

PANORAMA

Are bond markets the new “spare tyre” for corporates in emerging economies?

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If the year 2017 is synonymous with a slight economic upturn in the emerging markets, let's not forget the previous three years were marked by increased corporate risk. The reasons for this were numerous: declining commodity prices, high corporate indebtedness, production overcapacity, political risk at the highest level, etc. In this tumultuous environment, businesses have also had to deal with tighter credit conditions from banking institutions.

Restrictive credit conditions in times of crisis is not unique to the emerging world, the sub-prime crisis being another example. In these circumstances, the bond markets can provide an alternative to bank financing, providing businesses with some breathing space. This is according to Alan Greenspan, the former Chairman of the US Federal Reserve, who went as far as describing the bond markets as a “spare tyre” in 2000.

In this study, we question whether the bond markets have actually played the role of a “spare tyre” for emerging market businesses during the recent period of slowed growth (or even recession). The answer is a priori less obvious than in the case of advanced

economies, as the development of corporate bond markets is incomplete there. This year, however, marks the twentieth anniversary of the Asian crisis, which revealed the dangers linked to the financing of businesses exclusively dependent on banks.

Finally, in the 16 emerging market economies, bond markets seem to have offered a breath of fresh air to businesses in several countries in Asia (Thailand, Indonesia) and emerging European markets (Czech Republic, Poland, and Hungary). This is also the case in Latin America (Chile, Mexico and Colombia), with the difference being that international bond, instead of local bond issues have increased in this region, along with the resulting risks (increased currency risk in the case of foreign currency bond issues). Finally, one of the lessons of this study is that the bond market is of no help when the economic shock is particularly violent: despite the existence of liquid and relatively large markets, the recession was accompanied by a decrease in bonds outstanding in Brazil and Russia in 2015.



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1 BENEFITS OF DIVERSIFYING SOURCES OF FINANCING IN EMERGING ECONOMIES

Just 20 years ago, the Asian crisis revealed the need for emerging economies to divest themselves of “original sin”...

The 1997-98 Asian crisis resulted in increased interest in bond markets in the emerging markets. Up to this point, economic development in Asia, excluding Japan, had to a large extent been enabled by a financial system centred on the banking sector. According to Barry Eichengreen¹, banking systems have proved to be the easiest means of financing for developing economies with urgent needs: governments are likely to provide the necessary capital, thus facilitating the financing of long-term investments of large businesses. The Asian crisis of 1997 showed the weaknesses of this type of financing.

In the first half of the 1990s, Asian economies were characterised by strong investment growth, with the proportion of gross fixed capital formation in GDP reaching 35-45 per cent in Thailand, Indonesia, Malaysia, Singapore and the Philippines on the eve of the 1997 crisis. In order to finance their investment projects, businesses obtained external financing and therefore accrued foreign currency denominated debts. The current account balance of Asian countries deteriorated over this period, reaching, for example, 7.8% in Thailand in 1996. In this context, expectations of devaluations of local currencies increased, the majority of which at the time were linked to the US dollar. In Thailand, equity markets fell sharply from the beginning of 1997, particularly as a result of outflows of foreign capital. The decision of the Thai government to float the baht in June accelerated expectations of depreciation, such that the currency depreciated by almost 55% in the second half of 1997. This decline resulted in a sharp depreciation in other currencies in the region, increasing the amount of liabilities denominated in foreign currencies for local banks. To meet their short-term debt obligations, these banks were forced to recall some of their loans. These restrictions on credit penalised investment, as well as business and household consumption. This crisis therefore highlighted the negative consequences of a country's inability to borrow in local currency (via the bond market or banks), “original sin”², and the benefits of local currency bond financing, which transfers currency risk from the issuer to the investor.

The local bond market should enable businesses that do not have foreign currency revenues to borrow in local currency to avoid the effects of foreign exchange risk where currencies do not match (“currency mismatch”). Its development was therefore

considered useful by many emerging economies with an inclusive growth strategy aimed at boosting domestic demand. In the event of insufficient financial resources in local currency, businesses could also decide not to borrow to avoid currency risk, but the effects on investment and growth would be negative. Alternatively, public authorities could accumulate foreign exchange reserves to offset currency mismatch, but this solution also has its disadvantages: (1) net debt (and hence its positive effects on investment and growth) is eliminated, with increased private sector debt offset by the public surplus associated with accumulation of reserves; (2) there is an opportunity cost to holding foreign exchange reserves, the yield of which is generally lower than the cost of borrowing, according to D. Rodrik³.

... and for their businesses to diversify their sources of financing

Second, the existence of a local currency bond market makes it possible to diversify the supply of financing. It provides competition with the banking sector, leading to lower financing costs for businesses and households. From the point of view of savers, rather than borrowers, this additional supply of financial instruments in which to invest may incite less hoarding and more investment, thereby fostering business investment and growth (see Herring and Chatusripitak⁴).

Greenspan⁵ stresses that financial diversification also plays the role of a “spare tyre” in the event of a banking system failure: it reduces the magnitude of recession and/or economic slowdown. The country in question is also less subject to banking crises. According to C. Arteta⁶, who has examined the links between the cost of economic crises in emerging economies and the size of local currency bond markets relative to the banking sector, concludes

1/ Eichengreen B. and Luengnaruemitchai P. (2006): “Why doesn't Asia have bigger bond markets?,” BIS Paper volume 30, Asian bond markets: issues and prospects.

2/ See B. Eichengreen, R. Hausmann and U. Panizza: “Original Sin: The Pain, the Mystery and the Road to Redemption”, 2002 <http://www.financialpolicy.org/financedev/hausmann2002.pdf>

3/ Dani Rodrik: “The Social Cost of Foreign Exchange Reserves”, NBER Working Paper No. 11952, 2006

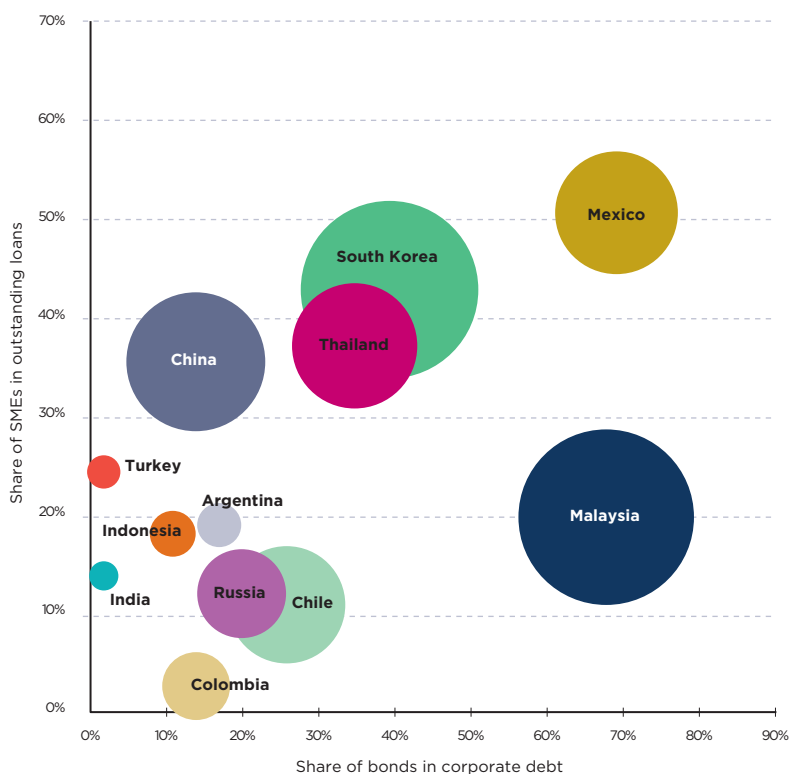
4/ Herring R.J. and Chatusripitak N. (2000): “The Case of the Missing Market: the Bond Market and Why It matters for Financial Development”, Asian Development Bank/ Wharton Seminar, May.

that the former positively affect economic growth, and that countries who have developed these suffer crises of lesser magnitude than those that have not.

The growth of bond markets also has beneficial effects on businesses that continue to finance themselves through other forms of financing, including bank credit. When larger businesses increase the proportion of bond financing in their debt, they free up space on banks' balance sheets, increasing their lending capacity to smaller firms. Indeed, a comparison between certain specific emerging economies illustrates this phenomenon. In Thailand, bond financing represents 35% of corporate debt and SMEs represent 37% of bank loans, whereas in Indonesia SMEs only represent 18% of bank loans, with bond financing representing 11% of corporate debt. The same applies to Latin American countries where, for example, nearly 70% of corporate debt in Mexico comes from the bond issues, thus enabling SMEs to represent 51% of bank loans, while the proportions in Argentina are 17% of corporate debt and 19% of bank loans respectively. Furthermore, the effect on credit to SMEs is more significant when financial conditions on the international markets are attractive, which also in parallel makes credit to small businesses more sensitive to a deterioration in overall financial conditions. In Mexico, for example, a 100 basis point increase in the difference between the cost of debt on international markets and domestic credit conditions results in a “crowding-out” effect of around 4 million pesos on new loans to SMEs⁷.

In addition, according to M. Aglietta⁸, developed bond markets provide a central bank with more sophisticated instruments to implement monetary policy. In other words, the central bank is no longer obliged to implement strict credit control policies (for example, by setting a required level of bank reserves or other measures that may distort the functioning of the banking sector and affect the confidence of economic agents). It is now able to target inflation and interest rates. The bond markets benchmark yield curves make it possible to collect information on inflation expectations, which are essential in the monitoring of this target. A bond market is also a prerequisite for more sophisticated financial products (derivatives, securitisation, etc.) enabling companies to improve their risk coverage thereby benefiting their investments. Indeed, the creation of a bond market implies the formation of a benchmark yield curve which then makes the creation of sophisticated financial instruments possible for businesses.

Chart 1:
Bond financing and bank loans to SMEs
Size of bubbles = outstanding corporate bonds relative to GDP



Sources: IMF, BIS



Developed bond markets provide a central bank with more sophisticated instruments to implement monetary policy.



5/ Greenspan, A. (2000) : “Global challenges”, allocation, Financial Crisis Conference, Council on Foreign Relations, New York, 12 July.

6/ Arteta C.O. (2005): “Does Bond Market Development help reduce the Cost of Crises? Evidence from Developing Countries”, Board of Governors of the Federal Reserve System, April.

7/ Carabarin M., A. de la Garza, O. M. Moreno, Global Liquidity and Corporate Financing in Mexico, Banco de México (2015).

8/ Michel Aglietta (2007): “Developing the bond market in China: The next step forward in financial reform”, for the international conference “Opening and innovation on financial emerging markets”, Beijing, March.

BOX 1

Corporate bonds in Thailand: do they support investment?

While bond financing has enabled businesses to diversify their sources of finance and to divest themselves of “original sin”, the extent to which this has helped to support economic activity, and in particular investment, remains to be seen.

The literature confirms the positive effect of corporate bond markets on economic activity. For example, G. Fink, P. Haiss, H. Kirchner and U. Thorwartl⁹ analyse the relationship between bond issuance volume and economic growth. Using quarterly data from 15 advanced economies between 1950 and 2000, they conclude that economic growth benefits from the development of corporate bond markets. Grjebine, Szczerbowicz and Tripier¹⁰ also point out that exits from recession are speedier in the case of economies with a large proportion of bond financing in their overall debt. Other studies emphasise the benefits not only of the presence of different sources of financing, but also of their stability within the financial structure of an economy. A. Garcia-Herrero and L. Cuadro-Saez¹¹ believe that a more

stable financial structure – in terms of the size of the banking system relative to capital markets – is associated with greater economic growth. They add that capital markets are rather a complement to bank financing than a substitute, which is consistent with Greenspan’s idea that bond market serves as a “spare tyre”.

In this context, we have investigated whether there is a relationship between the structure of corporate financing, and investment. In our case, the measurement of diversification of sources of financing is characterised by the proportion of bond issues in total corporate debt. In other words, the question is whether the substitution of bank loans by bond financing has had a positive influence on economic activity and in particular on investment. To do so, we have chosen to focus on Thailand, which has experienced significant growth in its bond market since the 2000s. In addition to our variable in terms of the proportion of bond financing (o_t), we have identified a number of factors that could influence investment (i_t) in this country. The selected variables are

the inflation rate (p_t), terms of trade (t_t), and the capacity utilization rate (u_t). We have quarterly data for all of our variables, beginning in the first quarter of 2000, up until the last quarter of 2016.

$$\Delta i_t = -1,46 \Delta p_{t-3} + 0,77 \Delta t_{t-4} + 0,39 \Delta u_t + 0,025 \Delta o_t + \varepsilon_t$$

We performed a multiple linear regression in time series to explain changes in investment based on other variables in our model. The results suggest a positive and significant relationship between the proportion of bonds in total corporate financing and investment. This means that the higher the proportion of bond financing, the greater the investment.

The low value of the coefficient associated with this variable can be explained in particular by the fact that many other variables also explain corporate investment decisions. Similarly, the coefficients of other variables confirm that inflation plays a negative role in investment, while the rate of production capacity utilisation and the terms of trade have a positive influence on investment.

■ ■ ■ **Since 2008, the level of attraction for international investors to emerging economies in general, and their bond markets in particular, has increased**

In addition to these structural factors, the rise of the bond markets is also the result of more cyclical dynamics influencing the investment decisions of international investors. The 2008-2009 crisis, which emanated from the United States in particular and the advanced economies in general, has led investors, both public and private, to diversify their investments in favour of emerging economies. The decline in growth in advanced economies and the ensuing relaxation of monetary policies prompted international investors to favour emerging asset classes due to interest-rate-growth differentials.

On the part of public investors, central banks have diversified their foreign exchange reserves: according to IMF data¹², the proportion of currencies other than the US dollar, the euro, the yen, the pound sterling, the Swiss franc, the Canadian dollar and the

Australian dollar (i.e. almost exclusively emerging currencies) went from 2.2% in the second quarter of 2008, to 5.9% in the third quarter of 2011. In addition to central banks, the same trend was observed among other types of sovereign investors in the region, i.e. sovereign wealth funds¹³, public pension funds and large public enterprises, although there is little data to confirm this.

This increase in demand for financial assets of emerging markets and corporate bonds in particular also comes from private investors. Recent studies suggest that private institutional investors did not

9/ Fink G., Haiss P., Kirchner H. and Thorwartl U. (2005): “Financing through Bond Issues and the Nexus with Economic Growth”, Europainstitut Working Paper Nr. 68, September.

10/ Thomas Grjebine, Urszula Szczerbowicz & Fabien Tripier (2014): “Corporate Debt Structure and Economic Recoveries”, CEPII Working Paper No 14-119.

11/ A. Garcia-Herrero and L. Cuadro-Saez (2008): “Finance for growth: does a balanced financial structure matter?”, BIS Research Paper

12/ Source: Currency Composition of Official Foreign Exchange Reserves (COFER), International Financial Statistics (IFS)

yet adopt a global approach to their investment strategies up until the 2008-2009 crisis, such that the assets of emerging markets as a whole were underweight in their portfolios. However, a reallocation of a very small proportion of assets under management from advanced markets to emerging markets would have a significant effect on the latter. In its October 2010 global financial stability report, the IMF noted that emerging market assets accounted for only 2-7% of G4 institutional investor portfolios. A reallocation of one percentage point of the assets (of the order of \$50 trillion) of these institutional investors to bonds or equities in emerging markets would generate flows of the order of 485 billion dollars to emerging markets, more than all the portfolio flows to emerging economies registered in 2007 (\$424 billion), a year before the record crisis in this area.

13/ In theory, funds held by sovereign wealth funds are to be distinguished from the central bank's foreign exchange reserves: the former aim to maximise the return on their assets over the long term, while the purpose of foreign reserves is to provide stability and manage of short-term liquidity. In practice, the literature fails to justify the foreign reserves accumulated by emerging (and especially Asian) central banks solely by the need for short-term crisis insurance (Hashimoto Y. (2008): “Too much for Self-Insurance? Asian Foreign Reserves”, Hong Kong Institute for Monetary Research, Working Paper No. 8/2006).

14/ The United States, Euro Zone, Japan and the United Kingdom.

2 INCREASED CORPORATE INDEBTEDNESS SINCE THE CRISIS

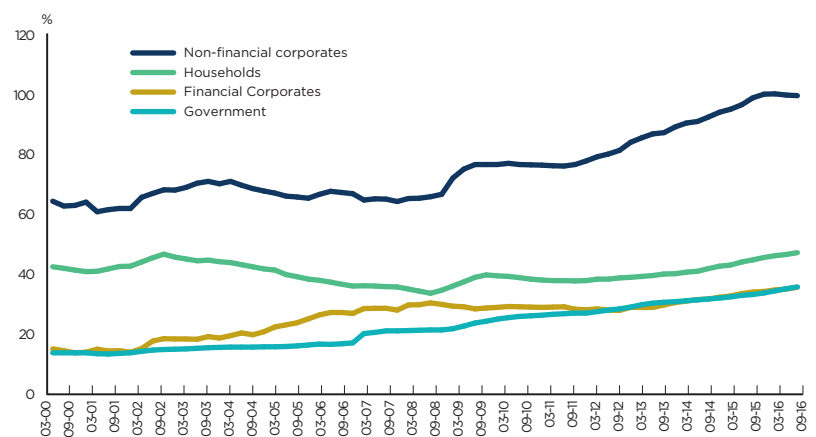
Corporate debt remains dominated by bank credit

Corporate debt in emerging economies has been growing steadily since the early 2000s, with a significant acceleration since the 2008 financial crisis. The amount of this debt even quadrupled between 2008 and 2017, an increase of nearly 25 percentage points of GDP (see chart 2). The level of corporate debt therefore far surpasses that in other sectors of the economy.

Emerging Asia appears to be the region with the highest level of corporate debt, accounting for 133% of GDP in 2016, largely due to China (166% of GDP, see chart 3).

Debt denominated in foreign currency represents a significant proportion of corporate debt. In some countries, such as Hungary, Turkey or Mexico, this type of debt reaches almost 50% of the total corporate debt, exposing businesses in these countries further to foreign exchange risk. The majority of this

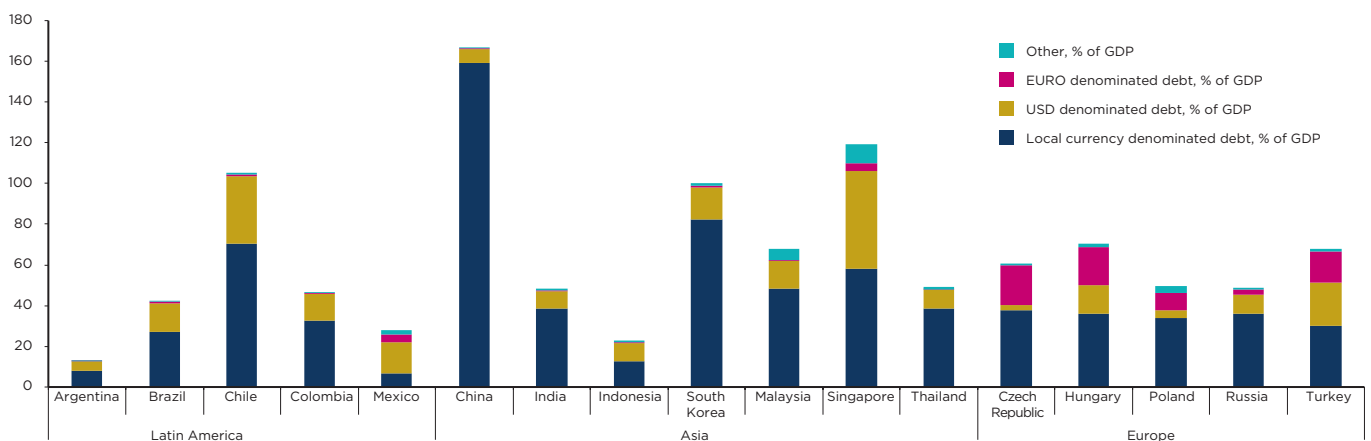
Chart 2:
Emerging market debt by sector (% of GDP)



Source: IIF

debt is denominated in dollars, except in emerging European countries.

Chart 3:
Corporate debt by currency



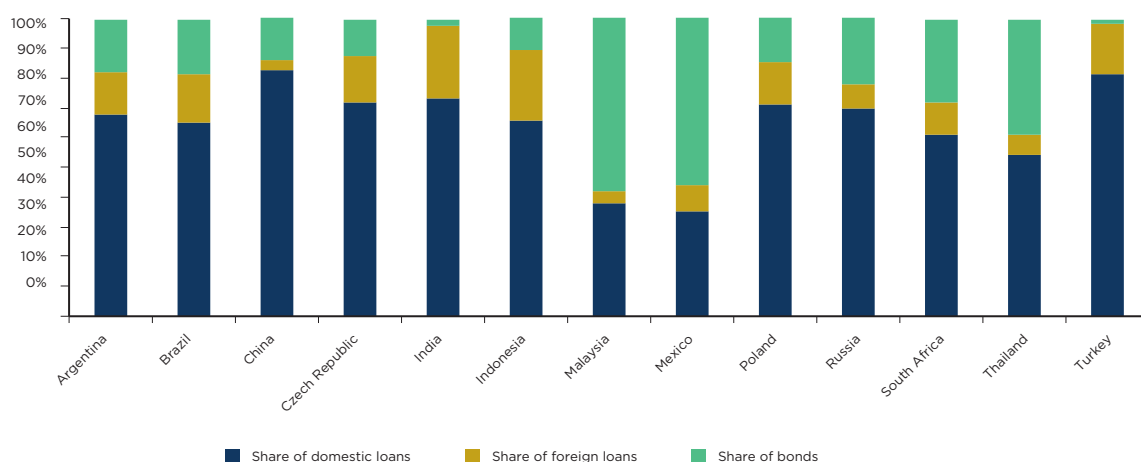
Sources: BIS, IIF



The main source of corporate financing remains bank credit, and in particular, loans from domestic banks. On average, bank lending in emerging markets accounts for almost 70% of total corporate debt (see chart 4). In addition, the interdependence

between banks and domestic firms is strong in most countries. As proof, nearly 50% of the supply of bank credit in emerging economies is for non-financial corporations, as against 40% and 10% for households and the State.

Chart 4:
Composition of corporate debt (% of total)



Sources: BIS, IMF, Coface

Strong growth in corporate bond financing

However, although corporate debt remains primarily banking debt in emerging economies, bond issues have risen sharply there since the 2008-2009 crisis (see chart 5). Chinese businesses are contributing significantly to this growth.

In Asia, this sustained growth has been primarily due to the growth of domestic markets. In Malaysia and Thailand, for example, corporate debt in the

domestic market benefited from an initially large market size of 31.2% of GDP and 10.2% of GDP in 2008, respectively, reaching 34.2% and 17.8% of GDP at the beginning of 2017 (see chart 6). On the other hand, with the exception of Brazil, Latin American corporates mainly issued bonds on international markets during this period in response to the lack of liquidity in their domestic markets, where volumes traded remained low¹⁵. In the first quarter of 2017, corporate bond issues in international markets reached 12.5% of GDP in Mexico and 16.7% of GDP in Chile.

Chart 5:
Corporate debt securities annual growth



Sources: BIS, Coface calculations

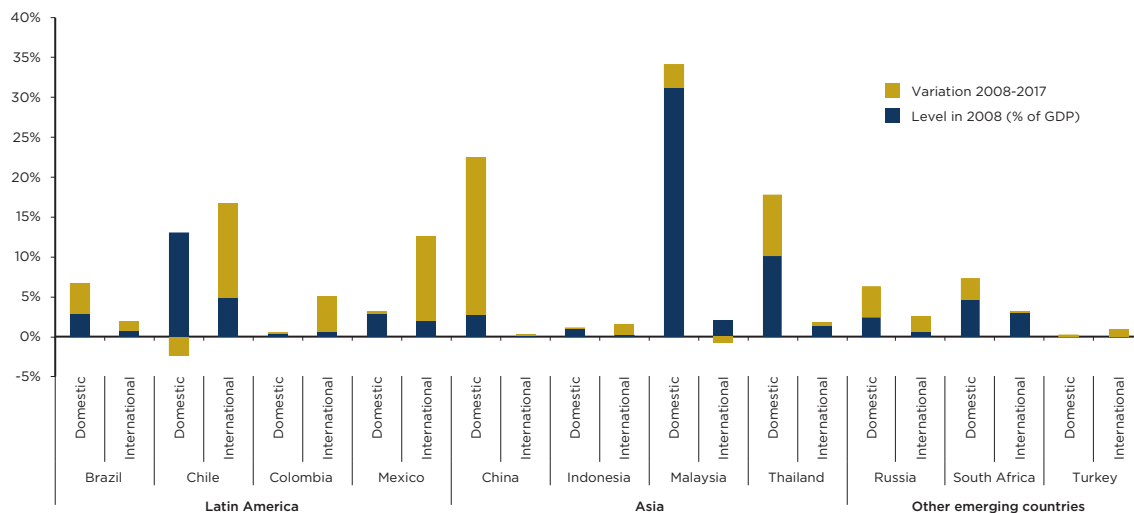
15/ Vtyurina S., A. Robles, B. Sutton, A License to issue (Anywhere): Patterns and Drivers of Corporate Bonds in Latin America, IMF Working Paper WP17/157 (July 2017).

* Latin America: Argentina, Brazil, Mexico, Chile

** Emerging Asia: Thailand, Philippines, Singapore, Malaysia, South Korea

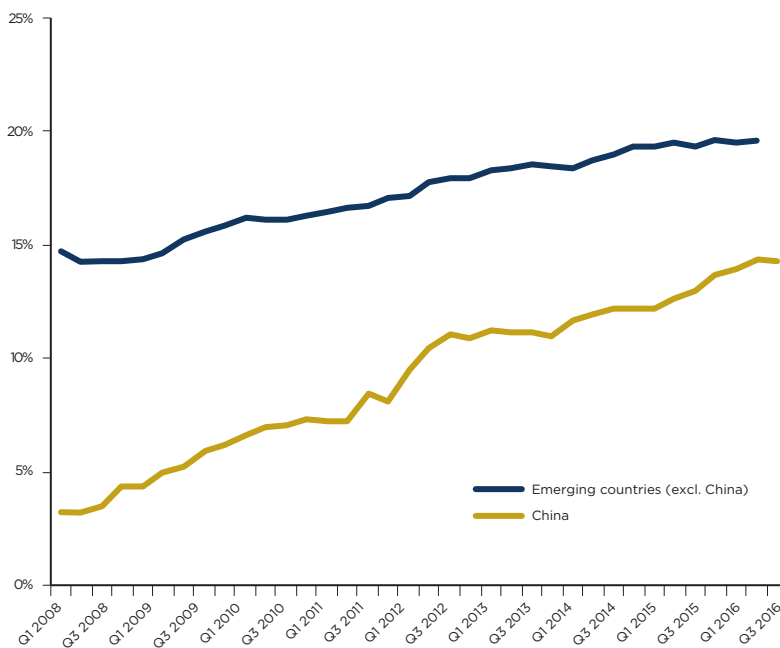
*** Other emerging economies: Russia, Turkey, South Africa, Czech Republic, Poland, Hungary, Israel

Chart 6:
Corporate bond issues by issuer markets



Sources: BIS, Coface calculations

Chart 7:
Share of bonds in total corporate debt



Sources: BIS, Coface calculations

This growth in bond issues is on average higher than that of bank credit over the period 2009-2017, and the proportion of bonds within total corporate debt has increased in emerging economies. While the bulk of the increase occurred between 2009 and 2013, the proportion of bond financing in corporate debt increased from 14% in 2008 to 20% in 2016 (see chart 5), showing diversification of sources of financing and reducing dependence on the banking sector.

The growth of bond financing in the emerging world is also reflected in the entry of new issuers into these markets. In Latin America, for example, the number of bond issuers has increased five-fold between 2008 and 2016 in Argentina and four-fold in Brazil¹⁶. Indeed, the increase in the number of issuers has been greater in the countries that have witnessed the development of their domestic bond market. This is particularly true in Brazil, where the domestic market has increased by almost four percentage points of GDP between 2008 and 2016, and where the proportion of first-time issuers, i.e. issuers who have never previously entered the bond market, represents more than one third of the total issuers in 2016.

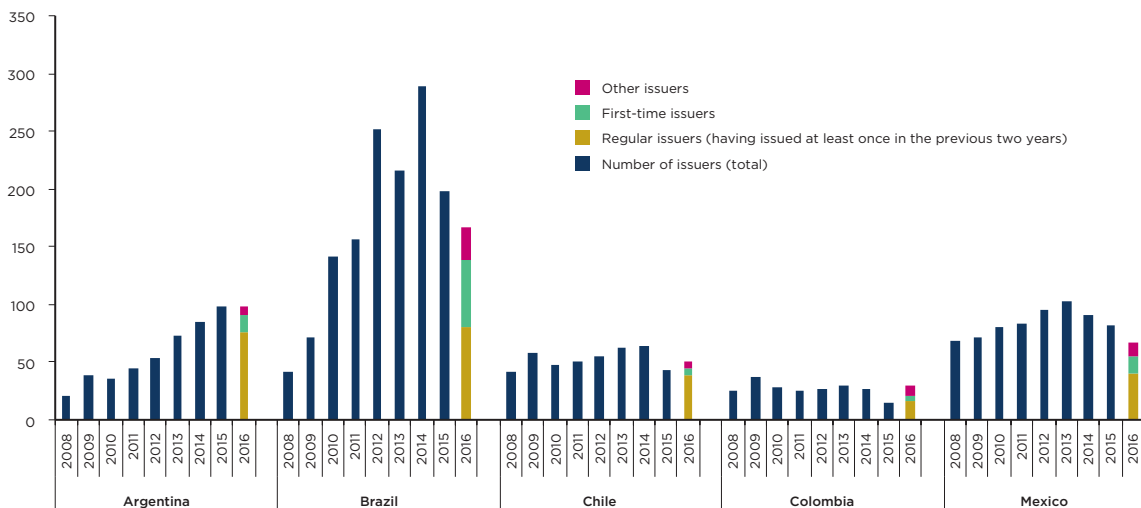


The proportion of bond financing in corporate debt increased from 14% in 2008 to 20% in 2016, showing diversification of sources of financing.



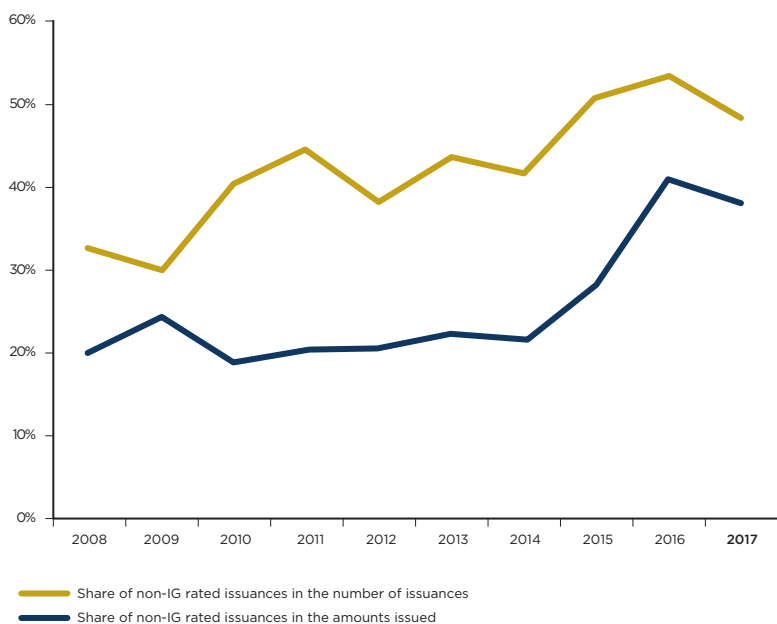
^{16/} Growth in the number of issuers was more limited in the period 2009-2013 in Mexico and Chile, where the number of issuers increased between 2008 and 2013 from 69 to 102, and 41 to 62 respectively.

Chart 8:
Number of issuers in major Latin American Countries



Sources: Bloomberg, Coface calculations

Chart 9:
Change in bond ratings in Emerging Economies



Sources: Bloomberg, Coface calculations

Another consequence of the development of the bond markets has been the diversification of issuer profiles, with a significant increase in issuers of inferior quality, defined by contrast with issuers classified as investment grade: in 2017, issuers who are not investment grade represent 43% of issuances and 38% of issue amounts, compared with 30% and 24% respectively in 2009. However, two periods should be distinguished. Between 2009 and 2013, the expansion of access to bond financing enabled the entry of new, lower quality issuers into the market in parallel with the increase in amounts issued by issuers already present. Therefore, while the proportion of low-quality issues increased relative to the total number of issues (from 30% in 2009 to 43% in 2013), their proportion of the amounts issued remained stable (24% in 2009 and 22% in 2013). By contrast, between 2014 and 2016, the proportion of low-quality issuers increased both in terms of the number of issues (from 41% in 2014 to 53% in 2016) and in relation to the amounts issued (21% 2014 to 40% in 2016), reflecting a general deterioration in market ratings from 2014 when the tarnishing of the macroeconomic situation in emerging economies was becoming apparent.



Another consequence of the development of the bond markets has been the diversification of issuer profiles.



3 CORPORATE BOND FINANCING: AN ADVANTAGE IN TIMES OF CRISIS?

The central role played by banks in corporate financing makes them vulnerable to changes in bank lending conditions (see *chart 9*). Indeed, bank lending to the non-financial private sector contracted in the emerging economies during the 2008-2009 crisis and then in 2015 and 2016. These two episodes confirm that the dynamics of bank credit are inherently pro-cyclical. On the one hand, the slowdown in business revenues due to the slowdown in activity leads to lower demand for loans. On the other hand, the deterioration in the financial situation of businesses is likely to lead banks to pursue more conservative lending policies.

In these periods of stricter banking credit conditions, bond financing can therefore be a “spare tyre”, an alternative for businesses (see Part 1). We compared the change in growth in bank credit to the private non-financial sector¹⁷, and that of outstanding amount of corporate bonds¹⁸ in 16 countries¹⁹. We are particularly interested in the recent period, which is marked by a deterioration in economic conditions in many emerging economies. To do this, we chose three criteria to determine the presence and type of “spare tyre” at play during periods of credit crunch: 1) if corporate bond growth is positive during a contraction of bank credit for at least two consecutive quarters; 2) if domestic bond account for more than 50% of total bonds; 3) if growth in domestic issues is higher than international issues. The first criterion allows us to deduce the presence of a “spare tyre” effect. The other two criteria relate to the type of issues that enable the substitution of bank loans with corporate bonds.

The analysis of these 3 criteria makes it possible to identify three groups of countries: countries where the domestic bond market plays the role of “spare tyre” for businesses, as is the case for Thailand, Indonesia, Poland, the Czech Republic, Hungary and Argentina; countries where the “spare tyre” materialises via the issue of bonds on the international market as in Mexico, Chile, Turkey and Colombia; and countries where neither the domestic market nor the international market has served as a “spare tyre”, as is the case in Brazil, Russia, South Africa and Malaysia. It should be noted that for China and India there has been no credit contraction over the recent period, and so it has not been possible to analyse the spare tyre effect here (see graphs in the appendix).

Chart 10:
Credit growth from banks to private non-financial sector in emerging countries



Source: IMF



The central role played by banks in corporate financing makes them vulnerable to changes in bank lending conditions.



In the first group of countries, growth in the bond market was not negative when bank lending declined, domestic bond issues grew more rapidly, and the majority of bond issues were issued on the domestic market (more than 60% in the Czech Republic and 86% in Thailand). We conclude that in these countries the domestic bond market has played its role as a “spare tyre” for businesses.



17/ Source: BIS; this indicator also includes loans to households but has been retained for reasons of comparability between countries and because it reflects credit trends for domestic banks.

18/ Source: BIS

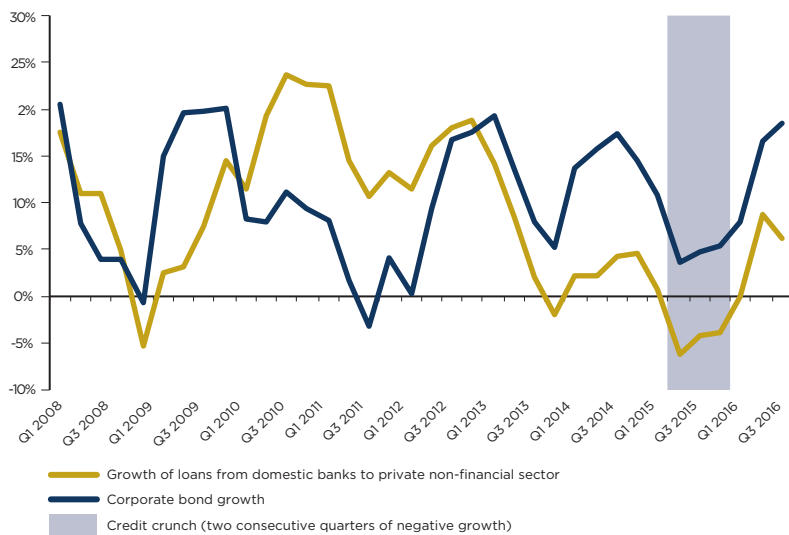
19/ South Africa, Argentina, Brazil, Chile, China, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Poland, Czech Republic, Russian, Thailand, Turkey.



Thailand provides an example of this situation. The strong growth in bond financing since the financial crisis of 2008 has made this market more liquid. The Thai bond market has experienced some of the fastest growth of Asian countries, from 10% to 18% of GDP between 2009 and 2016. Corporate financing in this market has now broadened and diversified, in particular as regards the issuing sectors and investor profiles. The arrival of new issuers has led to a lower concentration in the bond market, with the top 10 issuers accounting for 30% of total issues in 2016, compared to 37% in 2009. As a result, the number of issuers is growing (50 in 2009, compared to 205 in 2016) and come from increasingly diversified

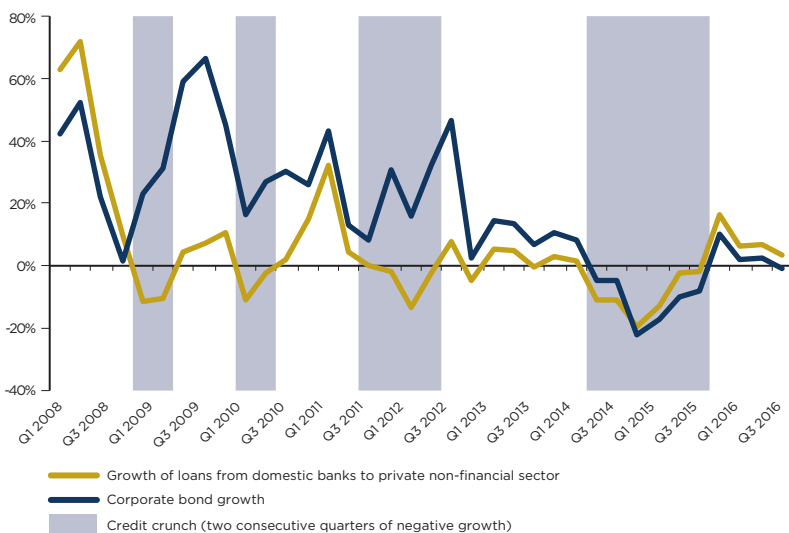
sectors, reflecting more the most dynamic sectors in the country's economy, such as agri-food, construction, energy and trade. Projects with a long maturity (greater than five years) also account for an increasing proportion of total issues, illustrating the rise in bond financing for longer-term investments. Finally, the proportion of corporate bond financing for refinancing purposes is only 5% of total bond issues, compared with an average of 20% in other Asian countries over the same period, indicating that this type of financing has largely been used to finance investment projects and has thus fostered growth (see Box 1).

Chart 11:
Growth of bank lending and corporate bonds issuance in Thailand



Sources: BIS, IMF, Coface calculations

Chart 12:
Growth of bank lending and bond issuances in Czech Republic



Sources: BIS, IMF, Coface calculations

In addition to several Asian countries, this category includes some emerging markets, including the Czech Republic. Within this region, periods of contraction in bank credit are different from those in other emerging economies. Indeed, credit contracted at the time of the 2008 financial crisis, and the sovereign debt crisis in the euro zone, and therefore not only from 2014 to 2016 as in most other emerging economies. During these two periods of contraction, the Czech Republic experienced a counter-cyclical development in its domestic bond market, illustrating the “spare tyre” effect. Two explanations can be given for this phenomenon.

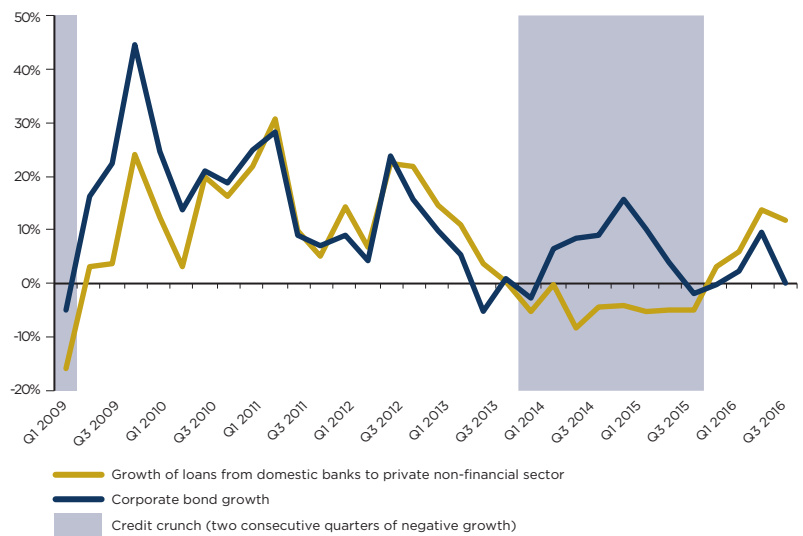
First, the nature of the credit shock influences the emergence of substitute sources of financing, resulting in off-setting via bond issues. Indeed, when the credit contraction is due to factors related to the supply of credit, companies turn more towards the bond market for financing. This was the case during the 2008 financial crisis and the sovereign debt crisis where banks tightened their credit conditions and supply due to the losses they incurred during these periods.

Moreover, this situation is only observed in countries where the domestic bond market has characteristics conducive to substitution of credit with bonds, as is the case in the Czech Republic. The first reason is the substantial size of the domestic market (12% of GDP) and the proportion of local currency issues, which is the largest in the emerging European economies (60% of the total). In addition, the maturity of issues is also the longest in the region (14 years on average for domestic issues), enabling businesses to finance longer-term investment projects in local currency during periods of restriction in the supply of bank credit.

The second scenario concerns countries in which businesses have in part been able to offset some of their minor bank borrowing by issuing bonds. However unlike the first category, these are primarily bond issues on the international markets which have been used as a “spare tyre” (criterion 2 and 3 not being observed). Indeed, international bond issues have been more dynamic than domestic issues and they account for a larger proportion of total issues.

For Chilean, Colombian and Mexican businesses, when global financing conditions became very attractive, bond issues on international markets were all the more significant because domestic markets were restricted, retaining pro-cyclical patterns during the credit crunch. While these developments have supported the financial position of businesses by allowing better conditions for debt refinancing, including a reduced rate and longer maturity, they also represent a return to “original sin” and exchange rate risk associated with external debt.

Chart 13:
Growth of bank lending and bond issuances in Chile



Sources: BIS, IMF, Coface calculations



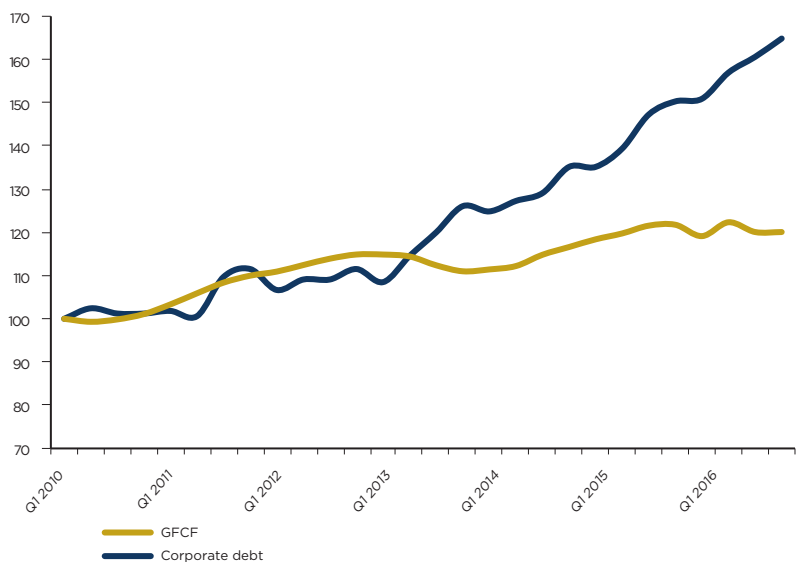
The nature of the credit shock influences the emergence of substitute sources of financing, resulting in off-setting via bond issues.



In fact, in Chile, Colombia and Mexico, the increase in bond issues during the credit crunch in 2014 had a relatively limited effect on activity, inviting a shift in the countercyclical role of debt securities traded on international markets. In the case of Mexico, the gap between financing needs and costs has led to a misalignment between the growth rates of corporate debt and investment, particularly from 2013 (see chart 14). In comparison with domestic bond markets, financing on international markets is also more associated with refinancing transactions²⁰ and investment in liquid assets²¹ than capital expenditure.

While the effect on investment appears to be at the least limited, the stabilising role of international bond financing activity may lie more in the form of financial intermediation provided by the issuing companies. In addition to providing banks with advantageous financing terms, international bond issues tend to increase bank deposits of non-financial corporations²² and thus doubly limit the reduction in the supply of credit during periods of contraction. According to Powell (2014), this link between bond issues in international markets and bank credit is particularly strong in Latin American countries, where a \$1 billion increase in corporate

Chart 14:
Misalignment between debt and investment in Mexico (base 100 = Q1 2010)



Sources: Banco de México, BIS, Coface calculations

20/ Regarding Mexican corporate bond issues by non-financial corporations in dollars, the proportion of refinancing increased from 13% in 2010 to 36% in 2016 (sources: Bloomberg, Coface calculations).

21/ Moreno R. and J. M. Serena, “Domestic financial markets and offshore bond financing” in BIS Quarterly review (September 2016).

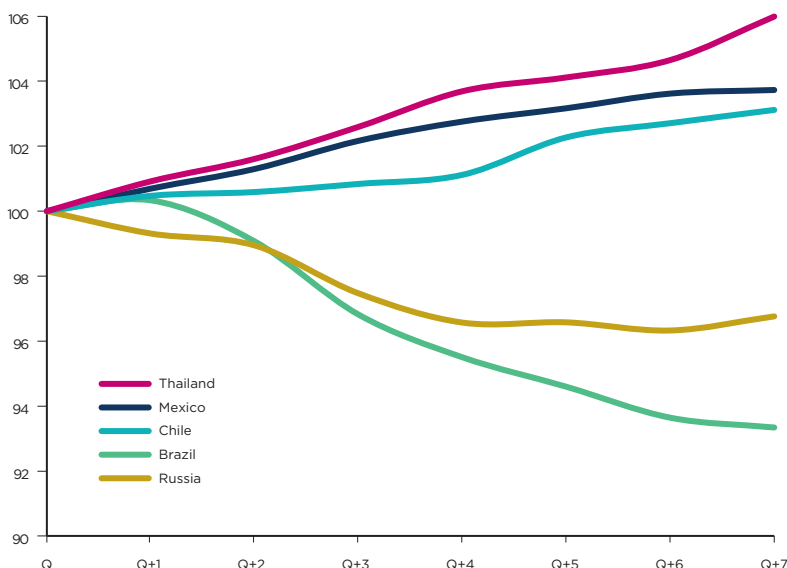


bonds outstanding in international markets results in an increase in bank credit of \$100 million²³. Since 2008, deposits by non-financial businesses have grown more rapidly than household deposits. Beyond the risk associated with external debt, other risks appear. An example of this is seen in Japan in the late 1980s²⁴, where the impact on corporate bank deposits of increased bond financing in international markets increases the sensitivity of the domestic banking system to global financial conditions. Consequently, a change in financial conditions in international markets affects not only companies that issue bonds in these markets, but also businesses that finance themselves exclusively through domestic bank credit, especially small and medium-sized enterprises.

On the other hand, the demand for bonds from investors has been severely impacted by the recession for at least two reasons. The magnitude of the shock has reduced demand from international investors and resulted in capital flight. In Russia, for example, as a result of the fall oil and gas prices - albeit in conjunction with international sanctions - the balance of portfolio flows reached negative levels in 2014 comparable to those recorded during the financial crisis of 2008. In addition, when the investor profile in the domestic corporate bond market is insufficiently diversified and consists mainly of institutional investors as is the case in Brazil²⁵, demand for bonds is much more sensitive to ratings changes. For example, when issuer ratings on financial markets deteriorated significantly in 2014 at the start of the recession, demand for bonds was constrained by the special regulatory requirements for institutional investors in terms of asset allocation.

Chart 15:

GDP growth during credit crunch in 2014
(base 100 = last quarter before contraction, identified for each country)



Sources: National Statistics, Coface calculations

Finally, in the third category are countries in which neither the domestic bond market nor the international market offer an alternative to local businesses from 2014 onwards. While the decline in the price of raw materials was reflected in these large emerging economies by a contraction in economic activity more than a recession (see chart 15), corporate bond issues have retained a pro-cyclical dynamic, mirroring the evolution of businesses during previous credit crunches. Affecting both the supply of bonds on the part of corporates and the demand for bonds from investors, several explanations for the pro-cyclical behaviour of bond financing can be advanced.

On the one hand, in the countries affected, the extent of the contraction was so great that the demand effect outweighed the contraction in the supply of credit: the fall in demand for financing following the decline of business activity consistently affected all sources of financing, including bond issues, thus reducing the supply of bonds.

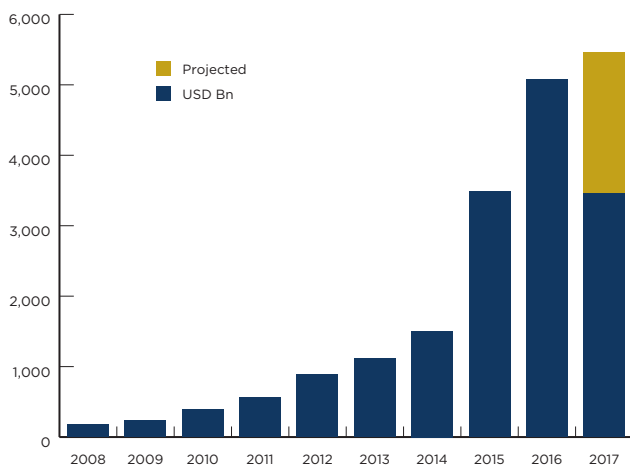
In conclusion, if the significant growth of this mode of financing in the recent past should theoretically have offered a “spare tyre” at the time of the 2014 slowdown, the reality has been more varied from country to country. Nonexistent in the countries most affected by the deterioration in macroeconomic conditions in 2014, the “spare tyre” effect appears to be differentiated according to whether corporates issue more on the domestic bond market or on the international market.

- 22/ Shin H. S., L. Zhao, Firms as surrogate intermediaries: evidence from emerging economies, Asian Development Bank working paper (2013).
- 23/ Powell A., Global Recovery and Monetary Normalization: Escaping a Chronicle Foretold?, Latin American and Caribbean Macroeconomic Report, Inter-American Development Bank (2014).
- 24/ Hattori M., H. S. Shin and W. Takahashi, “A financial system perspective on Japan’s experience in the late 1980s”, IMES Discussion papers, Bank of Japan (2009).
- 25/ Vtyurina S., A. Robles, B. Sutton, A License to issue (Anywhere) : Patterns and Drivers of Corporate Bonds in Latin America, IMF Working Paper WP17/157 (July 2017).

BOX 2

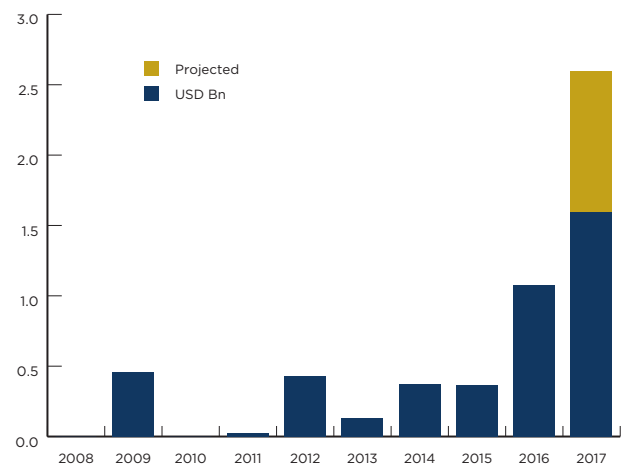
A fast growing giant: Should you be concerned about China’s bond market?

Chart 16:
Corporate bond issuance in China



Source: Bloomberg

Chart 17:
Corporate bond defaults in China



Source: Bloomberg

The Chinese bond market has developed very rapidly in the past years. Corporates issued US\$ 5.1 trillion worth of bonds in 2016, an increase of 45% compared to 2015, making it the third largest bond market in the world. At the time of drafting, total bonds outstanding were equivalent to US\$9 trillion, making the Chinese bond story one of the most relevant in finance lately. The market is both a source of risk and opportunity.

On the risk front, there is a chance that the unprecedented boom in corporate bond issuance may result in an asset bubble. Additional liquidity has led to the formation of imbalances, including a housing bubble and rising corporate debt. The surge in liquidity can be traced back to 2008, when the Chinese authorities embarked on a massive stimulus package, estimated to be RMB 4 trillion (USD 650 billion), in a wide-ranging effort to offset adverse global economic conditions and boost domestic demand. Corporate debt warrants the most attention, as it currently stands at approximately 200% of GDP, a very high level by international standards.

The explosion of the domestic bond market should therefore be understood in the context of China’s desire to shift corporate financing needs away from bank loans and towards capital markets. This is not the first attempt to rebalance corporate debt in China. Before bonds, another asset class suffered the consequences of China’s perilous efforts. In 2015 the Chinese authorities touted the equity market as an alternative source of financing for highly leveraged corporates.

The market – which had previously been suffering from a protracted bear run – rallied on government support. However, this all came to an abrupt halt once the authorities intervened to reduce excessive levels of leveraged financing. Financial actors using leveraging to invest in the stock market were forced to correct their position, leading to a steep decline in the stock market indices.

But the market also offers innumerable opportunity. The number of defaults increased to 7 in 2016 and 15 in 2017 YTD (US\$1.1Bn and US\$1.6Bn respectively),

which constitutes a shift from previously held assumptions of implicit guarantees by the state. However, defaults remain small relative to the huge size of the Chinese bond market. Of those defaulted, none had ratings by the three major agencies. This is because, unlike other emerging market peers, the domestic “onshore” bond market in China remains mostly closed.

However, a few developments on the liberalization front are noteworthy. The bond market was opened to foreign investors with the establishment of the Hong Kong-Shanghai bond connect on July this year. Foreign institutional investors were allowed free access to the mainland’s interbank market in February 2016. This will benefit the rebalancing of financing needs away from bank loans and towards more market-based mechanisms, but it also exposes international investors more to a potential correction in China’s debt bubble. Adequate risk management practices will remain a crucial component of accessing the potential of this market going forward.



CORPORATE BONDS AND BANK LENDING GROWTHS

- Growth of loans from domestic banks to private non-financial sector
- Corporate bond growth
- Credit crunch (two consecutive quarters of negative growth)

Sources: BIS, IMF, Coface calculations

Chart 18:
Growth of bank lending and corporate bonds issuance in South Africa

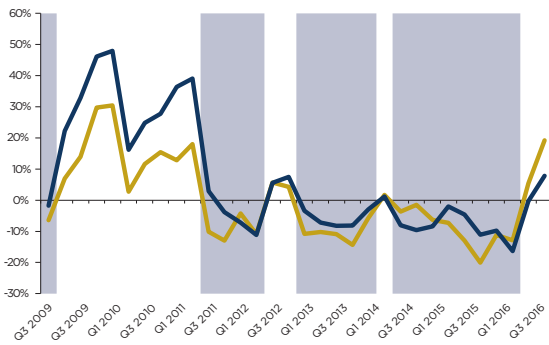


Chart 19:
Growth of bank lending and corporate bonds issuance in Argentina

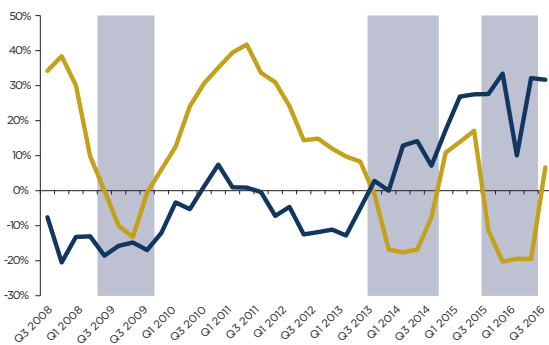


Chart 20:
Growth of bank lending and corporate bonds issuance in Brazil

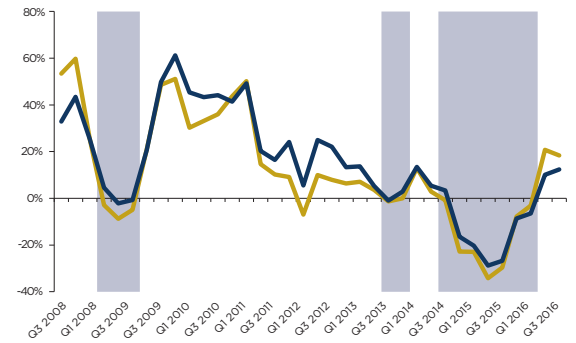


Chart 21:
Growth of bank lending and corporate bonds issuance in China

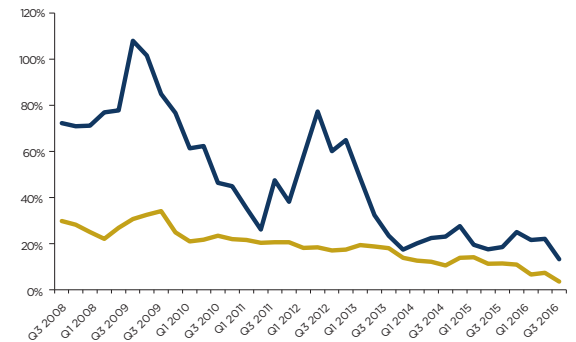


Chart 22:
Growth of bank lending and corporate bonds issuance in Colombia

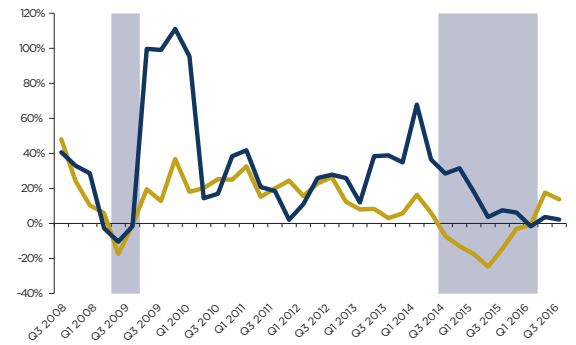


Chart 23:
Growth of bank lending and corporate bonds issuance in Hungary

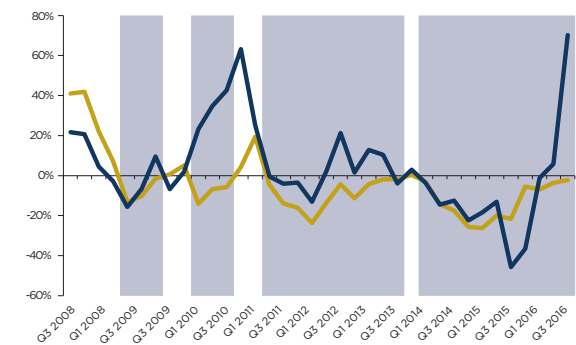


Chart 24:
Growth of bank lending and corporate bonds issuance
in India

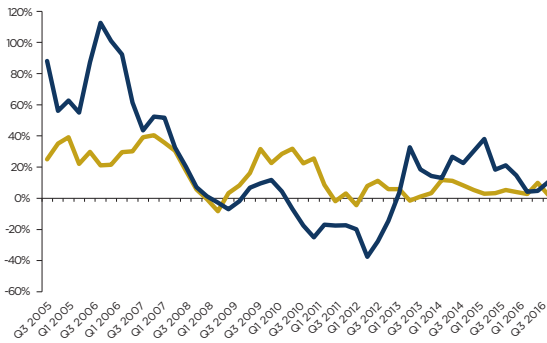


Chart 28:
Growth of bank lending and corporate bonds issuance
in Poland

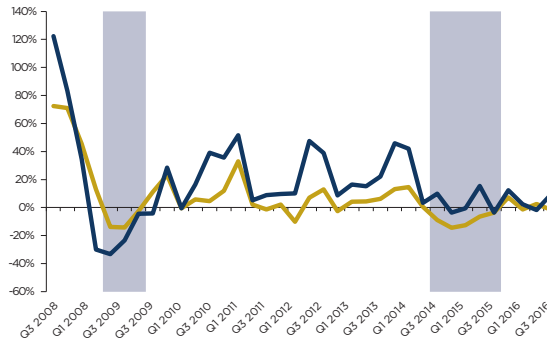


Chart 25:
Growth of bank lending and corporate bonds issuance
in Indonesia

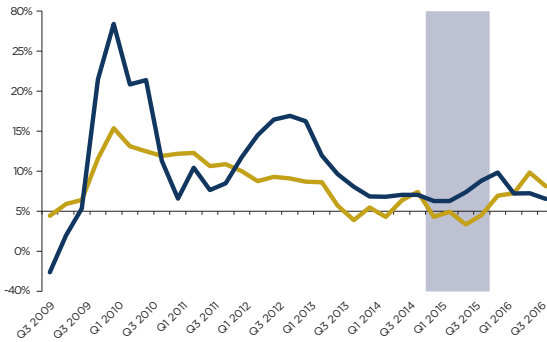


Chart 29:
Growth of bank lending and corporate bonds issuance
in Russia

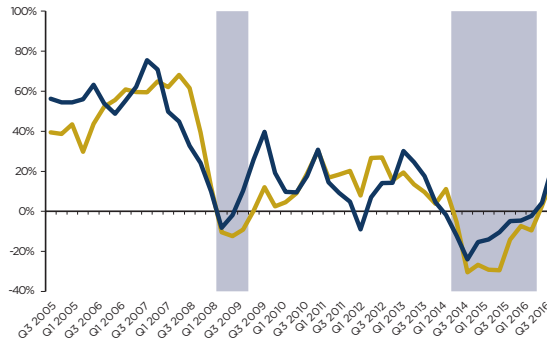


Chart 26:
Growth of bank lending and corporate bonds issuance
in Malaysia

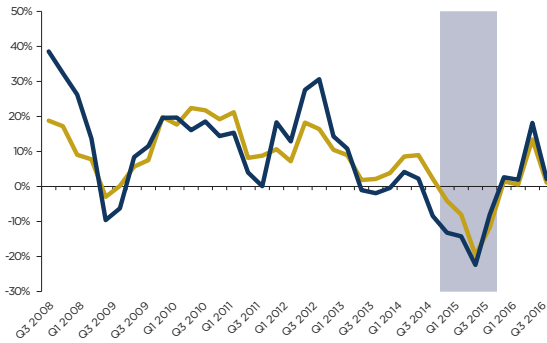


Chart 30:
Growth of bank lending and corporate bonds issuance
in Turkey

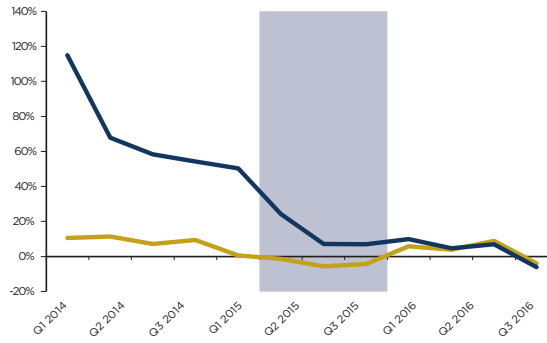
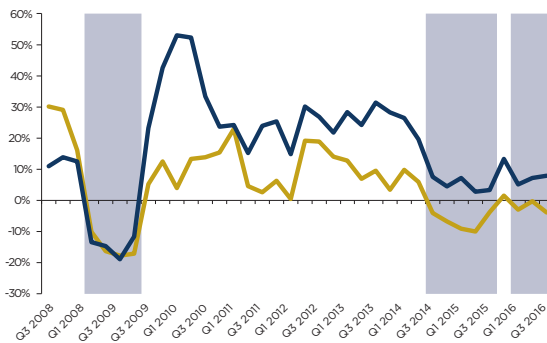


Chart 27:
Growth of bank lending and corporate bonds issuance
in Mexico



— Growth of loans from domestic banks to private non-financial sector
— Corporate bond growth
■ Credit crunch (two consecutive quarters of negative growth)

Sources: BIS, IMF, Coface calculations

RESERVATION

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