and bond issuance behaviour of a company around its IPO, the IPO database is merged with the SPO and corporate bond databases, respectively. When merging the IPO and SPO databases, common issuer characteristics across the two databases, specifically issuer CUSIP and issuer name are used. These issuer characteristics are also used when merging IPO and corporate bond databases. However, to account for cases in which an IPO firm issues bonds through a subsidiary, we also consider corporate bond issues made by companies whose parent company is the IPO firm in consideration.

Issue counts and issue size

A single equity or corporate bond issue by a company may include more than one tranche. Multiple tranches in a single issue are consolidated when reporting issue counts or issue sizes.

Country classification

The report follows IMF’s advanced economies classification. All economies that are not classified as advanced are classified as emerging.

The Europe category covers the countries in the EU, with the following modifications: (i) Emerging economies in the EU are excluded to avoid overlap with the emerging economies category. (ii) Switzerland and Norway are included.
Industry classification

The report follows Thomson Reuters’ industry classification. The main categories and their subcategories are the following:

- **Consumer:** Professional services, food and beverage, employment services, educational services, textiles & apparel, home furnishings, legal services, travel services, agriculture & livestock, household & personal products, tobacco and others.
- **Energy and power:** Oil & gas, petrochemicals, pipelines, power, water and waste management, alternative energy sources, and others.
- **Healthcare:** Pharmaceuticals, biotechnology, healthcare equipment & supplies, healthcare providers & services, hospitals, and others.
- **High technology:** Computers & peripherals, e-commerce / B2B, electronics, IT consulting & services, internet software & services, semiconductors, software, and others.
- **Industrials:** Aerospace & defence, automobiles & components, building/construction & engineering, industrial conglomerates, machinery, transportation & infrastructure and others.
- **Materials:** Chemicals, construction materials, containers & packaging, metals & mining, paper & forest products, and others.
- **Media and entertainment:** Broadcasting, cable, publishing, recreation & leisure, advertising and marketing, hotels and lodging, motion pictures & audio visual, casinos & gaming and others.
- **Real estate:** Non-residential, residential, REITs, real estate management & development, and others.
- **Retail:** Food & beverage retailing, discount and department store retailing, apparel retailing, computers & electronics retailing, internet and catalog retailing, automotive retailing, home improvement retailing and others.
- **Telecommunications:** Space & satellite, telecommunications equipment, telecommunications services, wireless, and others.