Changes in Colombian financial markets over the past decade

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Abstract

This note describes some of the most important changes that have occurred in the Colombian financial system over the past decade. It begins with an assessment of the growth of shadow banking, together with an analysis of the main risks that have emerged in the shadow banking sector and a description of recent regulation aimed at addressing those risks. Following that, salient changes in the balance sheet structure of the traditional banking system are described, together with the risk implications for banks. Then, the paper analyses the issuance of domestic and foreign bonds by Colombian corporations. Finally, the paper examines the way foreign capital inflows feed into local bank deposits in order to assess the relevance for Colombia of the risks highlighted by Powell (2014).

Keywords: financial system, shadow banking, bonds issuance, corporate debt

JEL classification: G20, G21, G28, G30

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Introduction

This note describes some of the most important changes in the Colombian financial system over the last decade. It begins with an assessment of the growth of shadow banking, together with an analysis of the main risks that have emerged in the shadow banking sector and a description of recent regulation aimed at addressing those risks. Following that, salient changes in the balance sheet structure of the traditional banking system are described, together with the risk implications for banks. Then, the paper analyses the issuance of domestic and foreign bonds by Colombian corporations. Finally, the paper examines the way foreign capital inflows feed into local bank deposits in order to assess the relevance for Colombia of the risks highlighted by Powell (2014).

Shadow banking in Colombia

In contrast to what has happened in some other emerging market economies (EMEs), shadow banking (SB) in Colombia has not grown faster than the traditional financial sector. However, it plays an important role with regard to bank funding. The most relevant systemic risks stemming from SB thus relate to maturity transformation and liquidity. Recent regulation has partially addressed those risks.

Structure and growth of SB

By the end of 2013, assets in the SB sector amounted to USD 31 billion, equivalent to 14% of traditional financial sector assets[2] and 8.5% of GDP.[3] Since 2001, the growth in SB assets has been lower than that of the traditional financial system (Table 1). Money market funds (MMFs) represent most of the activities conducted by SB entities in Colombia (65% of total assets). MMF holdings grew by 50% between 2010 and 2013 (Graphs 1 and 2).

The activities of non-financial cooperatives have also grown fast. Such intermediaries borrow from and lend exclusively to their stakeholders. The supervision (and part of the regulation) of those entities is separate from that of traditional financial intermediaries. They are not supervised by the Financial Superintendence but rather by the Economic Solidarity Superintendence.

[2] The traditional financial system comprises credit institutions (commercial banks, financial corporations, finance companies and financial cooperatives).

[3] These values use the definition of SB by activity. The figures resulting from a definition by entities (FSB broad measure) are slightly higher. See Financial Stability Board, *Report on Shadow Banking in the Americas,* Regional Consultative Group for the Americas, August 2014.

Table 1

Year	SB assets (by activity) / CE assets	SB assets (by entity*) / CE assets	CE Growth	SB (by activity) Growth	SB (by entity) Growth
2010	20%	19%	16%		
2011	16%	19%	20%	–2%	21%
2012	16%	19%	14%	15%	12%
2013	14%	17%	14%	0%	5%

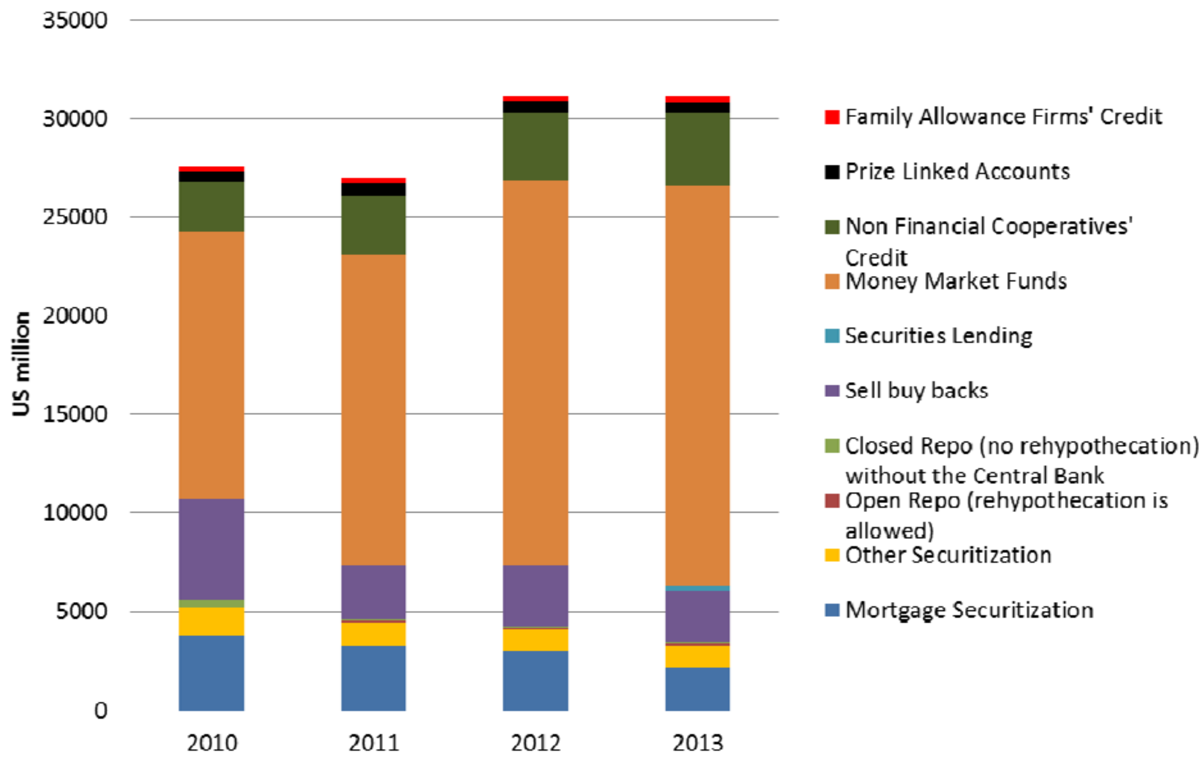
Note: CE- Credit Establishments

*Follows Financial Stability broad measurement

Source: Financial Superintendence, Titularizadora Colombiana, Confecoop. Authors' calculations.

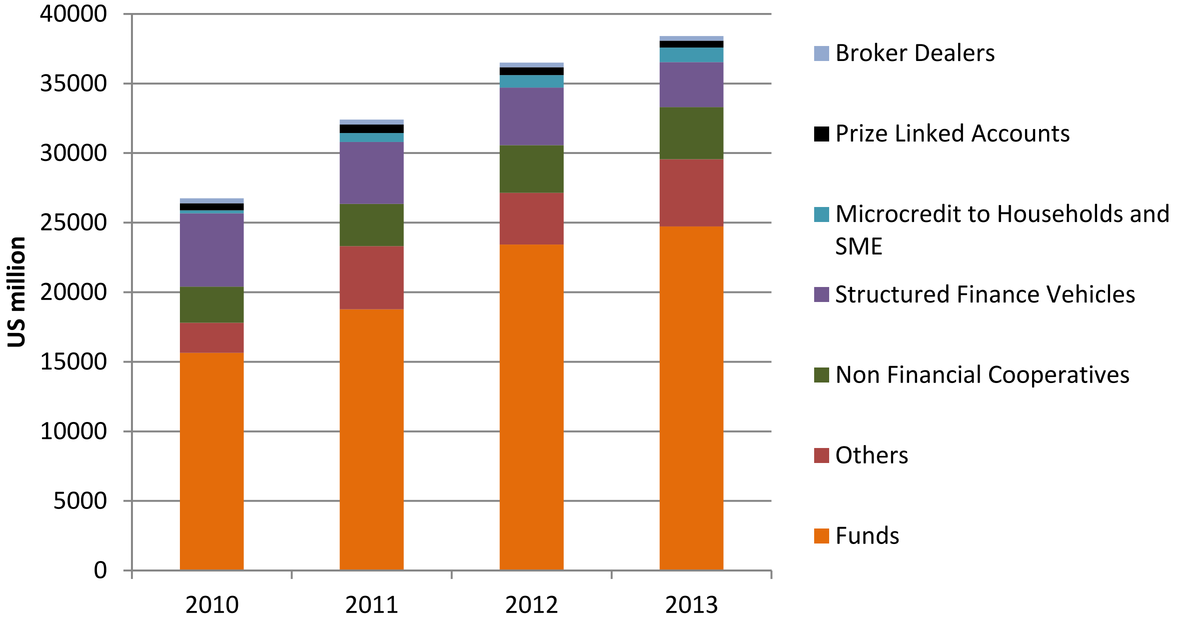
Shadow Banking in Colombia (by activity)

Graph 1



Source: Financial Superintendence, Titularizadora Colombiana, Confecoop. Authors' calculations.

Shadow Banking in Colombia (FSB broad measurement) Graph 2



Source: Financial Superintendence, Titularizadora Colombiana, Confecoop. Authors' calculations.

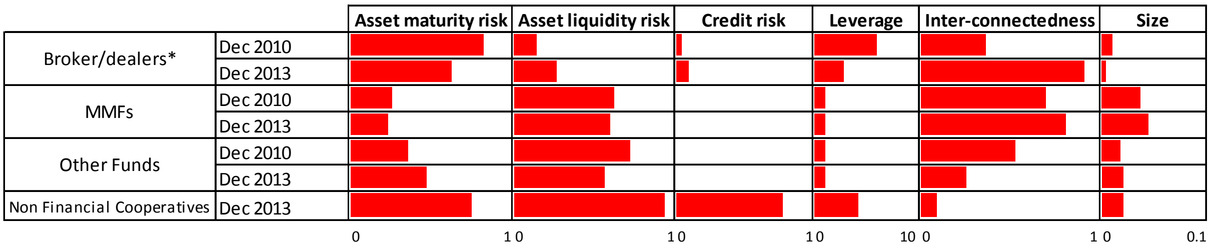
Main risks incurred by SB in Colombia

Following the risk categories proposed by the International Monetary Fund (IMF)´s Global Financial Stability Report of October 2014, it may be concluded that MMFs concentrate the most important systemic risks, given their size and connection to the traditional financial system (Graph 3). In 2013, their total assets were equivalent to 4.6% of GDP, while their assets and liabilities with credit institutions accounted for 80% of their total assets. Their holdings of bank liabilities amounted to 8% of bank deposits in the same year (Graph 4). Given the nature of MMFs, their main risks relate to maturity transformation and liquidity. The share of illiquid assets in the total assets of MMFs is close to 60%, far higher than the same figure for US MMFs (40%).

Non-financial cooperatives also involve risks that are non-negligible. The assets of such entities, which comprise mostly loans, represented 2.1% of GDP in 2013. Hence, non-liquid assets and assets with maturities longer than one year amounted to 95% and 75%, respectively, of their total assets. Non-financial cooperatives do not have access to central bank open market operations or lender of last resort (LOLR) facilities, although their liabilities are partially guaranteed by a special deposit insurance fund.[4]

[4] The coverage of this special deposit insurance fund is lower than that of credit institutions. The special deposit insurance fund is also distinct from the agency in charge of deposit insurance for most other credit institutions.

Graph 3

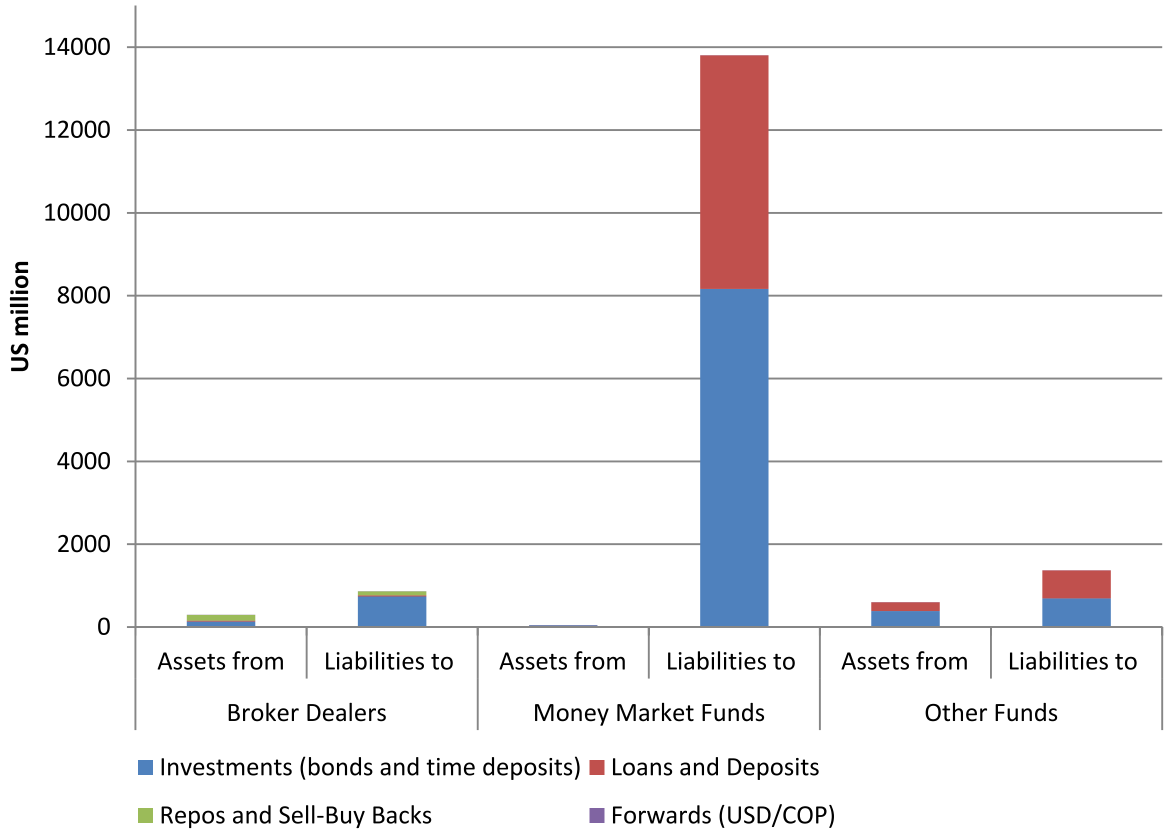


Note: calculations for securitization are not available for Titularizadora Colombiana. This entity specializes in securitizing mortgage loans in Colombia, and accounted for 62% of securitization in the country in 2013. * En las mediciones del SB por entidad generalmente se incluyen a las sociedades comisionistas de bolsa.
Asset maturity risk = (activos a largo plazo / activo total); largo plazo = vencimiento mayor a 1 año; Asset liquidity risk = 1- (activos liquidos / activos totales); arctivos liquidos = disponible + inversiones en TES + inversiones en acciones; Credit risk = (cartera / activos); Leverage = (activo/patrimonio); Inter-connectedness = (Activos + pasivos en EC)/Activo Total; Size = (activos del sector / PIB);
MMFs : FIC abiertas con concetración menor al 10 % en acciones
Other Funds : Fic cerradas, escalonadas y abiertas con concetración en acciones mayor al 10%

Source: Financial Superintendence, entities' balance sheets, Superintendence of Economic Solidarity. Authors' calculations.
Maturity risk=long-term assets to total assets; Liquidity risk=1 minus liquid assets (cash, public bonds, equities) to total assets; Credit risk=loans to assets; Leverage: assets to equity; Interconnectedness= assets from credit establishments (CE) plus liabilities to CE to total assets; Size=assets to GDP

Credit establishments' assets and liabilities with selected SB sub-groups

Graph 4

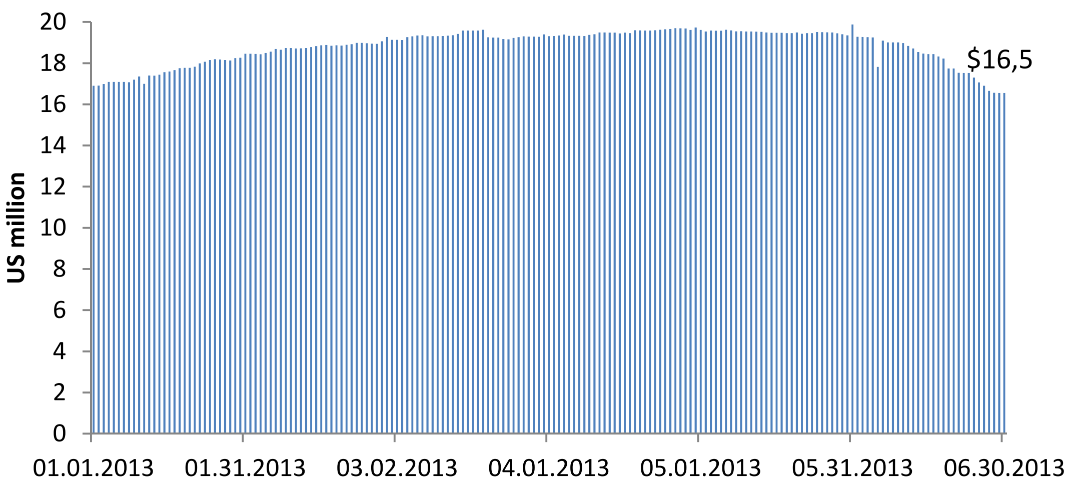


Source: Financial Superintendence, Banco de la República. Authors' calculations.

Recent regulation of shadow banking

Recent regulation of some SB activities and entities has been developed in the aftermath of two shocks that revealed fragilities in the sector. The first shock was the bankruptcy of the largest broker-dealer in Colombia, Interbolsa, in November 2012. Under the brokerage contract, this entity funded the purchase of a large number of shares in a non-financial corporation through repos. When the shares became overvalued, the operation became excessively risky, as the broker-dealer had to meet its clients' liabilities. Consequently, banks cut their funding to Interbolsa and the latter could no longer meet its obligations. The second shock occurred at the time of the "taper tantrum" and involved MMFs. The fall in local bond prices unleashed a sell-off that drastically reduced the valuation of the funds. As a result, there were large withdrawals that risked turning into fire-sales and a run on MMFs (Graphs 5 and 6).

Daily Evolution of Collective Investment Funds Portfolio* — Graph 5



Note:* Daily average exchange rate for 2013 applied: $ 1869 COP/USD

Source: Financial Superintendence

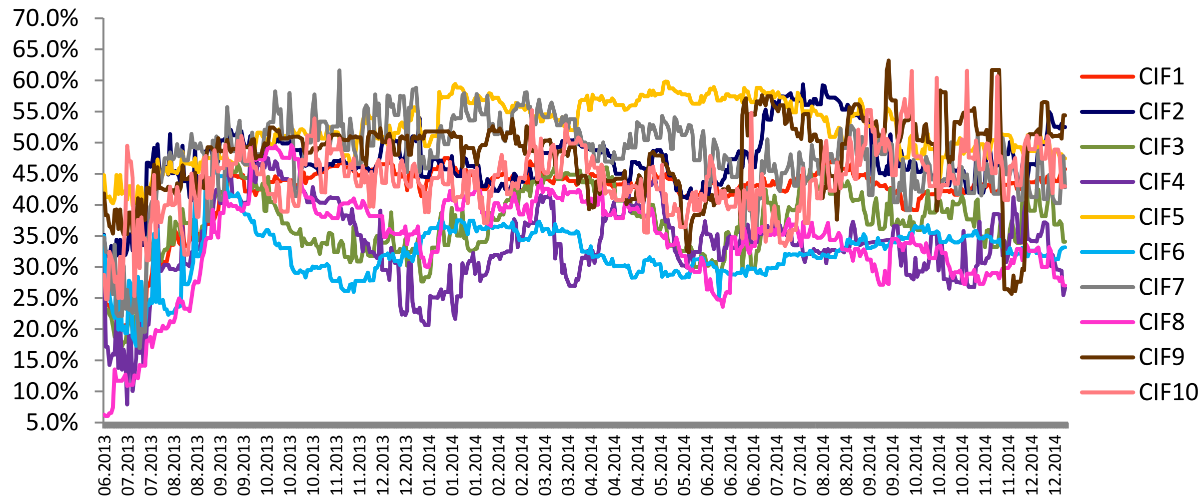
Following those stress episodes, new regulation was enacted to deal with vulnerabilities in the repo market and with the liquidity risk of broker-dealers and money market funds. Regarding REPO markets, first, the set of assets allowed as collateral was (more?) restrictively defined.[5] Second, rules that had been issued previously by the Colombian Stock Exchange (BVC) were included in a government decree, as a public regulation. Those rules set limits on transactions conducted on behalf of clients.[6] In addition, exposures to transactions by an individual and to a single asset were restricted to 30% and 100% of the broker-dealer´s equity,

[5] This set includes cash, public bonds and liquid stocks (as defined by the Colombian Stock Exchange (BVC)).

[6] Such transactions cannot be higher than 14 times the broker-dealer´s equity, or seven times its equity if they involve stocks.

respectively. Furthermore, an aggregate limit on the level of outstanding repos on a particular stock was established at 25% of the floating value of the stock. In a related area, haircuts were established as mandatory for sell/buy-backs to cover the market risk of the underlying asset.

(Cash + Colombian Government Bonds*) / Assets 10 Largest Open-ended Collective Investment Funds (CIF) Graph 6



Note: * Applying the Central Bank haircut; ** On 25 december 2014, the share of the 10 largest open-ended CIF in the total portfolio of open-ended CIF amounted to 48,9%; *** It does not include ETF, in particular the Ishares COLCAP (third largest CIF by assets)

Source: Financial Superintendence

New regulation was also enacted to deal with the liquidity risk of broker-dealers and MMFs. With respect to the liquidity risk of broker-dealers, since September 2014 these intermediaries must comply with a liquidity indicator that is similar to the Basel III liquidity coverage ratio (LCR). The indicator takes into account the risk that broker-dealers assume under their brokerage contracts by including 5% of their clients' gross positions in the LCR. Broker-dealers have to comply with a liquidity indicator for one and seven day periods. With respect to MMFs, new regulation that follows measures suggested by the International Organization of Securities Commissions (IOSCO) has been submitted for comments by the industry. First, all collective investment schemes that present the characteristics of a MMF or that are marketed to investors as having similar investment objectives would have to comply with equivalent requirements. Second, MMFs would be required to have a minimum of 5% of the market value of the fund in cash and 25% in liquid assets.[7] In addition, all open-ended funds without fixed redemption periods (including MMFs) would have to hold a minimum amount of liquid assets sufficient to cover the highest one-day redemptions experienced historically (and could not be lower than 10% of the value of the fund).

The ex ante liquidity regulation of the aforementioned SB entities completes the scheme to deal with systemic liquidity issues. Such entities have had access to quasi-

[7] These include cash, public sector bonds, equities eligible as warranty in repo operations and foreign government bonds with an investment grade.

LOLR facilities at the central bank in the form of intra-day repos that may be converted into overnight funding. Even though such funding carries penalty rates, moral hazard problems remain and are dealt with through ex ante regulation.

Moreover, the measures described above are in accordance with the recommendation of the IMF in its Global Financial Stability Report of October 2014 regarding the convenience of "integrating the entity and activity dimensions of shadow banking regulation".[8]

Changes in the structure of the banking system between 2005 and 2014

The changes that have occurred in the structure of assets and liabilities of the Colombian banking system may have affected the magnitude of the risks it confronts. Since 2005, there has been a shift in the composition of assets away from securities (mostly government bonds) and into loans (especially consumer and commercial credit, Graphs 7 and 8). Household bank indebtedness has evolved from mainly mortgages at the beginning of the current century to predominantly consumer loans today. This represents in part a fallout from the financial crisis that occurred at the end of the 1990s, which involved the bursting of a real estate bubble and a collapse in mortgage credit. As a result of that crisis, banks invested heavily in local government bonds at the beginning of the 2000s. However, after 2005 banks shifted the composition of their portfolios, trading market risk for credit risk.

On the liability side, there has been an increase in the share of deposits in the hands of non-financial corporations (NFCs), at the expense of deposits held by households (Graph 9). The increase in the share of corporate deposits has been particularly pronounced for term deposits (CDs, Graph 10). This may have increased the concentration of deposits and, thereby, may have had consequences for the liquidity risks faced by banks. By the same token, it may have enhanced the discipline exerted by corporate depositors on banks given that non-financial firms are better informed and qualify for proportionally less deposit insurance.[9]

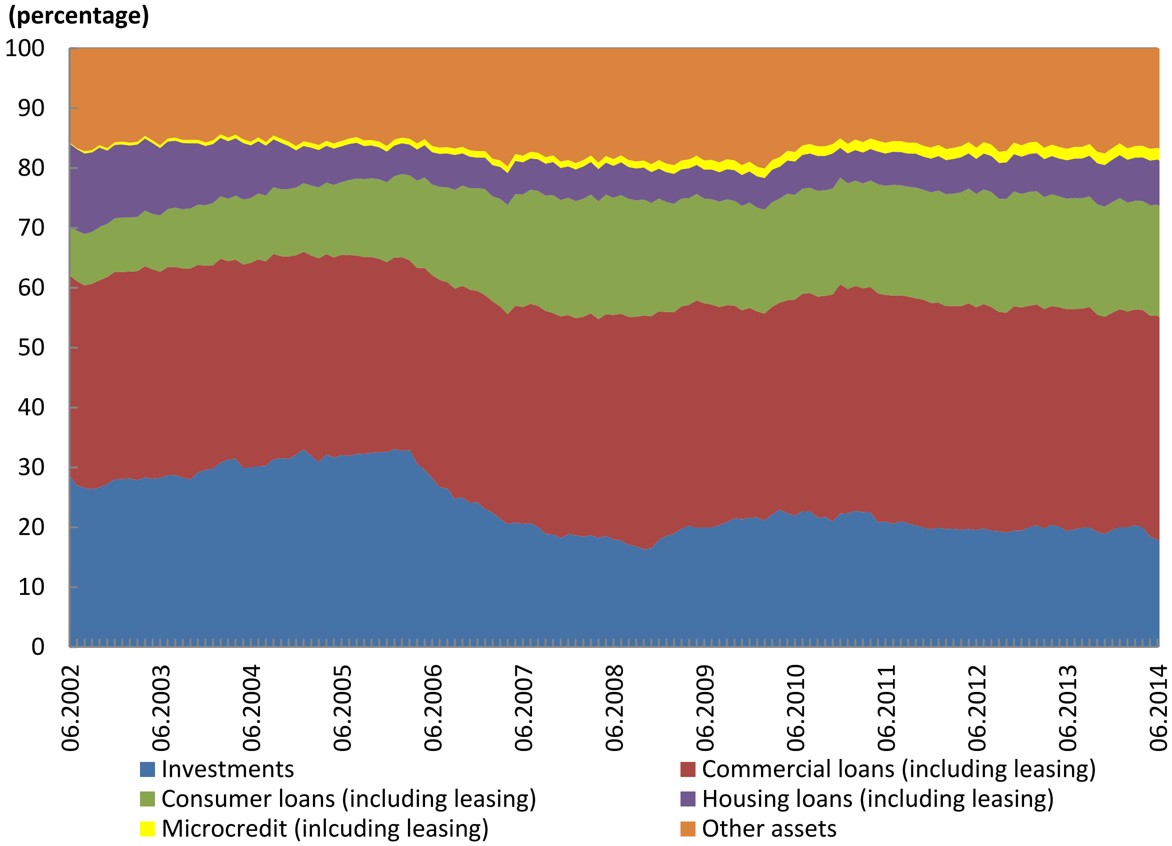
The breakdown of bank loans by interest rate type (fixed versus variable) shows a stable pattern since 2005, with the exception of mortgage credit. Unlike consumer loans and micro-loans, commercial loans are mostly variable rate (Table 2). Mortgage loans were almost entirely inflation-linked in 2005. Currently, however, 2/3 of these loans are fixed rate. This reflects the achievement of a low and stable rate of inflation in Colombia. It is hard to ascertain how interest rate risk has changed in the domestic banking system since 2005. While liabilities have remained concentrated in sight and short-term deposits, the share of fixed rate assets, including large medium-term government bond holdings, has been reduced in favour of variable rate commercial loans and fixed rate consumer loans. That said, the direction of the change in the duration of assets is uncertain, owing to insufficient data.

8 IMF, "Shadow banking around the globe: how large, and how risky?", Global Financial Stability Report, October 2014, Chapter 2.

9 Bank deposits include MMFs holdings of bank liabilities. If so, the figures reported in this note overestimate the exposure of banks to corporate deposits. However, the outcome of our analysis concerning results on deposit concentration and liquidity risk continue to hold.

Credit establishments' assets

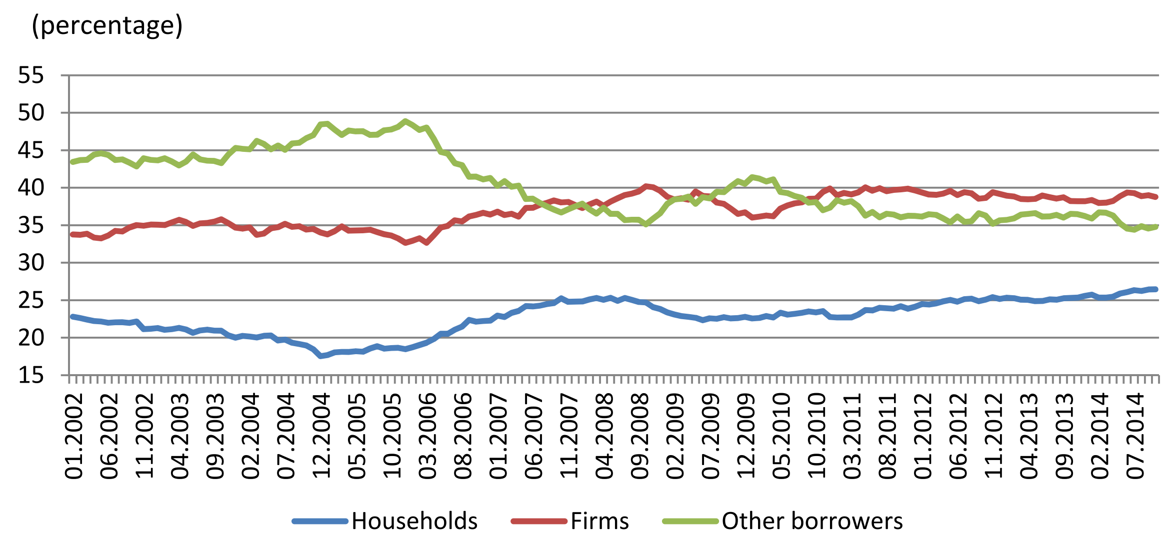
Graph 7



Source: Financial Superintendence

Exposure of credit establishments to

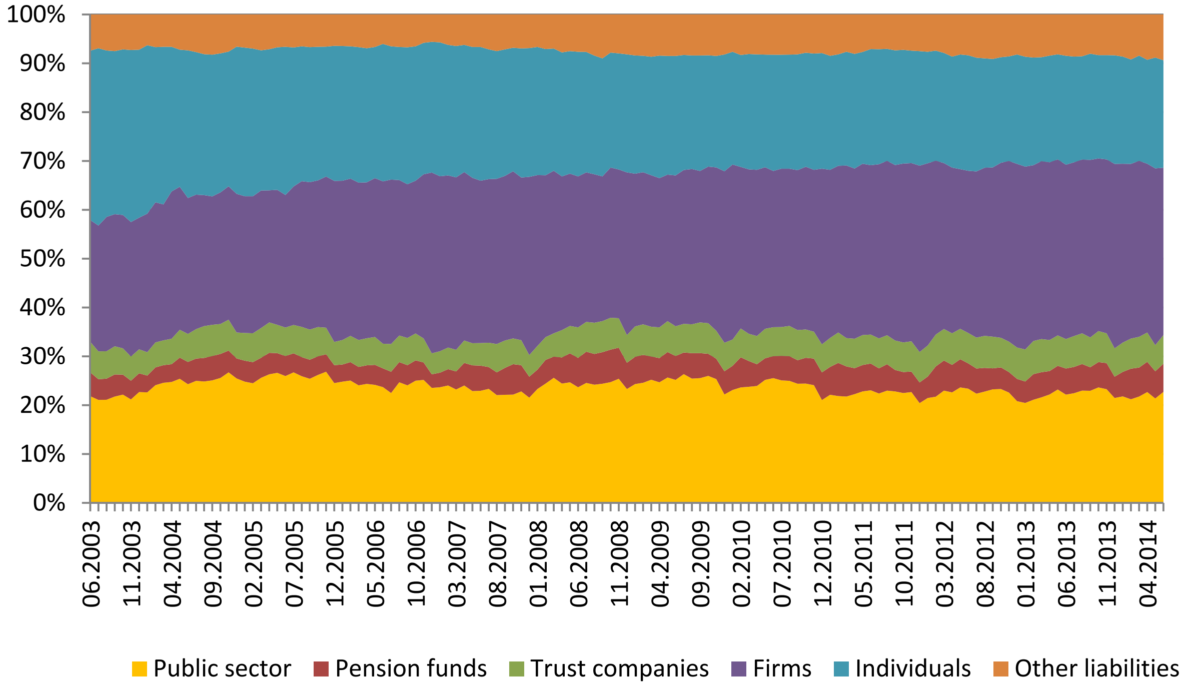
Graph 8



Source: Financial Superintendence

Credit establishments' liabilities

Graph 9

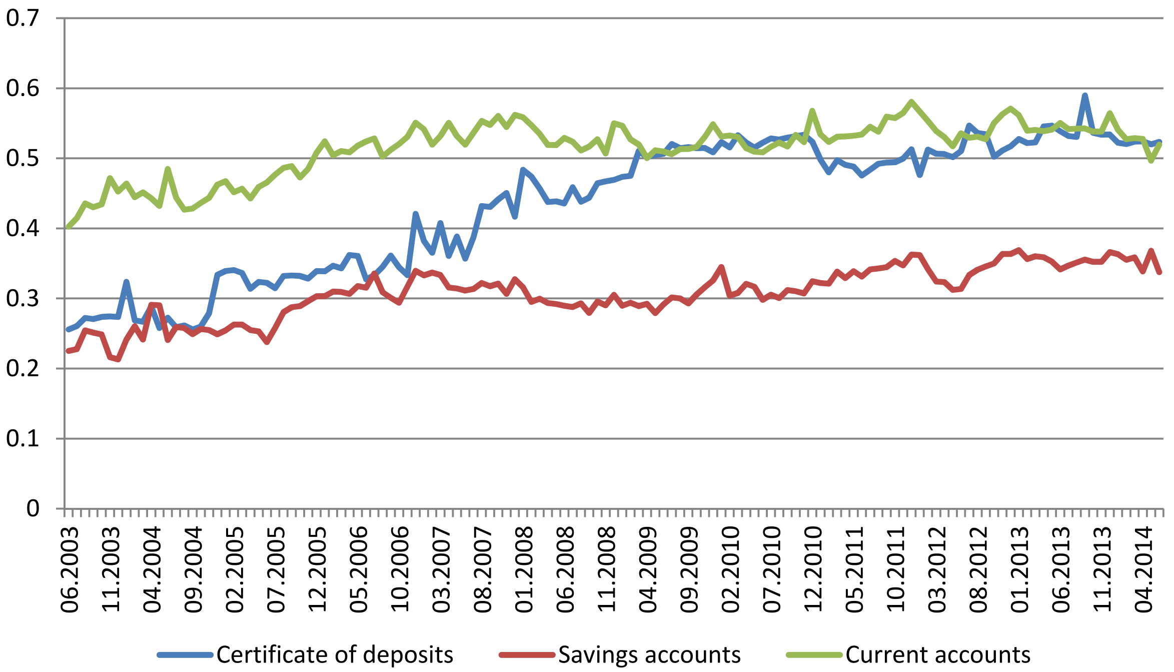


Note: The share of trust companies might be underestimated because mutual funds may be included in the firms' share and not in trust companies. As of December 2013, the share of mutual funds in the liabilities of credit establishments was 14.3%.

Source: Financial Superintendence

Firms' share in total deposits (by type)

Graph 10



Source: Financial Superintendence

Credit Establishments (%)

Table 2

	Commercial		Consumer		Microcredit		Housing	
	Fixed Rate	Variable Rate	Fixed Rate	Variable Rate	Fixed Rate	Variable Rate	Fixed Rate	Inflation Linked
Dec-05	42.45	57.55	81.44	18.56	77.46	22.54	6.99	93.01
Jun-09	57.37	42.63	85.48	14.52	85.56	14.44	49.06	50.94
Jun-11	16.03	83.97	86.37	13.63	84.42	15.58	63.06	36.94
Dec-11	18.05	81.95	85.78	14.22	86.22	13.78	66.36	33.64

Source: Financial Superintendence

The currency composition of assets and liabilities of Colombian bank has remained practically unchanged since 2005 (Table 3), with the vast majority of assets and liabilities denominated in local currency. Currency mismatches are very small or non-existent due partly to regulations imposed by the central bank. In particular, banks must match foreign currency funding with foreign-denominated loans or derivatives contracts. Mismatches may also have been contained by an awareness on the part of economic agents of the volatility implicit in the flexible exchange regime.

Table 3

Date	Local currency assets	Foreign currency assets	Local currency liabilities	Foreign currency liabilities
Jun-05	96.2%	3.8%	96.4%	3.6%
Dec-05	97.3%	2.7%	96.9%	3.1%
Jun-06	98.3%	1.7%	98.1%	1.9%
Dec-06	98.3%	1.7%	99.1%	0.9%
Jun-07	98.2%	1.8%	98.2%	1.8%
Dec-07	97.9%	2.1%	98.7%	1.3%
Jun-08	97.7%	2.3%	98.8%	1.2%
Dec-08	97.1%	2.9%	98.6%	1.4%
Jun-09	97.3%	2.7%	99.2%	0.8%
Dec-09	98.0%	2.0%	99.2%	0.8%
Jun-10	98.5%	1.5%	99.2%	0.8%
Dec-10	97.7%	2.3%	97.6%	2.4%
Jun-11	96.9%	3.1%	97.9%	2.1%
Dec-11	96.5%	3.5%	97.2%	2.8%
Jun-12	96.9%	3.1%	98.6%	1.4%
Dec-12	97.4%	2.6%	98.4%	1.6%
Jun-13	97.4%	2.6%	97.6%	2.4%
Dec-13	97.8%	2.2%	98.0%	2.0%
Jun-14	97.9%	2.1%	98.3%	1.7%

Note: Calculations do not include other assets.
Source: Financial Superintendence. Banco República's calculations.

Commercial foreign loans have represented between 66% and 90% of foreign currency assets of Colombian banks since 2005 (Table 4). This reflects the fact that most of the foreign currency activity conducted by Colombian financial institutions consists of traditional loan intermediation. Foreign currency loans fell in 2009 (Graph 11), when international trade financing shrank in the midst of the global financial crisis. Such loans recovered rapidly afterwards, along with total bank credit in Colombia. Holdings of foreign investments jumped between 2010 and 2013, following the acquisition by Colombian financial institutions of foreign banks, mainly in Central America. Regarding the composition of foreign currency liabilities, bond financing increased markedly after 2008, mostly related to the funding of the aforementioned acquisitions.

The evolution of foreign assets and liabilities of Colombian banks confront regulators and supervisors with new challenges. To begin with, the currency regulation established by the central bank might need to be reviewed in the light of the increased exposure of Colombian intermediaries abroad. More specifically, the equity participation of Colombian banks in foreign banks may be denominated in a currency that is different from the currency of funding used to acquire the shares.

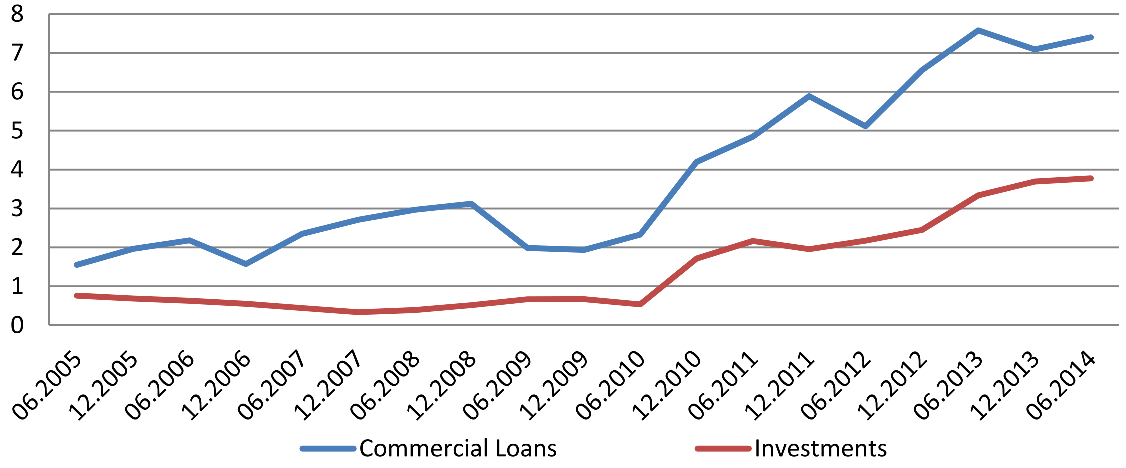
Table 4

Date	Share of foreign currency commercial loans in total foreign currency assets	Share of foreign currency investments in total foreign currency assets	Share of foreign currency bank loans in total foreign currency liabilities	Share of foreign currency bonds in total foreign currency liabilities
Jun-05	67.8%	31.9%	99.7%	0.0%
Dec-05	74.5%	25.1%	99.4%	0.0%
Jun-06	67.4%	31.7%	99.0%	0.0%
Dec-06	43.6%	55.6%	97.6%	0.0%
Jun-07	54.8%	44.5%	86.9%	12.1%
Dec-07	51.3%	48.0%	83.3%	15.3%
Jun-08	47.3%	52.1%	83.8%	14.9%
Dec-08	37.2%	62.2%	84.8%	14.4%
Jun-09	25.0%	74.5%	75.2%	23.3%
Dec-09	30.6%	68.7%	76.4%	20.3%
Jun-10	43.7%	55.4%	78.9%	18.0%
Dec-10	48.6%	50.7%	86.7%	12.7%
Jun-11	34.9%	64.6%	77.4%	22.1%
Dec-11	37.0%	62.5%	74.6%	25.0%
Jun-12	32.2%	67.3%	60.0%	39.5%
Dec-12	43.3%	56.1%	49.5%	50.1%
Jun-13	53.6%	45.6%	51.1%	48.5%
Dec-13	50.6%	48.5%	53.4%	46.2%
Jun-14	52.2%	46.9%	52.2%	47.5%

Source: Financial Superintendence. Banco República's calculations.

Foreign currency commercial loans and investments of credit establishments

(billions of dollars) Graph 11



Source: Financial Superintendence

So far, the central bank has requested information on the currency denomination of all assets and liabilities of banks in Colombia and overseas. This information is currently being refined and interpreted. No new regulation has been imposed yet. Similar concerns have arisen regarding the foreign exchange (FX) liquidity risk of financial conglomerates, leading to a request for detailed information in this respect.[10] More generally, the expansion of Colombian banks abroad requires a careful examination of the differences in financial regulation and safety nets across host countries.

With respect to collateral management, an important regulatory change was introduced in 2013 when the Colombian congress passed Law 1676, which introduced the concept of "mobiliary guarantees" (ie transactions under which an obligation is collateralised with the movable property of the guarantor) with the aim of promoting access to credit to small and medium-sized enterprises.[11] The law mandates the registration of guarantees in a central system privately run by Colombia's Chamber of Commerce and accessible through the internet. In addition, the procedure for the execution of guarantees was simplified with the purpose of reducing costs and processing time. There are signs that this reform is yielding positive results. After the introduction of the new legislation, the value of loans so covered has increased markedly (Table 5).

Finally, the Colombian banking system remains predominantly procyclical. A study by Hamann et al. (2013) found evidence in this regard. They also found heterogeneity in the way banks manage their balance sheet. Moreover, foreign banks exhibit higher leverage and higher non-core-to-core liability ratios than local banks. Foreign banks also display a greater degree of procyclicality.

[10] An LCR has been calculated by currency for financial conglomerates since March 2014.

[11] The assets subject to mobiliary guarantee agreements include tangible and intangible assets, derivatives assets, current assets and future property on which the guarantor obtains rights after an acquisition.

Table 5

	Before Law 1676 of 2013	After the implementation of Law 1676 of 2013 (February 20th of 2014)	Total
Number of registered credit operations	812622	137357	949979
Amount (billions of dollars)	43.3	23.7	66.9
Average amount (thousands of dollars)	53.2	172.1	70.4

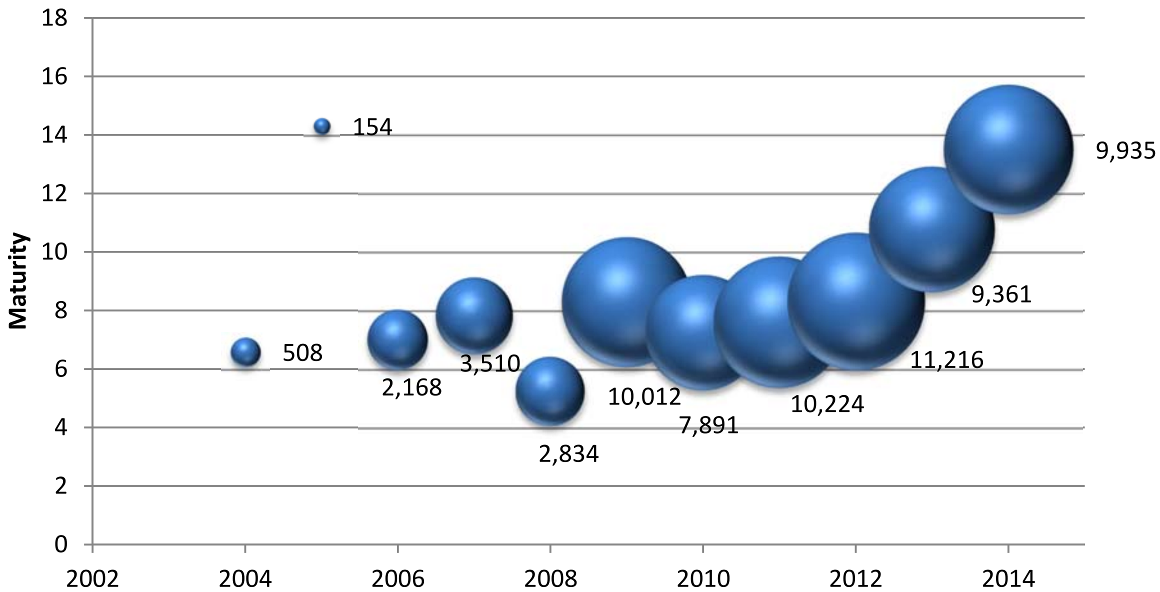
Source: Registro Garantías Mobiliarias- Confecámaras

Changes in the structure of Colombian corporate bond issuance between 2008 and 2014

Over the past six years, there has been a remarkable increase in bond issuance by Colombian corporations, even though bonds represent only 8% of the total financial liabilities of Colombian NFCs. Graph 12 shows that the size and maturity of the bonds issued domestically and externally by Colombian companies rose significantly after 2008, although the number of issuers remains low and issuance is limited to highly rated borrowers (Graphs 13 and 14).[12]

Corporate Debt Issuance (USD million)

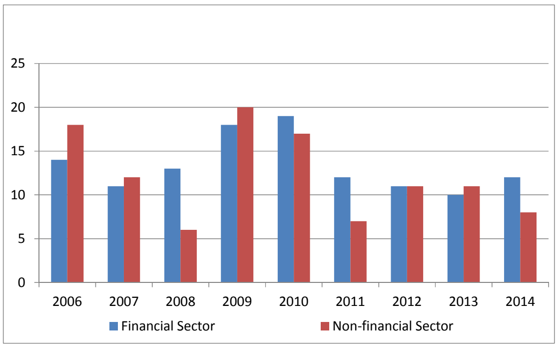
Graph 12



Source:Bolsa de Valores de Colombia (BVC) – Colombia' Stock Exchange, Bloomberg, own calculations

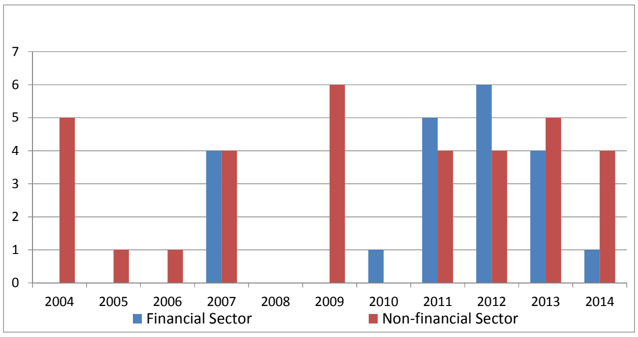
[12] Colombia's sovereign debt was downgraded to a speculative level (BB+) on 21 September 1999 and was further downgraded on 24 May 2000 (to BB). It was upgraded on 5 March 2007 (to BB+) by Standard and Poor's (S&P) and to investment grade (BBB–) on 16 March 2011. On 24 April 2013, it received a rating of BBB from S&P. Other agencies caught up later.

Number of Colombian corporate debt issuers in the local market



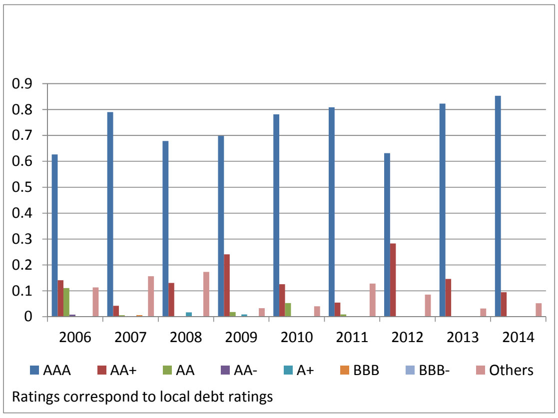
Number of Colombian corporate debt issuers in the external market

Graph 13



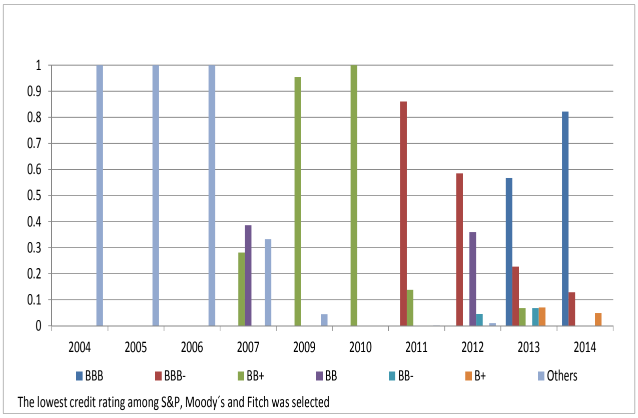
Source:Bolsa de Valores de Colombia (BVC) – Colombia' Stock Exchange, Bloomberg, own calculations

Credit rating of private sector local issuance of debt securities



External Corporate Debt Securities Issued by Credit Rating

Graph 14



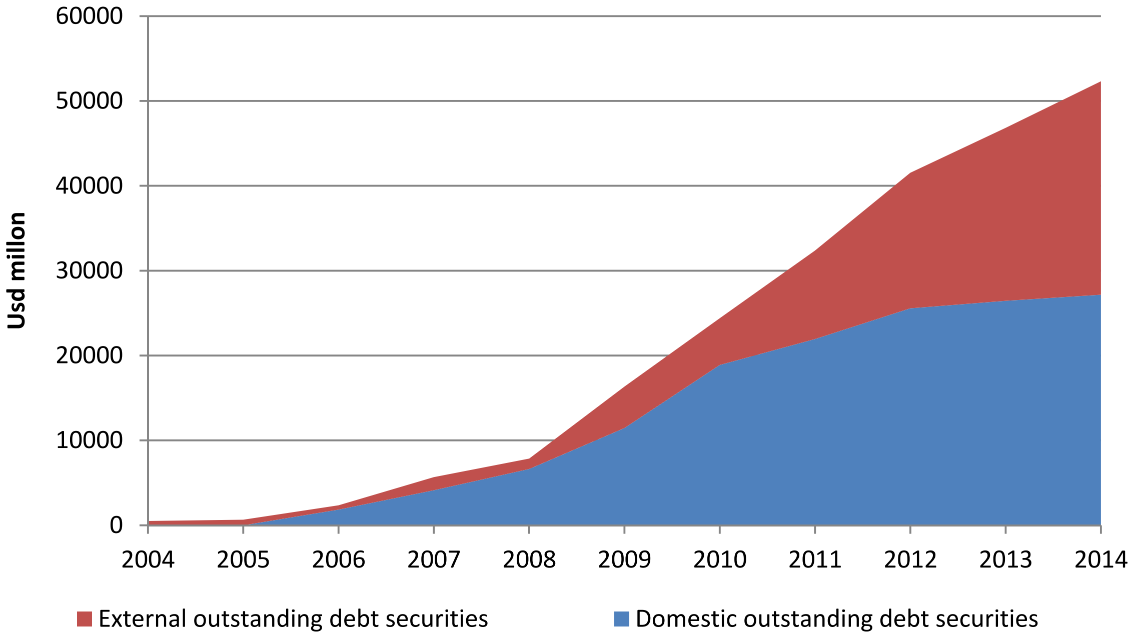
Source:Bolsa de Valores de Colombia (BVC) – Colombia' Stock Exchange, Bloomberg, own calculations

Most of the bond issuance has taken place in the Colombian domestic market (Graph 15), where both financial and non-financial firms have increased their bond liabilities (Graph 16). Bond issuance abroad has been carried out mostly by financial corporations (Graph 17). The entire domestic bond supply is denominated in local currency, while most external bonds are US dollar-denominated. Only a small fraction of corporate bonds sold in foreign markets is denominated in Colombian pesos (Graph 18).

Since 2006, most bonds sold abroad have been issued at fixed interest rates. In contrast, domestic bonds have generally been issued at variable rates, mostly linked to the consumer price index (CPI, Graph 19). The increase in the maturity of corporate issuance described above is common to both domestically and externally issued bonds, although it is more pronounced for the latter (Graph 20). The projected aggregate amortisation of external bonds shows peaks in 2019 and 2021–22 (Graph 21). Whereas in 2019 the bulk of amortisation corresponds to NFCs, for the 2021–22 period most debt repayments are due from financial firms.

Outstanding Corporate Debt securities by market

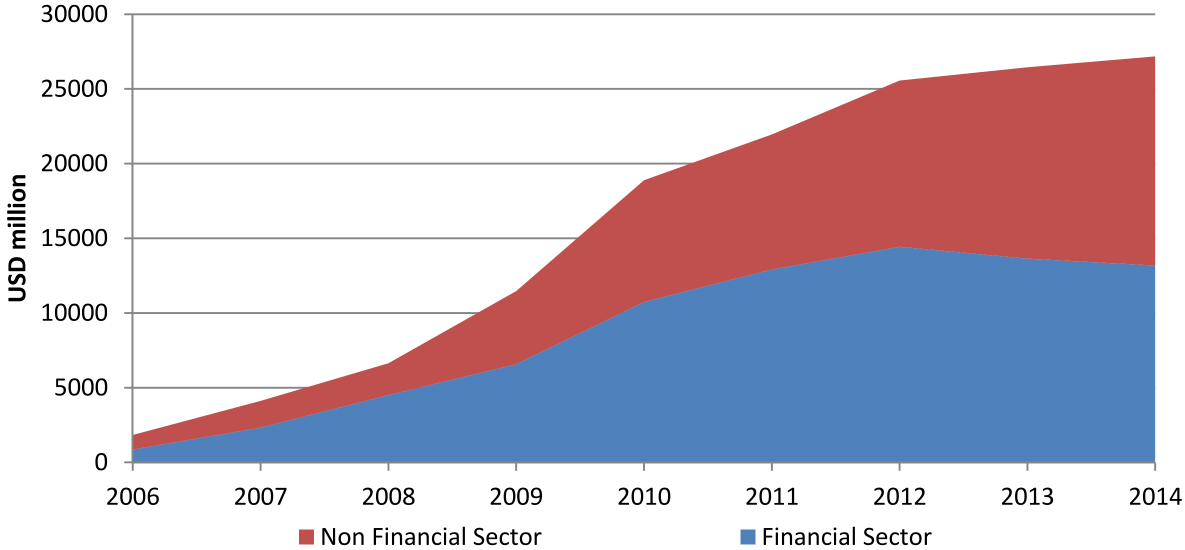
Graph 15



Source: Bolsa de Valores de Colombia (BVC) – Colombia’ Stock Exchange, Bloomberg, own calculations

Domestic outstanding debt securities – private sector

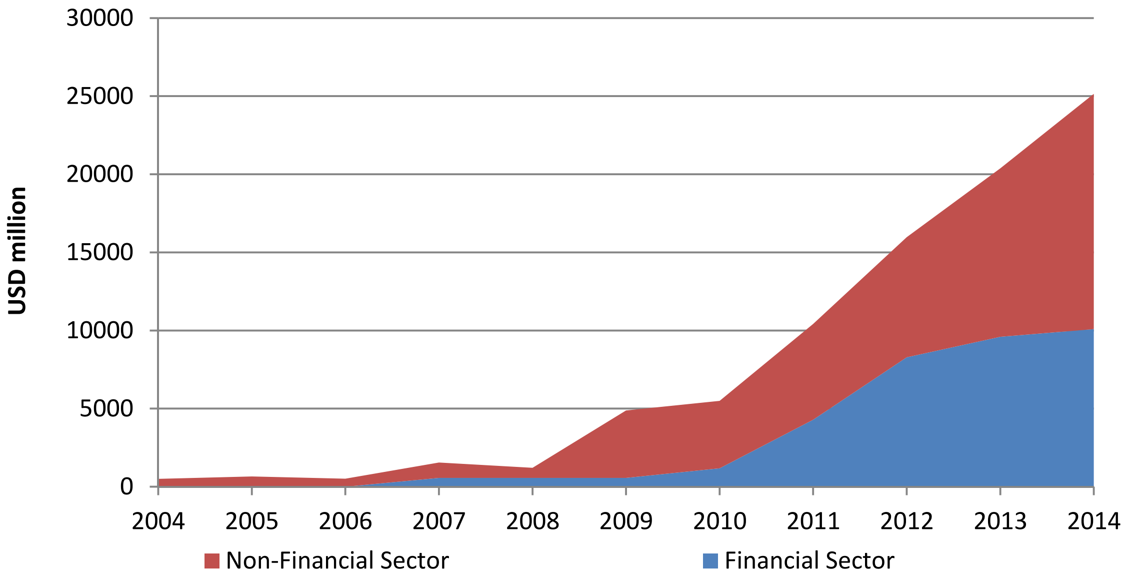
Graph 16



Source: Bolsa de Valores de Colombia (BVC) – Colombia’ Stock Exchange, Bloomberg, own calculations

External outstanding debt securities - private sector

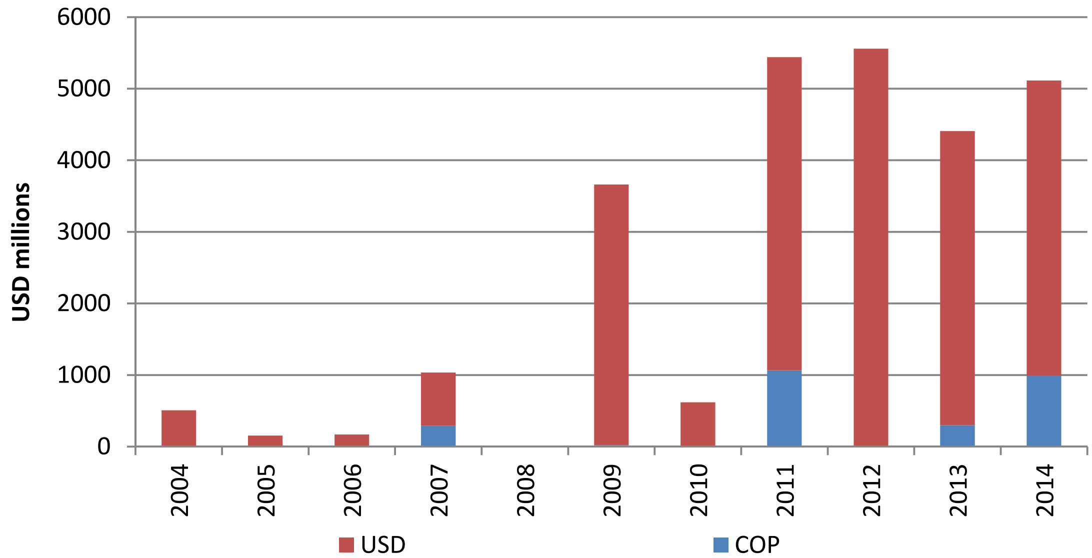
Graph 17



Source: Bloomberg, own calculations

External Corporate Debt Securities Issued by Currency

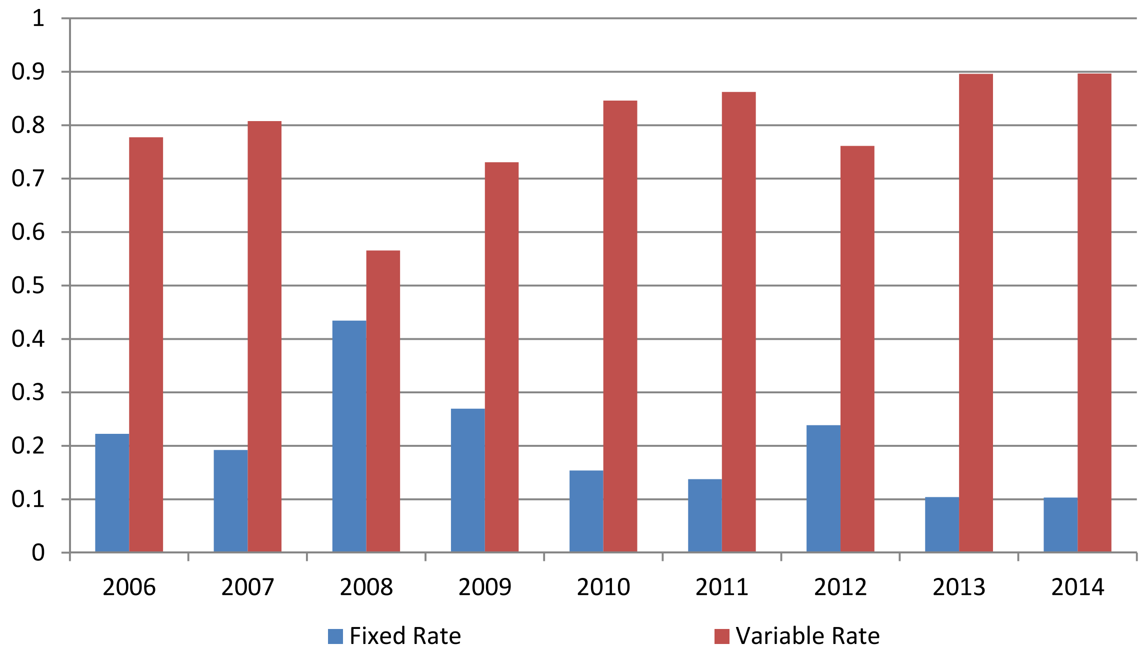
Graph 18



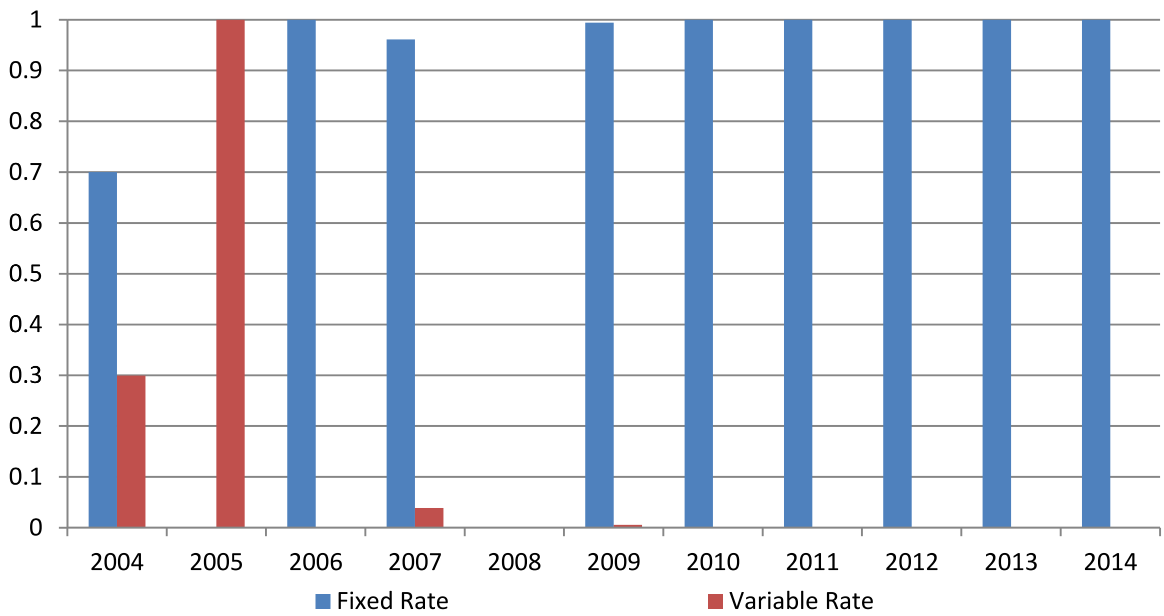
Source: Bloomberg, own calculations

Domestic Corporate Debt securities Issued

Graph 19



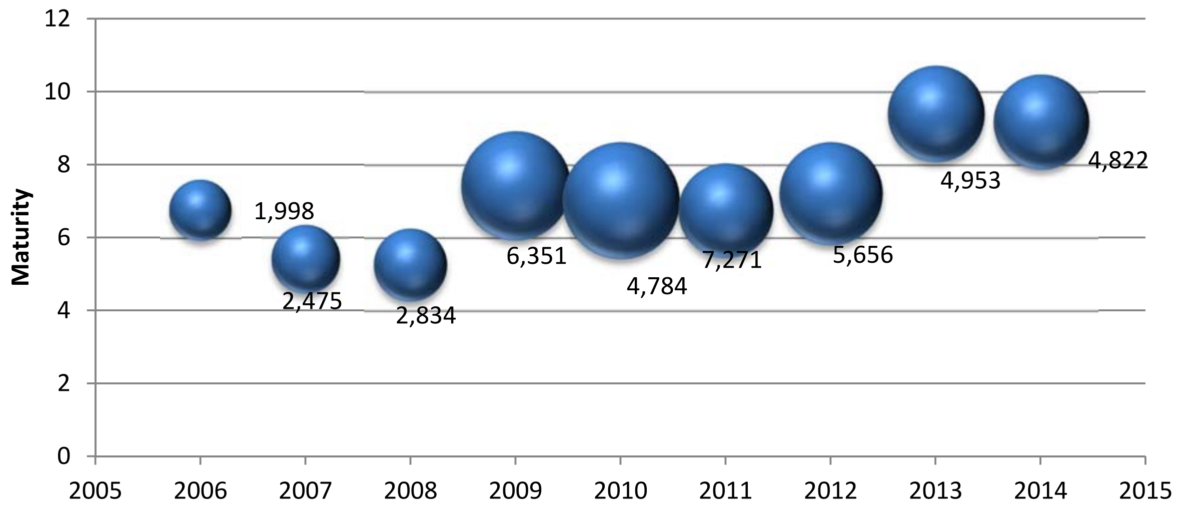
External debt securities issued – private sector



Source: Bolsa de Valores de Colombia (BVC) – Colombia' Stock Exchange, Bloomberg, own calculations

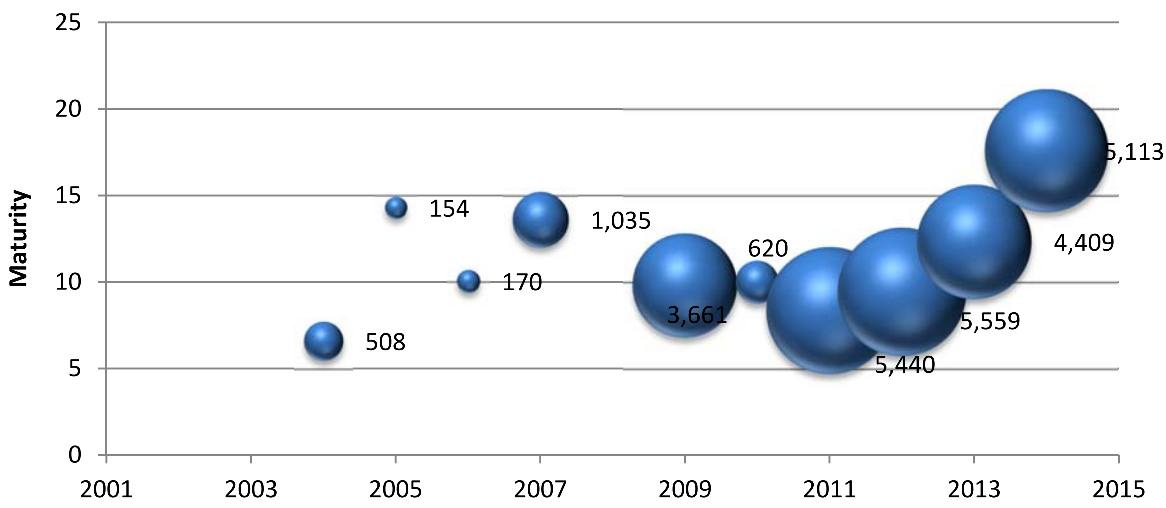
Domestic Corporate Debt Issuance

(USD million) Graph 20



External Corporate Debt Issuance

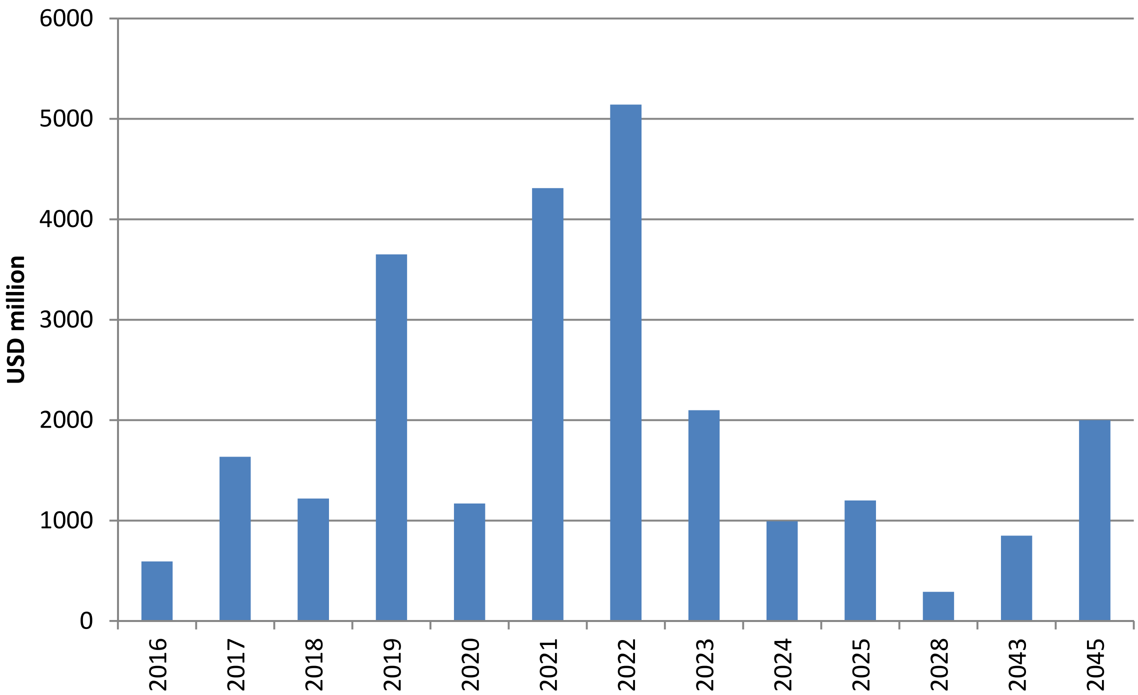
(USD million)



Source:Bolsa de Valores de Colombia (BVC) – Colombia' Stock Exchange, Bloomberg, own calculations

Projected redemptions on External Corporate Debt

Graph 21



Source: Bloomberg, own calculations

Changes in the uses and sources of funds of Colombian NFCs between 2008 and 2013

A potential source of vulnerability in EMEs has been the increased foreign indebtedness of NFCs after the global financial crisis (Powell (2014)). It has been argued that part of the foreign funding may have been channelled to the local financial system in the form of corporate deposits. As a result, risk may have built up in several dimensions. First, the new local bank deposits that have been fed by external issuance might be seen as "non-core" liabilities of banks, in the sense that they are not a stable source of funding. Ensuing expansions in credit supply and risk taking may weaken the banks' balance sheets.[13] Second, after a sudden stop of foreign lending, firms may withdraw their deposits. This may have implied higher liquidity risk for local banks and the possibility of diminished credit supply, as well as the activation of a negative cycle of the financial accelerator.

[13] Interestingly, in this case the expansion of non-core liabilities may have caused riskier lending, in contrast to the traditional risk- taking channel for which the causality runs in the opposite direction.

Figure 1 reproduces a diagram from Powell (2014), which illustrates the financial flows taking place between foreign and local financial and non-financial agents in selected Latin American countries.[14] The corresponding flows for Colombia are also included (red numbers). Whereas the GDP of Colombia represents about 9% of the aggregate GDP of the selected countries, the financial flows accounted for by the country amount to only 5% of the aggregate flows of the group, indicating that the above-mentioned risks might be less relevant. International loans to Colombian NFCs are an exception to this pattern, representing 25% of the group's aggregate flows.

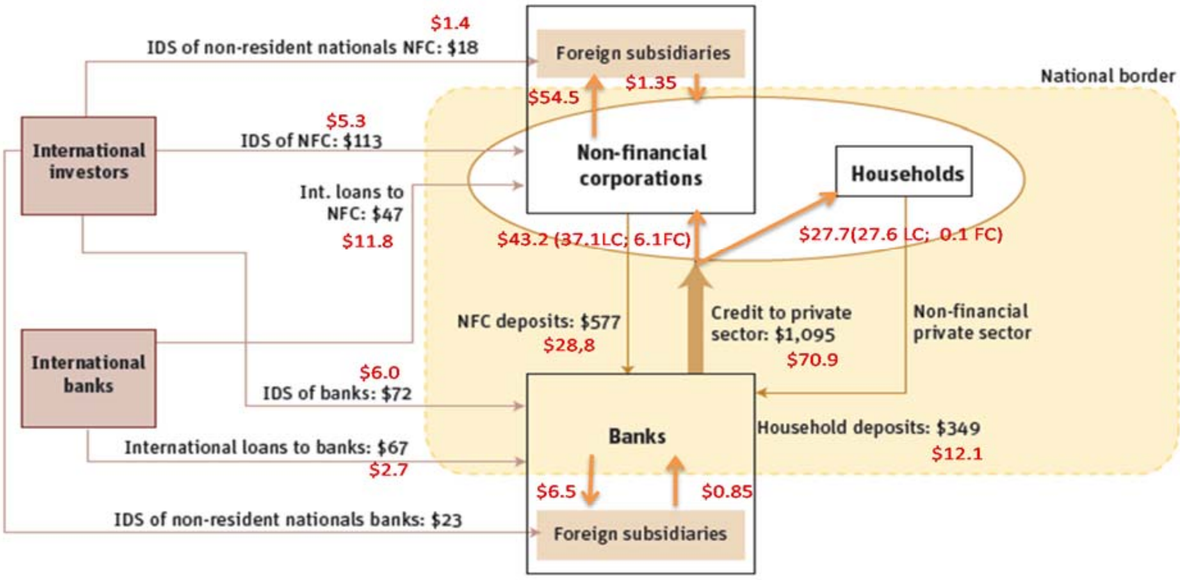
Moreover, the following features may be observed from Figure 1:

- Lending from foreign subsidiaries to Colombian banks and NFCs is small relative to other sources of funding.
- In contrast to the other countries in the group, the most important source of external funding for Colombian NFCs comes from international banks rather than from international investors. The opposite happens in the case of Colombian banks. This may be due to the relatively small size of NFCs in Colombia, which makes them more reliant on bank credit than their counterparts in other countries.
- Foreign direct investment (FDI) is an important use of funds for Colombian banks and NFCs. A non-negligible part of the foreign funding has been invested in external assets.

In sum, it seems that corporate deposits in local banks financed through foreign sources are not as important in Colombia as they might be elsewhere. Table 6 shows the change between 2008 and 2013 in the main assets and liabilities of a group of Colombian NFCs, which accounted for 51% of total non-financial private currency mismatches in 2013. Foreign financing, which includes FDI, bond issuance and bank loans, is one of the most important sources of funds. The main uses of funds are fixed assets and other assets, with bank deposits being a minor one.

[14] Brazil, Chile, Colombia and Mexico.

Figure 1



Explaining the growth in credit change in stocks of credit, deposits and international debt (2008-2013) in LAC-4 (Brazil, Chile, Colombia and México) (Bn USD).
Source: Powell (2014) IADB. The estimated contribution of Colombia is presented in red (Central Bank's calculations).

LC: local currency. FC: foreign currency

Note: Data on corporate local bank deposits might be overestimated, since they may include MMF holdings of bank liabilities.

Firms' balance Sheets

Table 6

(USD million)	2008	2013	2013-2008
Deposits **(1)+(3)-(2)**	314	1019	705
(1) Liabilities (a)+(b)+(c)	**11622**	**24973**	**13351**
(a) Financing in COP	2152	2738	586
(b) Financing in USD	4629	13735	9105
(c) Other liabilities	4840	8500	3660
(2) Assets (d)+(f)+(g)	**23805**	**45045**	**21240**
(d) Fixed assets 1/	9443	16635	7193
(f) Other assets	12237	24301	12064
(g) Foreign assets (i)+(ii)	2125	4109	1984
(i) Financial assets	1820	2405	585
(ii) Colombian direct investment abroad	305	1703	1398
(3) Net worth	**12497**	**21091**	**8595**

Source: Supersociedades, Superfinanciera, Aerocivil and Public services superintendence
1/: for balances that do not make this variable explicit, it was constructed as property, plant and equipment.

Conclusions

This note presented some features and changes of the Colombian financial system in the last decade. Shadow Banking grew fast along the traditional banking sector since 2008. Its main component is MMF. Hence important risks associated with Shadow Banking in Colombia are maturity transformation and liquidity. Recent regulation has been enacted or studied to deal with such risks.

The main changes in traditional banking over the last decade are related to the sector's foreign expansion, especially in Central America, and to its growing reliance on domestic corporate deposits. These changes require a reassessment and monitoring of currency mismatches as well as FX and local liquidity risks.

Corporate bond issuance has increased since 2008, both domestically and externally. However, bonds remain a minor source of funding for private financial and non-financial firms. The projected amortisations of external bonds peaks in 2019 and 2021–22.

Finally, although external funding for non-financial corporations has been large since 2008, the funds raised have been used to finance fixed and other assets. Corporate deposits in local banks have not been a major channel through which such resources have been allocated.

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