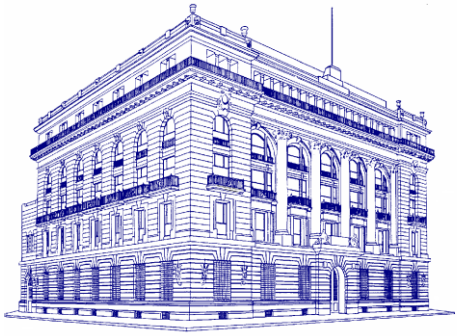
Financial System Report

September 2011



BANCO DE MÉXICO

October, 2011

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NOTICE

Unless otherwise specified, this document has been drafted using information available as of October 20, 2011. Figures are preliminary and may be revised.

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Financial System Report

1. Introduction

This Financial System Report essentially covers the period from June 2010 to September 2011, during which time the international environment became more complicated and uncertain. What began as a global financial crisis has turned into a sovereign debt crisis, especially in the euro zone. Measures announced in that region have failed to restore confidence in the sustainability of the public finances of countries with weak fiscal positions. In fact, fiscal and monetary activism has replaced in-depth solutions, which has only served to generate more uncertainty. Finally, a slower pace of global economic growth along with uncertainty over the future evolution of public finance cuts in the U.S. and other developed economies has only aggravated the problems.

In the prevailing complex international environment, Mexico has stood out for its responsible fiscal and monetary policies as well as a solvent and profitable financial system. The economic policies the country has implemented have brought about certainty, which is crucial to maintaining financial stability and sound economic performance. These policies, along with the domestic financial system's ability to absorb the effects of the crisis, have helped maintain investor confidence.

Mexico has made considerable efforts in recent years to place public finances on a sound footing, bring down inflation, strengthen financial regulation and oversight, as well as develop domestic financial markets, and these efforts have paid off. Today, the Mexican financial system comprises to a great extent modern, efficient, well-capitalized and very sophisticated institutions as well as deep financial markets. Commercial bank financing, particularly in the case of the largest banks, is founded on a retail deposit base, allowing corporate and household credit to expand on solid and stable foundations. However, the pronounced deterioration in the international environment means that financial authorities must be alert to risks that could threaten financial stability.

The main aim of this publication is to provide an account of the state of the Mexican financial system from the central bank's point of view. More than describing what happened during the period in question, the aim is to examine the strengths of the Mexican financial system and the risks it faces at the time of writing. The report was prepared using information available as of October 2011, and so some sections contain information as of that date while in others our analysis covers the first two quarters of 2011, as third-quarter information is not always complete. Given the worsening of the international crisis derived from the fragile situation in Europe and expectations of slower global economic growth, special emphasis is placed on an examination of possible transmission channels, in particular those derived from exposures between domestic financial intermediaries and foreign ones.

The second section of the report begins with a description of the international and domestic environments. The third section explains the financial system's composition and structure and analyzes the profitability and solvency of the main financial intermediaries, placing special emphasis on commercial banks because of their importance and size. The fourth section assesses the performance of financial markets during the period in question. The fifth section presents the main characteristics of the infrastructure that supports the financial

system with a concise picture of the work that is being carried out based on recommendations which different international organizations have issued under the G20. The sixth section analyzes the financial position of households, companies, and the public sector. The seventh section uses network analysis to look at the ability of the financial system to absorb various shocks and their transmission. The report ends with a balance of risks and conclusions.

2. International and domestic environment

2.1. International environment

2011 has seen a marked deterioration in the international environment owing to a strong moderation in the pace of global economic growth, the worsening of the E.U. sovereign debt crisis, and uncertainty over the future adjustment of public finance in the U.S. and other developed economies.

The large sums of resources committed mainly by developed economies to preventing their financial systems from collapsing, along with a decrease in fiscal revenues and greater spending associated with social programs as a result of weaker economic activity, have transformed the current financial crisis into a sovereign debt crisis. The financing needs of several governments, especially in the euro zone, and the lack of concrete measures on the part of E.U. authorities, have increased doubts over fiscal sustainability in some E.U. countries. This, along with the debate surrounding the fiscal measures required to make U.S. public finances viable, has generated an unusual atmosphere of uncertainty in financial markets. Meanwhile, expectations of slower global economic growth in a context of extremely fragile government, bank and household financial balances, are contributing to a very complicated situation.

The U.S. government debt ceiling

Increased spending on domestic security, income tax cuts, health benefit extensions and the effects of the recession derived from the international financial crisis, along with the large expenditures made to tackle it, all contributed to a rapid deterioration in U.S. fiscal accounts. Indeed, the fiscal balance went from a surplus of 2.4 percent of GDP in 2000 to a deficit of 8.9 percent of GDP in 2010 (graph 1a), while U.S. government debt rose from 34.7 to 62.1 percent of GDP over the same period (graph 1b).[1]

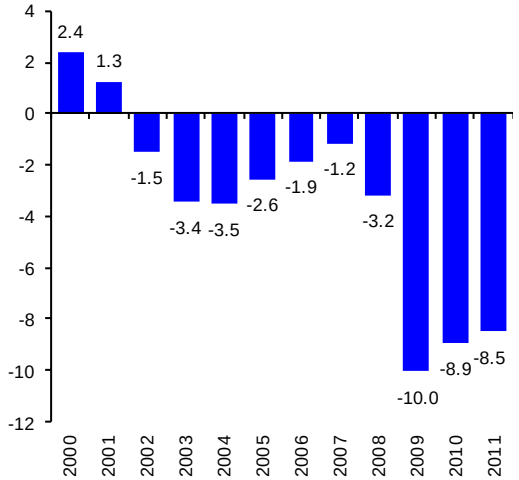
Consequently, in February and April 2011, the U.S. President proposed diverse measures to Congress for reducing the fiscal deficit to more sustainable levels. However, Congress rejected the proposals because they did not include big enough spending cuts to make the public finances sustainable and included tax increases opposed by the Republicans. In July, a national controversy broke out after differences between Republicans and Democrats over the best strategy for lowering the public deficit put congressional approval of an increase in the ceiling in jeopardy. In the event, approval was secured at the last minute, thus avoiding the risk of the U.S. government defaulting on its debt obligations.

[1] Refers to net government debt (Congressional Budget Office).

Graph 1
The United States' deficit and public debt

a) Public deficit as a percentage of GDP

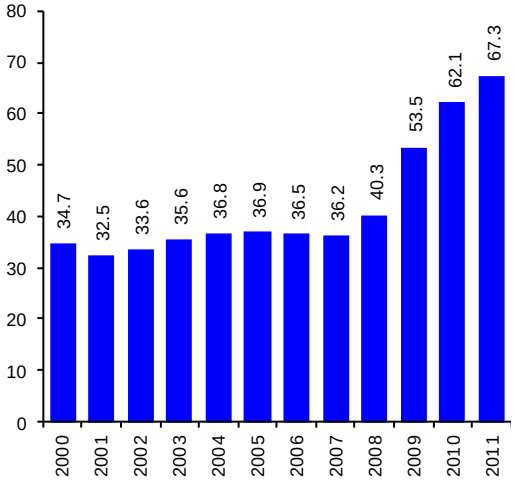
Annual percentage, end of period



Figures for 2011 are estimates (updated through September 20, 2011).
Source: Congressional Budget Office

b) Net public debt as a percentage of GDP

Annual percentage, end of period



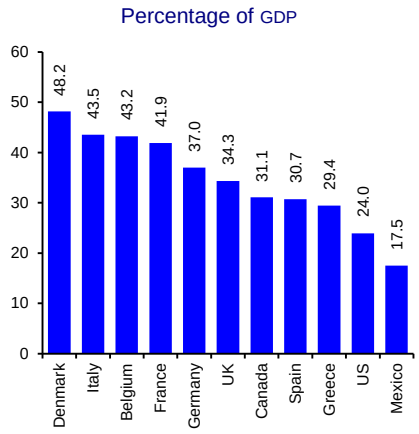
Figures for 2011 are estimates (updated through September 20, 2011).
Source: Congressional Budget Office.

The debate over the increase in the U.S. debt ceiling highlighted the fact that sovereign debt holders are exposed not only to the risk of government insolvency, but also to the prospect of debtor countries defaulting on their debt obligations for political reasons. In the case of the U.S. government, unlike that of several E.U. governments, no one has ever doubted the capacity to pay debt obligations. The U.S. economy is the world's largest, with a relatively low tax collection (24 percent of GDP) (graph 2a) and room to make public spending viable through structural reforms. Besides, its currency is the reserve asset par excellence. These conditions mean it would be relatively easy for the country to improve its fiscal position. However, the greatest uncertainty lies in the difficulty U.S. political forces have shown in reaching agreements, as well as an apparent lack of willingness on the part of some political players to back down, despite the enormous risks and costs implied for society.[2] All in all, the agreement to increase the debt ceiling was achieved only at the last minute and did not prevent one rating agency from downgrading U.S. sovereign debt for the first time in history at the beginning of August.

[2] A U.S. default on its debt would cast doubt on the validity of one of the most important premises of modern financial theory: the existence of a risk-free asset which makes yield comparisons possible, a premise which has been crucial to the development of financial markets. Furthermore, over the last two years, sovereign risk ratings have decreased for G7 and other E.U. countries, resulting in higher funding costs and reflecting lower market confidence in risk-free assets.

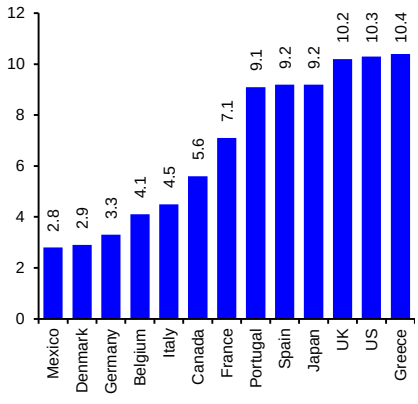
Graph 2
International comparison of public finance indicators of selected countries

a) Tax revenue in 2009



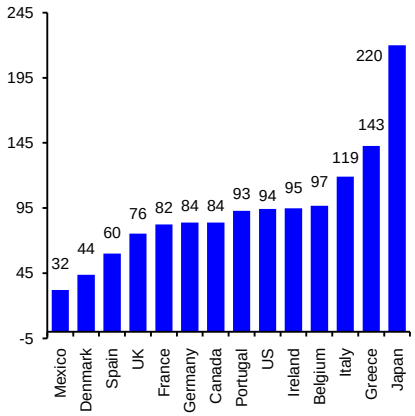
Source: Revenue statistics, OECD, December 2010. Information for Japan and Portugal is not available.

b) Public deficit in 2010



Source: Fiscal Monitor, IMF, Sep. 2011. (Ireland was excluded to facilitate the comparison, see table 1). Data for Mexico was taken from the Economic Planning Unit at the Ministry of Finance and Public Credit (SHCP).

c) Public deficit in 2010



Source: Fiscal Monitor, IMF, Sep. 2011. Data for Mexico was taken from the Economic Planning Unit at the Ministry of Finance and Public Credit (SHCP).

Similarly, shortly after the downgrade of U.S. sovereign debt, another agency downgraded Japan's on the basis of high public deficits following the international financial crisis and an increase in the level of government debt. However, the agency played down the possibility of a debt crisis in the near future. Furthermore, as occurred with the U.S. dollar, following the announcement of Japan's downgrade, the market confirmed that the yen remains a preferred safe haven in times of uncertainty.[3]

Significant downward revisions of U.S. economic growth expectations and ongoing high levels of unemployment prompted the U.S. President in September 2011 to submit to Congress a new plan to boost employment called the American Jobs Act. The bill consisted of temporary fiscal stimuli and spending programs amounting to USD 447 billion, equivalent to 3 percent of GDP. The announcement had only a modest impact on markets. At the beginning of October 2011, it was submitted to the Senate, where it failed to garner enough support in an initial vote.

[3] The Japanese economy is a net capital exporter and maintains large creditor positions with the rest of the world. Also, Japanese public debt is denominated in yen and held by Japanese nationals, so foreign exchange risks and cross-border financial contagion risks are relatively low.

The European crisis

The E.U. sovereign debt crisis has fueled an atmosphere of great uncertainty in international markets. The issues of greatest concern, to be commented on below, are the following:

- The high level of indebtedness and public-sector financing needs in several E.U. zone countries.
- The strong connection between sovereign risk and the solvency of E.U. banks.
- The possibility of such countries' banks contaminating others in the region and also in the rest of the world.

As a result of the international financial crisis, there was a strong jump in several E.U. periphery country public deficits (some of which had already been increasing) due to lower public revenues and the implementation of support programs. At the end of 2009, the E.U. countries with the highest public deficits were Greece, Ireland, Spain, and Portugal. By 2010 the public debt of several countries far surpassed the 60-percent-of-GDP threshold stipulated in the Maastricht Treaty. These countries included Greece, Italy, Belgium and Ireland. Furthermore, Greece, Portugal and Spain have registered high current account deficits (table 1).

Table 1
Public finance indicators of selected E.U. countries, 2000-2012
Percentage of GDP

	Public balance					Gross public debt					Current account balance				
	2000-08[1/]	2009	2010	2011	2012	2000-08[1/]	2009	2010	2011	2012	2000-08[1/]	2009	2010	2011	2012
Germany	-2.0	-3.1	-3.3	-1.7	-1.1	64.3	74.1	84.0	82.6	81.9	3.6	5.6	5.7	5.0	4.9
Belgium	-0.5	-5.9	-4.1	-3.5	-3.4	96.1	96.2	96.7	94.6	94.3	2.5	0.0	1.0	0.6	0.9
Spain	-0.2	-11.1	-9.2	-6.1	-5.2	46.8	53.3	60.1	67.4	70.2	-6.2	-5.2	-4.6	-3.8	-3.1
France	-2.8	-7.6	-7.1	-5.9	-4.6	62.7	79.0	82.3	86.8	89.4	0.2	-1.5	-1.7	-2.7	-2.5
Greece	-6.0	-15.5	-10.4	-8.0	-6.9	103.0	127.1	142.8	165.6	189.1	-9.0	-11.0	-10.5	-8.4	-6.7
Ireland [2/]	0.4	-14.2	-32.0	-10.3	-8.6	31.7	65.2	94.9	109.3	115.4	-2.3	-2.9	0.5	1.8	1.9
Italy	-2.9	-5.3	-4.5	-4.0	-2.4	106.1	116.1	119.0	121.1	121.4	-1.5	-2.1	-3.3	-3.5	-3.0
Portugal	-1.6	-10.1	-9.1	-5.9	-4.5	59.3	83.0	92.9	106.0	111.8	-9.7	-10.9	-9.9	-8.6	-6.4

Source: IMF's World Economic Outlook database, September 2011.
1/ Simple annual average.
2/ The unusually high 2010 public deficit number is due to the absorption of bank losses.

The deterioration in the public finances of most E.U. countries will translate into a big increase in financing needs in the coming years, especially in 2012. That year the financing needs of Greece and Spain will be particularly great and are expected to amount to 39.2 and 29.3 percent of GDP, respectively, followed by Italy, Portugal and Belgium with 28.9, 20.2 and 19.6 percent of GDP (table 2).

Table 2
Financing needs of the governments of selected E.U. countries
2011-2015[1/]
Percentage of GDP

	2011	2012	2013	2014	2015	2011-2015[2/]
Germany	7.0	12.8	7.9	5.0	4.7	7.5
Belgium	15.6	19.6	14.8	13.1	13.5	15.3
Spain	19.5	29.3	21.0	19.3	15.1	20.8
France	16.2	17.1	12.9	10.1	9.8	13.2
Greece	31.3	39.2	32.1	28.4	31.3	32.4
Ireland	13.7	14.6	12.7	13.5	6.1	12.1
Italy	17.1	28.9	17.2	13.7	15.7	18.5
Portugal	15.9	20.2	13.1	15.0	11.5	15.1
Average	**17.0**	**22.7**	**16.5**	**14.8**	**13.5**	**16.9**

Source: IMF's World Economic Outlook database, April 2011, and Bloomberg (updated through September 20th, 2011).
1/ Financing needs are calculated as the sum of amounts on maturity dates and estimated public-sector deficits.
2/ Simple average for the period.

In July 2011, leaders of the euro zone and E.U. institutions announced a new rescue plan to resolve the Greek sovereign debt problem, as well as a series of additional measures to guarantee financial stability in the region. The agreement included 109 billion euros in additional funds for Greece with the help of the International Monetary Fund (IMF) as well as private-sector contributions through transactions aimed at achieving an estimated reduction of around 21 percent in the present value of Greek debt. The measures announced also included better loan conditions for Ireland and Portugal, and the possibility of the European Financial Stability Facility (EFSF) buying sovereign debt in the secondary market and financing bank recapitalization programs (box 1).

Box 1

Financial programs the euro zone has agreed to

In response to the recent international financial crisis, the European Union has created several mechanisms for providing member countries with support through loans or credit facilities to member countries. Most of these mechanisms are for the exclusive use of E.U. entities. Similarly, the European Central Bank (ECB) has mandated a series of measures aimed mainly at ensuring bank liquidity and mitigating tensions in financial markets. Below we provide a brief description of the most important programs and mechanisms.

Greek Loan Facility. On May 2, 2010, euro zone members agreed on a three-year financing program amounting to 80 billion euros to support the Greek government in the country's economic crisis. The main characteristic of this facility is that it consists of bilateral loans extended jointly by E.U. member states. This aid was complemented by 30 billion euros in IMF financing for a combined package of 110 billion euros to be disbursed in programmed tranches until June 2013. Furthermore, on July 21, 2011, a new financial aid package amounting to 109 billion euros, also for three years, was agreed on for Greece and financed by E.U. member states through the EFSF, with IMF participation. The program includes the private sector's voluntary participation through a Greek bond exchange and buy-back program, which is expected to lower the present value of the country's debt by 21 percent.

European Financial Stabilisation Mechanism (EFSM). The European Commission created this facility to assist any of its 27 member states facing economic difficulty. The EFSM can obtain up to 60 billion euros in the market by issuing bonds covered by the E.U. budget.

European Financial Stability Facility (EFSF). This special-purpose vehicle was created by E.U. member countries to grant loans to countries in the same area facing serious financial difficulties. In order to grant loans it can issue bonds for up to 440 billion euros backed by member countries based on their pro-rata share of ECB paid-in capital.[1] Along with the EFSM, this facility is part of a safety net the IMF contributes to with 250 billion euros for potential total funds of 750 billion euros. On July 21, a decision was made to increase this guarantee to 780 billion euros in order to effectively raise the loan capacity to 440 billion euros. It was also agreed that the fund would be able to provide governments with financing in order to recapitalize their countries' banks, and that it may act preemptively and intervene in the secondary debt market in the event of financial instability.

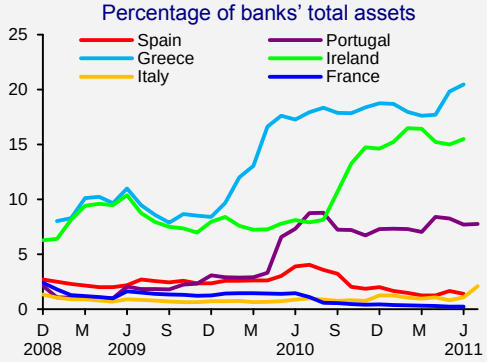
European Stability Mechanism (ESM). In December 2010, the European Commission recognized the need for euro member states to create a new mechanism to assume the work currently done by the EFSF and EFSM as of July 2013. The new financial aid mechanism has three characteristics that distinguish it from the previous ones: i) it is permanent; ii) its loans will have priority over the obligations of any other country with the exception of loans granted by the IMF; and iii) it establishes that euro area sovereign debt issuances maturing in more than a year should contain collective action clauses (CAC), standardized to guarantee an identical legal impact as of July 2013. CAC will allow a qualified majority of bond holders to agree on a restructuring with a State that has defaulted. The aim is for private holders of sovereign debt to share the losses any restructuring incurs.[2]

In July 2011, the finance ministers of the 17 euro member states signed a treaty to create the ESM, after the European Council modified the Treaty on the Functioning of the European Union in March in order to permit this. Under the treaty, the ESM had to be ratified by E.U. member states before December 31, 2011 in order to come into effect following the approval of at least 95 percent of the signatories.

ECB measures. The ECB made full allotment available to banks as well as foreign-currency-denominated liquidity through the purchase of covered bonds. The ECB also increased the maturities of these transactions and the list of eligible liquidity facility collateral. Furthermore, the ECB created the Securities Markets Programme (SMP) through which it can buy debt instruments issued by central governments or member-state public entities whose currency is the euro, or else euro-zone private entities.

As of July 2011, the ECB's liquidity injection had significantly increased, especially in Greece, Ireland and Portugal (see the graph below).

ECB liquidity injection
Percentage of banks' total assets



Figures as of July 2011.
Source: Morgan Stanley.

[1] The guarantee implied a total loan amount of below 440 billion euros.

[2] CAC have been commonplace in Latin America and are already used in the United States, the United Kingdom and Luxemburg, although not in most E.U. member states.

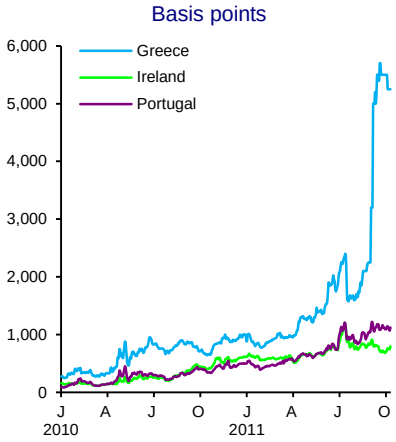
The June 2011 program announced by the E.U. authorities was not enough to quell the uncertainty surrounding Greece's ability to meet its debt obligations. Neither did it prevent the contagion from spreading to other countries such as Spain and Italy, and not long afterwards, although more incipiently, to France. The complexity of the E.U. institutions' decision-making process and lack of clear definitions in the announced program have been interpreted as a reflection of the difficulties E.U. governments face in obtaining the internal consensus required for implementation. This state of affairs has generated fears centered on the amount the E.U. would be willing to disburse in funding to support troubled member states. Furthermore, the lack of clarity with respect to the conditions under which the private sector would participate in Greece's debt restructuring fueled fears of a default, and produced a contagion effect on the debt of other euro-area countries with a weak fiscal position.

This, along with signs of slowing global economic activity has resulted in a marked deterioration in sovereign risk indicators and large increases in the cost of debt of E.U. member states with relatively more fragile fiscal positions. The rise in the cost of sovereign debt has also given rise to a vicious circle, as it contributes to a weakening of the fiscal positions of troubled countries, further increasing sovereign risk (graph 3). In order to mitigate these effects, the European Central Bank (ECB) resumed its purchases of sovereign debt in the secondary market through its Securities Markets Programme. Only this time, its acquisitions focused on the debts of Spain and Italy (graph 4a).[4] As a result of these purchases, the financing costs of the Spanish and Italian governments temporarily decreased (graph 4b). However, market indicators that measure the credit risk (CDS) of both countries' sovereign debt remained high. Likewise, in August, fears about insolvency in the interbank money market mounted considerably (graph 4c).

[4] In the week of August 15, 2011, the ECB purchased 14.3 billion euros worth of bonds with a view to mitigating tensions in the sovereign debt markets of Spain and Italy. The amount, which was disclosed on August 22, is below the intervention the ECB made during the week of August 8 to August 12 for 22 billion euros. The ECB does not disclose information on bonds purchased from individual countries.

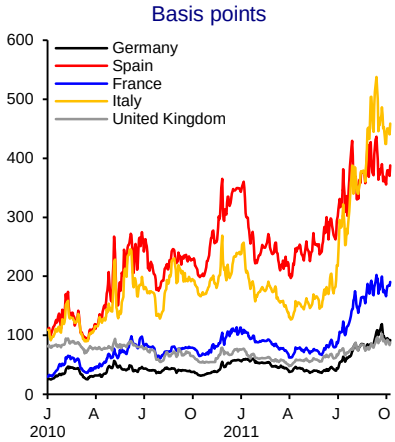
Graph 3
Credit market risk indicators (CDS) and sovereign bond yields[1/]

a) E.U. member states that have received financial support



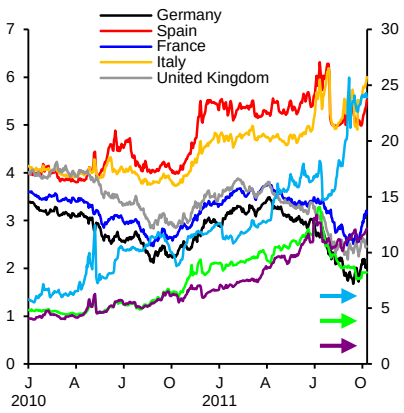
Figures as of October 2011.
Source: Bloomberg.

b) E.U. member states and the U.K.



Figures as of October 2011.
Source: Bloomberg.

c) Sovereign bond yields

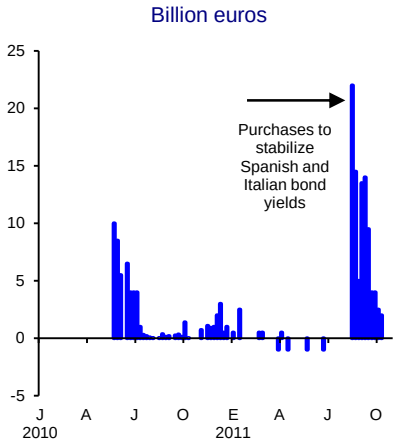


Figures as of October 2011.
Source: Bloomberg.

1/ Credit Default Swaps, CDS, correspond to a 5-year maturity and yields on sovereign bonds to ten years.

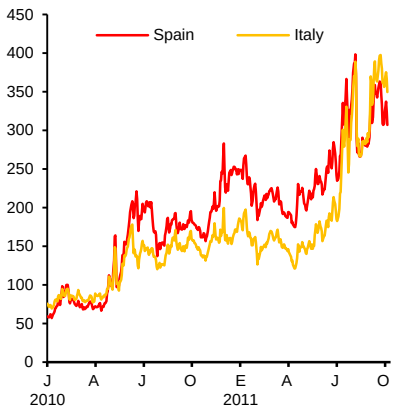
Graph 4
Direct purchases of sovereign bonds by the ECB and an indicator of insolvency risk in the interbank market

a) Weekly purchases



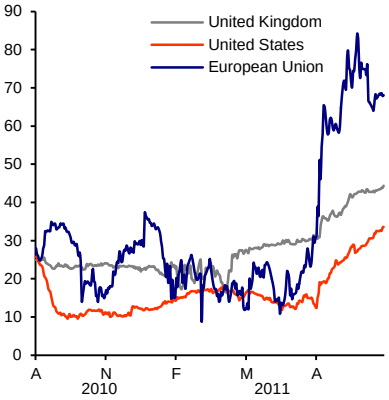
Figures as of October 2011.
Source: Bloomberg.

b) Sovereign Spanish and Italian bonds and the German bond yield spread



Figures as of October 2011.
Source: Bloomberg.

c) Spread between 3-month Libor and OIS[1/] rates



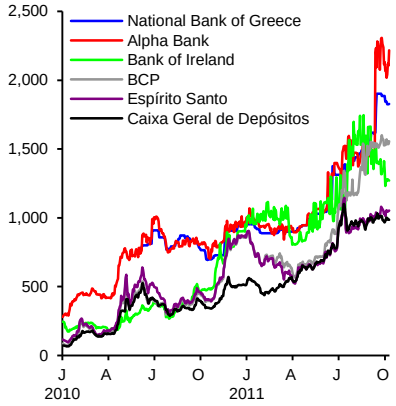
Figures as of October 2011.
Source: Bloomberg.

1/ The *overnight indexed swap* (OIS) is a swap contract that is indexed to the overnight benchmark rate in the interbank money market. A wider spread between the Libor rate and the OIS rate reflects a greater fear of bank insolvency.

Besides doubts related to E.U. member states' fiscal positions, there is concern about a potential contagion of the financial system. Sovereign risk is closely related to the risk of bank insolvency because of two factors. The first is the fact that the capacity of domestic governments to implement bank clean-up programs is linked to their fiscal positions, especially in those E.U. member states that have ceded their monetary autonomy. The second has to do with large investments European banks have made in the sovereign bonds of other countries in the region. A default or disorderly restructuring by one country could generate considerable losses for the banks of other E.U. member states. Hence the positive relationship between the stress levels of sovereign debt for E.U. countries and banks' cost of financing (graph 5c). This relationship contributed to higher vulnerability for European banks owing to their heavy dependence on wholesale financing, a situation that is reflected in higher market indicators that measure the credit risk of E.U. banks (graph 5a y 5b), as well as in a reduction in their share prices (graph 6).

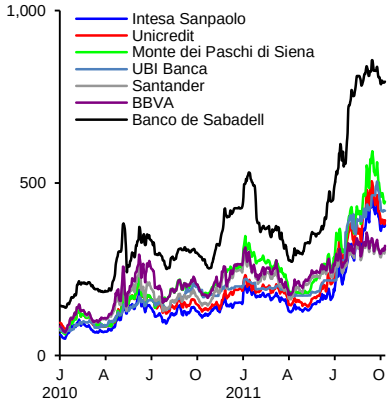
Graph 5
Credit market risk indicators (CDS)

a) Greek, Irish and Portuguese banks[1/]



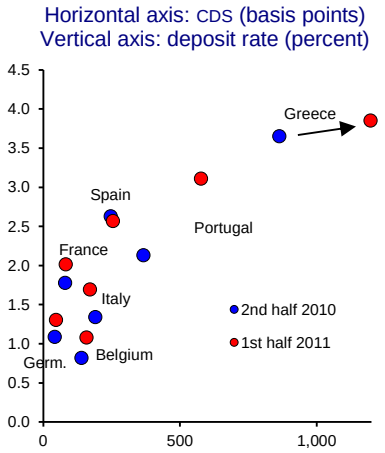
Figures as of October 2011.
Source: Bloomberg.
1/ CDS correspond to a 5-year maturity.

b) Italian and Spanish banks[1/]



Figures as of October 2011.
Source: Bloomberg.

c) Cost of retail financing and CDS[1/]

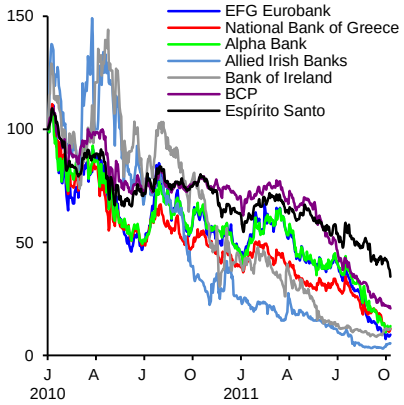


Source: Bloomberg and Eurostat.

It should be recalled that stress exercises coordinated by the European Banking Authority (EBA) in the first half of 2011 did not succeed in dissipating uncertainty over the financial situation of some banks, as reflected in their share price trends, despite a stricter methodology than in the 2010 tests. This is partly because, as in 2010, these tests excluded the possibility of an E.U. member state defaulting on its sovereign debt, a situation the market has not ruled out. In October the financial authorities of France and Belgium agreed to the bailout of Dexia, a bank that had passed the stress tests.

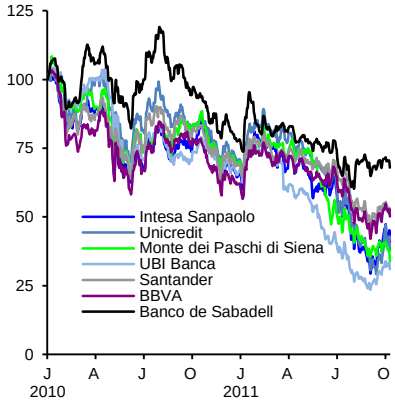
Graph 6
EU bank share indexes

a) Greek, Irish and Portuguese banks



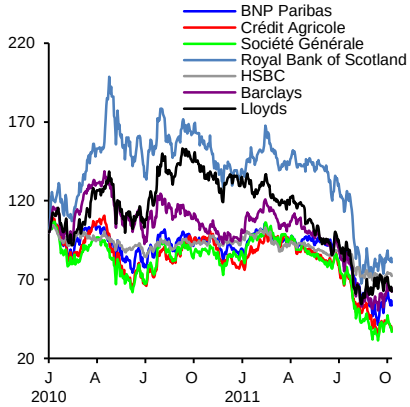
Figures as of October 2011.
Source: Bloomberg.
1/ The index's base is January 1, 2010.

b) Italian and Spanish banks



Figures as of October 2011.
Source: Bloomberg.

c) French and British banks



Figures as of October 2011.
Source: Bloomberg.

The risks of cross-border contagion are also significant as the larger E.U. banks are the main lenders not only to governments, but also to banks and private-sector non-financial companies in Greece, Portugal, Ireland, Italy, Spain and Belgium. Thus, based on data from the Bank for International Settlements (BIS), as of March 2011, banks with the biggest cross-border exposures as a percentage of bank capital were France´s to Italy (72.2 percent) and Belgium (47.0 percent) and Germany's to Italy (40.8 percent) and Spain (40.3 percent) (table 3). The European regulatory proposal to implement Basel III contemplates E.U. banks remaining under no obligation to provision for sovereign debt holdings from any E.U. member state. The origin of this rule is an E.U. Council agreement which will expire at the end of 2015.[5]

[5] On July 20, 2011, the European Commission published its proposal to implement Basel III in Europe (known as CRD-4). Among other things, the proposal contemplates European banks not having to provision for the sovereign debt holdings of any E.U. member state. This would include both the debt of countries that are part of the E.U. area and debt that is not denominated in euros and applies both to the standard method and the internal ratings-based method (IRB). The rule's insensitivity to sovereign risk contrasts with the capital requirement established in practice by Basel III for the affiliates of international banks in relation to their local sovereign debt holdings. In principle, Basel III indicates that only local sovereign debt holdings denominated and financed in the same local currency will not consume capital. However, affiliates consolidate their financial statements with their parent companies and so capital consumption related to their sovereign debt holdings will depend on internal models used by the parent company, or else such debt's global rating. This means that for an affiliate that is established in an emerging economy, capital consumption related to local sovereign debt holdings denominated and financed in local currency will be higher than for a European bank with debt holdings from any other E.U. country. A big difference between the new regulatory proposal and the current directive (Basel II) is that the CRD-4 will have scope equivalent to the law in its main components, and so its application will be obligatory for all E.U. member states. Thus, such countries will not be able to apply stricter local regulations than established in CRD-4. At the end of 2015, the European Commission and the European Banking Authority must issue a report that will assess whether this measure is beneficial or not.

Table 3
Foreign banks' exposure to Greece, Ireland, Italy, Belgium, Portugal and Spain by bank nationality[1/ 2/]
March 2011, percentage of bank capital[3/]

Debtor	Type of exposure	Creditor bank					
		France	Germany [4/]	Uk	Spain [5/]	Italy [5/]	Total
Greece	Sovereign	2.0	2.5	0.4	0.1	0.5	5.5
	Other	7.6	2.7	1.7	0.3	0.7	12.9
	Total [6/]	9.5	5.2	2.1	0.4	1.2	18.4
Ireland	Sovereign	0.4	0.6	0.5	0.0	0.1	1.6
	Other	7.7	27.4	19.5	3.4	4.9	62.9
	Total [6/]	8.1	28.0	20.0	3.4	5.0	64.5
Italy	Sovereign	15.3	9.2	1.4	2.7	-	28.6
	Other	56.9	31.6	9.4	10.8	-	108.7
	Total [6/]	72.2	40.8	10.7	13.5	-	137.3
Belgium	Sovereign	7.5	2.0	0.6	0.4	0.1	10.5
	Other	39.4	7.7	5.5	2.0	1.9	56.5
	Total [6/]	47.0	9.7	6.1	2.4	1.9	67.1
Portugal	Sovereign	1.3	1.6	0.2	1.8	0.1	5.0
	Other	3.7	7.7	3.2	25.7	1.4	41.7
	Total [6/]	5.0	9.3	3.4	27.6	1.5	46.7
Spain	Sovereign	4.7	5.3	0.9	-	1.1	12.1
	Other	22.0	35.0	13.3	-	7.9	78.2
	Total [6/]	26.8	40.3	14.2	-	9.0	90.3

Source: BIS and IMF.
1/ Foreign exposures correspond to the *foreign claims* variable in BIS statistics.
2/ The "others" concept includes claims on the banking and non-banking private sectors as well as the positive market value of derivatives contracts, guarantees granted and credit commitments.
3/ Banking system capital refers to the *Shares and Other Equity* variable of the IMF database; it is comprised of information from all banks within the country in question.
4/ The foreign exposure of German banks corresponds to BIS immediate borrower-based statistics.
5/ The foreign exposure of banks whose parent company is located within the selected countries is not included, as they are not accounted for as foreign exposures.
6/ The sum of the parts may not coincide with the total due to rounding.

In September 2011, the European environment further deteriorated following the decision by Germany's Constitutional Court with respect to the budgetary power of the German Parliament, the resignation of a member of the ECB Board, and Greece's difficulties in meeting fiscal commitments. The Court ruled that while the financial aid programs agreed on by the euro zone do not infringe on the Parliament's budgetary power, in the future the parliamentary budget committee must approve of the German government granting financial guarantees in the form of loans to any of the other E.U. member states. Furthermore, the Court ruled that the German government must not accept permanent mechanisms when they imply the assumption of liabilities resulting from the voluntary decisions of other member states, especially if their impact is difficult to gauge.[6] On September 30, the German Parliament approved an

[6] Some analysts have interpreted this as representing a constitutional obstacle to the issuance of eurobonds, while recognizing that the wording of the Court's ruling also seems to suggest that if

increase in the EFSF's lending capacity to 440 billion euros along with greater flexibility in accordance with agreements reached at the July 21, 2011 E.U. summit (box 1).

The resignation of an ECB board member reflects reticence in some E.U. countries over adopting measures that imply committing funds to the bail-out of other E.U. member states, as well as the role the ECB should play in resolving the region's sovereign debt crisis. Furthermore, pressures to continue disbursing the funds contemplated in Greece's rescue package due to difficulties the country faces meeting agreed-upon fiscal goals led the Greek government to announce a special property tax to cover estimated shortfalls for 2011 and 2012.[7] While the announcement confirmed Athens' endeavors to meet its fiscal commitments, it failed to dispel doubts on the adequacy and availability of additional funds to achieve it.

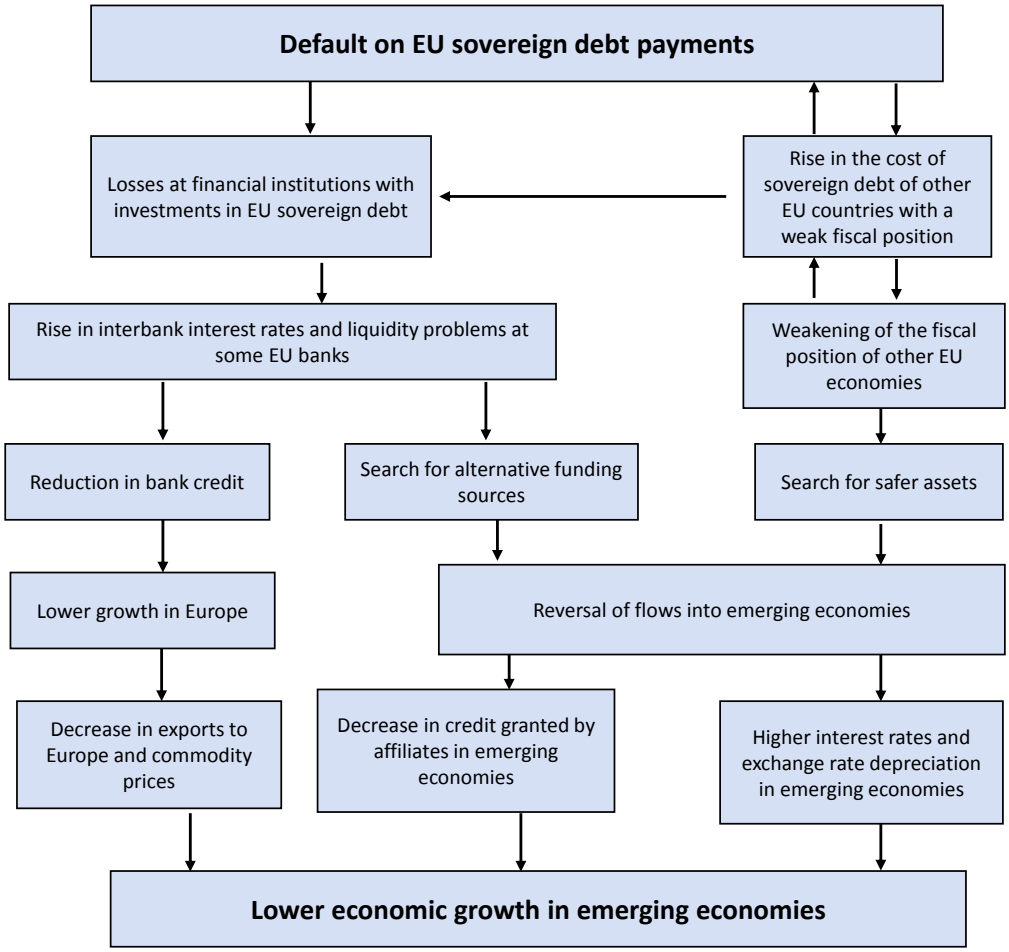
Consequently, E.U. governments are analyzing the possibility of reforming the EFSF by increasing its funds and enabling it to operate as an insurance company. They have also expressed their intention to demand that E.U. banks value E.U. sovereign debt on bank balance sheets at market prices and establish a minimum Tier 1 capital of nine percent.

The E.U. situation is particularly complex, as the differences between E.U. economies are increasingly great. While incipient signs of inflation are observed with dread in some countries, others require measures to bolster financial stability. The deterioration is occurring in an environment in which the global economy continues to face major challenges derived from the fall-out of the global financial crisis and in which the fragility of government, bank and household financing has become one of the main sources of risk to a European economic recovery. The sovereign debt issue is under the spotlight because of the consequences of a default to the financial stability of the region and the rest of the world, as well as the availability of credit and its effects on the economic growth of emerging economies (figure 1).

Germany had a say in the fiscal decisions of the countries in which it has assumed some debt, the constitutional obstacle would not exist.

[7] This tax, which was approved by the Greek Parliament on September 27, will last two years and be collected through electricity bills, reflecting the country's weak tax collection capacity. A few days later, on October 2, the Greek government informed Parliament that the 2011 public deficit would be 8.5 percent of GDP versus the 7.6 percent it had previously committed to, and that the recession would be far worse. It also said that 2012 public debt would amount to173 percent of GDP versus the proposed 162 percent.

Figure 1
Chain of contagion



Global economic activity

Uncertainty caused by the sovereign debt crisis in some E.U. periphery countries, natural disasters in Japan, and higher commodity prices have resulted in global economic growth outlooks being gradually revised down in 2011. Growing tensions in international financial markets related to fears of the E.U. crisis extending to Italy, Spain and France, banks' strong exposure to these countries' sovereign debt, and disappointing economic activity data from the U.S., as well as the inability of U.S. politicians to reach agreements on fiscal consolidation, brought about further deterioration in global growth prospects.

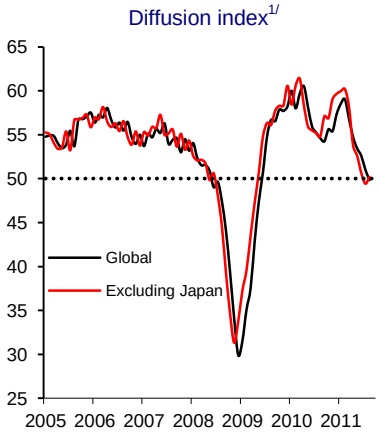
In fact, although the global economy continued to grow in the first half of 2011, the pace slowed, especially as of the second quarter. Despite the easing of the negative effects of natural disasters in Japan and high commodity prices, global economic growth has continued to wane. In particular, in recent months there has been a slowdown in industrial output growth in both developed and emerging economies. At the same time, forward-looking production indicators have deteriorated (graphs 7a y b), and 2011 and 2012 growth forecasts for the

U.S., Japan and the E.U. have been lowered (graph 8). In this environment, the risks to global economic growth associated with the problems afflicting the U.S. and E.U. economies have considerably increased.

Thus, global growth prospects for both developed and emerging economies have been revised downward (graph 7c). The global economy's loss of steam is particularly problematic in the current context, as it could further weaken the fiscal positions of many developed economies and exacerbate the delicate situation that some financial intermediaries are experiencing, as well as discourage spending by companies and households still going through the debt reduction process.

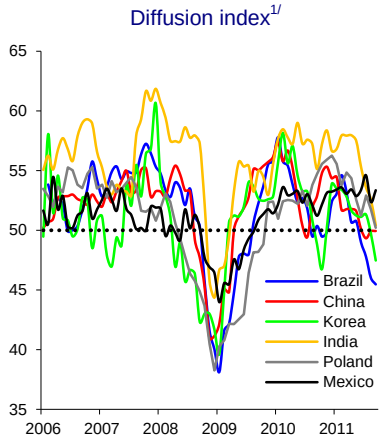
Graph 7
Economic activity indicators and global economic growth prospects

a) Production, manufacturing sector purchasing managers' forward index



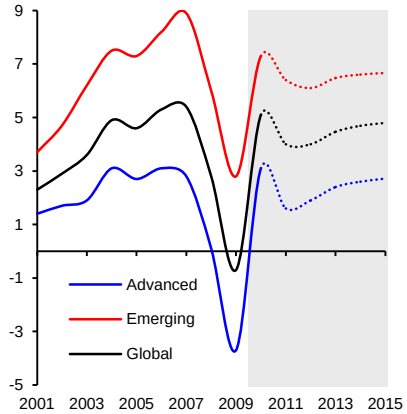
Seasonally adjusted figures as of September 2011.
Source: Markit.

b) Manufacturing sector purchasing managers' forward index for selected emerging economies



Seasonally adjusted figures as of September 2011.
Source: Markit.

c) World economy: GDP growth 2000-2015



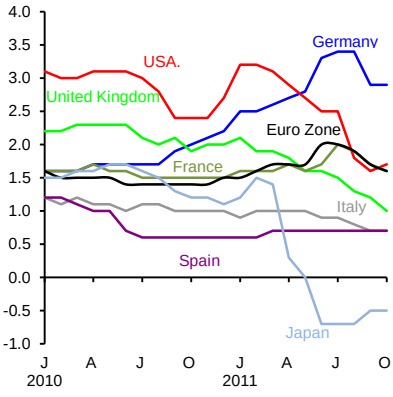
Source: The IMF's World Economic Outlook, September, 2011.

1/ A diffusion index measures the degree to which the change in a variable is generalized, disperse or "diffused" within a group of individuals.

Graph 8
Growth forecasts for developed economies

a) Selected countries: 2011 GDP

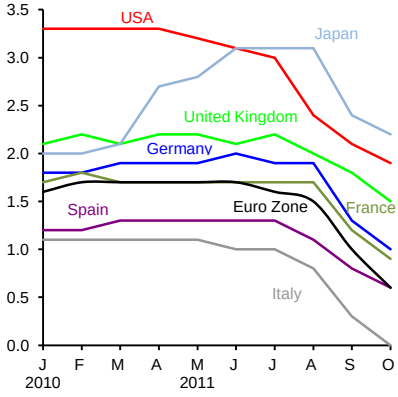
Real YoY percentage change



Source: Consensus Economics Inc., October 2011.

b) Selected countries: 2012 GDP

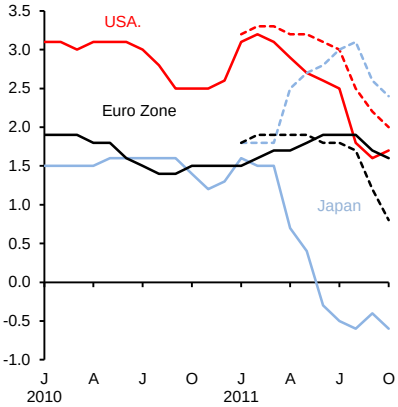
Real YoY percentage change



Source: Consensus Economics Inc., October 2011.

c) World growth: 2011 and 2012 GDP

Real YoY percentage change



Source: Blue Chip Economic Indicators, October 2011. The dotted lines refer to the trend in 2012 forecasts.

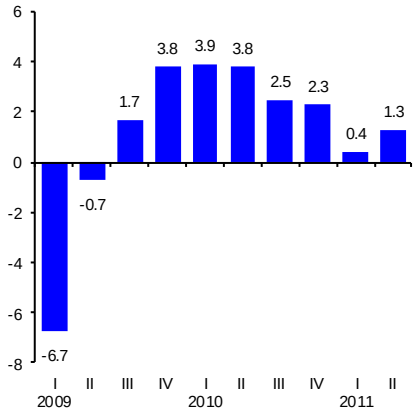
U.S. GDP grew at a year-on-year quarterly rate of 1.3 percent in the second quarter of 2011 (graph 9a), considerably less than what analysts had anticipated. On top of this were significant downward revisions to historical numbers confirming weaker-than-originally-expected economic activity. Furthermore, indicators for the labor market, the mortgage market, consumer confidence and spending point to an environment of low economic growth in the years ahead. In fact, real private consumer spending rose by a meager year-on-year quarterly rate of 0.4 percent during the second quarter of the year (graph 9b), adversely impacted by increases in energy prices. In this environment, consumer confidence has remained at very low levels (graph 9c). Furthermore, uncertainty over the unavoidable withdrawal of the fiscal stimulus, given the difficulties approving the debt ceiling, and no details on fiscal consolidation measures, have dampened optimism on a U.S. economic recovery.[8]

[8] The agreement between the leaders of the Democrats and Republicans in both houses included discretionary spending cuts amounting to USD 1 trillion over the next 10 years. The agreement also included the creation of a bipartisan committee to propose, before November 23, 2011, a legislative plan to reduce the federal deficit by USD 1.5 trillion over the next 10 years, on top of the previous amount, through adjustments to both social benefits and taxes.

Graph 9
US economic activity indicators

a) Gross domestic product

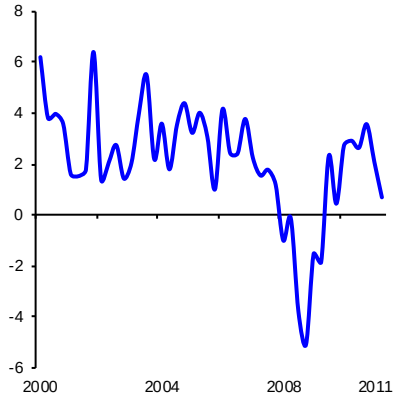
Real quarterly year-on-year change in percentage terms



Seasonally adjusted figures as of June.
Source: Economic Analysis Office.

b) Real consumer spending

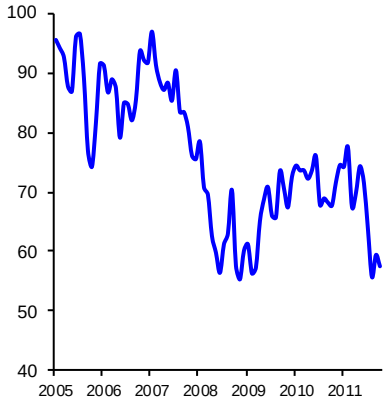
Quarterly year-on-year change in percentage terms



Seasonally adjusted figures as of June.
Source: Bureau of Labor Statistics.

c) Consumer confidence

Index 1966=100



Figures as of October 2011.
Source: University of Michigan.

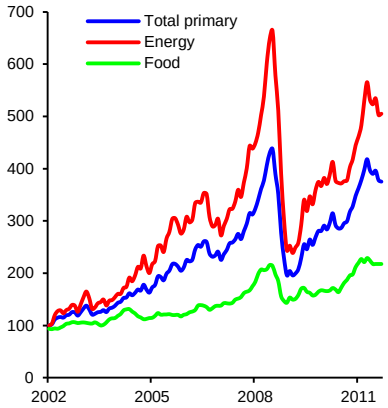
Economic growth in the euro zone slowed in the second quarter of 2011 in an environment of uncertainty over the fiscal positions of several E.U. member states. GDP grew at a year-on-year quarterly rate of 0.7 percent during the second quarter compared with 3.1 percent in the first quarter. Likewise, unemployment rates remained high, softening private spending, hurting consumer confidence, and triggering lower retail sales in the second half of 2011. In this environment, lower economic growth would have an adverse impact on public finances and complicate the consolidation of the region's bank balances even more, throwing more doubt on the adequacy of measures adopted by the authorities to tackle the crisis.

Lower global economic growth expectations appear to be dampening rising inflation trends observed earlier in the year due to supply disturbances, including increases in commodity prices, mainly food, metals and energy (graph 10a). Thus, headline inflation in developed economies appeared to have already hit highs, ready to trend lower in the second half of 2011 (graph 10b). Meanwhile, in the first half of the year, inflationary pressures continued to be observed in diverse emerging economies amid a high growth environment (graph 10c). However, as in developed economies, inflation in the main emerging economies has eased in recent months with inflation levels in some of them even decreasing. As a result, some central banks have interrupted their monetary stimulus withdrawal process.

Graph 10
World inflation and commodity prices

a) Food and energy

January 2002=100

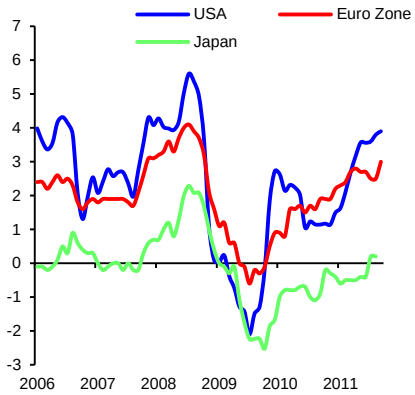


Figures as of September 2011.
Source: IMF.

1/ Wholesale price inflation.

b) Headline inflation in developed economies

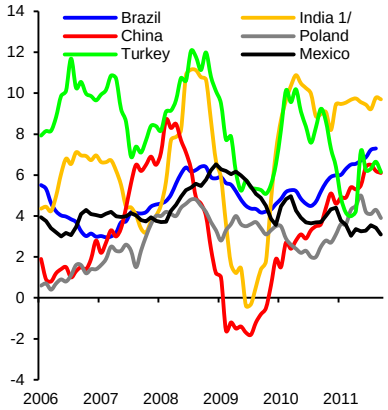
YoY percentage change



Figures as of September 2011, with the exception of Japan (August 2011).
Source: U.S. Bureau of Labor Statistics, Eurostat and Japanese Statistics Office.

c) Headline inflation in emerging economies

YoY percentage change



Figures as of September 2011.
Source: Bloomberg.

In this environment, the Federal Open Market Committee (FOMC) stated in September 2011 that there were significant downside risks to economic prospects and that the unemployment rate was expected to gradually decrease to levels deemed compatible with the Fed's dual mandate, while inflation should settle over the coming quarters at levels equal to or below those consistent with that mandate. Based on this assessment, the Fed decided to increase the average maturity of its securities portfolio in order to reduce the duration of Treasury bonds in the market and thereby take some pressure off long-term interest rates. The main transaction announced consisted of buying Treasury bonds with outstanding maturities of six to thirty years amounting to USD 400 billion and selling Treasury bonds with outstanding maturities of up to three years for the same amount (graph 12a) before June 2012. At the same time, the Committee maintained the federal funds rate target in a 0 to 0.25 percent range and forecast that economic conditions would likely justify maintaining the target until at least the middle of 2013 (graph 11a).

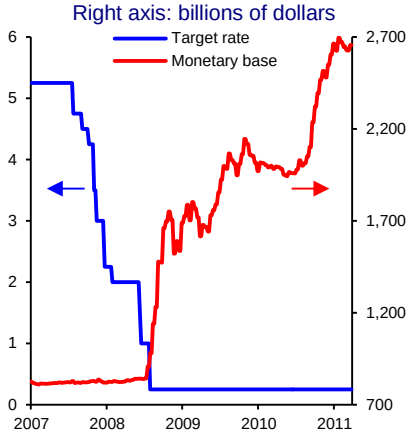
Annual headline inflation in the euro zone was 2.5 percent in August compared with 2.2 percent in December 2010. The ECB raised the benchmark rate by 25 basis points in April and by 25 basis points again in July to 1.5 percent. In its October meeting the Bank held its policy interest rate steady but announced new temporary measures to ensure the European banking system would not face liquidity restrictions (graph 11b). [9] Given renewed tensions in some euro area financial markets, the ECB also announced that it would extend its unconventional liquidity measures until January 2012, among other steps. These included

[9] Among other measures, the ECB said it would recommence its covered bond purchase programs in the primary and secondary debt markets as of November 2011 for 40 billion euros and undertake two long-term fixed-rate refinancing transactions with an extended maturity (12 and 13 months) and no liquidity limit.

purchases of Italy's and Spain's bonds in order to support the region's sovereign debt market (graph 12b).

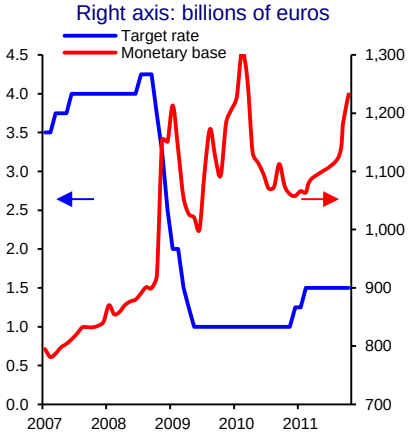
Graph 11
Monetary policy in developed economies

a) United States



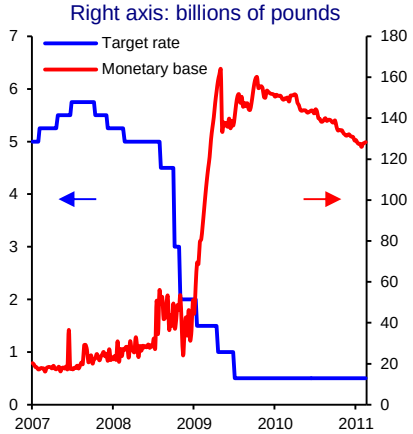
Figures as of October 2011.
Source: U.S. Federal Reserve.

b) Euro zone



Figures as of October 2011.
Source: European Central Bank.

c) United Kingdom



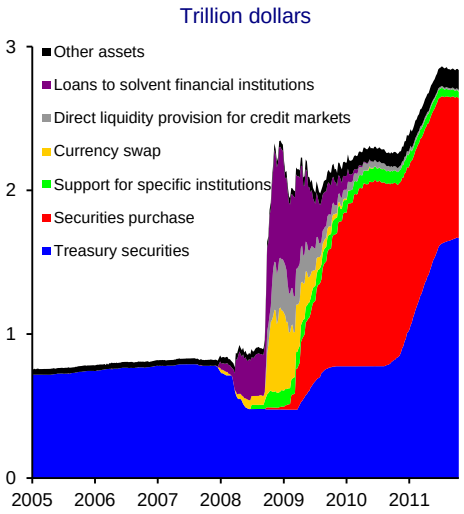
Figures as of October 2011.
Source: The Bank of England.

Greater pessimism on global economic prospects has triggered a decrease in the interest rates of the main developed economies and more uncertainty in financial markets. This in turn has made capital flows to emerging economies more volatile (graph 13a). Such flows have targeted safer assets, including the Swiss franc, the Japanese yen and gold (graph 13b). The central banks of Switzerland and Japan have responded by adopting measures to stem the appreciation of their currencies.

After announcing at the beginning of August that it would increase money market liquidity to tackle the franc's overvaluation, at the beginning of September, the Swiss Central Bank decided to establish an exchange rate floor of 1.20 euros to one Swiss franc. Meanwhile, at the beginning of August, the Japanese financial authorities decided to intervene in the foreign exchange market for a third time in 11 months to force the yen to depreciate. As a result of these measures, emerging economy exchange rates have depreciated in the last two months, reversing some of the appreciation displayed in the first half of the year (graph 13c).

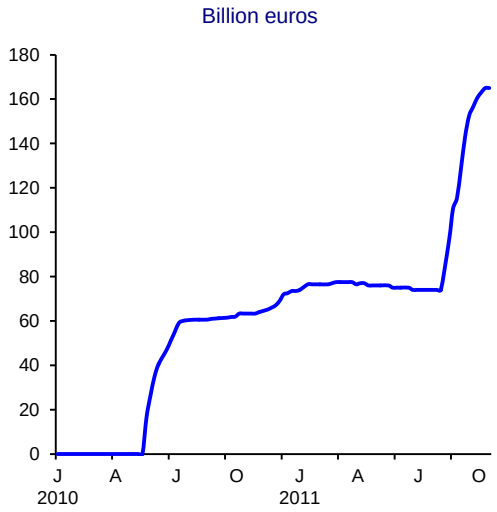
Graph 12
ECB bond purchases and Federal Reserve assets

a) U.S. Federal Reserve assets



Figures as of October 20, 2011.
Source: U.S. Federal Reserve and Bloomberg.

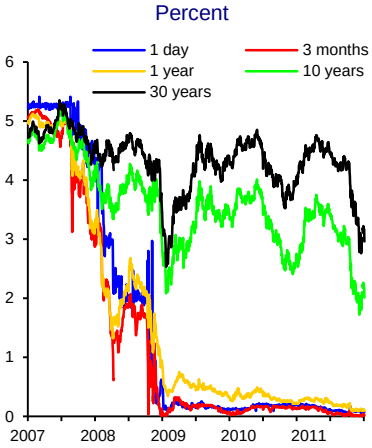
b) ECB sovereign bond purchases



Figures as of October 20, 2011.
Source: Bloomberg.

Graph 13
Interest rates and exchange rates

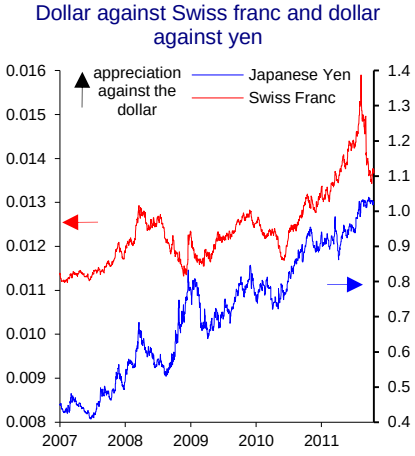
a) U.S. Treasury yields



Figures as of October 20, 2011.
Source: U.S. Federal Reserve and Treasury Department.

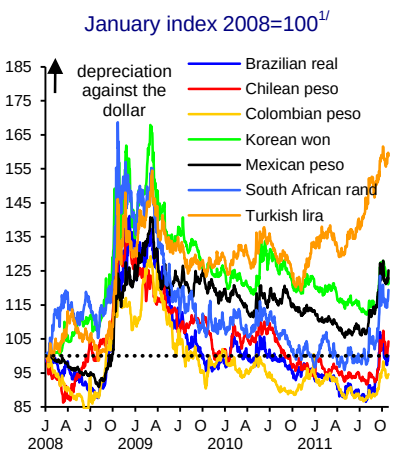
1/ The index's base is January 1, 2008.

b) Swiss franc and Japanese yen exchange rate



Figures as of October 20, 2011.
Source: Bloomberg.
An increase equivalent to the appreciation of the currency against the dollar.

c) Exchange rates of selected currencies

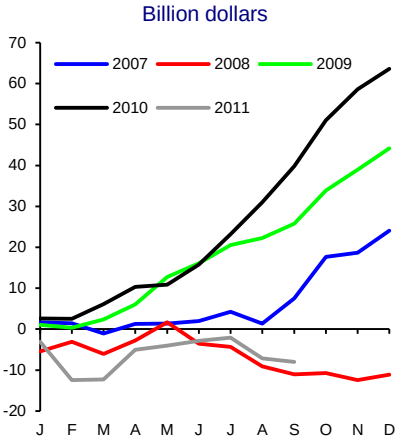


Figures as of October 20, 2011.
Source: Bloomberg.
An increase equivalent to the depreciation of the currency against the dollar.

During the first half of 2011, portfolio flows to emerging economies amounted to USD 11.8 billion, a decrease of 80.8 percent compared with the same period in 2010 (graph 14). The reduction could be due to new institutional investors searching for safe-haven assets.

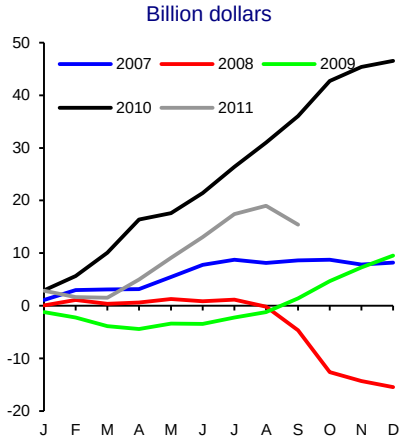
Graph 14
Cumulative capital flows to emerging markets

a) Equities



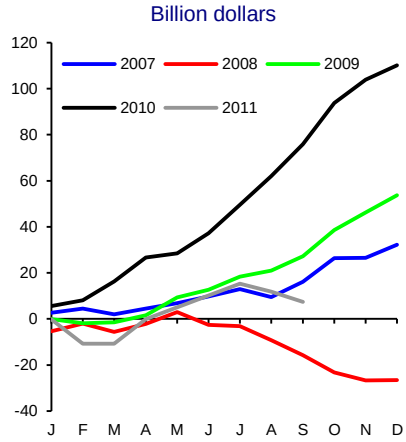
Figures as of September 2011.
Source: EPFR Global.

b) Debt



Figures as of September 2011.
Source: EPFR Global.

c) Equities and debt



Figures as of September 2011.
Source: EPFR Global

2.2. Domestic environment

Mexico's production levels continued to display a positive trend in the first half of 2011, despite some indicators beginning to suggest a possible moderation in the rate of expansion towards the end of that period. In fact manufacturing production was driven by external demand while growth in domestic demand favored a growth trend in services linked both to the external sector and the domestic market.

The favorable trend in external demand was reflected in the broad-based strength of manufactured exports. However, it has recently begun to reflect the effect of the global slowdown, of the U.S. in particular, as recent numbers for manufactured exports to the U.S. and the rest of the world as well as non-oil exports show.

With respect to domestic demand, in the first half of 2011, private consumption and investment displayed a positive trend. However, timely indicators for some headline components have slowed in recent months. Investment remains at pre-2008-global-crisis levels.

While some factors determining domestic spending have gradually recovered, they are still low. In particular, the formal-sector payroll has displayed a positive trend, mainly due to higher employment levels, although the rate of growth has eased in recent months. The consumer confidence indicator improved but remains at low levels, while the producer confidence indicator began shifting downward in 2011. Meanwhile, remittances recovered slightly, but continue to lag pre-global-financial-crisis levels. Finally, there has been a modest pick-up in

commercial bank financing since the middle of last year, which is consistent with economic activity.

During the period in question, the production gap has been narrowing at a slower-than-expected pace, although economic growth remains below potential. This suggests that economic growth levels have not caused price pressures and are not expected to do so in the coming months.

Accordingly, several labor market indicators suggest ongoing slack. Take, for example, the situation with formal sector unemployment, under-employment and employment indicators. All of these indicators have remained high, reflecting employment problems in all of the world's economies. As a result, wage increases have been modest, and this, along with an increase in labor productivity, has translated into a reduction in unit labor costs. Consequently, these costs have not generated price pressures. Furthermore, during the period in question, the country's external accounts have not come up against demand-side pressures. The current account deficit has remained at modest levels, and despite uncertainty in international financial markets, Mexico has tapped funds abroad for amounts that have more than covered the deficit.

Inflation has trended lower in 2011. Thus in September, headline and core inflation rates reached 3.14 and 3.12 percent, respectively. This implied a sizeable reduction in relation to end-2010 data (4.40 and 3.58 percent, respectively). Furthermore, annual headline inflation has trailed 4 percent each month, while as of 2011, core inflation, which is a better reflection of the medium-term trend in headline inflation, reached levels of around 3 percent. Lower inflation, along with monetary policy that is consistent with convergence towards this target, can be attributed to a series of factors that impacted both the core and non-core components, in particular:

- Down-trending unit labor costs.
- Fading effects associated with tax adjustments and public tariff and price hikes authorized by different tiers of government which came into force at the beginning of 2010.
- The exchange-rate trend.
- A step-up in competition between retail chains, as well as in the telecommunications industry.
- A big reduction in the prices of agricultural commodities.

Progress on inflation has been facilitated by an environment of solid economic fundamentals. Monetary policy implementation, along with prudent fiscal policy, a flexible exchange rate regime, and adequate regulation and oversight of the financial system have all played a key role in achieving a large reduction in the level, volatility and persistence of inflation in recent years, as well as convergence towards the 3 percent inflation target. This has set Mexico apart from other developed and emerging economies with relatively weaker macroeconomic fundamentals.

3. Financial intermediaries

3.1. Financial system structure

The Mexican financial system is comprised mostly of modern, efficient institutions that are very sophisticated. It is also characterized by the strong presence of foreign affiliates and access to relatively deep and liquid markets. The largest banks are part of financial groups. The public sector participates in the system through development banks and trusts offering products and services that complement those of private intermediaries, including the issuance of loan guarantees in order to minimize distortions in the efficient allocation of funds in the economy. At the end of the second half of 2011, financial intermediaries' assets amounted to 11 trillion pesos, a real increase of 8.6 percent on the same year-earlier period.

Table 4
Number of intermediaries in the Mexican financial system and market share

	Number of entities	Share in total assets (%)	Real annual growth rate of assets (%)
Commercial banks[1/]	42	51.3	10.4
Siefores (afores)[2/]	81 (14)[3/]	13.6	10.0
Mutual funds (managers)[4/]	572 (60)[5/]	11.5	9.8
Development banks[6/]	11	9.2	7.0
Insurance companies	101	6.1	6.1
Surety companies	15	0.2	2.8
Brokerage Firms	34	3.9	6.0
Regulated Sofoles and sofomes[7/]	41	1.1	-2.3
Unregulated Sofoles and sofomes[8/]	3,400	1.9	-15.4
Auxiliary Credit Organizations[9/]	35	0.1	-7.1
Popular savings and credit entities[10/]	235	1.0	7.3
Memo: Housing Institutes [11/] and others [12/]	*3*	*n.a.*	*n.a.*

The number of financial entities refers to those authorized to do business as of October 2011; some are not operating. Their share of total assets corresponds to June 2011 and the real growth rate refers to June 2011 with respect to the same year-earlier month.
Source: Banco de México, SHCP, CNBV, CNSF, Consar, Condusef and AMFE.
1/ Multiple banks' total assets include regulated sofomes that are consolidated with the respective bank when they are subsidiaries.
2/ Overall, pension funds (Afores) manage a total of 86 Siefores.
3/ The number in brackets refers to the number of Afores and the number outside the brackets refers to the number of Siefores.
4/ Mutual fund management companies manage 572 funds in all. Of the 60 investment fund operators, 4 are multiple banks, 10 are brokerage firms and 46 are mutual fund management companies. Asset information corresponds to the balance sheets of investment funds, not management companies.
5/ The number in brackets refers to the number of mutual fund management companies and the number outside the brackets refers to the number of mutual funds.
6/ Includes development banks and trusts (FIRA, FOVI, Fonhapo, Fifomi and Financiera Rural).
7/ The share of total assets considers sofomes that are regulated because they belong to a financial group but do not consolidate their assets with a multiple banking institution (15 out of 22). Those that do consolidate their assets with banks are included in the multiple banking heading (6 out of 22); there is also one that belongs to development banks.
8/ Figures referring to the number of unregulated sofomes come from a Condusef record of them. However, information about assets only contains information from those entities associated with the AMFE, a sector trade association which to date has 54 unregulated members.
9/ Includes general deposit warehouses, financial leasing companies, factoring companies, and money exchanges.
10/ Includes savings and loan associations (SLA), popular finance corporations (sofipos), savings and loan cooperatives (socaps) and credit unions.
11/ Infonavit and Fovissste.
12/ Infonacot.

Commercial banks are still the largest intermediary (table 4), with 42 banks managing 51 percent of financial assets, a large percentage of which corresponds to banks belonging to financial groups (table 5). In recent years, pension funds and mutual funds have gained in importance, and as a result, more funds have been available for long-term financing and venture capital. The growing participation of such intermediaries and other foreign institutional investors has helped keep Mexico's financial markets stable and liquid.

Table 5
Financial system's corporate structure

	Commercial banks		Afores		Insurance companies		Brokerage firms	
	Number	% assets[1/]	Number	% assets[1/]	Number	% assets[1/]	Number	% assets[1/]
I. Affiliates of foreign financial entities	**17**	**73.7**	**7**	**53.3**	**59**	**63.7**	**15**	**35.3**
a. belonging to a financial group (FG)	10	68.8	4	33.3	10	23.4	10	31.7
b. not belonging to a FG	7	4.9	3	20.0	49	40.2	5	3.6
II. Controlled by local individuals	**16**	**23.3**	**2**	**13.4**	**23**	**22.9**	**19**	**64.7**
a. belonging to a financial group (FG)	9	21.0	0	0.0	9	17.2	8	37.7
b. not belonging to a FG	7	2.3	2	13.4	14	5.7	11	26.9
III. Controlled by non financial entities	**9**	**3.0**	**5**	**33.3**	**19**	**13.4**	**0**	**0.0**
a. belonging to a financial group (FG)	3	1.3	0	0.0	0	0.0	0	0.0
b. not belonging to a FG	6	1.7	5	33.3	19	13.4	0	0.0
Total	**42**	**100**	**14**	**100**	**101**	**100**	**34**	**100**

The number of financial entities refers to those authorized to do business as of October 2011; some are not operating. Their share of total assets corresponds to June, 2011.
Source: Banco de México, CNBV, Consar, CNSF and Condusef.
1/Market share measured as a percentage of each intermediary's total assets.

Commercial banks' funding, especially in the case of the larger banks, is retail-deposit-based, a situation that differs from some E.U. countries and other regions of the world where the largest banks have used wholesale funding to finance their rollout, sometimes from abroad. Consequently, in Mexico, corporate and household credit has expanded on solid and stable bases. At the same time, banks have been relatively less impacted by liquidity crunches in financial markets.

The Mexican financial system has remained solid in the face of the international crisis, bouts of volatility associated with foreign fiscal problems, and a high level of indebtedness in the U.S. and Europe. Besides the characteristics mentioned, this solidity can be attributed to a robust regulatory framework and oversight processes, capital levels, and provisions as well as the fact that while they are affected by the international crisis, the banks continue to make profits (table 6). Mexico learned important lessons from the financial crisis of the 1990s that brought about reforms, raising the quality and amount of banks' capital and serving to strengthen financial markets.

Table 6
Profitability of financial intermediaries and non-financial firms that trade on the Mexican Stock Exchange (BMV)[1/]

Sector	Return on Equity (Net profit as a percentage of equity)		
	dec-09	dec-10	jun-11
Commercial banks	12.8	13.4	12.5
Afores[2/]	23.0	26.9	24.2
Mutual fund managers[3/]	28.1	29.9	26.2
Brokerage firms	18.1	21.0	12.9
Insurance companies	19.1	15.4	14.6
Other financial intermediaries[4/]	3.9	7.9	8.1
Regulated Sofoles and sofomes	4.3	2.3	1.0
Unregulated Sofomes	-18.2	-1.6	-1.0
BMV companies	14.1	13.9	13.8

Source: CNBV, Consar, BMV, CNSF and AMFE.
1/ Return on equity was calculated using first-half 2011 earnings and dividing them by average equity from that period. The return calculated on the basis of the previous 12 months' accumulated result divided by average equity for the same period was 12.8 in June for commercial banks.
2/ Asset and capital numbers correspond to the sum of the respective numbers on Afores' balance sheets, not funds managed by Siefores. Funds managed by Siefores also include, besides workers' funds, part of the Afores' capital, which under current capitalization rules must invest them in Siefores.
3/ The numbers correspond to mutual fund management companies, not the funds in which they invest.
4/ Other financial intermediaries include: auxiliary credit organizations (surety companies, deposit warehouses, leasing companies, money exchanges, factoring companies) and popular savings and loan companies (sofipos, socaps, saps and credit unions).

3.2. Commercial banks

Commercial banks' assets, adjusted for repos, amounted to 5.8 trillion pesos as of June 2011, which is real annual growth of 10.4 percent. 2010 and 2011 saw the financial system continue to be consolidated and reorganized.[10]

The main regulatory changes that have taken place over the last year include the placement of limits by the National Banking and Securities Commission (CNBV) on credit risk transactions with relevant related persons (RRP) in order to avoid risks being concentrated in these persons and to encourage adequate management of these risks through transaction diversification. When the aggregate amount of such transactions exceeds 25 percent of the bank's Tier 1 capital, it must be deducted from it.[11]

Profitability

During the first half of 2011, commercial banks' profits were 8.4 percent lower in real terms than for the same year-earlier period. As of June 2011, the

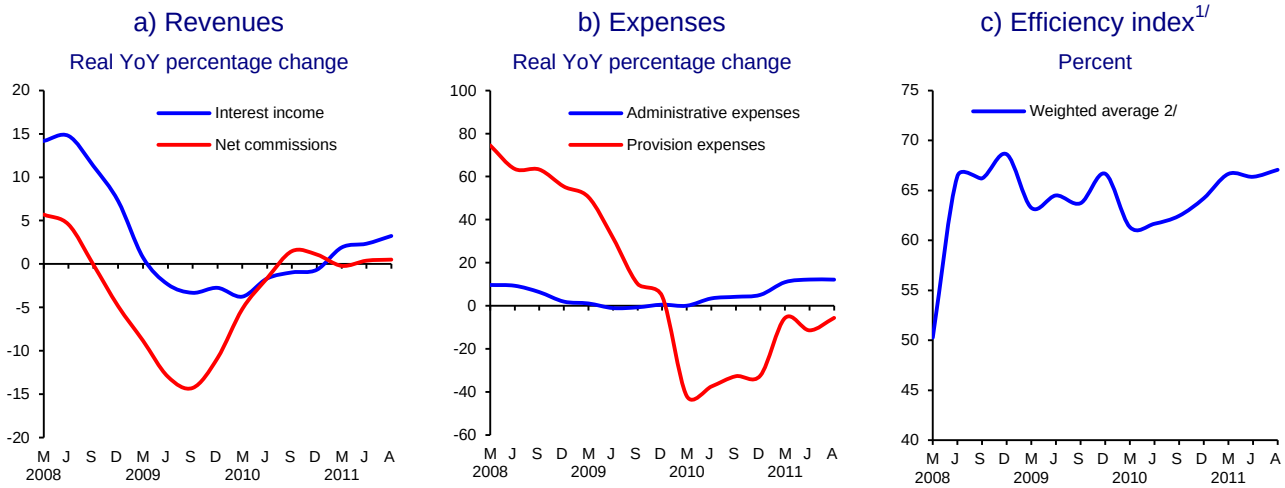
[10] In the first quarter of 2011, one of the country's largest financial groups merged with a medium-sized financial group. Also, a sofom bought a bank, a license was granted for a new bank, and a bank bought a sofome mortgage portfolio.

[11] The definition of relevant related persons (RRP) is established in CNBV general provisions applicable to banks. The modifications also prescribe that the amount that should be considered in RRP credit risk transactions involving derivatives must correspond to positions with net positive market value in accordance with current provisions. The rule also provides for cases in which the amount of RRP credit risk transactions should be excluded, for example, transactions in which the institution itself creates more loan-loss reserves than required due to the portfolio's rating.

banking system's profitability was 12.5 percent.[12] As of the same date, the profitability of the seven largest banks was 12.7 percent, that of medium-sized and small banks 13.1 percent, foreign banks' small affiliates 9.7 percent and banks associated with retail chains 6.8 percent.

The increase in interest income (2.3 percent in real terms) and lower spending on provisions (-11.4 percent in real terms) was not enough to offset lower trading income and the revaluation of security positions, foreign currency and derivative transactions (-38.2 percent in real terms) and higher administrative spending (12.2 percent in real terms) (graph 15). Meanwhile, net fee income grew 0.4 percent in real terms. These factors, along with growth in bank assets, explain the decrease in net profit as a percentage of assets in the first half of 2011 versus 2010.

Graph 15
Commercial banks' sources of income and expenses



Figures as of August 2011.
Source: CNBV.

Figures as of August 2011.
Source: CNBV.

Figures as of August 2011.
Source: CNBV.

1/ The efficiency index is calculated as a percentage of administrative and marketing expenses with respect to total revenues. The latter include interest income, trading losses or gains, net fees and other income (outgoings) related to the business.
2/ Weighted average based on the percentage share of each bank in the total assets of commercial banks.

Solvency

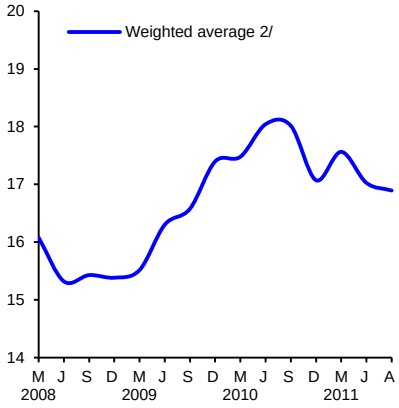
Mexican banks have capitalization levels that exceed the required minimum. As of August 2011, commercial banks had a capital adequacy ratio of 16.2 percent, and as of the same date Tier 1 capital accounted for 86.8 percent of net capital (graph 16). The capacity of Mexican banks' capital to absorb losses is very similar to what Basel III contemplates and surpasses a recent proposal that is part of an E.U. directive to implement new capitalization rules in that region. For that reason, the implementation of Basel III in Mexico should not pose a problem for most banks. The biggest impact that Basel III will have is on the calculation of subordinated debt, as current issuances do not comply with Basel III. However, the new rules contemplate a 10-year transition period.

[12] Return on equity was calculated using first-half 2011 earnings and dividing them by average equity for the same period. The return calculated using the previous 12 months' accumulated result and divided by average equity for the same period was 12.8.

Banks' solvency is based not only on high capital adequacy ratios (table 7), but also on the loan provision coverage ratio calculated as non-performing loans provision coverage. As of June 2011, the ratio reached 181.5 percent, slightly below the previous year's. Furthermore the coverage ratio is above 100 percent for virtually all banks.

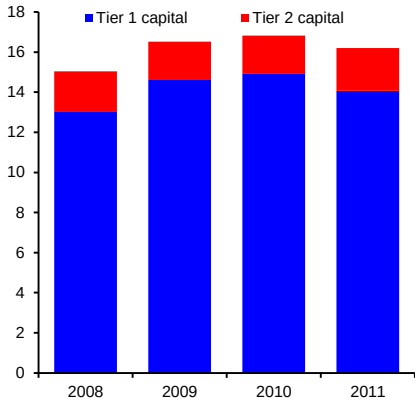
Graph 16
Solvency measures

a) Capital Adequacy Ratio[1/]



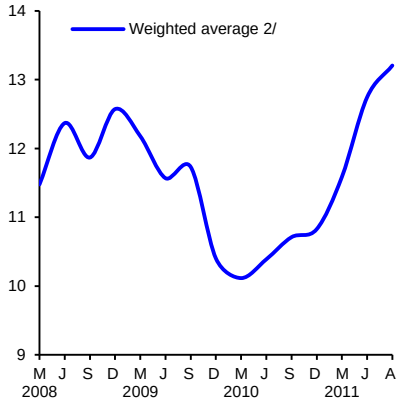
Figures as of August 2011.
Source: CNBV and Banco de México.

b) Tier 1 and Tier 2 capital[3/]



Figures as of August 2011.
Source: CNBV and Banco de México.

c) Asset to Equity Ratio



Figures as of August 2011.
Source: CNBV and Banco de México.

1/ The capital adequacy ratio is calculated by dividing total capital by risk-weighted assets. Under capitalization rules, the ratio of that division should be a minimum of eight percent. Total capital is regulatory capital and comprises Tier 1 and Tier 2 capital.
2/ The weighted average was calculated based on the percentage share of individual banks in commercial banks' total assets.
3/ Tier 1 and Tier 2 capital at the end of each respective year as a percentage of risk-weighted assets for the same period with the exception of 2011 numbers, which correspond to August.

Mexico has been among the first countries to modify rules for creating loan reserves based on expected losses rather than realized losses (box 2). In March 2011, rules that apply to non-revolving consumer loans (such as loans for the acquisition of durable consumer goods, payroll and personal loans) and mortgage loans (graph 17) came into effect.[13] In October 2011, rules were established to determine loan-loss provisions for federal, state, and municipal loans. The CNBV is preparing rules for retail loan-loss provisions so that they are also calculated on the basis of expected losses.

The application of the new reserve creation rules implied creating more provisions for consumer loans. However, in the case of mortgage loans, the new rules permitted a reduction in provisions as they give more recognition to loss-mitigating factors, such as the value of the property guaranteeing the loan, unemployment insurance, and funds the worker has paid into Infonavit or Fovissste, if a joint loan with one of these institutions is involved.[14] This, along

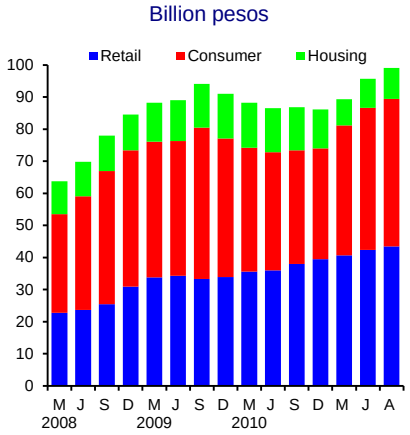
[13] The first step in this direction was taken in September 2009 with the introduction of the revolving consumer loan portfolio expected-losses methodology.

[14] Similarly, the provisions do not depend only on the number of payments in arrears but on other variables such as punctual payments in previous months or the loan amount versus the value of the property.

with additional reductions in some banks' reserves, caused a decrease in the mortgage loan coverage ratio, which in June 2011 was 53.5 percent.[15]

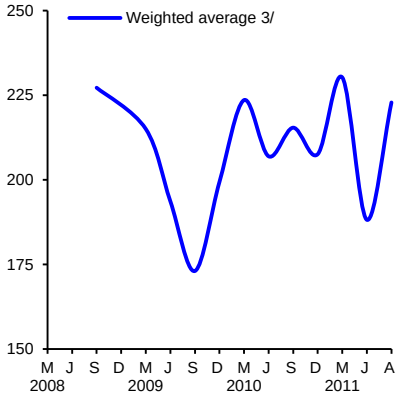
Graph 17
Commercial bank loan-loss estimates and coverage ratio

a) Loan-loss estimates[1/]



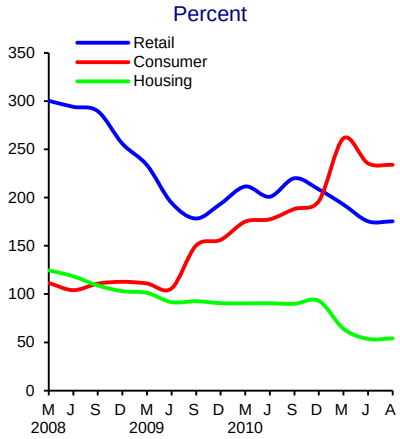
Figures as of August 2011.
Source: CNBV.

b) Coverage ratio[2/]



Figures as of August 2011.
Source: CNBV.

c) Coverage ratio by loan portfolio type[2/]



Figures as of August 2011.
Source: CNBV.

1/ Refers to general loan-loss provisions and does not include additional ones.
2/ The coverage ratio is the balance of loan-loss provisions as a percentage of past-due loans.
3/ Weighted average calculations based on each bank's share of commercial banks' total assets.

[15] Mortgage portfolio coverage ratios may be below 100 percent, as a past-due loan with adequate collateral does not have to be fully provisioned.

Table 7
Commercial banks' capital adequacy ratios and leverage

Banco	Assets Billion de pesos	Capital Adequacy Ratio[1/] Percentage	Tier 1 Capital [2/] Percentage	Core capital ratio [3/] Percentage	Levergage Assets / Capital Times	Levergage RWA / Capital Times
System	**5,918.9**	**16.2**	**14.1**	**13.2**	**10.2**	**6.3**
Large	**4,662.0**	**16.0**	**13.8**	**12.8**	**9.5**	**6.3**
BBVA Bancomer	1,201.9	15.5	11.3	9.1	10.6	9.1
Banamex	1,066.4	16.9	16.7	16.7	8.3	4.6
Santander	829.4	14.2	14.0	13.4	9.4	5.7
Banorte	607.0	15.7	11.9	11.1	12.9	7.5
HSBC	506.1	14.8	11.4	11.1	13.3	8.0
Inbursa	227.2	23.2	23.1	22.8	4.7	3.7
Scotiabank Inverlat	224.0	16.2	16.0	17.2	8.0	5.6
Medium sized	**603.4**	**17.6**	**15.1**	**14.4**	**12.6**	**6.2**
Interacciones	89.3	16.1	11.1	10.7	18.7	8.9
Del Bajío	88.7	16.7	16.1	16.3	8.0	5.4
IXE	94.8	15.2	9.4	8.1	20.7	9.7
Banregio	53.3	16.4	15.6	13.7	12.2	6.8
Afirme	82.0	14.4	11.5	11.5	30.9	8.0
Mifel	35.5	12.4	6.2	4.9	25.9	11.7
Invex	32.6	15.8	15.6	13.4	13.0	6.3
Monex	27.5	20.2	20.0	21.8	11.5	3.6
Multiva	18.5	12.4	12.1	11.3	9.9	7.3
Bansí	17.3	16.9	16.6	16.5	15.2	6.0
Ve por Más	14.6	18.3	13.5	11.2	12.7	7.2
Compartamos	13.7	44.0	43.9	43.9	2.1	2.3
CI Banco	18.9	19.6	19.1	18.5	22.9	5.1
Actinver	5.3	39.6	39.4	39.1	5.8	2.5
Interbanco	4.4	41.9	41.8	41.8	9.0	2.4
Autofín	3.9	15.5	15.5	15.3	7.1	6.2
Amigo	3.1	23.6	22.7	17.9	4.2	4.1
Small subsidiaries of foreign banks	**554.4**	**19.4**	**19.2**	**18.4**	**17.3**	**4.9**
ING Bank	150.4	14.6	14.6	13.6	17.4	7.3
Bank of America	81.9	20.6	20.6	20.6	18.8	4.7
Deutsche Bank	189.4	19.4	19.4	19.4	76.6	5.2
JP Morgan	40.2	25.2	25.2	25.3	9.2	3.6
Barclays Bank	31.2	17.6	17.6	17.3	10.8	5.7
American Express	16.9	28.1	25.3	21.7	4.5	2.7
Credit Suisse	19.6	17.8	17.8	16.1	9.6	5.0
Tokyo-Mitsubishi UFJ	6.4	35.6	35.4	35.4	8.6	2.8
Royal Bank of Scotland	8.9	35.8	35.5	35.4	13.8	2.8
UBS Bank	5.6	131.3	131.1	131.1	11.1	0.8
Volksw agen	3.1	19.1	18.4	18.5	3.3	5.4
New York Mellon	0.8	195.0	195.0	191.9	1.1	0.4
Associated with commercial chains	**99.2**	**13.4**	**12.5**	**12.0**	**9.8**	**7.1**
Azteca	70.9	13.6	12.3	11.4	13.0	8.4
Ahorro Famsa	12.6	12.1	12.0	11.8	6.6	7.9
Bancoppel	12.1	11.6	11.6	13.2	8.7	6.4
Wal-Mart	3.4	21.6	20.7	17.2	2.7	1.7
Fácil	0.2	61.1	61.1	60.8	1.4	1.3

Figures as of August 2011.
Source: CNBV and Banco de México.
1/ Net capital index = net capital / risk-weighted assets (RWA).
2/ Tier 1 index = Tier 1 / (RWA).
3/ Core capital ratio = core capital calculated based on Basel III / (RWA).

Box 2

Loan-loss provisions

The main risk that banks face when granting loans is non-payment. Despite being equipped with loan-granting evaluation and approval systems, the possibility of non-payment is always present, which is why banks create loan-loss provisions to reduce potential losses in the event of default. The main issue when creating provisions is that the amount of any future losses is unknown and cannot be completely envisaged.

The main objective of loan-loss provisions is to absorb the impact of loan portfolio losses. If the provisions are not sufficient to cover the losses, then any excess can be deducted from profits for the period. If profits are not sufficient to cover the losses, the excess amount would then be deducted from the bank's capital. In sum, provisions impact banks' income, capital and solvency.

In practice, banks monitor and periodically evaluate the status of or compliance with payments on the loans that comprise their portfolios. When monitoring loans, banks can make individual or group evaluations. Individual evaluations are costly and mainly used for large loans. Group evaluations correspond to relatively medium to small-sized loans with similar risk characteristics.

There are currently three types of provisions: specific, general and those created to meet country risk. Specific provisions are created to cover large loan losses while general provisions cover medium-sized and small loan losses. Country risk provisions are used for cross-border loans and can be either specific or general. Importantly, the type of methodology used to calculate the provisions as well as accounting practices, disclosure principles and tax treatment, vary from one jurisdiction to another.

Three types of methodologies are used to create provisions: incurred loans, expected loss, and dynamic provisions. With respect to the first, banks only create provisions when an event or identifiable non-payment casts doubt on the ability to collect the loan. Thus, the bank only makes a provision if there is a documented event that provides objective evidence of deterioration in the borrower's payment capacity. This provisioning method is prescribed by International Accounting Standards (IAS) 39, and many domestic accounting principles such as US GAAP. The biggest drawback to this model is that it excludes the effect or impact of potential future losses and therefore presents an overly optimistic assessment of future loan losses.

In the case of expected loss, the provision for a loan portfolio is obtained in two stages. First, the bank calculates the amount of the individual provision for each loan as the product of the probability of default (PD), loss given default (LGD), and the size of the exposure at default (EAD). Second, in order to obtain the total provision amount, the bank must add the amount of the individual provisions for all loans of which the portfolio is comprised. In order to apply this methodology the bank must previously estimate both the PD and the LGD of each loan.

Note that the estimate of EAD is complex only in the case of products that include contingency credit lines. The Basel Committee promotes an expected loss approach because it considers it to be more consistent for the Basel II credit risk focus.

Compared with the incurred loss model, the expected loss model is more robust and opportune because it forces the bank to make provisions without recording or identifying an event or non-payment indicating deterioration in the borrower's payment capacity. Thus, the creation of provisions to cover losses as soon as a loan is granted is economically justified because credit risk occurs precisely when the loan is granted.

The expected loss method leads to the calculation of provisions equivalent to the long-term annual average of each type of bank loan portfolio. Thus the period's loss is absorbed by provisions as long as it is below the long-term loss. Furthermore, during years in which losses are higher than the long-term average, the excess or unexpected loss is absorbed by profits or the bank's capital.

Finally, the dynamic provision constitutes a reserve which, unlike in the models above, is adjusted to cover a long-term average level of expected losses, not a fixed level. As a result, the provision is substantially bigger during the best years of the economic cycle because losses are expected to be below the average level for those years. Consequently, the dynamic model reduces the inherent pro-cyclicality of the incurred loss model, but does not guarantee that provisions for potential losses will be adequate in all cases. The application of this model is, in practice, more complex, since if historical information does not include data corresponding to at least one or more severe recessions, a non-representative historical average is used for the expected loss, which impacts how provisions are calculated. Furthermore, it is not clear how frequently the calculation of losses should be updated so that the experience of the most recent loss is not overly emphasized.

Provisions in Mexico

Regulations identify three different types of loan portfolios: consumer, mortgage and firm. The creation of provisions for both consumer and mortgage loans is based on an expected loss approach. The CNBV is about to implement the expected loss methodology for the firm loan portfolio. In Mexico PD for each borrower is based on a logistic function, which in turn depends on a series of variables such as the number of periods in arrears, the type of loan, how old the account is, and payments made versus payments due. In turn, LGD ceases to be a constant value and becomes a function that increases as the number of payments in arrears increase. EAD for a non-revolving loan is simply equal to the loan balance, while in the case of a revolving loan, EAD not only contemplates the unpaid balance but also the possibility of the cardholder making additional purchases before defaulting.

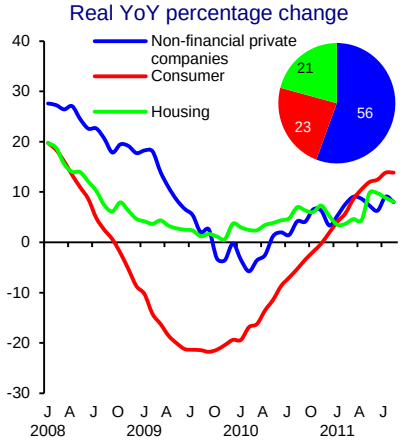
Credit risk

Credit to the non-financial private sector has resumed with respect to June 2010 across sectors (graph 18a). In particular, banks continued to expand consumer loans as of the second quarter of 2010. The increase in consumer financing has been mainly driven by growth in personal and payroll loans. This segment's share increased from 21.8 percent of the consumer loan portfolio in December 2007 to 33.8 percent in June 2011, while the share of credit cards, which have usually accounted for a larger percentage of consumer credit, decreased. Regarding the public sector, since 2008 there has been strong growth in bank loans to states and municipalities.

Credit risk factors (probability of non-payment, default and concentration correlation) with respect to the non-financial private sector continued the downtrend begun at the end of 2009 (graph 18b). Thus, as of June 2011, the value at risk (VaR)[16] of bank loans to the non-financial private sector as a percentage of total capital has remained at similar levels despite growth observed in the loan portfolio (graph 18c).

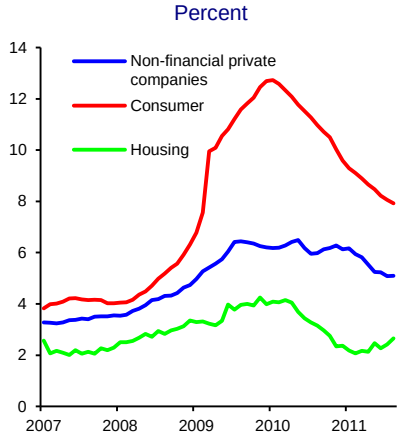
Graph 18
Commercial bank loans to the non-financial private sector

a) Corporate, consumer and mortgage loans



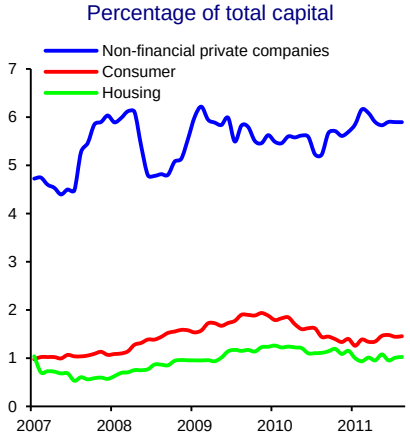
Figures as of August 2011.
Source: CNBV.

b) Probability of default[1/]



Figures as of August 2011.
Source: Banco de México.

c) Non-financial private-sector credit VaR



Figures as of August 2011.
Source: Banco de México.

1/ The probability of default was calculated using the method of moments. In the case of consumer loans a sample of loans from the credit bureau was used, substituting for the regulatory report data that does not provide the required degree of granularity as the source. Estimates for retail and mortgage loan portfolios do not include the effect of the exposure at default (EAD) and therefore assign a greater weight to portfolio segments with more loans but not necessarily the biggest exposure.

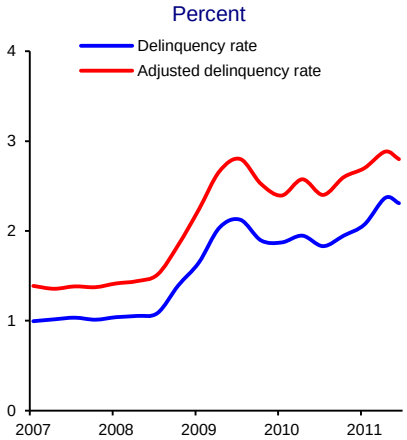
[16] VaR with a 99.9% confidence level with a one-month horizon.

As of June 2011 corporate loans accounted for 56.3 percent of credit to the non-financial private sector, but contributed 70.7 percent of VaR. Meanwhile, the consumer heading accounted for 23.7 percent of the portfolio but contributed 17.8 percent of VaR. Finally, mortgage loans accounted for 20.0 percent of the portfolio and 11.5 percent of VaR. The greater relative weight of loans to non-financial private companies in the system's VaR can be attributed to the portfolio's bigger concentration in this sector.

With respect to non-performing loans, the jump in non-financial corporate delinquency and adjusted delinquency rates as of the fourth quarter of 2010 stands out mainly due to defaults by medium-sized companies (graph 19a). Similarly, mortgage loan delinquency spiked as of June 2011 (graph 19c). On the other hand, consumer loan delinquency continued to decrease (graph 19b), although we note that the adjusted delinquency rate reversed its downtrend in the first few months of 2011 due to an increase in delinquency and probability of default in the personal loans segment. Thus, at the end of August 2011, the adjusted delinquency rate was 2.8 percent in the case of non-financial private company loans, 11.8 percent for consumer loans, and 5.7 percent for mortgage loans.

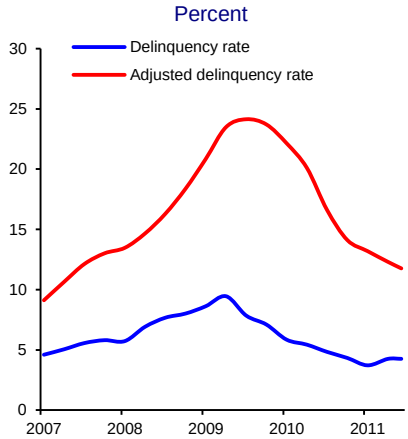
Graph 19
Delinquency rates and adjusted delinquency rates[1/]

a) Credit to non-financial private companies



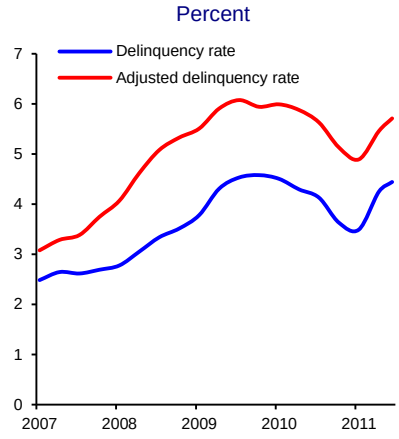
Figures as of August 2011.
Source: Banco de México and CNBV.

b) Consumer credit



Figures as of August 2011.
Source: Banco de México and CNBV.

c) Mortgage loans



Figures as of August 2011.
Source: Banco de México and CNBV.

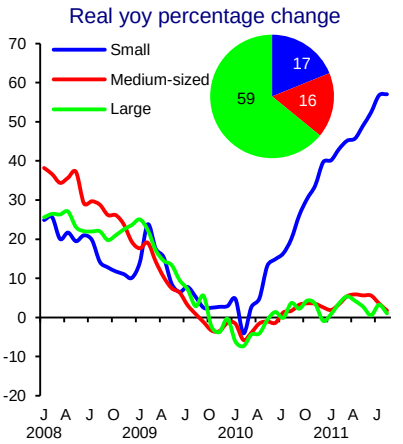
1/ The adjusted delinquency rate is the past-due loan portfolio plus write-offs over the previous twelve months divided by the total loan portfolio plus write-offs over the previous twelve months.

Credit to non-financial private companies

Credit to non-financial private companies revived towards the end of the first half of 2010, especially credit to small and medium-sized companies (Pymes), (graph 20a). As a result, the segment's share increased from 28.1 percent in June 2010 to 32.7 percent in June 2011. Although banks maintain a lending policy geared towards companies with a banking sector credit history, terms under which loans are granted have improved, with longer terms being offered as well as lower interest rates. Thus, as of June 2011, the average loan maturity was 22.8 months compared with 15.4 months one year earlier. Meanwhile, the average interest rate spread versus the 28-day TIIE decreased from 328 to 312 basis points. This situation is the same for large firms and for small and medium-sized companies (graph 20b y c).

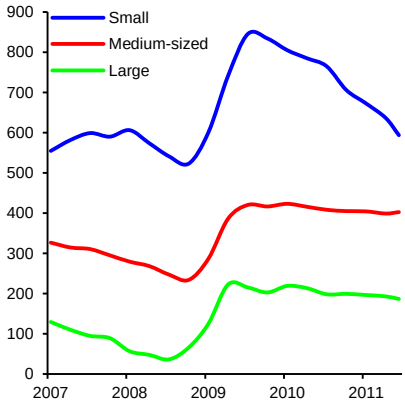
Graph 20
Commercial bank credit to non-financial private companies

a) Performing loans by company size



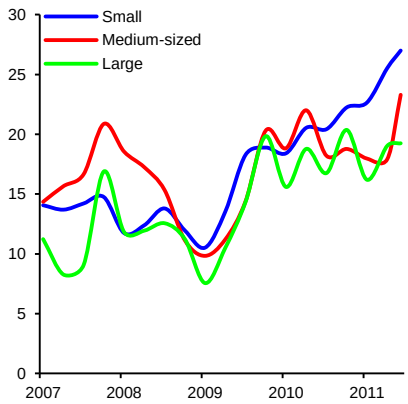
Figures as of August 2011.
Source: Banco de México.

b) Interest rate by company size[1/]



Figures as of August 2011.
Source: Banco de México.

c) Average loan term by company size[2/]



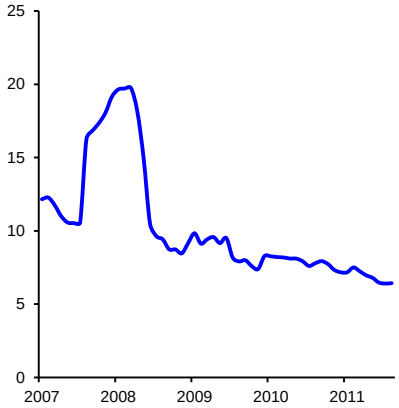
Figures as of August 2011.
Source: Banco de México.

1/ Weighted average rate by portfolio amount.
2/ Weighted average term per loan portfolio amount.

Non-financial private company loan portfolio risk factors have shown a mixed trend. While there have been decreases in the concentration index and probability of default by micro and small companies, since June of last year, the trend in the probability of default by large and medium-sized companies has remained virtually constant (graph 21a y b). This persistence in probabilities of default has been reflected in delinquency rates for both the aggregate loan portfolio and company size (graph 21c).

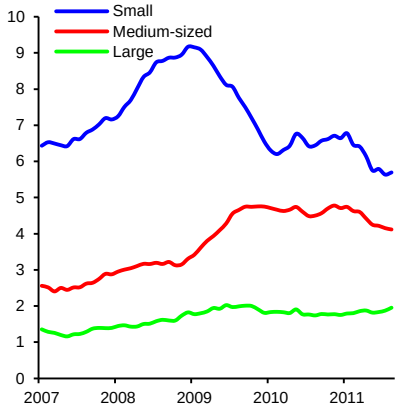
Graph 21
Commercial bank credit to non-financial private companies

a) Loan portfolio concentration (HHI)[1/]



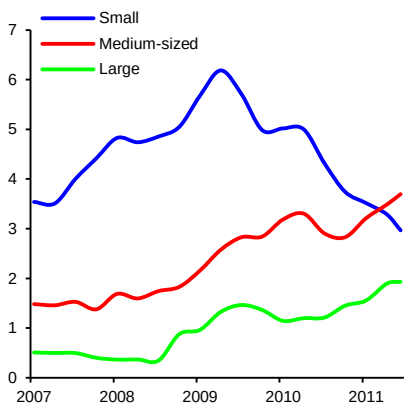
Figures as of August 2011.
Source: Banco de México.

b) Probability of default by company size[2/]



Figures as of August 2011.
Source: Banco de México.

c) Delinquency rate by company size



Figures as of August 2011.
Source: Banco de México.

1/ Loan portfolio concentration is calculated using the Hirschman Herfindahl Index (HHI).
2/ Probabilities of default were calculated using the method of moments. It does not include the effect of the loss given default (LGD), and so a greater weight is given to segments of the portfolio with more loans but not necessarily those with greater exposure.

Consumer credit

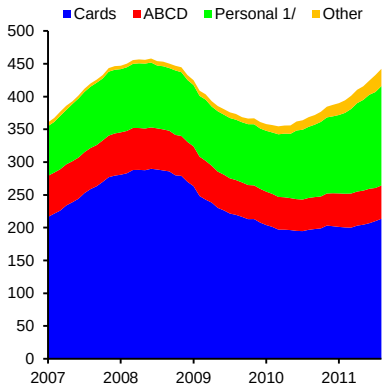
Consumer credit has registered positive growth since the end of 2010. Growth in personal loans has been especially rubust (graph 22b). These loans increased their share of consumer loans from 28.9 percent in June 2010 to 33.8 percent twelve months later (graph 22c). Some of the increase can also be attributed to a decrease in the credit cards segment, which did not resume growth until May 2011. Transition matrices[17] (graph 23) show how the percentage of loans that went from being punctual in payment to arrears was higher in the case of personal loans than for the rest of the consumer loan segment. Similarly, the percentage of personal loans that went from being in arrears to past-due has shown a sustained increase, with a more marked trend over the last 12 months than for credit granted through credit cards or car loans.

[17] Refers to the percentage of loans that go from one credit situation to another. For example, the percentage of performing loans that goes from that situation to payments in arrears or from payments in arrears to past-due payments.

Graph 22
Commercial bank consumer credit

a) Consumer credit by loan type

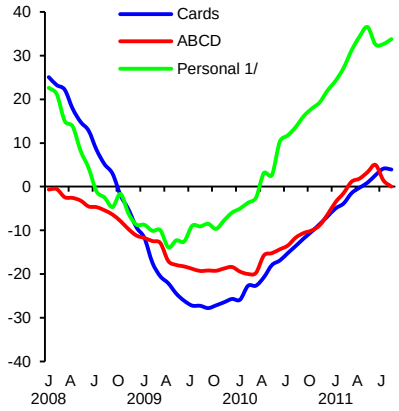
Billions



Figures as of August 2011.
Source: Banco de México.

b) Consumer loans

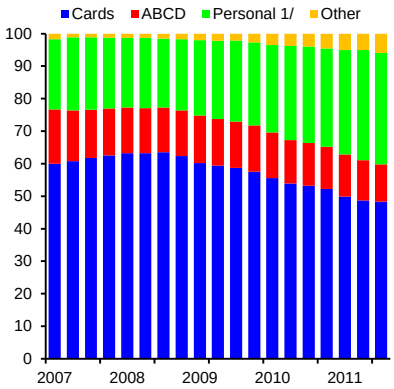
Real YoY percentage change



Figures as of August 2011.
Source: Banco de México.

c) Loan portfolio distribution by credit type

Percentage



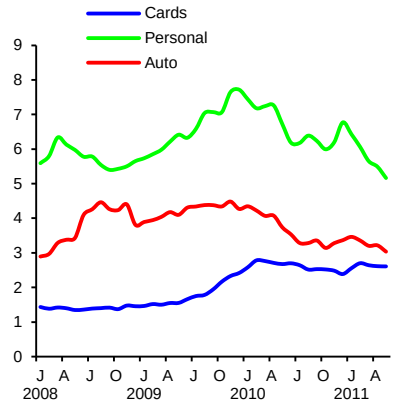
Figures as of August 2011.
Source: Banco de México.

1/ Payroll loans are included in the personal loans category.

Graph 23
Bank consumer loan transition matrices

a) Loans that went from punctual to in arrears

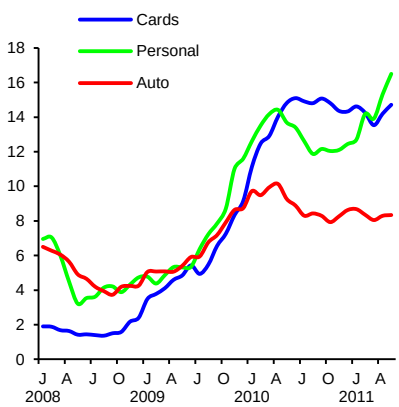
Percentage



Figures as of June 2011.
Source: Banco de México.

b) Loans that went from in arrears to past-due

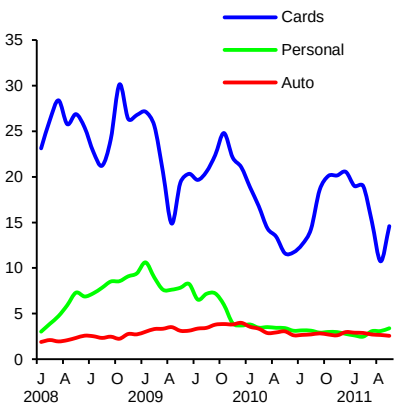
Percentage



Figures as of June 2011.
Source: Banco de México.

c) Loans that went from past-due to punctual

Percentage



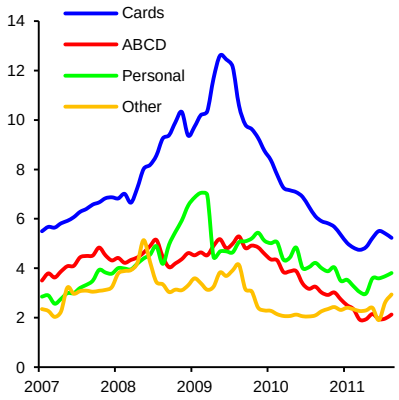
Figures as of June 2011.
Source: Banco de México.

The process for cleaning up the credit card portfolio continued during the second half of 2010 and the first half of 2011. However, the delinquency rate recorded a slight rebound for most banks in the second quarter of 2011. Nevertheless, the adjusted delinquency rate continued to trend lower and so the rise in the delinquency rate was partly due to the lower level of write-offs for the period (graph 24a).

Credit cards began a new growth cycle as of the second half of 2010. Between July 2010 and June 2011, the number of cardholders rose by 8.1 percent with 5.4 million cards being granted by banks (graph 24b). Of the cards granted during that period, 42.2 percent corresponded to individuals with no other bank cards and 19.9 percent to individuals with no credit history. The percentage of cardholders with three or more active cards decreased from 30 percent in 2007 to 20 percent in June 2011 (graph 24c).

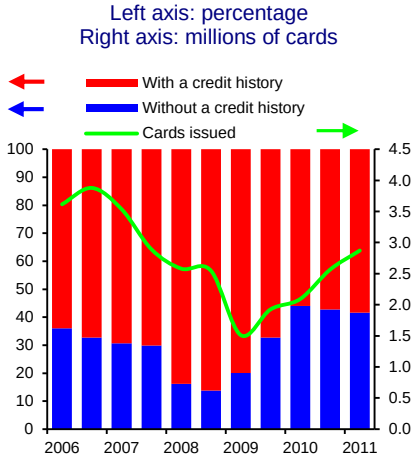
Graph 24
Consumer credit risk indicators

a) Delinquency rate by loan type



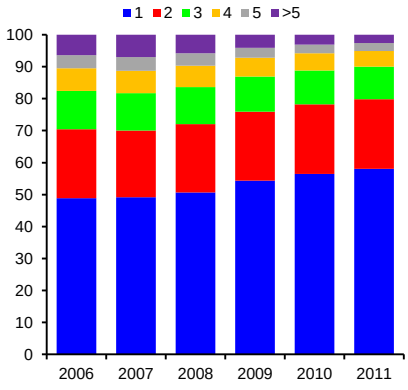
Figures as of August 2011.
Source: Banco de México.

b) Credit cards granted to individuals with and without credit histories



Figures as of June 2011.
Source: Credit Bureau

c) Number of bank cards per client



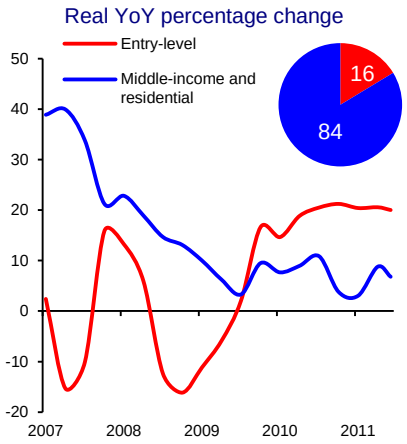
Figures as of June 2011.
Source: Banco de México.

Mortgage loans

Mortgage loans continued to maintain a sustained pace of growth driven by larger banks. Some banks have sought to win market share by offering products with lower interest rates. Bank mortgage loans were relatively more concentrated in the residential housing segment, which as of June 2011 accounted for 83.7 percent of bank mortgage loans. However, Infonavit's participation in joint financing schemes with some banks has led to an increase in its share of the entry-level housing segment. Thus banks' entry-level mortgage loans increased by 21.3 percent between June 2010 and June 2011 (17.4 in real terms), while delinquency levels associated with this portfolio decreased considerably, even though entry-level credit amounts are usually higher than for the residential housing segment (graphs 25a y b). This is because payments related to the new mortgage products are charged directly to the borrower's payroll.

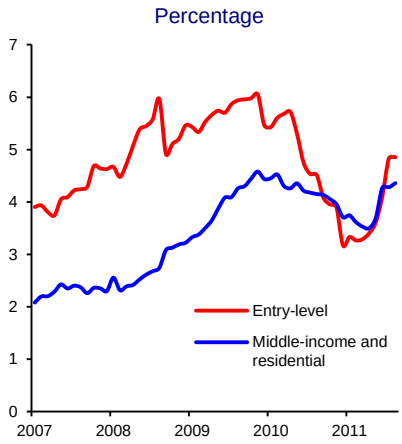
Graph 25
Trend in mortgage loans

a) Loan growth by housing type



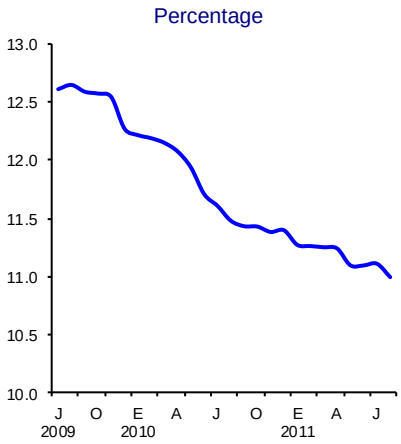
Figures as of August 2011.
Source: Banco de México.

b) Delinquency rate by housing type



Figures as of August 2011.
Source: Banco de México.

c) Average interest rates[1/]



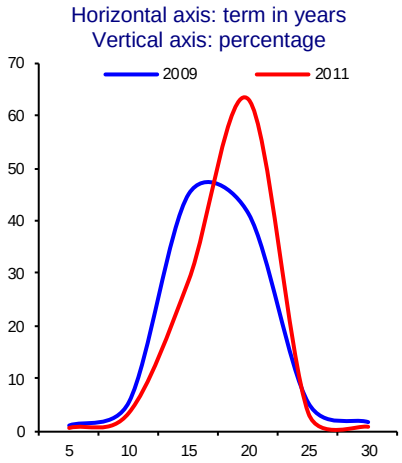
Figures as of August 2011.
Source: Banco de México.

1/ Loan portfolio average interest rate in local currency weighted by the loan amount

Furthermore, lower long-term interest rates have enabled banks to reduce the rates charged and increase the terms of their middle-income and residential mortgage loans (graphs 25c y 26a). Thus, the relative importance of 20-year loans increased versus 15-year loans. The relationship between the loan amount and the value of the home (loan-to-value ratio, LTV) and the relationship between the monthly payment and income (payment-to-income ratio, PTI) have remained stable (graph 26b). Meanwhile, minimum-wage-indexed loans generally present higher LTV; in June 2010 the average LTV for such loans was 81.8 percent while in June 2011 it was 81.0 percent. Housing prices, measured through the Sociedad Hipotecaria Federal (SHF) index, rose at an annual rate of 4.7 percent in nominal terms as of the end of June 2011 (graph 26c).

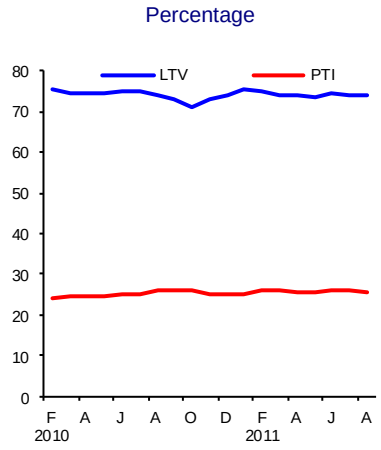
Graph 26
Mortgage loan-granting conditions

a) Distribution of new loans by original term[1/]



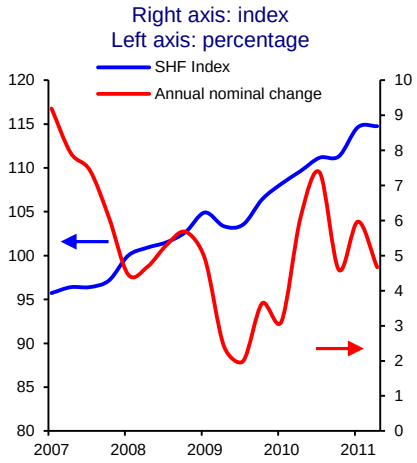
Figures as of August 2011.
Source: Banco de México.

b) Loan amount versus loan to value (LTV) and payment to income (PTI)[2/]



Figures as of August 2011.
Source: Banco de México.

c) SHF Index of house prices in Mexico[3/]



Figures as of June 2011.
Source: SHF.

1/ The distribution includes loans granted between January and August of the respective year and only includes loans granted in pesos for housing or land for construction.
2/ Three-month average. LTV refers to the loan amount as a percentage of the value of the housing; PTI refers to the monthly payment amount as a percentage of the borrower's income.
3/ Refers to the national house price index calculated by the SHF. The definition and methodological description of the index can be consulted at: http://www.shf.gob.mx/estadisticas/IndiceSHFPreciosViv/Paginas/default.aspx

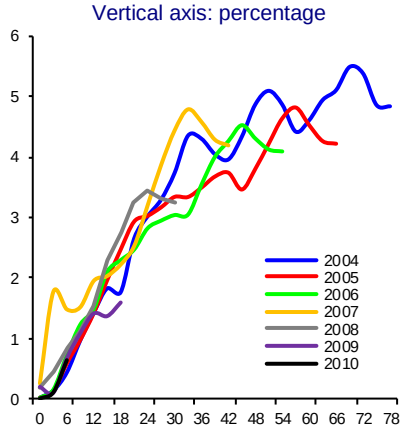
Despite sustained growth in bank mortgage loans, mortgage loan-granting criteria do not appear to have been relaxed. This is reflected in the similar behavior of bank mortgage vintages by loan initiation year since 2004 with the exception of 2007 (graph 27a). Likewise, there has been no major change in the life cycle of banks' mortgage loans over the last 12 months (graph 27b). However, the partial prepayment of loans rose slightly in 2010. Thus in March 2010, 9.98 percent of loans granted as of 2004 recorded a prepayment, while in March 2011 the percentage was 11.94 percent.[18]

[18] Banco de México circular 22/2010 prohibited charging commissions on advance payments.

Graph 27
Mortgage loan-granting conditions

a) Arrears rate by date granted

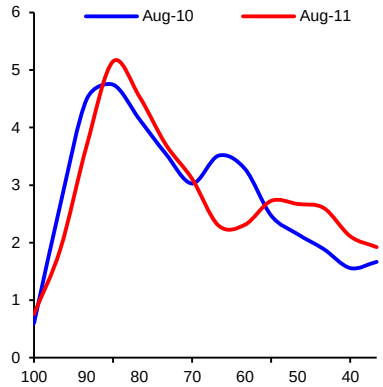
Horizontal axis: months elapsed since loan was granted
Vertical axis: percentage



Figures as at August 2011.
Source: Banco de México.

b) Arrears rate by term elapsed

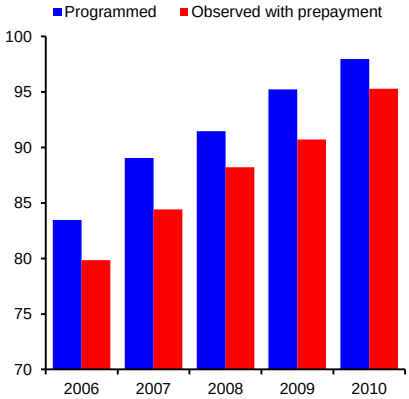
Horizontal axis: amount of original term transpired in percentage terms
Vertical axis: arrears rate in percentage



Figures as at August 2011.
Source: Banco de México.

c) Average remaining balance of loans by year granted

Percentage of original amount



Figures as at August 2011.
Source: Banco de México.

Loans to states and municipalities

Bank loans to states, municipalities and related entities experienced strong growth in 2008, when they increased 27.4 percent. This trend continued until 2010, when credit to this sector rose 40.0 percent (graph 28a) Despite this robust growth rate, loans to states did not surpass 2 percent of domestic GDP and does not therefore represent a systemic risk (graph 28b). However, some banks have concentrated their loan portfolios among such borrowers, resulting in strong exposure to subnational debt risk. High levels of indebtedness and doubts about the payment capacity of some states have been reflected in downgrades from the main rating agencies (graph 28c). In response to this, during the first half of 2011, bank loans to this sector contracted by 3.4 percent versus the year-earlier period.

In October 2011, modifications were made to rules for determining loan-loss provisions for such loans. The new rules are based on the expected loss approach, which means the amount to be provisioned will no longer depend on the state or municipality's rating but on other variables related to payment history, income and expenditure, among other things.[19] Prudential regulations applicable to commercial bank loans previously depended partly on the credit ratings of state or municipal governments. In particular, loan-loss provisions and capital requirements were determined by considering the rating of the government in question and the status of the loan in the Register of state and municipality debt, as well of the collateral and payment sources, so that loans not included in that register were treated differently in terms of provisions and capital.[20] [21]

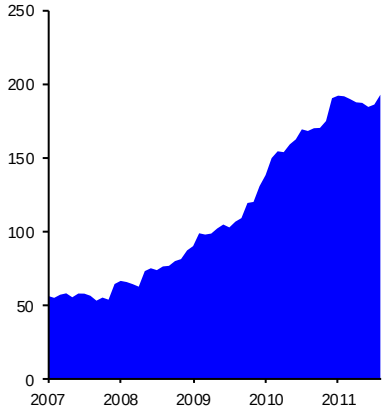
[19] Banks must create reserves in accordance with the new rules as of December 2011, although they could begin to do so as of September of the same year. Capitalization rules were not modified and so they still depend on the rating.

[20] In order to calculate loan-loss reserves, the rating of the state or municipality is associated with a "level of risk" which increases as the rating decreases. The collateral is subsequently deducted from the provision

Graph 28
Trends in commercial bank loans to state and municipal governments [1/]

a) State and municipal government performing loans

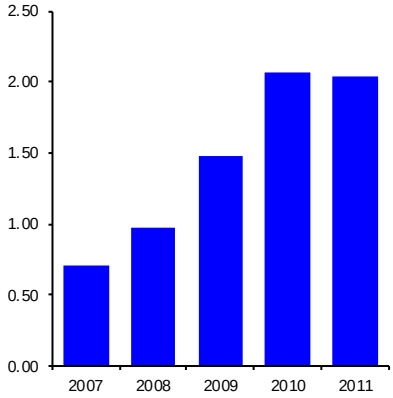
Billion pesos



Figures as of August 2011.
Source: CNBV

b) State and municipal government performing loans

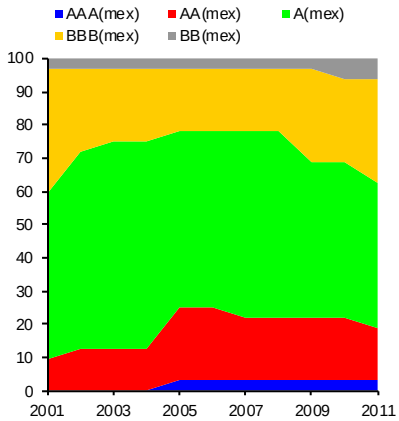
Percentage of GDP



Figures as of June 2011.
Source: CNBV.

c) Trend in states' credit ratings

Percentage of states[2]/



Figures as of August 2011.
Source: Fitch Ratings, Moody's, S&P.

1/ These loans include loans granted to decentralized public entities.
2/ The information includes changes to ratings made between July and August 2011. It was created using the domestic-scale long-term credit rating of state issuers. As of September 2011, Fitch Ratings rated 27 states, S&P 19, Moody´s 25 and HR Ratings 10. The trend in Fitch's ratings was used and when this was not available, the trend in the rating of the agency with information, as follows: S&P, Moody's and HR Ratings.

Market risk

From June 2010 to June 2011, VaR as a percentage of the net capital of banks' total loans increased by 27.5% to 8.1 percent of net capital. This was due to an increase in both the volatility of financial variables and equity portfolio risk. Considering portfolios by risk factor, interest rate VaR decreased 28.9 percent, exchange rate VaR 38.7 percent, and equity position VaR rose 2.7 times in absolute terms (graph 29a y b).

Lower risk from interest rates was due to a decrease in the repo position on government bonds and the use of interest rate swap hedges. The decrease in exchange rate risk was due to a reduction in the short positions of swaps and foreign-currency-denominated holdings. Furthermore, the increase in equity position risk can be attributed to a bigger increase in the derivatives position in the Mexican Stock Market benchmark (IPC) and increase in commercial bank equity holdings.

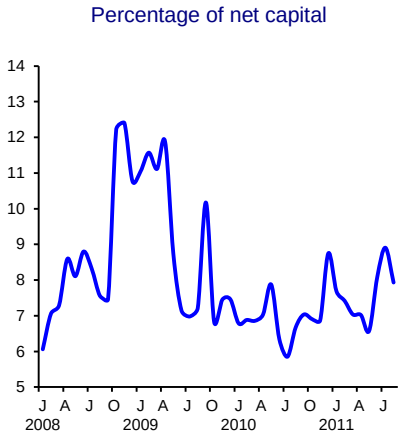
The variation in the value of the interest rate portfolio in response to a rate increase of 100 basis points decreased 37.6 percent between June 2010 and June 2011 to 1.2 percent of net capital (graph 29c). This reduced sensitivity can basically be explained by interest rate hedges in recent months.

calculation based on that level of risk. Similarly, to calculate the capital requirement, a risk weighting factor is associated with the rating.

[21] Loans that are not in the Register of State and Municipality Bonds and Loans will receive a higher risk level than the one they would otherwise receive. Loans to this sector with an original maturity of less than 180 days will not be subject to this rule.

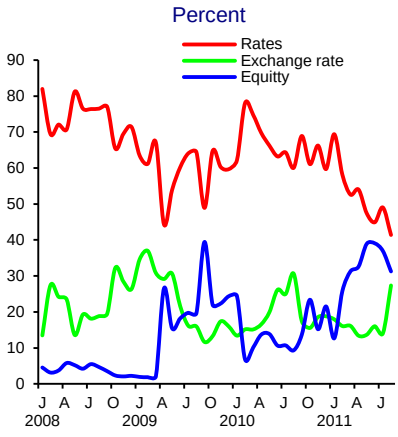
Graph 29
Market risk

a) VaR at a 99.9% confidence level for commercial bank total loans



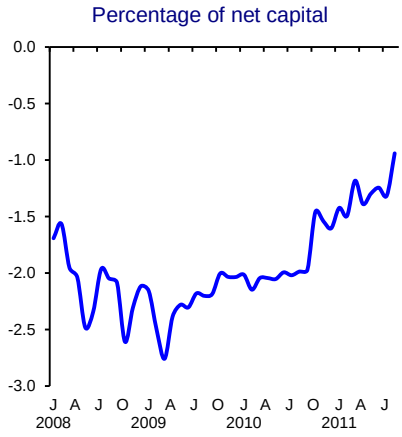
Figures as of August 2011.
Source: Banco de México.

b) Percentage of VaR by risk factor of commercial bank total loans



Figures as of August 2011.
Source: Banco de México.

c) Changes in the valuation of commercial bank total loans in response to a 100 basis-point increase in interest rates



Figures as of August 2011.
Source: Banco de México.

Combined market and credit risk [22]

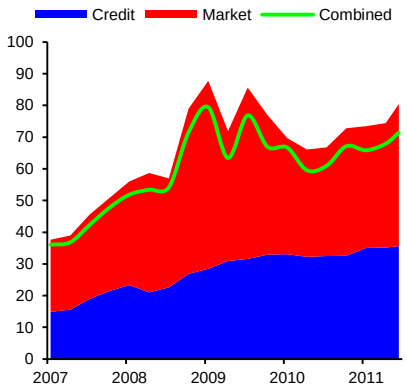
Combined market and credit VaR simultaneously estimates losses from these two types of risk. This indicator rose by 10.4 percent in the second half of 2010 and the first half of 2011, due mainly to higher market risk derived from greater volatility in risk factors. While credit risk also increased during the period, it did so at a slower pace as a result of a decrease in loan default probabilities and more diversified portfolios (graph 30).

[22] Box 28 of the 2007 Financial System Report explains the procedure used to obtain combined credit and market losses.

Graph 30
Combined market and credit risk[1/]

a) Market and credit VaR [2/]

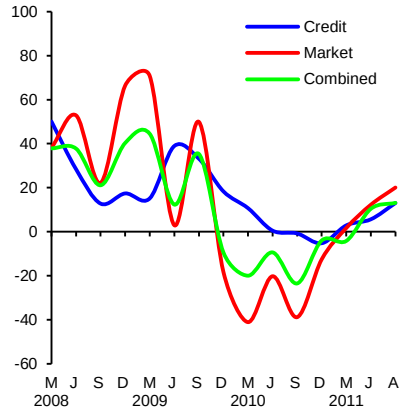
Billion pesos



Figures as of August 2011.
Source: Banco de México.

b) Market and credit VaR

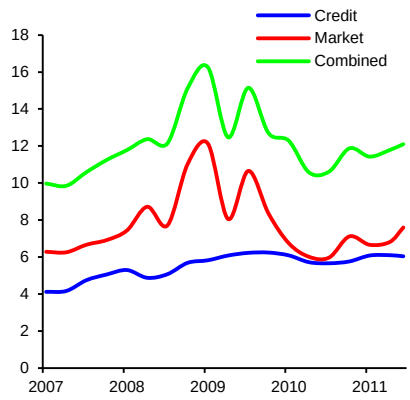
Real annual percentage change



Figures as of August 2011.
Source: Banco de México.

c) Market and credit VaR

Percentage of net capital



Figures as of August 2011.
Source: Banco de México.

1/ The calculation of credit VaR is based on the Capital and Credit Risks Model for Emerging Markets (CCRMEM). The main elements of the CCRMEM model are the default probability of each loan, the variance and covariance structure of potential defaults, and the structure and level of portfolio loan concentration. An explanation of the CCRMEM model can be found in: Banco de México (2007), *Financial System Report 2006* and Márquez Diez-Canedo, J. (2006), *Una nueva visión del riesgo de crédito*, Limusa.
2/ The combined VaR is below the sum of market and credit VaR due to the structure of the correlations.

Liquidity risk

The banking system's liquidity position, as measured by the Basel Committee Liquidity Coverage Ratio (LCR),[23] is ample on average, and there have been no major changes over the last twelve months (graphs 31a y b). In December 2010, the Basel Committee published some important changes to the definition of this ratio with respect to the original December 2009 proposal. Those included a reduction in outflows of deposits, the extension of the liquid assets category (an additional asset category is included subject to a discount factor), and the inclusion of part of the loan portfolio flows as cash inflows, partially reducing the stringency of the new requirement.[24] The Basel Committee established an observation and calibration period for LCR and the Net Stable Funding Ratio (NSFR) which will begin in 2012. The deadline for the LCR coming into effect is January 1, 2015 and for the NSFR, January 1, 2018.

The ample liquidity position of the Mexican banking system, especially for the larger banks, can be attributed to the fact that retail deposits, which are very stable, are the main source of funding.[25] We note the favorable trend in the position of some banks with tighter liquidity situations which have begun to modify the composition of their liabilities before Basel III comes into force. Consequently, there has been a considerable improvement in the LCR of some banks

[23] This indicator is defined as the ratio between very liquid assets and cash outflows net of cash inflows in a stress scenario.

[24] With respect to the Net Stable Funding Ratio (NSFR), there have been no major advances and the proposal made in December 2010 should be complemented towards the end of 2011.

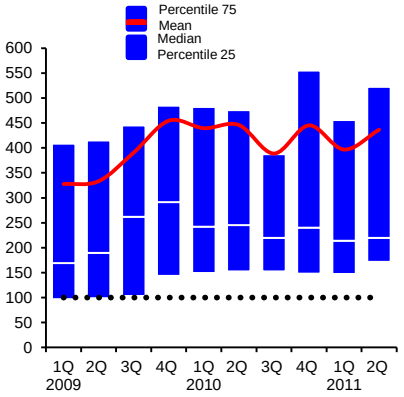
[25] Liquid assets include the unrestricted mandatory long-term deposits (DRM) for guaranteeing a transaction with Banco de México, since banks can use them to obtain liquidity.

(graph 31c). Nevertheless, some banks still need to improve their liquidity positions before Basel III rules in this area become effective.

Graph 31
Liquidity coverage ratio (LCR)[1/]

a) LCR of large banks

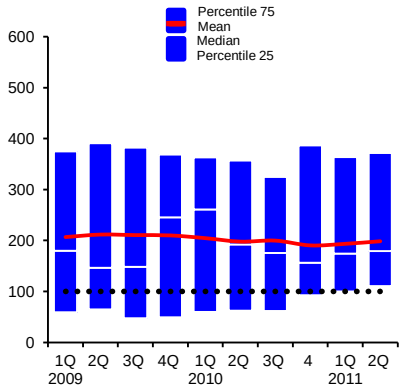
Quarterly percentage average



Figures as of June 2011.
Source: Banco de México.

b) LCR of medium-sized banks and banks associated with retail chains

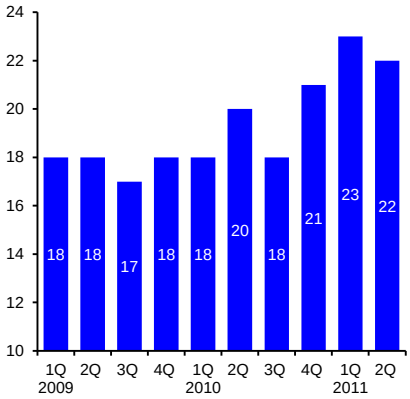
Quarterly percentage average



Figures as of June 2011.
Source: Banco de México.

c) Banks with an LCR of above 100%

Number of banks



Figures as of June 2011.
Source: Banco de México.

1/ The LCR of 28 banks in all was calculated, excluding the small affiliates of foreign banks.

Furthermore, Mexican banks' liquidity risk management practices vary, a situation similar to the one observed in studies undertaken in other countries. This is partly due to each bank's level of complexity. However, it is of paramount importance that banks incorporate best practices when managing risk, mainly with respect to:

- Involving the board of directors and senior management in the design of the management framework and in making key decisions related to liquidity risk.
- The use of robust stress tests.
- The preparation of a contingency funding plan.

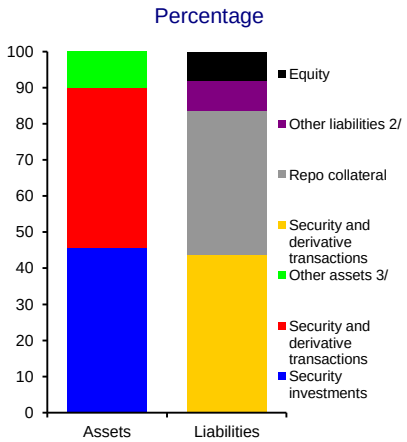
3.3. Brokerage firms

In June 2011, assets managed by brokerage firms amounted to 446 billion pesos, 6 percent more in real terms than for the year-earlier period.

The structure of brokerage firms' assets (graph 32a) is reflected in their income compositions, which mainly comprise securities trading and commissions, the trend for which is shown in graphs 32b and c. As of June 2011, these income categories accounted for 52 and 34 percent of total income, respectively.

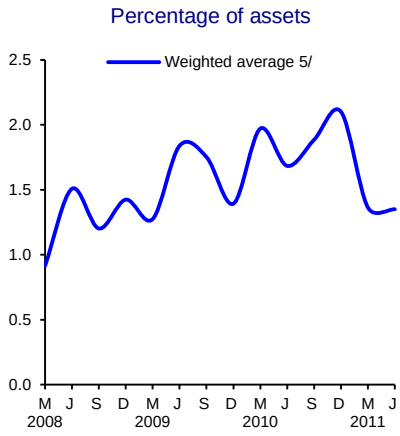
Graph 32
Structure of the assets, liabilities, and capital and income of brokerage firms

a) Structure of assets,[1/] liabilities and capital



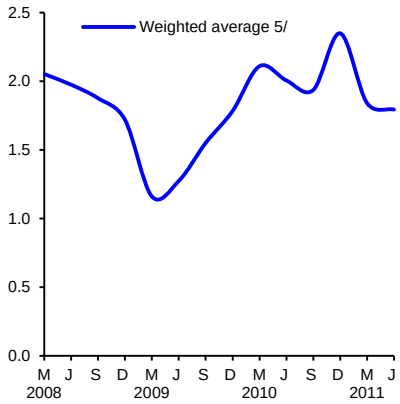
Figures as of June 2011.
Source: CNBV.

b) Trading income[4/]



Figures as of June 2011.
Source: CNBV.

c) Services income[6/]



Figures as of June 2011.
Source: CNBV.

1/ Assets adjusted for repo transactions.
2/ Other liabilities include stock liabilities, loans from banks and other entities, accounts payable and deferred taxes.
3/ Other assets include cash and equivalents, accounts receivable, permanent investments in stocks, furniture and equipment, and others.
4/ Trading income consists of profit and loss generated by the purchase and sale of securities, currencies, metals, and derivatives, as well as the revaluation of positions in such instruments.
5/ The weighted average was calculated based on each institution's share of brokerage firms' total assets.
6/ Services income includes net fees and income from financial consulting.

Profitability and solvency

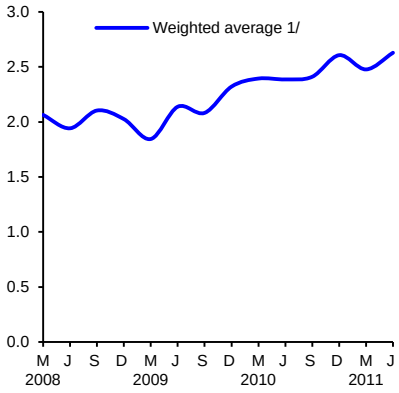
Brokerage firms' net profit decreased by 23.0 percent in real terms in the first half of 2011 versus the year-earlier period. As in the case of banks, lower profit was due to a decrease in trading income and the revaluation of security, currency and derivative positions (graph 32b), as well as higher administrative expenses (graph 33a). Higher expenses were reflected in a modest deterioration in the efficiency ratio (graph 33b). Meanwhile, as of June 2011, the capital consumption index[26] of brokerage firms was 30.5 percent, above the 28.0 percent recorded a year earlier (graph 34a).

[26] The capital consumption index is used to measure brokerage firms' solvency. It is the ratio of capital requirements for market, credit and operating risks divided by the brokerage firm's capital. In order to be considered solvent, brokerage firms must maintain a capital consumption index of below 80 percent.

Graph 33
Brokerage firms' expenditure and efficiency ratio

a) Administrative expenses

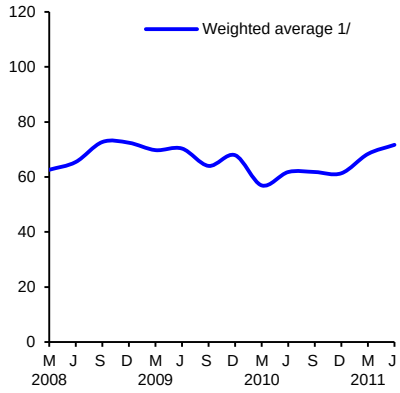
Percentage of assets



Figures as of June 2011.
Source: CNBV.

b) Efficiency ratio[2/]

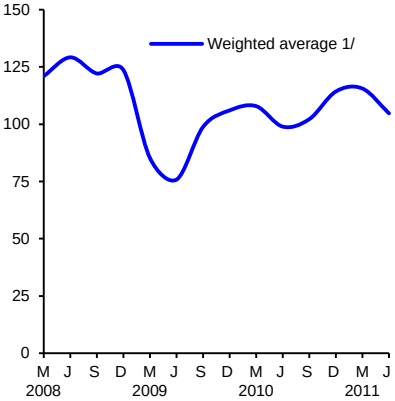
Percentage



Figures as of June 2011.
Source: CNBV.

c) Services results[3/]

Percentage of administrative expenses



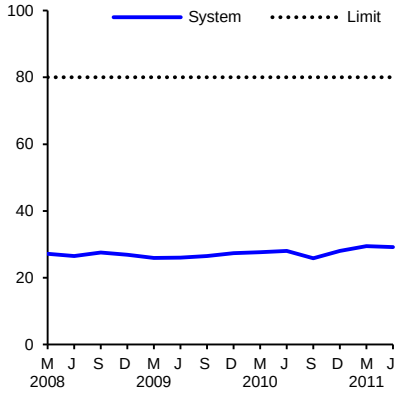
Figures as of June 2011.
Source: CNBV.

1/ The weighted average was calculated based on each institution's share of brokerage firm total assets.
2/ The efficiency ratio is obtained by dividing administrative expenses by total income for the period.
3/ Services income includes net fees and income related to financial consulting.

Graph 34
Brokerage firms' solvency, leverage and return on equity

a) Solvency

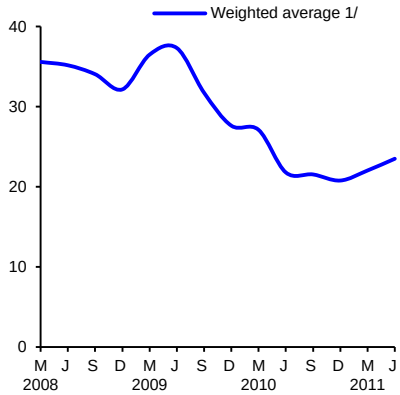
Percentage



Figures as of June 2011.
Source: CNBV.

b) Total-assets-to-equity ratio

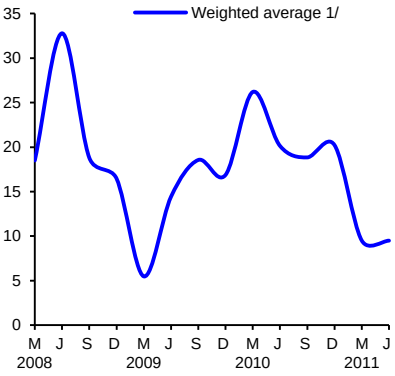
Number of times



Figures as of June 2011.
Source: CNBV.

c) Return on Equity

Percentage of assets



Figures as of June 2011.
Source: CNBV.

1/ The weighted average was calculated based on each institution's share of brokerage firm total assets.

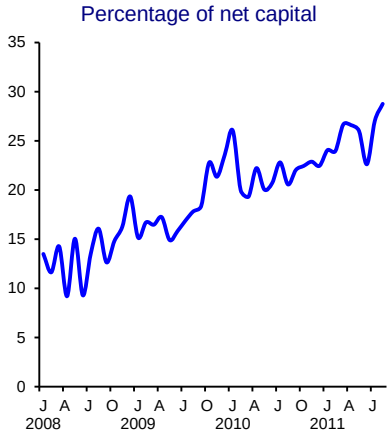
Risks

As of June 2011, brokerage firms' market VaR rose by 8.9 percent compared with the same year-earlier period due mainly to increases in positions in long-term government bonds. Market VaR is concentrated mainly in the equity portfolio, which represents 62.1 percent of total risk, while the bond portfolio represents 19.0 percent and foreign exchange 18.9 percent (graphs 35a and b). The variations in the value of the portfolio in response to an increase in interest

rates of 100 basis points rose 19.6 percent between June 2010 and June 2011. This can be attributed to bigger positions in government bonds and long-term tradable securities (graph 35c).

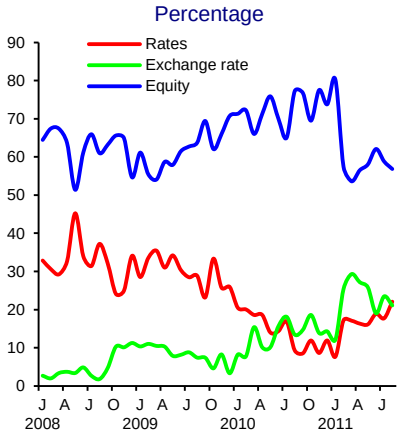
Graph 35
Brokerage firms' market risk

a) VaR of brokerage firms' total portfolio with a 99.9% confidence level



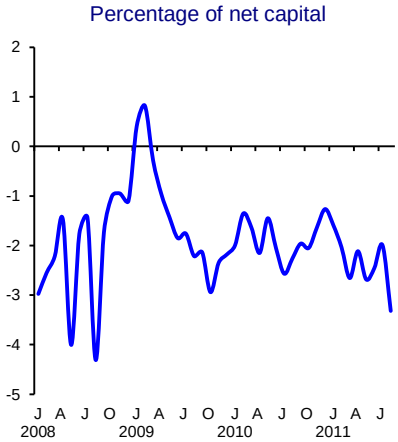
Figures as of August 2011.
Source: Banco de México.

b) Percentage of VaR by risk factor of brokerage firms' total portfolio



Figures as of August 2011.
Source: Banco de México.

c) Changes in the valuation of the total portfolio of brokerage firms in response to a 100 basis-point increase in interest rates



Figures as of August 2011.
Source: Banco de México.

3.4. Insurance companies

As of June 2011, insurance-sector assets amounted to 690 billion pesos. As of that date, the amount represented 6.1 percent of total financial-sector assets. As of the end of June 2011, the insurance sector was comprised of 100 institutions,[27] including one owned by the federal government and two mutual insurance companies.[28] Over the last five years, the sector's assets have grown by an average of 9.6 percent year on year in real terms.[29]

Regulations require that insurance companies back up their technical reserves,[30] a liability stemming from the issuance of premiums, with investments that must comply with adequate security and liquidity conditions. The aim is for such intermediaries to have access at all times to enough funds to meet their contingent liabilities (graph 36b).

Besides establishing a regime for creating and investing in technical reserves, the law provides that insurance companies must calculate and back a capital requirement (minimum capital guarantee). Thus, such companies must maintain enough funds to cover both the investment base of the technical reserves and the minimum capital guarantee requirement. Compliance with both requisites can be analyzed by using the technical reserve coverage ratio (TRCR),[31] and the minimum capital guarantee coverage ratio (MCGCR).[32] Solvency rules applicable to the sector aim for insurance companies to maintain enough funds to back their obligations and meet possible deviations from expected losses on an ongoing basis (graph 36c).

Insurance company profits depend on the performance of premiums issued, returns on their investments and reserve creation costs, premium acquisitions, and the operation and payment of claims.[33] In the first half of 2011, direct premiums[34] grew 7.6 percent in real terms, surpassing low growth (of 3.0

[27] As of October 2011 there were 101 authorized companies, 96 of which were ongoing concerns.

[28] Torreón, Sociedad Mutualista de Seguros and SPT Sociedad Mutualista de Seguros. Unlike an insurance company, a mutual company is not for profit, but rather meets the insured risks of its policyholders.

[29] Asset growth was calculated based on real average year-on-year growth between the period June 2006 and June 2011.

[30] Technical reserves represent the expected value of future liabilities related to the payment of claims, benefits, guaranteed securities, acquisition and administration expenses, among others, as well as any other future liability derived from insurance contracts.

[31] The technical reserve coverage ratio (TRCR) is calculated by dividing total investments backing the technical reserves by the reserve amount. When this ratio is higher than or equal to one, it means that investments cover the technical reserves and that the company has enough funds to meet its liabilities.

[32] The minimum capital guarantee (MCG) is the insurance company capital requirement and is based on assumed risks. The MCG must be backed by assets invested in accordance with the General Mutual Insurance Company and Institutions Law (GMICIL). The minimum capital guarantee coverage ratio (MCGCR) measures the solvency of insurance companies and is obtained by dividing the sum of investments that back the MCG and excess investments backing technical reserves by the minimum capital guarantee requirement. An MCGCR greater than one implies that the investments cover the MCG requirement and that the company has additional investments for meeting it; when below one, investments that comply with security and liquidity requirements are insufficient to back the requirement.

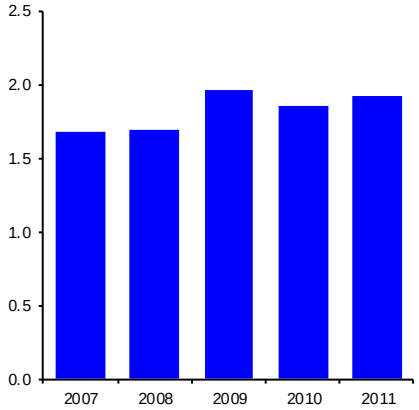
[33] The acquisitions category under insurance company expenses refers to premium issuance costs including agents' fees.

[34] The premium is the fee received from the policyholder for the protection granted. Premiums issued are policies signed by the insurance company. Direct premiums issued are the total amount of the net premiums corresponding to policies and endorsements issued to policyholders over a set period and do not take into account the acquisition of premiums generated by another insurance company or premium cessions to another insurance company.

percent) observed in 2010. As of June 2011, the most profitable segments of the sector in terms of net profit generated relative to the direct premium issued were pensions and accidents and health. As of June 2011, income from financial products decreased 7.4 percent year on year in real terms versus the year-earlier period.

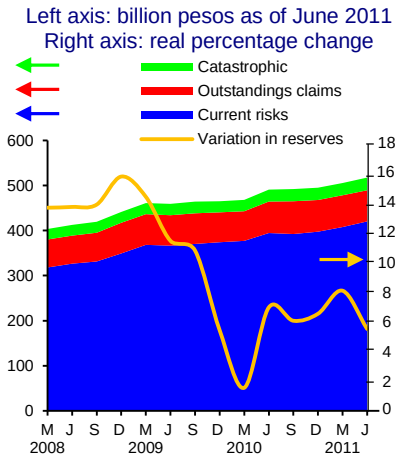
Graph 36
Insurance company market penetration and solvency indicators

a) Direct premiums[1/ 2/]



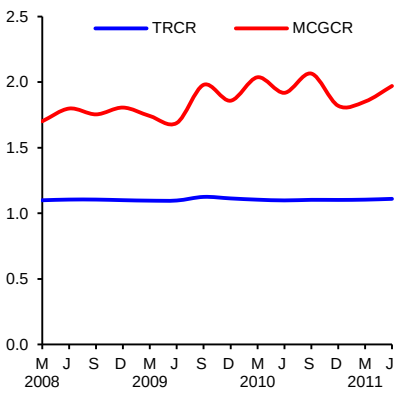
Figures as of June 2011.
Source: CNSF and Banco de México.

b) Technical reserves



Figures as of June 2011.
Source: CNSF.

c) Minimum capital guarantee coverage (MCGCR)[3/] and technical reserve (TRCR)[4/] ratios



Figures as of June 2011.
Source: CNSF.

1/ 2011 figures are annualized for comparison purposes.
2/ The direct premiums issued are the total amount of net premiums corresponding to policies and endorsements issued to policyholders over a given period and do not take into account the acquisition of premiums generated by another insurance company or cessions to another insurance company. The ratio is obtained by dividing the total amount of direct premiums by the nominal average GDP.
3/ The MCGCR measures the solvency of insurance companies and is obtained by dividing the sum of investments that back the minimum capital guarantee and excess investments that back technical reserves by the minimum capital guarantee requirement.
4/ The TRCR is calculated by dividing total investments that back technical reserves by the amount of such reserves.

Sector expenses derived from claims grew 5.6 percent in real year-on-year terms as of June 2011. Life and car insurance account for most of that increase, with 38.9 and 26.5 percent, respectively. However, the agriculture and cattle-breeding sector recorded the most claims (20 times compared with the previous year), owing to historical losses exceeding 2.8 billion pesos derived from the worst freezes in 50 years in northern Mexico. However, their share of total claims was just 4.3 percent.

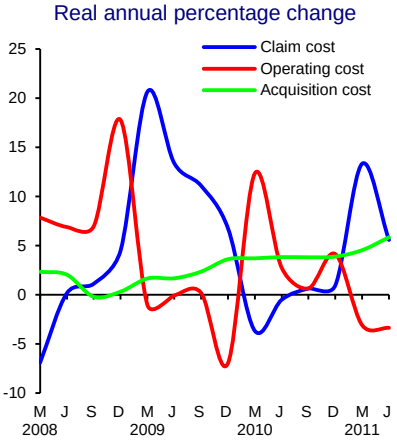
As of December 2010, claims as a percentage of direct premiums have decreased, mainly in the life and loss segments. Likewise, the combined index, which reflects the premium's generation and administration capacity, decreased 97.7 percent during the first half of 2010 to 96.8 percent during the same period of this year (graph 37c).[35] Along with ongoing sector efficiency (graph 37b), premium

[35] The combined index measures the technical profitability of an insurance company and evaluates the capacity of income generated by premiums to meet the company's costs. The index is the sum of three indicators: a) net acquisition cost as a percentage of withheld premiums: this indicator shows the direct cost per peso of a withheld premium (premium issued less premiums cessioned in reinsurance), or in other words, direct costs generated by the sale of insurance policies; b) cost of the claim as a percentage of premiums written: this measures whether the level of loss the insurance company has faced has been met by revenues generated by the sale of policies after deducting expenses generated by the increase in

issuance so far in 2011 has been enough to meet claim, acquisition and operating costs. Higher claims have an impact on technical reserves, since under the regulations they must reflect the experience of prior claims. Thus, despite the 5.5 percent real year-on-year increase in technical reserves as of June 2011, the percentage of the increase in technical reserves relative to assets decreased from 8.5 percent of assets as of June 2010, to 7.8 percent as of June 2011.

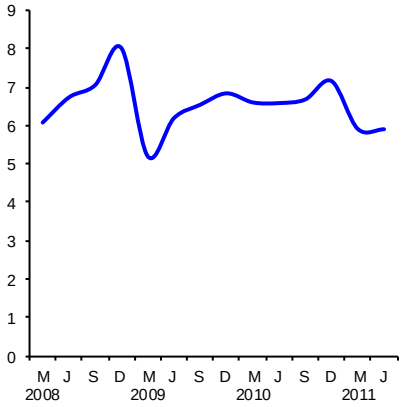
Graph 37
Insurance sector costs

a) Costs



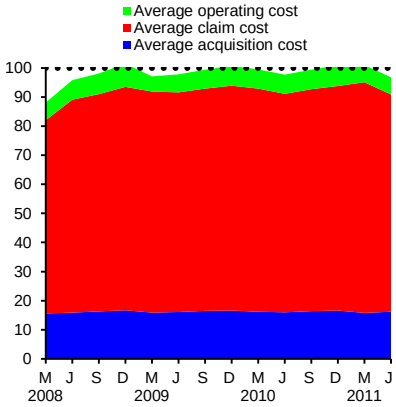
Figures as of June 2011.
Source: CNSF.

b) Efficiency ratio[1/]



Figures as of June 2011.
Source: CNSF.

c) Combined ratio[2/]



Figures as of June 2011.
Source: CNSF.

1/ The efficiency ratio is the net operating expense ratio divided by direct premiums.
2/ A combined index of below 100% implies that the value assigned to the premium is enough to cover the premium's generation and administration costs as well as claims during the life of the insurance policy.

As of June 2011, the insurance sector's return on equity[36] was 14.6 percent, below the figure for the year-earlier period (15.6 percent). The decrease reflects a bigger capital increase compared to the increase in net profit.

reserves (written premiums); and, finally c) the administrative cost as a percentage of issued premiums; this measures the efficiency of premium placement by assessing total expenses per peso of premium sold.

[36] Return on equity is annualized net profit as a percentage of average equity.

3.5. Pension and mutual funds

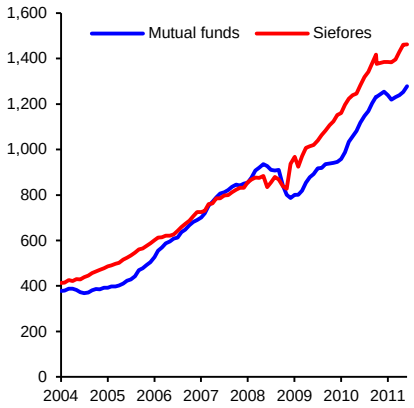
Until 2008, pension funds (Siefores) and mutual funds managed similar amounts; however, since 2009, Siefores' assets have increased at a faster pace than those of mutual funds. As of June 2011, assets managed by the Siefores were 13.4 percent higher than assets managed by mutual funds.

The securities comprising the portfolios of Siefores and mutual funds vary because of differences in investment horizon and clients' liquidity needs. For example, while in June 2011, the average term of debt securities managed by the Siefores básicas, including Pensionissste, was 11.5 years, that of mutual funds was 2.5 years. Similarly, the modified duration[37] of Siefores' debt securities was 1.4 years in June 2011 and 0.3 years in the case of mutual funds (graph 38b).

Graph 38
Mutual funds and Siefores

a) Net assets

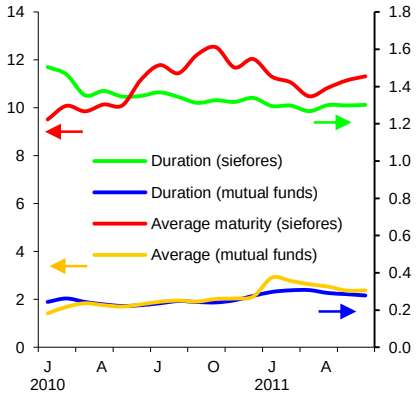
Billion pesos



Figures as of June 2011.
Source: CNBV and Consar.

b) Average term and modified duration of debt securities

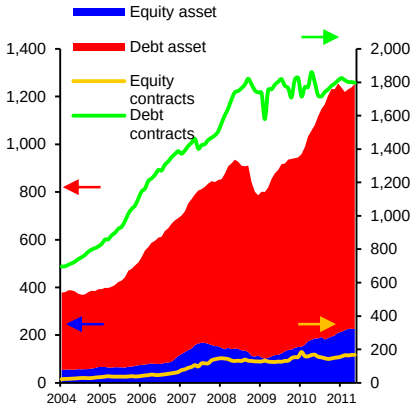
Left axis: maturity in years
Right axis: modified maturity in percentage terms



Figures as of June 2011.
Source: CNBV and Banco de México.

c) Net assets and number of mutual fund contracts

Left axis: billions of pesos
Right axis: thousands of contracts



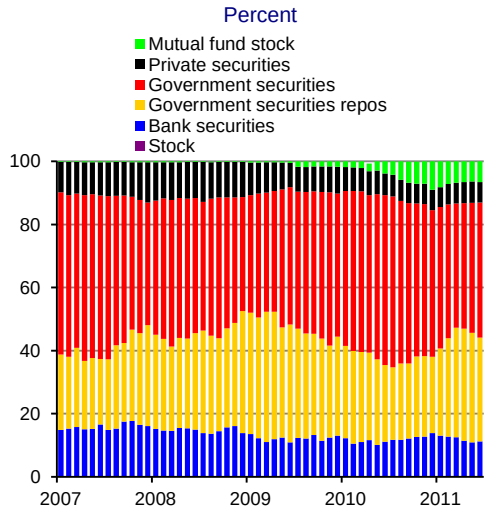
Figures as of June 2011.
Source: CNBV and Banco de México.

As of June 2011, funds managed by mutual funds increased to 1.3 trillion pesos (growth of 10.5 percent in real terms compared with the year-earlier period). With respect to portfolio composition, 81.6 percent was invested in debt instruments and 18.4 percent in equities. Investments in debt instruments mostly comprise government securities, both direct and repos, while investments in equities mostly comprise stocks in companies and other mutual funds (graph 39).

[37] Modified duration measures the security´s price sensitivity to changes in the interest rate and depends both on the term and distribution of the flows generated during the life of the security. The greater the modified duration the greater the variation in the security's price in response to interest rate movements.

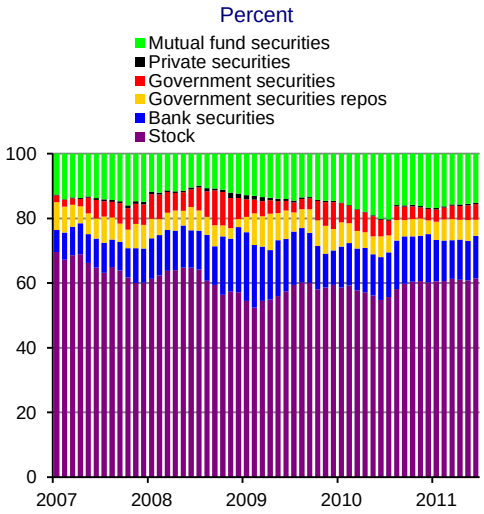
Graph 39
Mutual Funds in Mexico

a) Fixed-income mutual funds



Figures as of June 2011.
Source: CNBV.

b) Equity mutual funds



Figures as of June 2011.
Source: CNBV.

As of June 2011, funds managed by the Afores[38] amounted to 1.4 trillion pesos. This figure was equivalent to 10.9 percent of GDP and implied 10.5 percent growth in real terms in relation to the year-ago number (graph 40a). Within the Siefores básicas group, Fund 3 managed the largest amount (30.6 percent of total funds as of June 2011) followed by Siefore básica number 4 (28.3 percent of total funds) (graph 41b).[39] The most conservative Siefores (básica 1 and básica 2) invest a high percentage of funds from relatively older workers in their portfolios in low-risk instruments (graph 40c), while the Siefores that manage the accounts of relatively younger works invest in higher-risk instruments with a higher expected return.

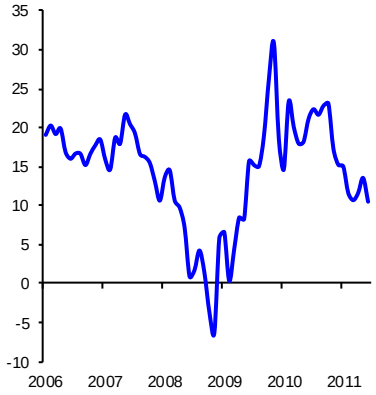
[38] Includes the balance of Pensionissste accounts.

[39] Siefore básica 3 manages the funds of workers aged between 37 and 45, while Siefore básica 4 manages the funds of workers aged between 27 and 36. There are a further three types of Siefores: Siefores básicas 1 and 2, which as of July 28, 2011 modified the age range they were directed at (Siefore básica 1, for workers over 60; Siefore básica 2, from 46 to 49), and Siefore básica 5, for workers below the age of 25. Each of the funds has an investment regime that takes into account the risk profile and age of members and their investment horizons; thus, funds directed at the youngest workers are subject to a relatively riskier investment regimes than Siefores básicas geared toward managing the funds of workers nearing retirement age.

Graph 40
Return and asset composition indicators

a) Assets managed by Afores

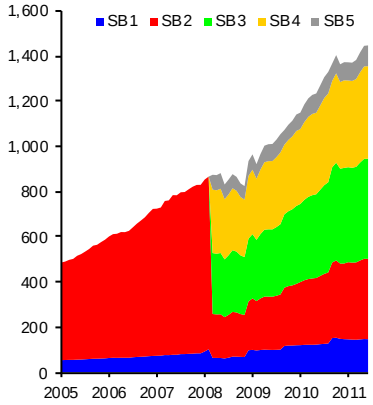
Real YoY percentage change



Figures as of June 2011.
Source: Consar.

b) Assets by type of Siefore[1/]

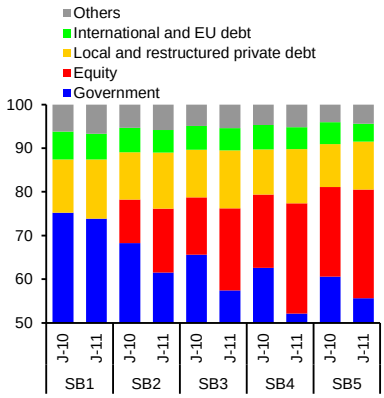
Billion pesos



Figures as of June 2011.
Source: Consar

c) Structure of assets[1/]

Percentage



Figures as of June 2011.
Source: Consar.

1/ SB1: Siefore básica 1; SB2: Siefore básica 2; SB3: Siefore básica 3; SB4: Siefore básica 4; SB5: Siefore básica 5.

Return and risk

Over the last four and a half years, the average return offered by the Siefores was 6.1 percent per year, which compares favorably with the average return generated by mutual funds of 5.1 percent during the same period. According to the Sharpe[40] ratio, an indicator that compares the risk-adjusted returns of diverse investment portfolios, Siefores have offered a superior risk-return to that of mutual funds (graph 41a). With respect to risk, graph 41b shows how the VaR of the Siefores is within the established regulatory limit. We should also mention that the relationship between risk and return had improved as of June 2011 with respect to the previous twelve months (graph 41c).

Fees

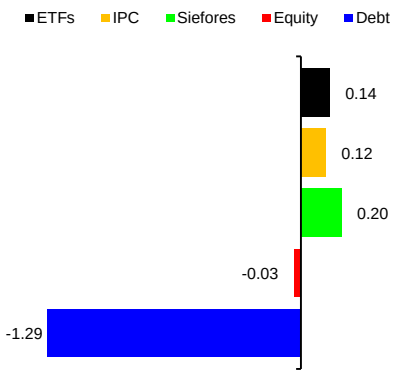
Over the last four years, fees paid by Afore-affiliated workers have decreased at an average rate of 4.5 percent per year, so that average fees on assets managed by the system authorized for 2011 amounted to 1.4 per year. The Afores have partially offset this decrease through higher Siefore assets under management (table 8).

[40] The Sharpe ratio measures excess return per unit of deviation in an investment portfolio and is defined as: $S=(r-r_f)/\sigma$, where r is the asset return, r_f is the risk-free return, and σ is the standard deviation of the portfolio's return. The Sharpe index permits a comparison of the historical performance of different investment portfolios. The higher the Sharpe ratio the better the performance.

Graph 41
Return and risk indicators

a) Sharpe ratio[1/]

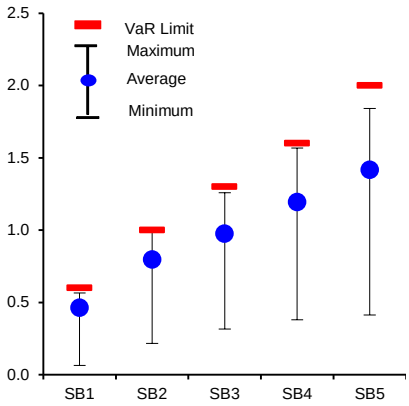
Percentage
4-year arithmetic average



Figures as of June 2011.
Source: Consar and Bloomberg.

b) Value at risk (VaR)

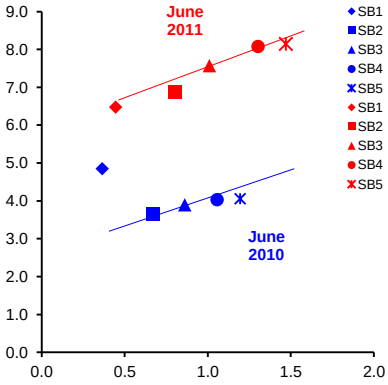
Percentage of net assets



Figures as of June 2011.
Source: Consar.

c) VaR and profitability

Horizontal axis: VaR as a percentage of the portfolio
Vertical axis: real return for the last 36 months in percentage terms



Figures as of June 2011.
Source: Consar.

1/ For a definition of the Sharpe ratio see footnote 40.

Table 8
Fee structure
Percentage

Siefore	2008	2009	2010	2011
Afirme Bajío	1.70	1.70	1.51	1.51
Azteca	1.96	1.96	1.96	1.67
Banamex	1.84	1.75	1.58	1.45
Bancomer	1.47	1.47	1.45	1.40
Banorte Generali	1.71	1.71	1.58	1.48
Coppel	3.30	1.94	1.81	1.70
HSBC	1.77	1.77	1.61	1.52
Inbursa	1.18	1.18	1.18	1.17
ING	1.74	1.74	1.61	1.48
Invercap	2.48	1.93	1.73	1.72
Metlife	2.26	1.89	1.74	1.69
Principal	2.11	1.94	1.79	1.55
Profuturo GNP	1.96	1.92	1.70	1.53
XXI	1.45	1.45	1.42	1.40
Pensionissste	1.00[1/]	1.00	1.00	1.00
Average[2/]	**1.70**	**1.63**	**1.52**	**1.43**

Figures as of June each year.
Source: Consar.
1/ Information as of December 2008.
2/ Weighted average by assets under management.

Regulatory changes applicable to Afores

In 2011, Consar announced some changes to the Siefores' investment regime in order to diversify investment options. The main changes included the following:

- The cap on equity investments as a percentage of the portfolio was raised for each type of Siefore.[41]
- Siefores may buy securities that track indexes containing the securities of foreign issuers that are not eligible under the investment regime as long as their share of the index is below 2.5 percent.
- Siefore básica 2 may invest up to 5 percent in commodities while Siefores básicas 3, 4 and 5 may invest up to 10 percent.
- Regulatory limits on the VaR of all pension funds were raised. [42]
- Modification of the age range of Siefore básica 1 to 60 years and beyond (previously 56 years and beyond), as well as an extension of the age range of the Siefore básica 2 to persons aged between 46 and 59.
- Afores are now allowed to hire third parties to manage some of the assets under the management of Siefores. These mandate contracts are often used by mutual funds, trusts and central banks. Their aim is to maintain the profitability of the portfolios and ensure they are adequately diversified through investments in markets that Siefores do not know enough about or have enough experience with to be able to trade in. Consar has issued guidelines that representatives must follow, and contracts should adhere to, including managers' experience and information disclosure rules, among other things.
- Investment is authorized through mutual funds regulated by competent authorities.
- The list of eligible countries was expanded.

The group of authorized currencies was enlarged to include all those belonging to eligible countries, although only currencies with markets that are sufficiently liquid and deep may be traded for purely strategic purposes.

[41] The new investment maximums range from 5 to 40 percent of assets under management compared with 0 to 35 percent previously.

[42] The regulations establish that Siefores must calculate a one-day historical VaR with a confidence level defined by the benchmark portfolio. VaR limits for Siefores básicas changed as follows: Siefore básica 1: from 0.6 to 0.7 percent of assets; Siefore básica 2: from 1.0 to 1.1 percent; Siefore básica 3: from 1.3 to 1.4 percent; Siefore básica 4: from 1.6 to 2.1 percent; and Siefore básica 5: from 2.0 to 2.1 percent.

3.6. Development banks

Development banks[43] and Development Trusts are part of the Mexican financial system. Through them the public sector offers services and products that complement those provided by private financial intermediaries. Institutions that make up the development financial system, which includes development banks, Fideicomisos Instituidos en Relación con la Agricultura (FIRA) and Financiera Rural (FR), provide first- and second-tier credit and guarantees, and provide special development programs and technical assistance. In times of economic hardship, such intermediaries have become an important vehicle for implementing counter-cyclical policies aimed at mitigating the adverse effects of the crisis on credit-market workings and economic activity. As of the end of the first half of 2011, development banks' assets accounted for slightly over 9 percent of the Mexican financial system's total assets

Credit

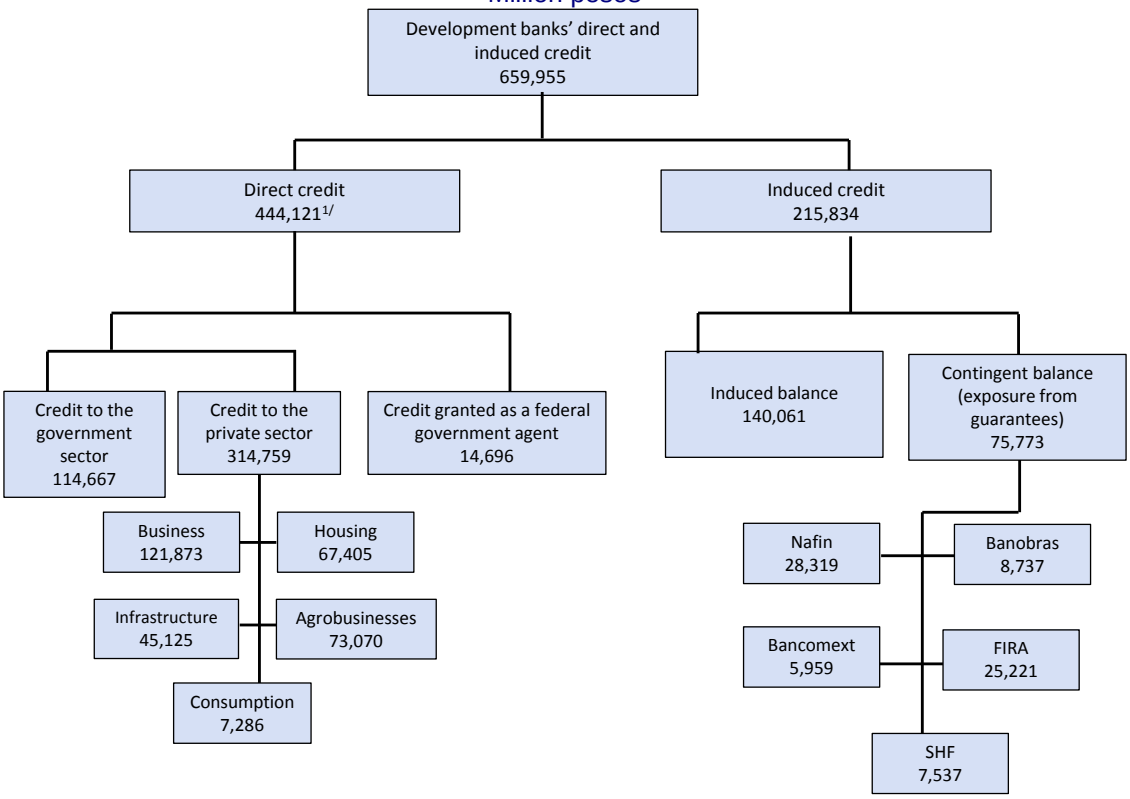
As of June 2011, the direct loan portfolio of development banks, FIRA and FR amounted to 444 billion pesos, equivalent to 16 percent of the total combined credit granted by the Mexican banking system as a whole. These intermediaries also guaranteed 216 billion pesos´ worth of additional loans ("induced credit").[44] As of that date, the sum of both concepts was 660 billion pesos (figure 2).

The direct credit balance can be classified in three different ways: as first tier, second tier, and as federal-government-agent credit; or as credit to the private sector, to the public sector, and federal-government-agent credit; or by market segment (graph 42).

[43] The term development banks refers to the Banco Nacional de Obras y Servicios Públicos (Banobras), Nacional Financiera (Nafin), Banco Nacional de Comercio Exterior (Bancomext), Banco Nacional del Ejército, Fuerza Aérea y Armada (Banjército), Banco del Ahorro Nacional y Servicios Financieros (Bansefi), and Sociedad Hipotecaria Federal (SHF).

[44] Induced credit refers to credit granted by diverse private financial intermediaries that is partially guaranteed by development banks, FIRA or FR. The figures mentioned are Banco de México estimates.

Figure 2
Direct and induced credit by guarantees granted
Million pesos

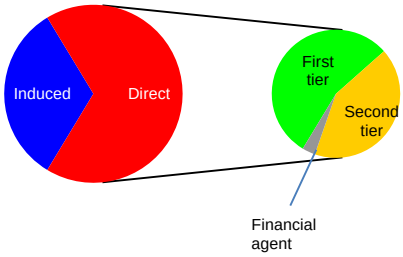


Figures as of June 2011.
1/ Development banks' credit balance. First-tier credit: 243.361 billion pesos; second-tier credit: 186.064 billion pesos; and federal-government-agent credit 14,696.

Graph 42
Composition of credit granted and induced by development banks

a) Composition of total credit balance

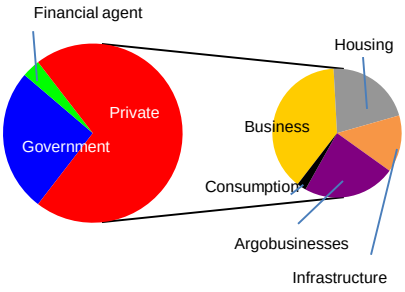
Percentage



Figures as of June 2011.
Source: Banco de México.

b) Composition of direct credit balance

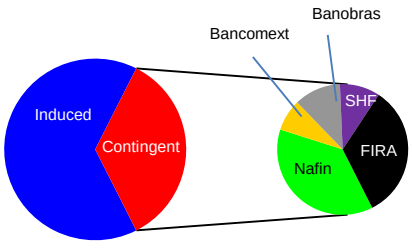
Percentage



Figures as of June 2011.
Source: Banco de México.

c) Composition of induced credit balance

Percentage



Figures as of June 2011.
Source: Banco de México.

During the second half of 2010 and the first half of 2011, direct credit granted by development banks grew by 2 percent in real terms, a more modest rate than the one observed during the period following the 2008 international financial crisis. This is because several companies recovered their access to market-funding sources and paid off their short-term development bank loans.

As of June 2011, the first-tier loan portfolio registered real growth of 17 percent year on year, three percentage points more than the previous year (graph 43a). This growth can be attributed mainly to the fact that the SHF initially recorded the portfolio granted to it as payment in kind by some financial intermediaries as first-tier credit, whereas previously it had been recorded as second-tier credit.[45]

Had this not been the case, between June 2010 and June 2011, real growth in the first-tier portfolio would have been 8.6 percent, reflecting a slowdown derived mainly from the early amortization of loans granted in order to tackle the effects of the 2008 international crisis and the April 2009 public health contingency.

As of June 2011, Banobras, the SHF and Bancomext accounted for 83 of the first-tier loan portfolio (graph 43b). The Banobras portfolio grew 8 percent in real year-on-year terms, while Bancomext's decreased 13 percent in real year-on-year terms due to prepayments made by some of its main borrowers.

With respect to the second-tier loan portfolio, as of June 2011, Nafin, FIRA and the SHF[46] accounted for 94 percent of the total (graph 43c). As of the same month, the portfolio decreased by around 7 percent overall in real year-on-year terms.[47] In the case of Nafin and FIRA, second-tier credit grew in real terms by 1 and 2 percent, respectively, while the portfolios of Banobras and the SHF decreased in real terms by 37 and 32 percent, respectively. In the case of the SHF, the reduction was due to the above-mentioned payments in kind, while in the case of Banobras it was due mostly to a prepayment made by an end borrower.

[45] The SHF does not usually grant first-tier loans. However, during the period of analysis three sofomes covered debts with the SHF with loan portfolios in lieu of payment, such that the loan portfolio that was originally classified as second-tier and off-balance sheet credit in trusts was reclassified and is now part of the performing and past-due first-tier loan portfolio. This reclassification took place in the institution's financial statements in December 2010.

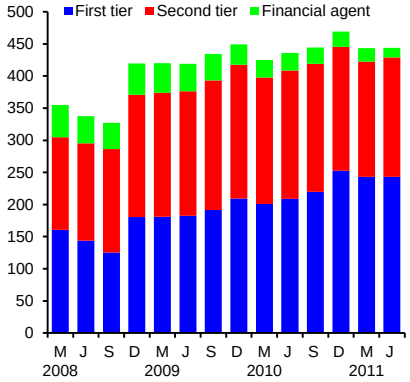
[46] Loans granted by the SHF include individual and bridge loans.

[47] Adjusted for the SHF'S reclassification mentioned above results in a 7 percent increase in the second-tier portfolio.

Graph 43
Loan portfolios of development banks, FIRA and Rural Funding

a) Trend in the balance of the direct credit portfolio

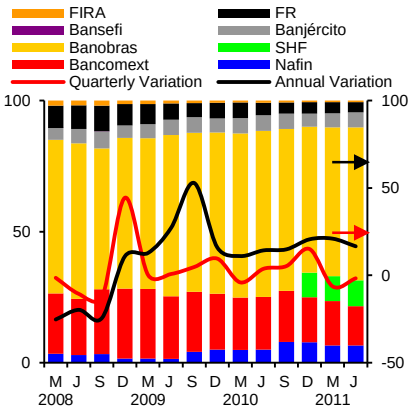
Billion pesos as of December 2010



Figures as of June 2011.
Source: Banco de México.

b) First-tier portfolio's participation by institution

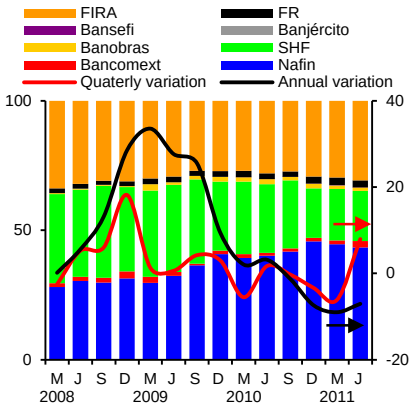
Percentage



Figures as of June 2011.
Source: Banco de México

c) Second-tier portfolio's participation by institution

Percentage



Figures as of June 2011.
Source: Banco de México.

Trend in direct credit to the private and public sectors

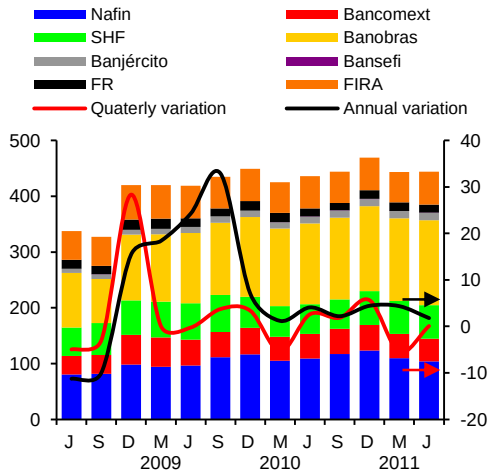
Direct loans granted to the private sector by development banks, FIRA and FR, amounted to 315 billion pesos as of June 2011 (graph 44b), which corresponded to 71 percent of these institutions' total loans. During the period of June 2010 to June 2011, this portfolio registered real growth of 7 percent. A 9 percent annual real growth rate in loans to the infrastructure sector stood out, followed by the business sector with real annual 7 percent growth.

The share of development bank loans in public-sector financing continues to decrease. Over the last year, excluding Banobras, whose main vocation is the funding of public-sector infrastructure projects (the federal government, state-owned entities, states and municipalities), loans to this sector decreased by 24 percent in real terms. Considering Banobras, the public-sector loan balance amounted to 114.5 billion pesos in June 2011, for annual real growth of 3.2 percent.

Graph 44
Direct loan portfolio of development banks, FIRA and Financiera Rural

a) Trend in the direct loan portfolio and each institution's share

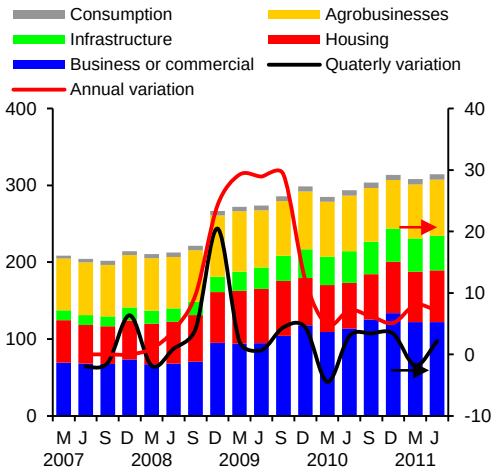
Left axis: billion pesos as of December 2010
Right axis: percentage



Figures as of June 2011.
Source: CNBV and Banco de México.

b) Trend in private-sector credit by economic activity[1/]

Left axis: billion pesos as of December 2010
Right axis: percentage



Figures as of June 2011.
Source: CNBV and Banco de México.

1/ For comparative purposes with other sections of the report, private-sector credit by economic activity includes first- and second-tier loans.

As of June 2011, direct loans to the infrastructure sector for projects with their own source of payment reached 45 billion pesos, basically distributed among roads construction, electricity generation, and water treatment plants. Over the last four years, loans to this sector have tripled mostly because the National Infrastructure Fund has supported diverse projects with subordinated loans.

Meanwhile, Nafin and Bancomext have provided their support to companies from diverse sectors of the economy. Direct loans to the private sector granted by both institutions rose by 7.2 percent in real year-on-year terms as of June 2011 even though several large companies prepaid around 3.8 billion pesos in the first half of 2011.

With respect to Nafin, 43 percent of gross loan placement through development programs corresponded to production chains, 7 percent to the traditional discount program, and 47 percent to induced credit derived from the guarantees program.[48] Around 89 percent of loans placed by Bancomext corresponded to first-tier transactions; recipients included the following sectors: tourism; in-bond export, auto, autoparts, manufacturing and industrial parks.

As of June 2011, direct loans granted to the housing sector rose 13.6 percent in real year-on-year terms, contrasting with a 15 percent year-on-year decrease in June 2010. The increase in such loans over the last year can be mainly attributed to housing development loans granted by SHF for the benefit of Infonavit and Fovissste affiliated workers. Individual loans or housing construction loans for the unaffiliated remain stagnated.

[48] See section on loan collateral granting.

Between June 2010 and June 2011, direct loans to the agribusiness sector granted by FIRA and FR grew by 1.1 percent in real terms, displaying a slight recovery versus the previous period, when they decreased in real terms by 3 percent year on year. Of total loans, 56 percent correspond to working capital loans, while the rest correspond to fixed-asset loans. Likewise, 89 percent of loans granted by FIRA were used to fund agriculture and cattle breeding. Finally, 60 percent of the total funding consisted of primary-sector loans, 19 percent to industrial-sector loans, and the rest to commercial and services loans.

Credit Guarantees

A large percentage of development bank FIRA and FR transactions have focused on the granting of credit guarantees. While these transactions are not accounted for on the balance sheets of development banks, they have a big impact on loan supply.

As of June 2011, the so-called induced credit[49] amounted to 215.8 billion pesos with an average guarantee of 35 percent (graph 45b). Induced credit is placed through commercial banks, non-bank banks, debt security issuances, and portfolio securitization vehicles.

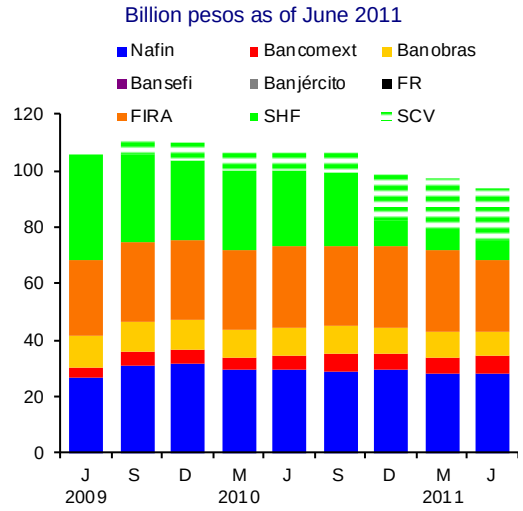
Contingent balance-of-credit guarantees, or the credit risk to which such institutions are exposed as a result of such transactions, amounted to 75.7 billion pesos as of June 2011. This balance displayed a real decrease of 24 percent year on year mainly as a result of guarantees originally transferred by the SHF to its insurance company, Seguros de Crédito a la Vivienda (SCV) (box 3)[50], and the cancellation of guarantees the SHF received in lieu of payment. Considering the amount guaranteed by the SCV and adding the amount granted by development banks, FIRA and FR, the contingent balance-of-credit guarantees amounted to 93.5 billion pesos, a real reduction of 12 percent with respect to the year-earlier month (graph 45a).

[49] See footnote 45 for a definition of induced credit.

[50] As of June 2011 the migration of SHF guarantees to its insurance company amounted to 16.378 billion pesos.

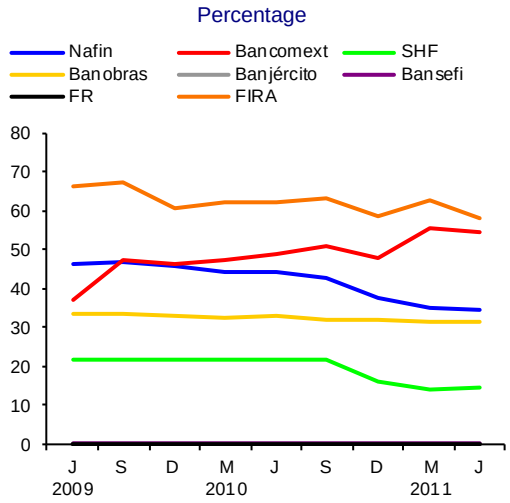
Graph 45
Contingent balance of guarantees granted by development banks, FIRA, Rural Funding and SCV

a) Trend in contingent balance by institution



Figures as of June 2011.
Source: CNBV and Banco de México.

b) Average percentage guaranteed by institution



Figures as of June 2011.
Source: CNBV and Banco de México.

As of June 2011, 70 percent of all credit guarantees had been granted by Nafin and FIRA; the guarantees granted by these institutions displayed real decreases of 3 and 13 percent year on year. The FIRA registered prepayments of guaranteed loans to agro-industrial companies granted during the 2008-09 crisis. Bancomext's credit guarantees portfolio rose by 16 percent year on year in real terms on the back of growth in the extension of letters of credit and guarantees. Of the guarantees granted by Nafin, 93.4 percent were channeled through its SME automatic guarantee program.[51] The rest was divided between bond-issue guarantees (0.8 percent) and the guarantee extended for the construction of Terminal II of the Mexico City International Airport (5.8 percent), half of which corresponds to Banobras. Likewise, Banobras's guarantees balance decreased by a real 11 percent year on year due to secured loan amortizations; total guarantees granted by this bank focused on infrastructure projects at the three levels of government.

The guaranteed loan balances of development banks are partially backed by counter-guarantee funds for up to 7.3 billion pesos granted by various Federal Government entities such as the Ministry of the Economy, the Ministry of Finance and Public Credit (SHCP), and the Agriculture Ministry (SAGARPA), among others. The corresponding funds partially cover the losses development banks would incur in the event of a default by borrowers.

[51] See box 9 of the June 2010 Financial System Report.

Box 3

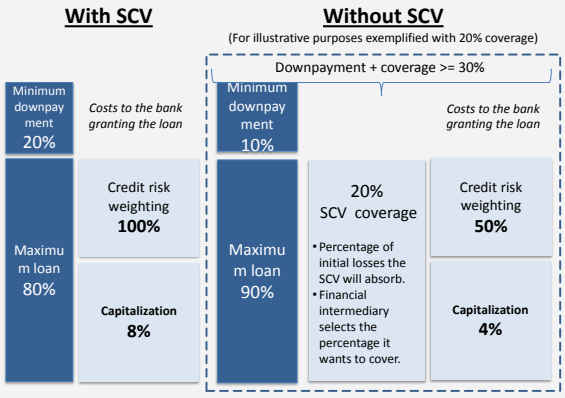
Sociedad Hipotecaria Federal (SHF) Insurance Company Seguros de Crédito a la Vivienda

In March 2009 the insurance subsidiary of Sociedad Hipotecaria Federal (SHF), called Seguros de Crédito a la Vivienda (SCV), began operating. Alongside this insurance company, within the property and casualty segment, the category "mortgage loan insurance" was created in Mexico with the approval and under the supervision of Comisión Nacional de Seguros y Fianzas (CNSF). In the future, this will enable private insurance companies to enter the Mexican market in this segment.

The SHF previously offered a product called Default Guarantee (GPI), which provided banks with security in the recovery of mortgage loans granted to end borrowers. The SHF guaranteed first losses to the financial intermediary for up to 25 percent of the outstanding balance of the loan and up to 100 percent for federally subsidized programs. After the SCV became operational, the SHF transferred such guarantees to the insurance company responsible for managing the transferred loans and undertaking new product subscriptions. As of June 30, 2011 the SCV's portfolio comprised 221,000 issued policies with a guaranteed amount of around 18 billion pesos, out of which around 20,000 policies corresponded to new subscriptions and the remainder to transfers from the GPI to the SCV.

The SCV covers the possibility of the final borrower not paying the bank, which helps reduce mortgage loan risk and therefore downpayment amounts. It also helps improve the quality of the mortgage-loan-granting process and standardizes documentation, as a third party the SCV checks the loan portfolio's documentation.

For financial intermediaries this generates benefits with respect to capital requirements and frees up reserves, bringing down the mortgage loan supply cost. The SCV underpins the credit quality of mortgage loans, strengthening the asset sale or securitization process.



Unlike the bank guarantee, which complies with prudential standards issued by the CNBV, an insurance company complies with the insurance regulatory framework established in the General Mutual Insurance Company and Institutions Law (GMICIL) and the Insurance Contract Law (ICL). Prudential standards fundamentally require them to have a minimum capital guarantee and technical reserves.

The minimum capital guarantee is comprised of:

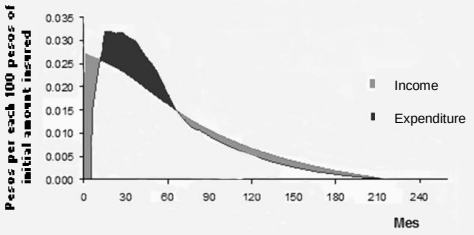
- The Mortgage Loan Insurance Gross Solvency Requirement. A requirement based on the age and loan-to-value (LTV) ratio of the home is estimated for each policy. It can be adjusted for reassurance, or deductions can be made to the catastrophe reserve (for example), subject to CNSF approval.

- The Investment Gross Solvency Requirement. This is estimated in accordance with the instruments in which reserves are invested. The investment shortfall is added to reserves.

While for banks, the capital requirement for a default guarantee is 8 percent, for an insurance company the gross solvency requirement depends on the age and ratio of the unpaid balance divided by the value of the home (LTV). For an insurance company, those loans with a fully-provisioned insured amount do not require capital.

Technical reserves are as follows:

- The Unexpired Risks Reserve (URR): to cover expected losses. This method is based on the actuarial principle for long-term insurance which states that the URR must be equal to the present value of expenditures, less the present value of income. It is estimated using an actuarial method registered before the CNSF.



- The Outstanding Reserve (OR) to cover claims. It is estimated based on a reserve percentage of the insured amount, which depends on the delinquency of the guaranteed loan. In other sectors, the OR only covers cases in which losses have occurred. But for the SCV, as the reserve is for delinquency, in most cases a claim has not been made. Therefore, more than the equivalent of an OR, it is similar to a URR.

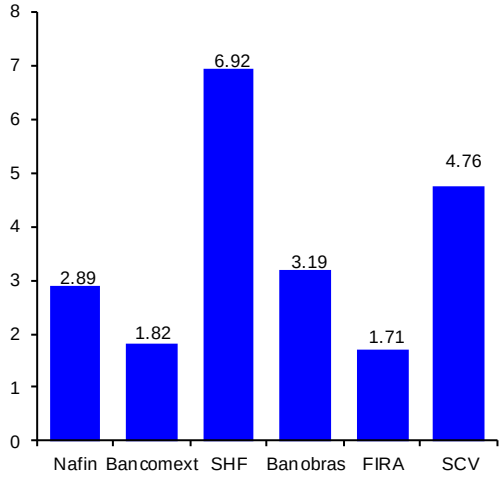
- The Catastrophe Reserve to cover losses incurred as a result of a catastrophic event. This is a cumulative reserve the contributions of which correspond to 50 percent of the risk premium earned plus the financial product. They are released 144 months afterwards, or before in case a catastrophe occurs, and only with the CNSF'S approval.

The 215.7 billion pesos induced credit balance represents an average of 2.8 pesos of credit granted per peso guaranteed (graph 46a). If the SCV is taken into account, the induced credit balance amounts to more than 300 billion pesos, and the average to 3.2 pesos of credit granted per peso guaranteed. With respect to the June 2010 level, the induced balance, including the SCV, has decreased by 2.4 percent in real terms.

Graph 46
Trend in development bank, FIRA and Financiera Rural guarantees

a) Pesos of credit granted for each peso guaranteed (induced credit by institution)

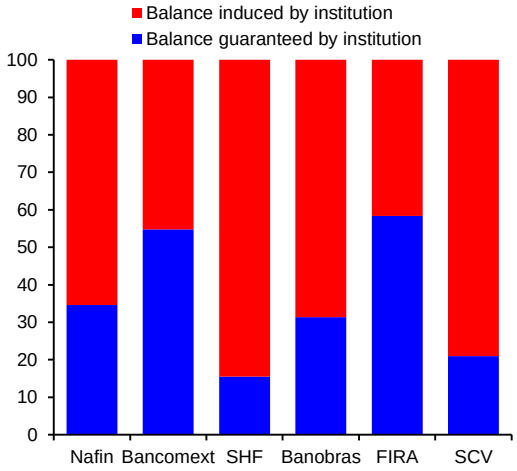
Number of times



Figures as of June 2011.
Source: Banco de México.

b) Performance of induced credit by institution as of June 2011

Percentage

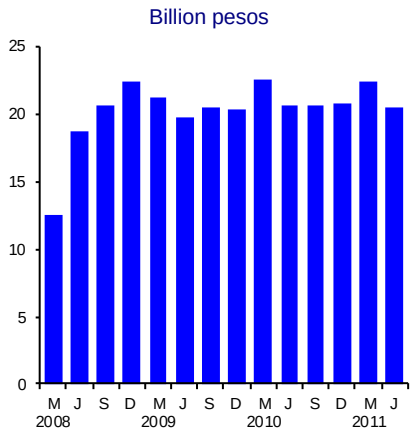


Figures as of June 2011.
Source: Banco de México.

The year-on-year interest income of development banks, FIRA and Financiera Rural has remained at average levels of 20 billion pesos over the last two years (graph 47a). As of the end of June 2011, a decrease in the financial margin of below 1 percent was recorded with respect to the year-ago period. With respect to the creation of loan loss reserves, they rose 58 percent versus June 2010 (graph 47b), mainly on the creation of additional reserves by the SHF, a change in the mortgage loan portfolio methodology, and more loans granted by Banobras. As of the first half of 2011, net profit decreased by 16.6 percent versus June 2010 (graph 47c).

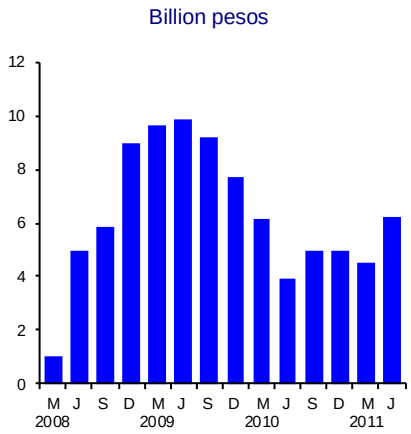
Graph 47
Loan portfolio of development banks, FIRA and Financiera Rural

a) YoY interest income



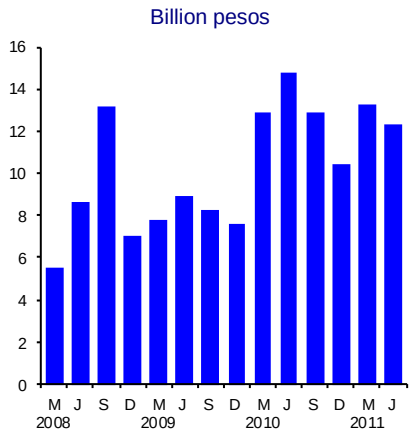
Figures as of June 2011.
Source: CNBV and FIRA.

b) YoY reserve creation by loan risk



Figures as of June 2011.
Source: Banco de México.

c) Development banks' YoY net profit



Figures as of June 2011.
Source: Banco de México.

Development banks' average capital adequacy ratio has remained at 16.1 percent over the last three years. As of June 2011, the ratio was 16.5 percent.[52] As of the same date, 80 percent of the portfolio was comprised of minimum- and low-risk loans, 4 percent high-risk loans, and the remaining 16 percent exempt loans.[53]

As of the first half of 2011, the past-due loans of the development banks, FIRA and FR rose 45 percent versus the year-ago period, due mainly to an increase of 106 percent in SHF past-due loans.[54] SHF accounts for 67 percent of past-due loans (graph 48a); excluding the SHF from that calculation, past-due loans decreased by 4.1 percent versus June 2010. During the period June 2010 to June 2011, the coverage ratio decreased from 208 to 168 percent (graph 48b). Meanwhile, the delinquency rate remained below 3.4 percent increasing 42.5 percent compared to June 2010 due to growth in SHF past-due loans. The adjusted delinquency rate behaved similarly, as neither Nafin nor the SHF applied write-offs. Thus, the average adjusted delinquency rate for the period was 3.5 percent (graph 48c).

[52] FIRA and Financiera Rural are not banks and therefore do not calculate capital adequacy ratios.

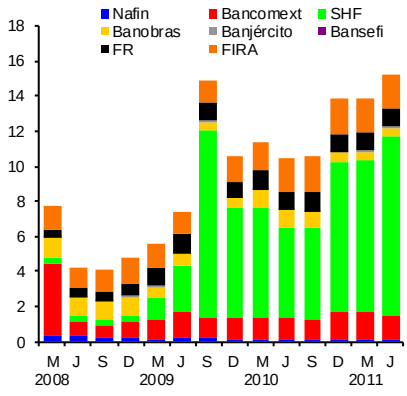
[53] Portfolios rated "A" and "B" are considered minimum and low risk and those rated "C," "D" and "E" are considered high risk.

[54] Growth in SHF past-due loans is mainly due to the fact that during the period two sofomes defaulted on their debt with the SHF. As previously mentioned, during the period three sofomes covered debts with the SHF with loan portfolios in lieu of payment, such that second-tier loans became first-tier performing loans or first-tier past-due loans.

Graph 48
Loan portfolios of development banks, FIRA and Financiera Rural

a) Past-due loans

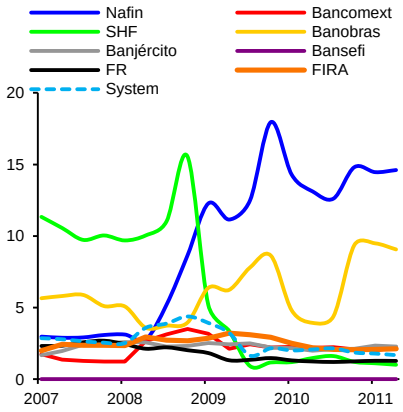
Billion pesos



Figures as of June 2011.
Source: CNBV and FIRA.

b) Coverage ratio[1/]

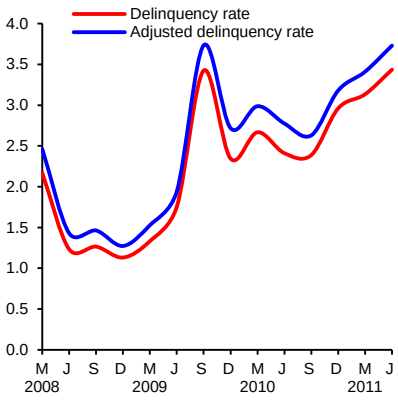
Number of times



Figures as of June 2011.
Source: CNBV and FIRA.

c) Delinquency rate[2/]

Percentage



Figures as of June 2011.
Source: CNBV and FIRA.

1/ Preventive estimates for loan risks as a percentage of past-due loans.
2/ The adjusted delinquency rate is the past-due loan portfolio plus write-offs over the previous twelve months divided by the total loan portfolio plus write-offs over the previous twelve months.

3.7. Infonavit

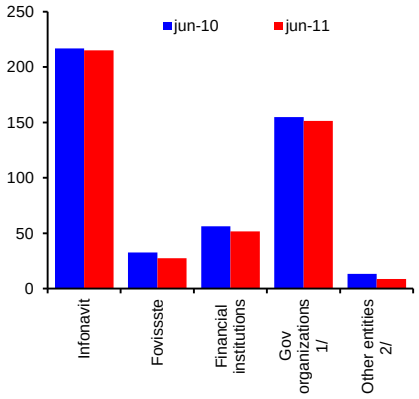
The Public Housing Fund (Infonavit) is the main provider of mortgages in Mexico. Despite the slight reduction in the number of loans granted in the first half of 2011 compared with the same year-earlier period, the amount of loans granted rose by 6.2 percent in real terms. Meanwhile, the delinquency rate on the institute's loans is low compared with other mortgage lenders (graph 49).

Infonavit financing sources consist of worker contributions, amortizations of previously granted loans, and portfolio securitization. Consequently, the availability of the institute's funds is tightly related to the economic cycle. As of June 2011, 34.2 percent of financing came from workers' contributions (graph 50a). Employment growth[55] and new loan portfolio securitizations have contributed to funding new loans (graph 50b).

[55] The number of IMSS-affiliated workers increased by 4.2 percent as of June 2011 vs. the year-ago period. The number of Infonavit-affiliated workers grew by 4.9 percent in the same period.

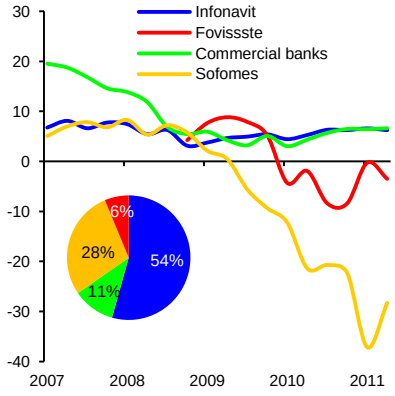
Graph 49
Market development indicators

a) Mortgage loans by originator



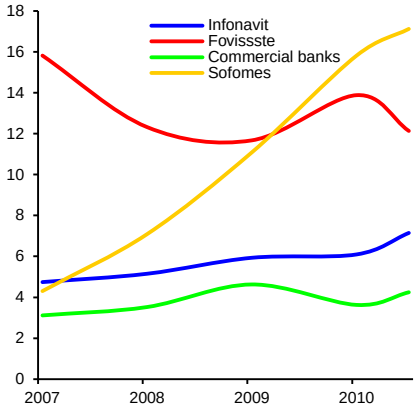
Figures as of June 2011.
Source: Conavi.

b) Real YoY growth in the mortgage portfolio 3/



Figures as of June 2011.
Source: AMFE and Banco de México.

c) Mortgage loans delinquency rate



Figures as of June 2011.
Source: CNBV, Infonavit, Fovissste and AMFE.

1/ Includes: Conavi, Fonhapo and the SHF.
2/ Includes: Banjército, Pemex, CFE, Habitat, Issfam and state housing entities (orevis).
3/ Includes only the portfolio in each institution's balance.

As of June 2011, Infonavit's past-due loan portfolio increased by 10.6 percent in real terms compared with the year-earlier period, and the delinquency rate hit 7.2 percent. However, when considering past-due loans along with loans with payment extensions[56] and written-off loans[57] as a percentage of the total loan portfolio plus written-off loans, there is a marginal decrease compared to the previous year; as of June this year this indicator was 12.6 percent compared to 13.3 percent a year ago (graph 50c). This can be attributed mainly to a large decrease in loans with payment extensions (15.1 percent year-over-year in real terms).

Infonavit has increased loan-loss provisions in order to cover diverse accumulated credit risks. As of June, the reserve balance[58] was 122 billion pesos, an increase of 9.7 percent in real terms with respect to the year-earlier period, yielding a past-due loan coverage ratio of 226.4 percent.

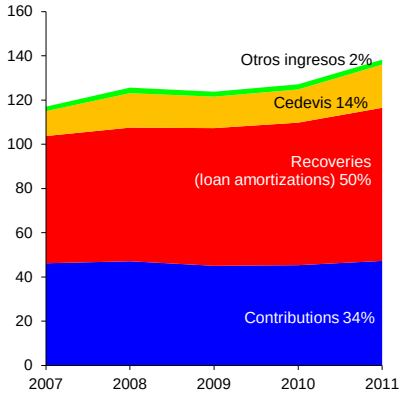
[56] Loan payment extensions represent the balance of performing loans of workers who have lost their jobs and been given a payment extension in accordance with article 41 of the Infonavit Law. Payment extensions may not exceed 12 months each or 24 months combined.

[57] With the prior authorization of the Board of Directors at the Audit Committee's proposal, uncollectable loans are written off by charging loan-loss reserves once it has been decided that their recovery is practically impossible. Likewise, when borrowers are no longer employed and have gone through the "social collection" process, the unpaid balance of such loans is cancelled by charging it to loan-loss reserves, and the amount is recognized in suspense accounts in the category "totally or 100 percent reserved loans." These loans do in fact correspond to written-off loans, and are therefore included in the calculation of the adjusted delinquency rate (B) of graph 50c.

[58] The calculation of loan-loss reserves is implemented in accordance with "General Provisions applicable to Banks' Loan Portfolio Rating Methodology" issued by the CNBV.

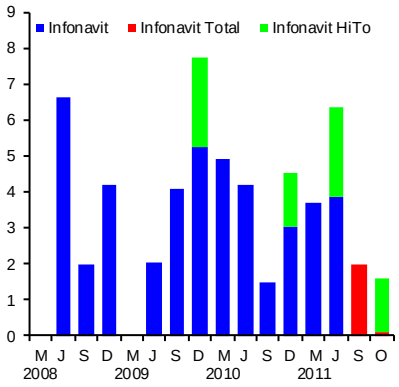
Graph 50
Sources of Infonavit funds

a) Source of Infonavit funds



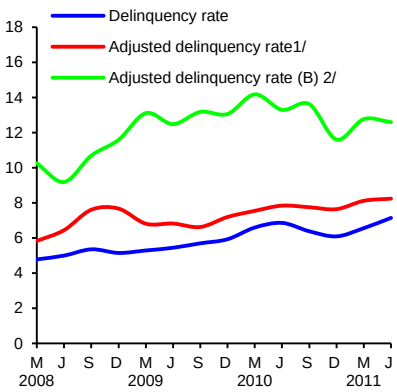
Figures as of June 2011.
Source: Infonavit.

b) Infonavit mortgage-backed securities issuances



Figures as of June 2011.
Source: Infonavit.

c) Loan portfolio risk indicators



Figures as of June 2011.
Source: Infonavit.

1/ The adjusted delinquency rate is the sum of past-due loans, the accumulated flow of written-off loans in the last four quarters, and percent reserved loans divided by total loans plus the accumulated flow of written-off loans and percent reserved loans in the last four quarters.
2/ The adjusted delinquency rate (B) is the sum of past-due loans, the accumulated flow over the last four quarters of written-off loans, of percent reserved loans and loan payment extensions divided by total loans plus the accumulated flow over the last four quarters of written-off loans and percent reserved loans.

In 2011 Infonavit undertook two mortgage-backed securitizations (cedevis). Mortgages originated under the shared financing scheme with commercial banks (offered for the first time in 2008) can be securitized jointly; in July 2011 the first issuance of this type for 2 billion pesos took place.[59] There is strong demand for Infonavit and Fovissste issuances because they are considered low risk; coupons are below those of bonds with similar characteristics, and the protection level of the issuances, measured as a percentage of the amount of the securitized loan portfolio issued, is still far higher than has been the case for the mortgage-back securitizations of mortgage sofomes (graph 51). Siefores are the main investors in such instruments (graph 52a).

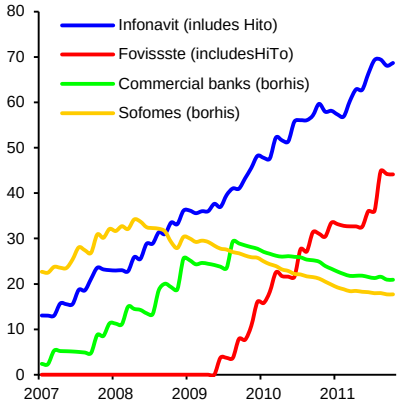
[59] Portfolio securitization has been facilitated by joint transactions with HiTo, which promotes the development of the mortgage loan financing system based on the Danish model with three objectives: (i) to provide intermediaries with an efficient and stable source of risk-free mortgage financing; (ii) to create a standard, transparent, solid and liquid instrument for investors; and (iii) to provide investors and the final borrower with the benefits of the HiTo model. HiTo securitizations also have the following advantages: they permit larger issuances through bond re-openings, and they permit transactions that provide certainty about the market value of securities through repurchases of securities issued at a discount for the benefit of borrowers and investors. This process ultimately provides investors with additional protection, as the financial intermediary subordinates his return to all of his market issuances with enough capital and reserves to meet their obligations.

As of the end of August 2011, HiTo had undertaken securitizations of Infonavit mortgage-backed loans amounting to 6.5 billion pesos.

Graph 51
Mortgage-backed securitizations

a) Outstanding mortgage-backed securities

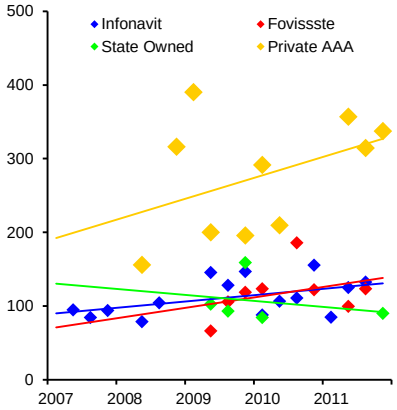
Billion pesos as of December 2010



Figures as of October 2011.
Source: Banco de México and Valmer.

b) Exit coupon rate less the adjusted Udibono return to maturity

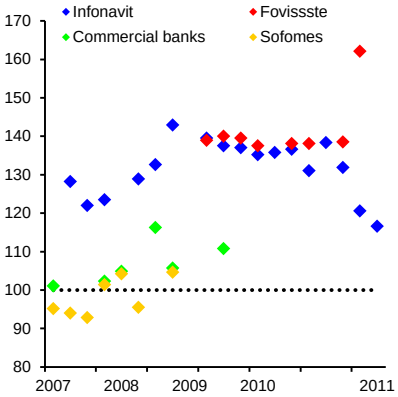
Basis points



Figures as of October 2011.
Source: Banco de México.

c) Securitized portfolio as a percentage of the amount placed

Percentage

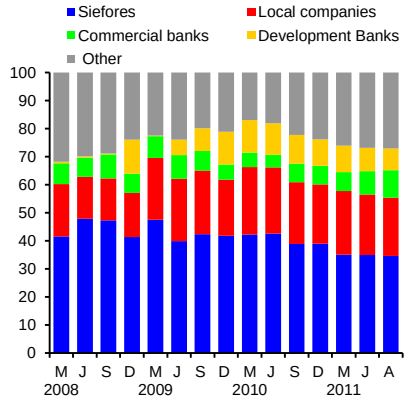


Figures as of October 2011.
Source: BMV.

Graph 52
Holders of mortgage-backed securities

a) Infonavit and Fovissste

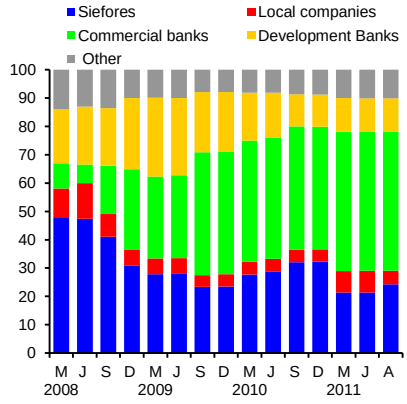
Percentage outstanding



Figures as of August 2011.
Source: Banco de México.

b) Commercial banks

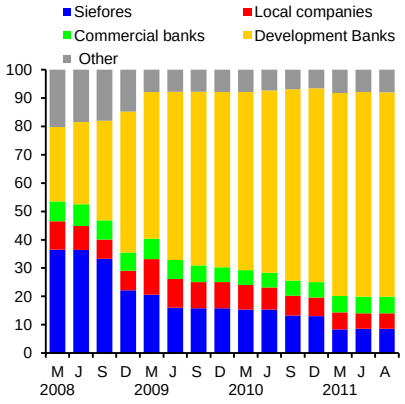
Percentage outstanding



Figures as of August 2011.
Source: Banco de México.

c) Mortgage Sofomes

Percentage outstanding



Figures as of August 2011.
Source: Banco de México.

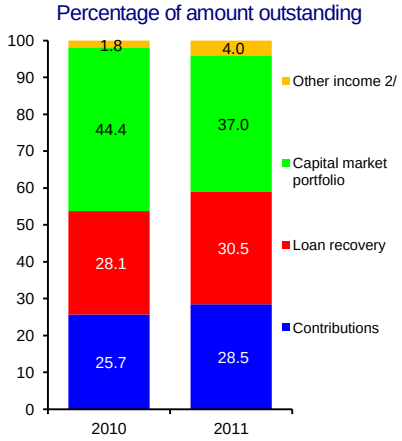
3.8. Fovissste

The number of Fovissste loans decreased by 15.8 percent in the first half of the year compared to the year-earlier period, and by 3.5 percent in real terms, due to the implementation of new process-control measures, including electronic appraisal and file reviews.

In 2010, Fovissste modified its loan schemes in order to increase its financial capacity through loan extension collaboration agreements with banks. Likewise, there was an improvement in the differentiation of diverse income brackets.[60] Like Infonavit, Fovissste has managed to place mortgage-backed securitizations to fund the extension of new loans. Its issuances have a high degree of protection, as securitized loans account for a large percentage of the amount issued. Furthermore, the use of a collection model similar to Infonavit's means the borrower's willingness to pay has a limited impact on the credit risk of the mortgages.[61]

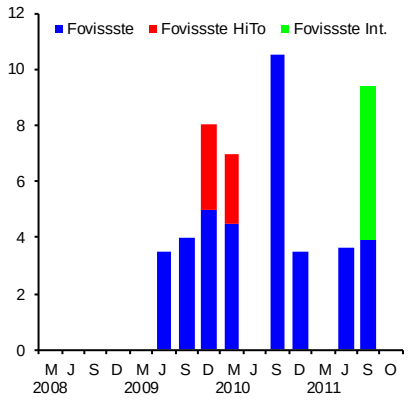
Graph 53
Sources and uses of Fovissste funds

a) Sources of Fovissste funds[1/]



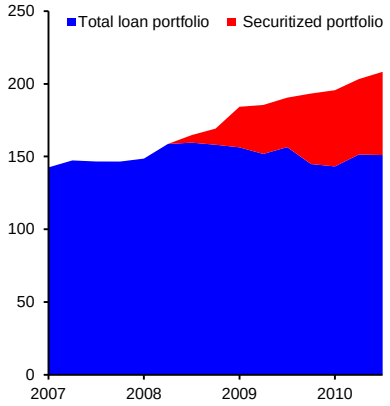
Figures as of December each year.
Source: Official Federal Gazette and Fovissste.

b) Fovissste mortgage-backed security placements



Figures as of October 2011.
Source: Banco de México.

c) Fovissste mortgage loan portfolio



Figures as of June 2011.
Source: BMV and Banco de México.

1/ Refers to the financing scheme established in the Housing Fund's Annual Financing Program approved by its Board of Directors and published in the Official Federal Gazette at the end of the immediately preceding corresponding year.
2/ Includes: interest on investments, initial availability and others.

In August 2011, Fovissste undertook its first international mortgage-backed certificates placement (TFOVIS), managing to place 5.5 billion pesos. Thus, at the end of the first half of 2011, Fovissste's total securitized portfolio represented 27.5 percent of its total loan portfolio (graphs 53b y c).

[60] In 2010 the program "Alia2+" was put in place, which consists of Fovissste increasing in 250,000 pesos on average its contribution to the total amount of an "Alia2" loan. The loan is complemented with additional funds from other financial intermediaries (banks and/or mortgage sofomes); the interest rate is fixed during the term of the loan. Fovissste negotiates a lower-than-market rate for such loans in exchange for providing collection services currently provided by lenders in the co-financing scheme.

[61] Similarly to Infonavit, the collection of the Fovissste loan portfolio is direct, consisting of an automatic payroll debit, which reduces risks but does not eliminate them, as the worker could lose his job.

3.9. Sofoles y sofomes

Sofoles and sofomes are financial entities that specialize in granting financing to diverse sectors of the economy. Unlike banks, they may not accept deposits from the general public, and so their prudential oversight and regulatory regime differs from that of commercial banks.[62]

The amount of assets registered in the unregulated sofomes sector[63] illustrates the importance of these institutions to the overall sofome sector (table 9) and to the Mexican financial system as a whole (table 4). While their loan portfolios have been decreasing (graph 54a) (-15.4 percent in June 2011 with respect to the year-earlier period), it is important to follow this sector's trends because of its capacity to contribute to household and corporate leverage, high delinquency rates, and also given difficulties obtaining information on the sector and the possibility of local and foreign-regulated financial entities using the sofomes to undertake regulatory arbitrage.[64]

Although the activity of unregulated sofomes was significantly reduced by the 2008 financial crisis, they continued to grow in number. As of June 2011, the number of unregulated sofomes officially registered with the Condusef was 2,843, compared with 1,622 for the year-earlier month.[65] Sofomes can be divided into mortgage and non-mortgage sofomes.[66] Although most of the increase in the number of intermediaries comes from the non-mortgage sector, the number of mortgage sofomes has doubled over the last year.

[62] Sofoles are financial entities authorized by the SHCP which from their beginnings have been subject to CNBV oversight. On July 18, 2013, the amendment repealing section IV of article 103 of the Credit Institutions Law will come into effect pursuant to the decree published in the Official Federal Gazette on July 18, 2006 (provisional article 5), and authorizations granted by the SHCP will become ineffective unless the non-bank-lending financial institution model is adopted. As of that date sofoles may become sofomes or be dissolved.

Sofomes are corporations whose objective is also to grant credit, but whose bylaws also include leasing or financial factoring operations. They have never been subject to this regulation except for those with patrimonial links with financial-group-controlling companies or with banks. Unregulated sofomes are called sofom ENR and regulated ones sofom ER. Some banks created sofomes in order to manage business units that were previously part of the bank, such as credit cards, for example. This section's analysis does not include information on sofomes which, because they are subsidiaries, consolidate financial information with the bank (Tarjetas Banamex, Servicios Financieros Soriana, Santander Consumo, Santander Hipotecario, Ixe Tarjetas, and Sociedad Financiera Inbursa).

[63] Financial information corresponding to unregulated sofomes is limited. This section is based on financial information from sofoles, regulated sofomes and unregulated sofomes that are members of the Mexican Association of Specialized Financial Entities (AMFE).

[64] As of June, 2011 there were at least seven unregulated sofomes affiliated to foreign financial institutions (BNP Paribas Personal Finance, BNP Paribas, Crédit Agricole CIB México, Crédito Inmobiliario, Dexia Crédito Local México, ING Hipotecaria). These sofomes have a combined local market debt of 10.5 billion pesos.

[65] As of October 2011, there were 3,400 registered institutions, many of which may not be operational due to a lack of financing.

[66] Non-mortgage sofomes include those specializing in auto, corporate, consumer, agro-industrial and micro loans.

Table 9
Market structure of sofoles and sofomes
Number of intermediaries and assets in billions of pesos[1/]

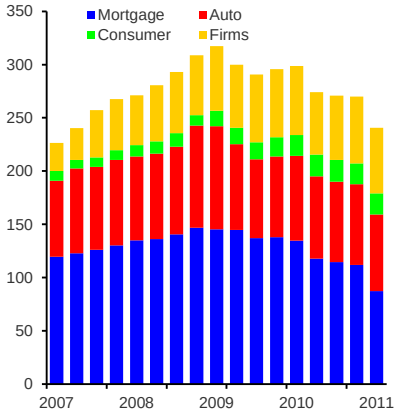
	Mortgage		Non-mortgages		Total
	AMFE[3/]	No AMFE	AMFE[3/]	No AMFE	
Sofoles	5 (27.8)	0 (0.0)	10 (24.0)	4 (13.0)	19 (64.9)
Regulated Sofomes [2/]	2 (6.2)	0 (0.0)	3 (9.1)	17 (29.0)	22 (44.3)
Non regulated Sofomes	12 (79.9)	4 (n.d.)	41 (140.6)	3,343 (n.d.)	3,400 (220.5)
Total	**19 (113.9)**	**4 (n.d.)**	**54 (173.7)**	**3,364 (42.0)**	**3,441 (329.7)**

The number of sofoles and sofomes refers to those authorized as of October 2011 although some of them are not operational. Assets correspond to June 2011, with the exception of AMFE affiliates, which correspond to April 2011.
Source: CNBV, Condusef and AMFE.
1/ The numbers in brackets refer to the value of the assets, and the numbers outside the brackets to the number of intermediaries.
2/ Does not include information corresponding to the 6 regulated sofomes that consolidate their financial information with commercial banks. As of June 2011, the assets of such sofomes amounted to 143.9 billion pesos and their information is presented along with that of commercial banks.
3/ Although the AMFE had 76 members, only members that reported financial information in April 2011 are included.

Mortgage sofoles and sofomes represented 34.5 percent of the sector in terms of total assets as of April 2011. Within the mortgage sector, unregulated sofomes are the most important in terms of assets. These entities specialize in granting individual loans focused on entry-level housing as well as loans to homebuilders. Up until the 2008 crisis, unregulated sofomes had access to a wide variety of sources of financing, which included bank loans, short- and long-term security issuances, and securitizations of bridge loans and individual mortgages. However, since the crisis, investor appetite for risk related to these financial intermediaries has gradually decreased. The deterioration in their assets, an unfavorable economic environment for the homebuilding sector and solvency issues faced by some of the largest mortgage sofomes led to these entities losing access to almost all sources of private funding. The SHF has remained the main source of financing for these intermediaries, either directly or through loan guarantees or security issuances. This guarantee has enabled them to tap funding in attractive market conditions (graph 54b).

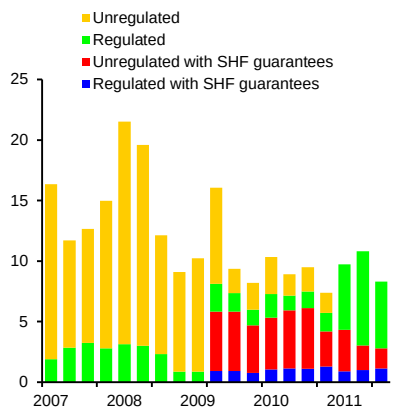
Graph 54
Credit granted and funding received by sofomes

a) Loan portfolio[1/]



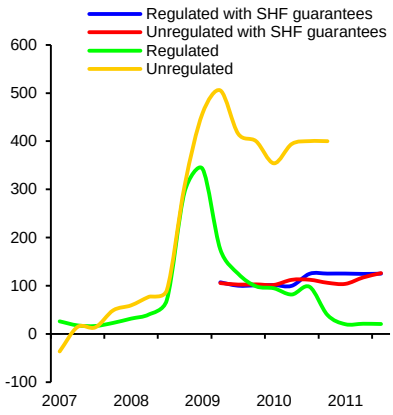
Figures as of April 2011.
Source: AMFE.

b) Securities issuance



Figures as of September 2011.
Source: Banco de México.

c) Spread between the short-term debt issuance rate and TIIE[2/]



Figures as of September 2011.
Source: Banco de México.

1/ The corporate sector encompasses companies specializing in the agro-industrial and micro-loan sectors.
2/ Issuances of regulated sofomes that do not use SHF guarantees have better credit ratings than those of sofoles that do use them. This would explain why the former obtain better funding conditions than the latter.

In order to encourage improved risk management practices that contribute to strengthening the financial position of mortgage sofomes, the SHF requires that companies that request funds or guarantees be subject to capitalization rules, an early warning scheme based on their capitalization level, and stricter loan-loss provision rules.[67]

Mortgage sofomes have the highest delinquency rates (graph 55b), followed by consumer loan sofomes. The mortgage sofom sector is undergoing a transformation process consisting of capital injections, mergers and liquidations.[68]

Although the construction sector has experienced something of a recovery, mortgage sofomes continue to face major challenges. On the one hand banks are paying more attention to some sofom market niches such as entry-level and middle-income mortgage financing and financing for homebuilders under better terms and conditions.[69] On the other, mortgage sofom delinquency rates have increased considerably.

[67] In the early warning model, the SHF establishes that if the loan portfolio's delinquency rate is greater than 10 percent, a coverage index of at least 60 percent of the loan portfolio must be maintained. The loan-loss and capitalization model contemplates substituting the SHF's current methodology with the one that came into effect in March 2011. One of the implications of this change is that sofomes will have to create additional reserves for medium- and high-risk projects.

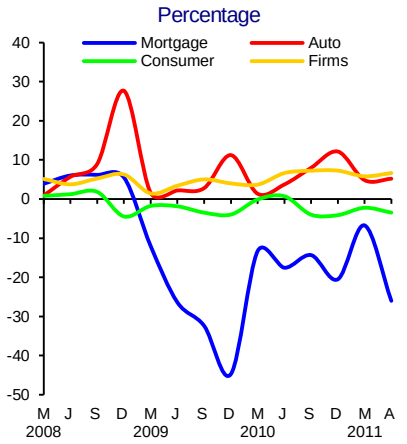
[68] Metrofinanciera, the second-largest mortgage sofom in 2008, managed to restructure its debt with borrowers and after an inactive period resumed operations in May 2011. ING, Vértice and Crédito Inmobiliario were also capitalized. Casa Mexicana merged with Apoyo Integral and Fincasa; IXE merged with Banorte. Furthermore, the sofom ABC Capital acquired Banco Amigo, thus maintaining authorization to operate as a bank and gaining the advantages that come with being able to tap funding sources available to banks, such as deposits, in exchange for being subject to prudential banking regulation.

[69] Examples of these programs are Infonavit Total and Total AG, which try to boost credit capacity through a scheme in which the credit comprises an Infonavit loan, the borrower's housing subaccount balance, and financing from a commercial bank. Please refer to the sections on Infonavit and Fovissste.

A scenario of slower growth in Mexico would have negative implications for other unregulated sofomes, in particular those that grant auto and consumer loans. Furthermore, sofomes specializing in corporate loans display adequate profitability and solvency levels, and so the number of intermediaries specializing in this niche will likely continue to increase (graph 55).

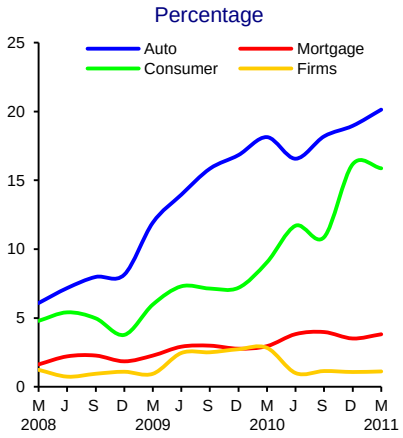
Graph 55
Profitability of sofomes

a) Return on total assets



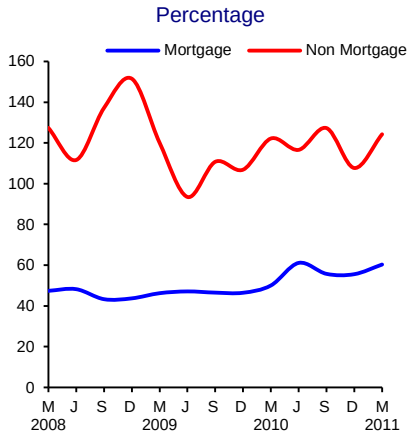
Figures as of April 2011.
Source: AMFE.
1/ Past-due loans as a percentage of total loans.

b) Delinquency rates



Figures as of April 2011.
Source: AMFE.

c) Coverage ratio[1/]



Figures as of April 2011.
Source: AMFE.

4. Financial markets

4.1. Capital market

Ample international liquidity in the second half of 2010 and the first nine months of 2011 meant the public and private sectors were able to maintain their access to international markets under relatively favorable conditions. However, the E.U. sovereign debt crisis and problems related to the negotiation of the U.S. debt ceiling, as well as the downgrading of U.S. debt, had a contagion effect on international financial markets, including Mexico.

Debt market

The relative stability of Mexico's financial markets as of the end of 2009 helped both the Federal Government and the Bank Deposit Insurance Institute (IPAB), resume quarterly debt placement patterns they had maintained prior to the outbreak of the 2008 global financial crisis. In the case of the Federal Government, longer-term instruments, bonds and government inflation-protected bonds (Udibonos) have increased their relative weight of total debt, reducing dependency on short-term instruments (graph 56a).[70] Likewise, turnover in the secondary debt market has increased, but is still below levels observed prior to 2008 (graph 56b). The syndicated placement scheme continued to be used as part of the Federal Government's strategy for maintaining a long-term debt profile and strengthening the liquidity and depth of the Mexican market (table 10). In the case of IPAB, the average maturity of debt issuances has increased from a per-amount-weighted average of 1,689 days in December 2008 to 1,894 days in September 2011, surpassing pre-crisis levels (graph 56c).

Table 10
Syndicated placement of bonds and Udibonos

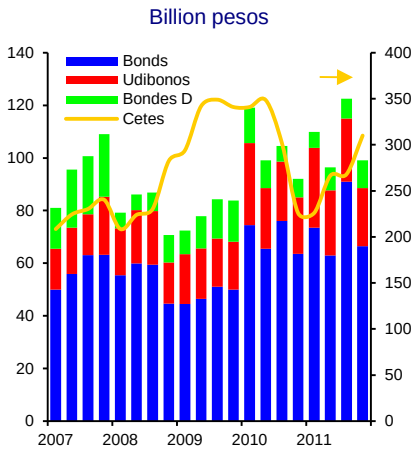
Date	Instrument	Maturity	Amount assigned	Excess demand	Placement rate
			Bonds: millions of pesos Udibonos: millions of udis	Times the amount assigned	Percentage
feb-10	10 yr bond	jun-20	25,000	2.95	7.66
mar-10	30 yr udibono	nov-40	3,500	3.50	4.27
jul-10	5 yr bond	jun-15	25,000	2.20	6.13
feb-11	10 yr bond	jun-21	25,000	2.50	7.44
mar-11	10 yr udibono	dec-20	3,500	2.70	3.50
jul-11	5 yr bond	jun-16	25,000	2.50	6.00
sep-11	20 yr bond	may-31	25,000	1.26	7.11

Figures as of October 2011.
Source: Banco de México.

[70] As a result of the 2008 financial crisis, the average maturity of Mexican government securities stopped increasing, instead decreasing from 6.4 years as of October 2008 to 6.1 years in December 2009. As of 2010, maturity recovered its upward trend, reaching 7.4 years in September 2011.

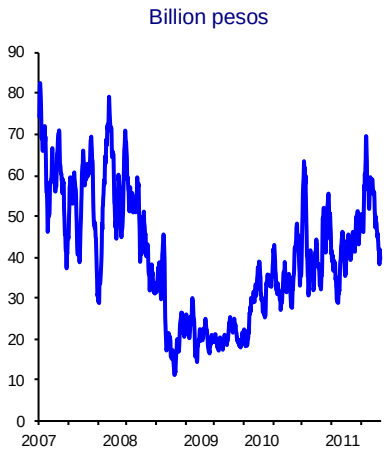
Graph 56
Placement and liquidity of public-sector debt

a) Federal Government debt placements in pesos[1/]



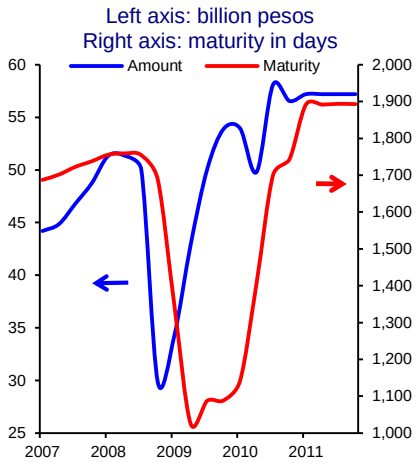
Figures observed as of September 2011 and projected for the year-end based on the fourth-quarter placement announcement.
Source: Banco de México.
1/ Includes syndicated placements.
2/ 10-day moving average.

b) Direct turnover of bonds[2/]



Figures as of October 2011.
Source: Banco de México.

c) IPAB debt placements in pesos



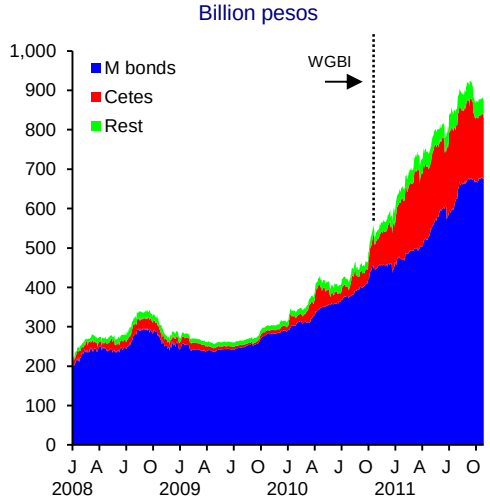
Figures observed as of September 2011 and projected for the year-end based on the fourth-quarter placement announcement.
Source: Banco de México.

In this context, the increase in foreign investors' government security holdings (graph 57a), mainly fixed-rate long-term peso-denominated instruments (bonds), is noteworthy. This increase stems from the Mexican economy's strong fundamentals, the positive spread between interest rates in pesos and dollars, and the expectation that most developed economies will maintain loose monetary conditions for an extended period.

The development of Mexican financial markets in recent years has given international investors access to more attractive conditions in terms of liquidity and depth for trading than those prevailing in the debt markets of other emerging economies. As a result, holdings of Federal Treasury Certificates (Cetes) by foreign investors have continued to increase. Furthermore, in October 2010, M-bonds were included in diverse benchmarks, such as Citigroup's "*World Government Bond Index* (WGBI)," which resulted in more foreign investors including them in their portfolios. Thus, as of October 2011, foreign investor holdings of broad government securities accounted for 19 percent of total such securities outstanding. These investors continue to show strong appetite for M-bonds, with more than 41 percent of the total amount outstanding as of October 2011 (graph 57b).

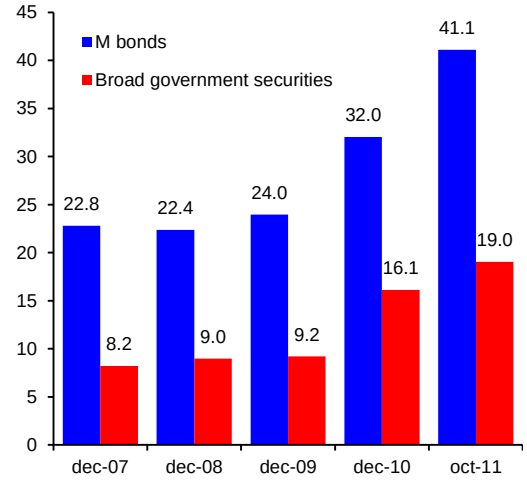
Graph 57
Government securities held by foreign investors

a) Holdings of broad government securities[1/]



Figures as of October 2011.
Source: Banco de México.
1/ Securities issued by the Federal Government and by IPAB.

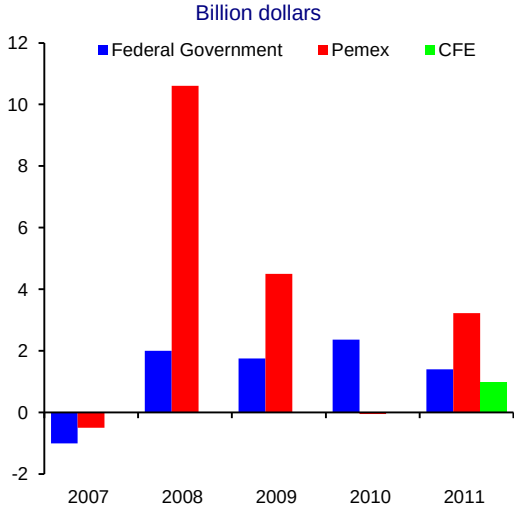
b) Holdings of broad government securities [1/]



Figures as of October 2011.
Source: Banco de México.

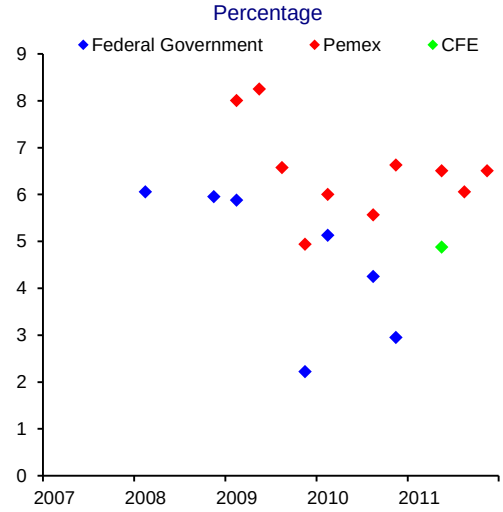
Graph 58
Public sector debt placements abroad by issuer

a) Net public-sector placements abroad



Figures as of October 2011.
Source: Banco de México.
1/ Includes issuances in dollars, euros, Swiss francs, and yen.

b) Coupon rates of securities placed[1/]



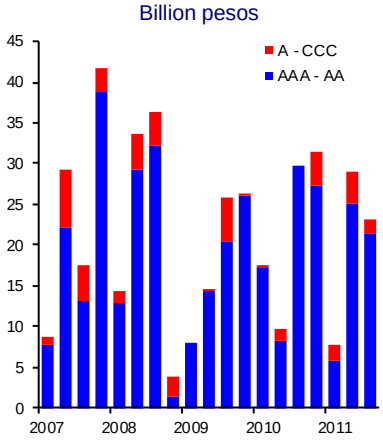
Figures as of October 2011.
Source: Bloomberg.

The public sector took advantage of favorable liquidity conditions at attractive rates to continue tapping international markets. As of the second half of 2010, net placements amounted to 10 billion dollars. Pemex undertook two perpetuity bond placements, and the Federal Government undertook a 100-year placement. The Federal Electricity Commission issued dollar-denominated securities in foreign markets for the first time since 2006 (graph 58).

The momentum displayed by private-sector long-term issuances in the local market during the first half of the year (real annual growth of 41.9 percent compared to the 2010 period) eased in the third quarter. For the first nine months of 2011, placements grew 5.6 percent in real terms compared to the year-earlier period. Access to long-term financing through stock certificates (certificados bursátiles) has been limited to issuers with the highest credit ratings (AAA and AA) (graph 59a). Less activity in long-term issuances during the third quarter was reflected in a strong increase in the placement of short-term securities. As in the case of the Federal Government, Mexican corporate issuers resorted to external markets in search of funding, taking advantage of good liquidity conditions (graph 59b). The spread between interest rates on long-term securities and their benchmark rates has been largely maintained since 2009, when they increased strongly during the crisis (graph 59c).

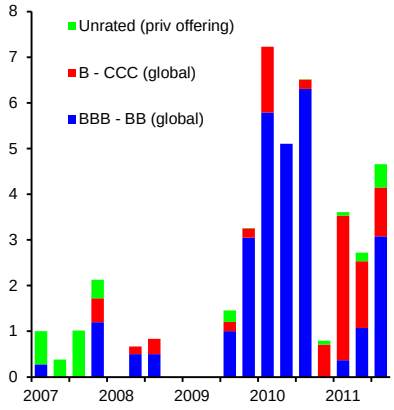
Graph 59
Placement of long-term private securities in the domestic market and abroad[1/]

a) Quarterly domestic market placements by credit rating



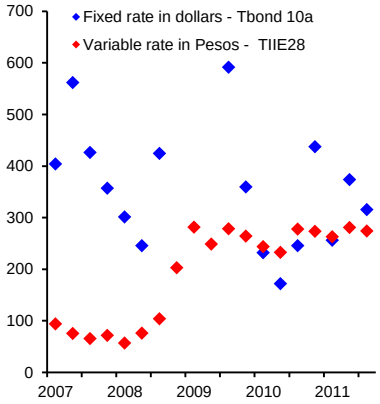
Figures as of September 2011.
Source: Banco de México.

b) Annual placements abroad by credit rating



Figures as of September 2011.
Source: Bloomberg.

c) Securities' interest rate and benchmark rate spread



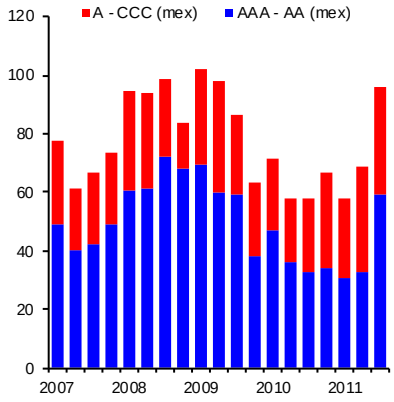
Figures as of September 2011.
Source: Banco de México and Bloomberg.

1/ Long term refers to instruments with a maturity of more than one year.

With respect to short-term issuances, there was a strong increase in the amount placed during the third quarter of the year, especially in the case of the better-rated issuers (graph 60a). Placements by issuers rated below AA have grown steadily since the last quarter of 2010, and funding conditions have finally recovered levels observed before the 2008 financial crisis; the cost of funding for higher-rate issuances began to recover as of mid-2009 (graph 60b). Meanwhile, demand as a percentage of the amount placed also recovered for the higher-rated securities (graph 60c).

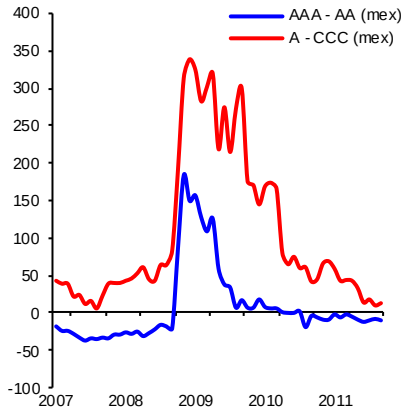
Graph 60
Short-term private securities placement in the domestic market

a) Quarterly placement of stock certificates



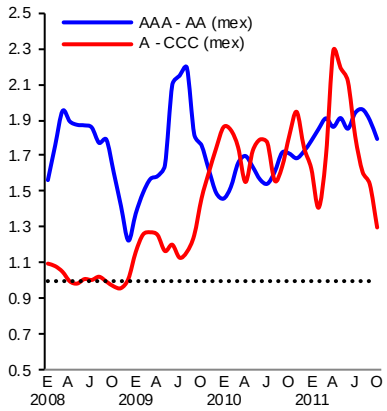
Figures as of September 2011.
Source: Banco de México.

b) Interest rates vs. TIIE spread



Figures as of September 2011.
Source: Banco de México.

c) Amount bid on the issuance date as a percentage of the amount placed



Figures as of September 2011.
Source: Banco de México.

Finally, security placements by states did not manage to recover pre-crisis levels, and along with municipalities they have resorted to bank loans. Problems in some states owing to excessive indebtedness as well as credit-rating downgrades for several of them should pose an obstacle to new issuances (table 11).

Table 11
States' unsecured debt ratings

States	S&P		Moodys		Fitch Ratings		HR Ratings	
	sep-11	sep-10	sep-11	sep-10	sep-11	sep-10	sep-11	sep-10
Aguascalientes	AA	AA			AA-	AA		
Baja California	AA-	AA-	AA+	AA+				
Baja California Sur	BBB+	BBB+			A-	A-		
Campeche	A+	A+			A+	A+		
Chiapas1/		A	A+	A+	A	A		
Chihuahua1/			AA-	AA-	A+	AA-	AA-	n.d.
Coahuila	BBB-	AA-			BBB-	AA		
Colima		BBB	A+	A+	A	A	A	A
Distrito Federal1/			AAA	AAA	AAA	AAA		
Durango			A+	A+	BBB+	A-		
Guanajuato	AA	AA	AA+	AA+				
Guerrero	BBB+	BBB+	A	A	BBB+	BBB+		
Hidalgo1/	A	A	A	A	A	A		
Jalisco					A+	A+	A+	A+
México	A-	A-	A	A	A-	A-		
Michoacán1/	BBB+	BBB+	A	A	BBB	BBB+	A-	n.d.
Morelos			A	A	A	A		
Nayarit		BBB+	A	A+	BBB+	A-	BBB+	n.d.
Nuevo León1/	A	A	A+	A+	A-	A	A	A+
Oaxaca1/	A-	A-	A	A	A-	A-		
Puebla1/		A+	AA-	AA-	A+	A+		
Querétaro	AA	AA	AA+	AA+	AA	AA		
Quintana Roo			A	A+	A-	A		
San Luis Potosí	BBB	BBB	A-	A-			A-	A-
Sinaloa	A	A	A	A	A+	A+		
Sonora	BB	BB	A+	A+	A	A	A+	n.d.
Tabasco			A+	A+	A	A		
Tamaulipas	AA	AA	AA-	AA-	AA-	AA-		
Tlaxcala	BBB+	A-	AA-	AA-				
Veracruz1/			A-	A-	BBB-	BBB	BBB+	A-
Yucatán				A	A	A	A	A
Zacatecas	BB+	BB+	BBB-	BBB-				
Median	**A**	**A**	**A+**	**A+**	**A**	**A**	**A**	**A**

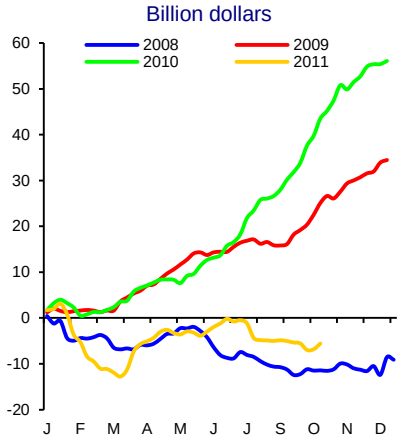
Figures as of September 2011.
Source: Fitch, Moodys, S&P, and HR Ratings.
1/ States that have issued debt as of September 2011.

Equities

Stock market indexes have reflected the environment of uncertainty derived from the E.U. sovereign debt crisis and slower rate of global economic growth. During the first half of 2011, most stock indexes returned to pre-2008 crisis levels (graph 61b). However, as of last July they retraced again, and Mexico has been no exception. While the Mexican Stock Exchange's Índice de Precios y Cotizaciones (IPC) closed 2010 with a gain of 20 percent for the year, outperforming the main U.S. stock markets, for the first nine months of 2011, it had lost 13.1 percent. Likewise, foreign investment flows were negative in the first nine months of 2011, as was the case in 2008 (graph 61c).

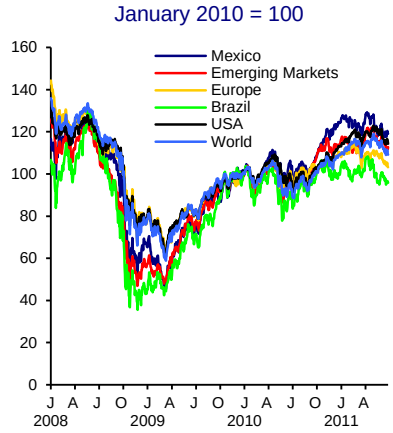
Graph 61
Investment flows and stock market performance

a) Dedicated flows into emerging-market equities



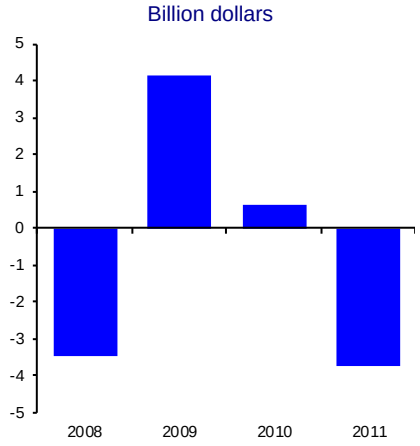
Figures as of October 2011.
Source: Emerging Portfolio.

b) MSCI stock indexes



Figures as of October 2011.
Source: Bloomberg.

c) Foreign investment in the Mexican stock market



Figures as of September 2011.
Source: Banco de México.

In 2010, five new stocks belonging to different sectors of the economy were listed, as well as two more during the first nine months of 2011. This was in contrast to 2009, when there were no new listings (graph 62a). Other factors that have driven the development of the stock market are Consar modifications to the Siefores' investment regime, which raised the cap on the percentage invested in equities, as well as more flexibility for individual stock investments. Furthermore, more modern infrastructure for making such investments (RINO) has also facilitated the development of the stock market.[71]

During the first half of 2011, there was a strong increase in Development Capital Certificates (DCC) issuances to 4.73 billion pesos, or an increase of 224

[71] In recent years, the financial authorities, financial intermediaries and the stock market have made a coordinated effort to optimize the operation of the Mexican market to reflect international trends and client needs. Consequently, in September 2010, reforms were made to BMV internal operating regulations, called project RINO (Integral Reform of Operating Standards). RINO optimizes transactions, permits new types of bids, improves extant bids, creates the concept of transaction desk official for the supervision of instructions, and grants direct access to the market such that orders are executed instantly, permitting high-frequency algorithmic operations. Additional reforms are expected to take place at the end of 2011 and mid-2012 to simplify transactions and add more bids such as closed-book bids in order to make things easier for institutional investors.

percent compared with the same period in 2010 (graph 62b). However, the recent economic slowdown affected these instruments, and so no further issuances took place until October 2011, consisting of two issuances amounting to 1.1 billion pesos in all. The main investors in this market are those with long-term investment horizons such as Siefores. Furthermore, in March 2011, the first issuance by a real estate trust (fibra) took place, amounting to 3.615 billion pesos (table 12). This instrument offers investors both revenue flows from leases on real estate it finances and surplus capital derived from real estate appreciation.

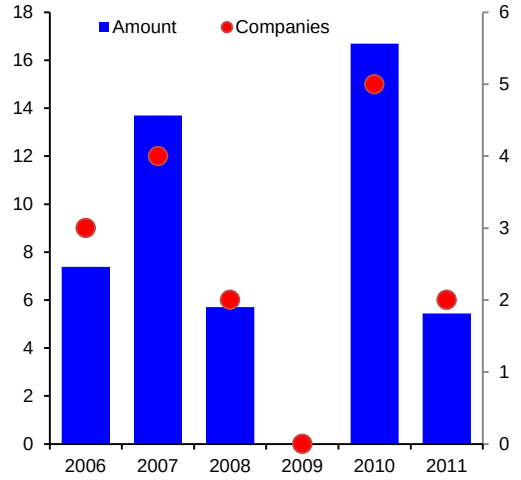
Table 12
Real estate trusts (fibras)

Definition:	Real estate investment trust pursuant to articles 223 and 224 of ITL
Purpose:	Fosters real estate investment by acquiring or building real estate for subsequent lease
Characteristics:	- Must be set up in Mexico and the institution authorized to run the trust must be resident in Mexico - Its main aim is to acquire or build real estate for lease, or to acquire the right to earn income from the lease of real estate. - 70 percent of the trust's assets must be invested in real estate. - The real estate built or acquired is for lease. - Issuance and placement of participation certificates for the assets that make up the trust's patrimony. - Distribution of at least 95% of the taxable income generated by the trust's assets.
Aimed at:	Pension and retirement funds.
Benefits:	Income tax exemption.
Example:	Fibra Uno Administración, S.A. de C.V. First public offering, March 2011.

Source: BMV.

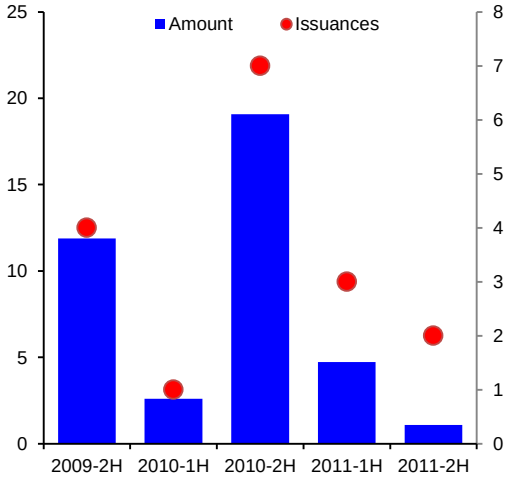
Graph 62
BMV placements

a) Initial public offerings, number of companies and amount
Left axis: billion pesos
Right axis: number



Figures as of October 2011.
Source: Bloomberg.

b) Issuances of Development Capital Certificates (DCC)
Left axis: billion pesos
Right axis: number



Figures as of October 2011.
Source: Indeval.

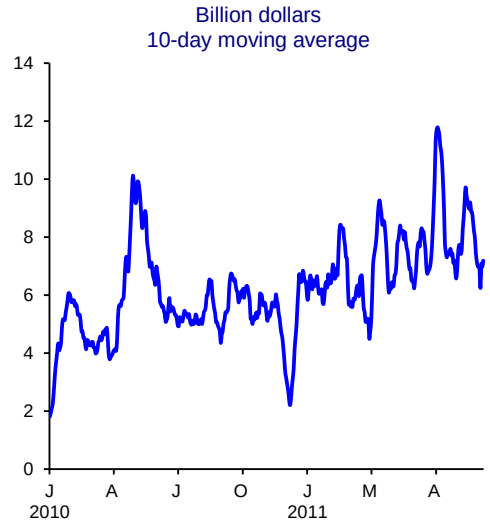
4.2. Foreign exchange market

In the second half of 2010 and until July 2011, the peso continued to appreciate against the dollar. However, during the third quarter of 2011, the slowdown of the U.S. economy and its high correlation with the Mexican economy generated stronger volatility in financial markets, pushing the peso weaker, to levels not seen since March 2009. However, the floating currency regime in place since 1994 has played a key role in developing and deepening the foreign exchange market. The few interventions Banco de México has been forced to make have always taken place in conditions of transparency for market participants, with the sole objective of achieving orderly market functioning. As a result, the peso has become one of the few emerging-market currencies to trade for 24 hours a day, making it very liquid. The peso is also the world's 13th most traded currency. Interbank market buy-sell spreads are comparable to those observed for the world's core currencies, namely, the dollar, yen, euro and pound sterling. Therefore, despite strong volatility in international markets, both the foreign exchange trading volume and buy-and-sell exchange rate spreads have been maintained (graph 63).

Foreign exchange market trading volumes reflected in the BIS's most recent triennial survey indicate that the peso remains one of the most traded emerging currencies in both the spot and swaps-and-forwards markets (graph 64).

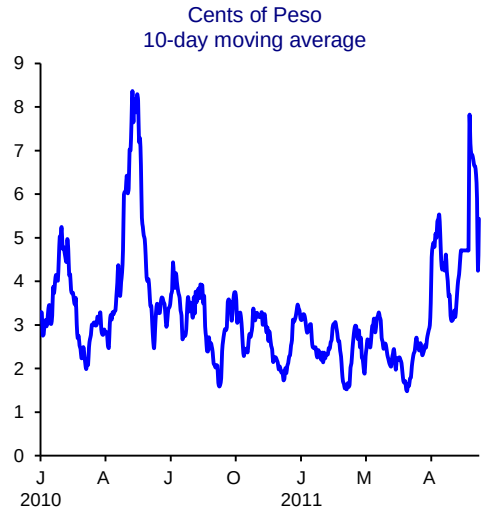
Graph 63
Exchange rate

a) Spot market turnover



Figures as of October 2011.
Source: Reuters and Banco de México.

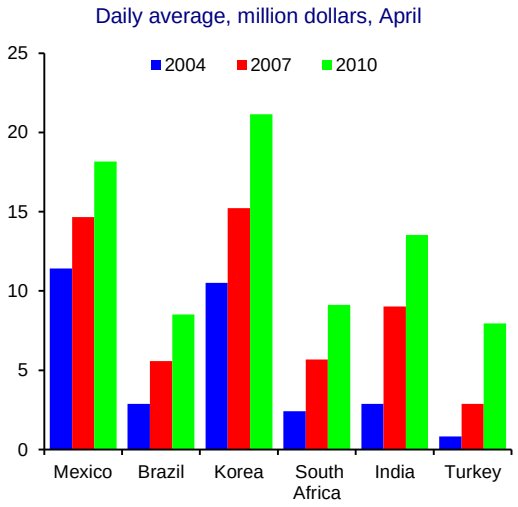
b) Difference between exchange rate highs and lows



Figures as of October 2011.
Source: Reuters and Banco de México.

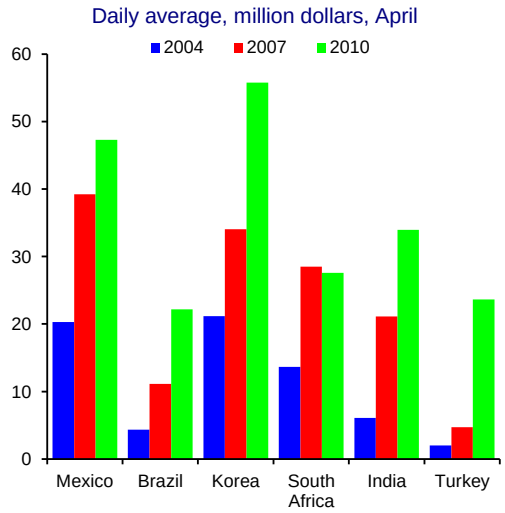
Graph 64
Turnover of selected emerging-market currencies

a) Total spot market turnover



Figures as of April each year.
Source: BIS triennial survey, September 2011.

b) Total turnover for all foreign exchange instruments



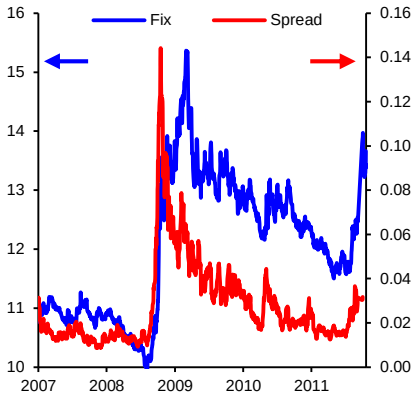
Figures as of April each year.
Source: BIS triennial survey, September 2011.

The peso is one of the currencies that as of October 2011 still showed a level of depreciation greater than before the 2008 crisis (graphs 65a y b). While not exempt from recent global risk aversion, most emerging-market currencies have seen strong appreciation against the dollar, which has forced their respective authorities to intervene directly in foreign exchange markets or establish regulatory and capital control measures in a bid to prevent them from appreciating further. These actions have not, however, eliminated the appreciation trend of currencies belonging to countries with solid macroeconomic fundamentals and internal growth sources.

Graph 65
Foreign exchange market

a) Buy and sell exchange rate spread

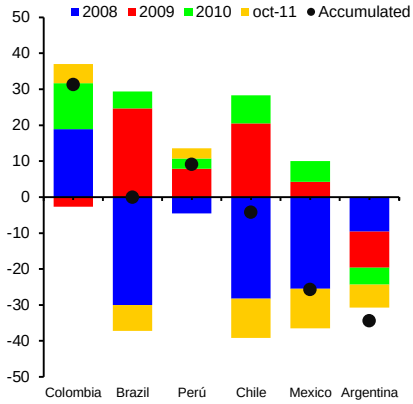
Left axis: pesos per dollar
Right axis: average percentage traded, 10-day moving average



Figures as of October 2011.
Source: Banco de México.

b) Performance of Latam currencies

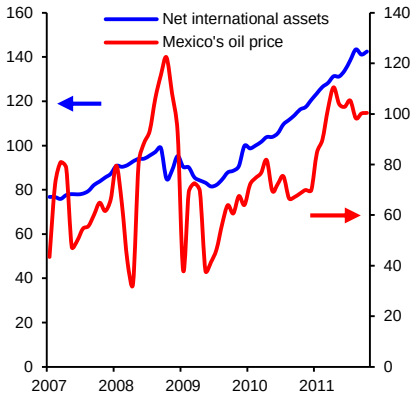
Percentage appreciation (+) / depreciation (-)



Figures as of October 2011.
Source: Bloomberg.

c) International reserves and the price of the Mexican oil mix

Left axis: billions of dollars
Right axis: dollars per barrel



Figures as of September 2011.
Source: Banco de México.

Both the liquidity and depth of the foreign exchange market have fueled interest among foreign investors in peso positions. A substantial part of foreign investors' peso positions consists of peso future purchases.[72] The large flow of foreign investments in pesos has resulted in the forward peso/dollar exchange rate[73] moving below its theoretical level projected using the interest rate spread between both currencies (graph 66a).[74] A forward peso/dollar exchange rate that is below the interest rate spread enables foreign investors to take advantage of interest rates in pesos and dollars by investing in peso-denominated instruments

[72] For an explanation of these transactions, see Box 2 of the June 2010 Financial System Report.

[73] The forward exchange rate refers to the same foreign-currency transaction when the currencies are exchanged days or months after the trade is agreed upon. Accordingly, the forward exchange rate offers the investor a premium or discount based on the interest rate spread during the period between the date the trade was agreed upon and the date the currencies are exchanged.

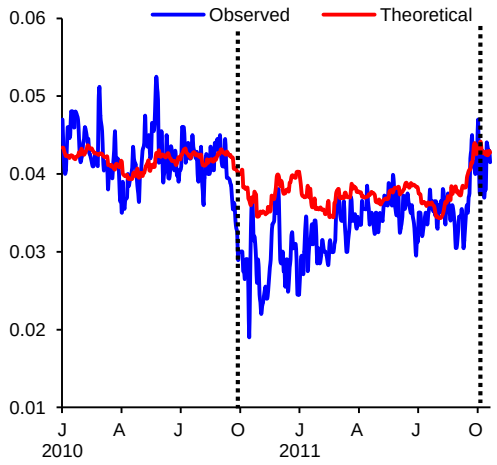
[74] The forward exchange rate can move below its estimated theoretical level based on the interest rate spread when foreign investor counterparts to forward transactions are faced with not-very-liquid markets or regulations that make hedging such positions more expensive. In the case in point, the foreign investor counterparty must hedge his short position in pesos (long in dollars) by obtaining dollar funding to invest in peso-denominated instruments. The difficulties or cost associated with obtaining such funding makes the quoted forward exchange rate move away from its theoretical value, opening up arbitrage opportunities for other financial market players.

without incurring exchange-rate risk. This has encouraged foreign investment in fixed-income instruments, Cetes in particular (graph 66b).

Graph 66
Exchange rate and relevant variables

a) Forward points

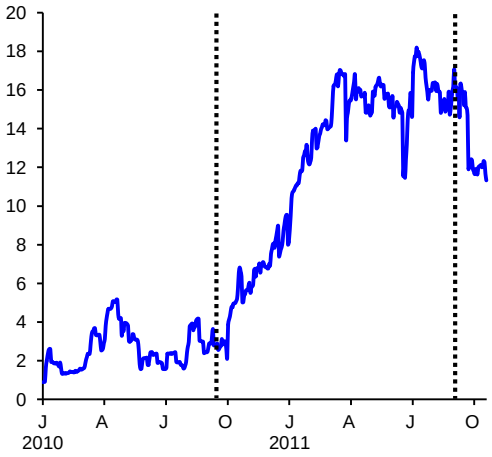
Basis points



Figures as of October 2011.
Source: Banco de México.

b) Cetes held by foreign investors

Million dollars



Figures as of October 2011.
Source: Banco de México.

In the second half of 2010 and in the first nine months of 2011, Banco de México continued to auction 600 million dollars in dollar put options. As a result of this mechanism, the central bank accumulated USD 8.980 billion between February 2010 and October 2011, which, along with Banco de México's dollar purchases from PEMEX and the Treasury, has taken international reserves to historical highs (graph 65c). An additional measure used to strengthen foreign currency availability came in December 2010 in the shape of a flexible loan facility with the International Monetary Fund for 47.3 billion of Special Drawing Rights (SDR) equivalent to USD 73.5 billion[75] for a two-year period. This loan facility is only granted to countries that have demonstrated solid political and macroeconomic foundations.

4.3. Derivatives market

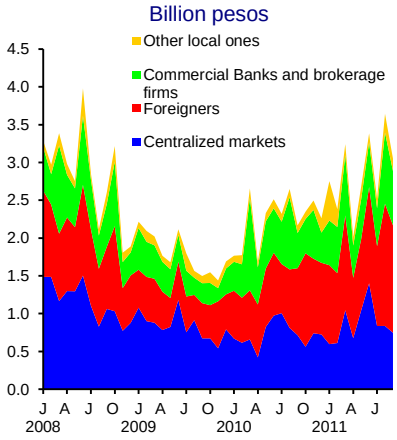
The notional value traded in the derivatives market displayed sustained growth in the second half of 2009 (graph 67a). However, in light of greater investor caution over using such instruments, the amount traded is only just returning to levels prevailing before the 2008 international financial crisis.[76] Most of the turnover still takes place in over-the-counter transactions (graphs 67a y b), driven mainly by foreign investors (graph 67c), who channeled money to emerging markets in search of higher returns due to low interest rates in key economies .

[75] At the SDR/USD exchange rate for October 6, 2011.

[76] Besides market volatility and uncertainty, lower turnover can also be attributed to reduced risk appetite among financial intermediaries in Mexico, which cancelled transactions in advance.

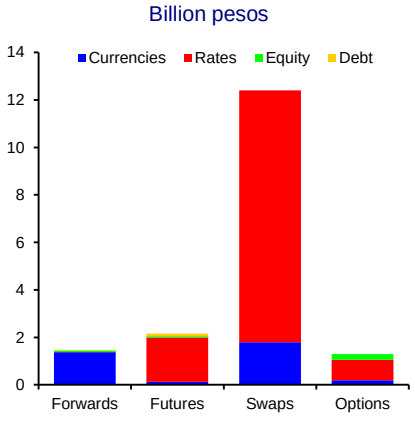
Graph 67
Current notional value and turnover in the derivatives market

a) Monthly turnover by counterparty type[1/ 2/]



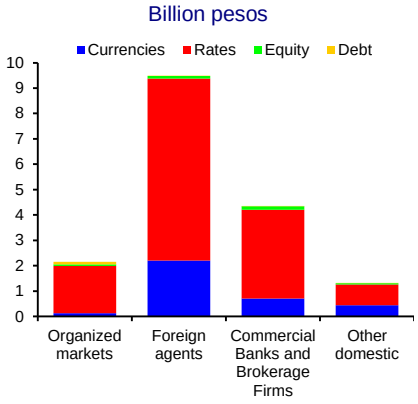
Figures as of September 2011.
Source: Banco de México.
1/ Figures in pesos. Includes purchases and sales.
2/ Turnover on the date the transaction is agreed.

b) Current notional value by type of instrument and underlying asset[1/]



Figures as of September 2011.
Source: Banco de México.

c) Current notional value by type of counterparty and underlying asset[1/]

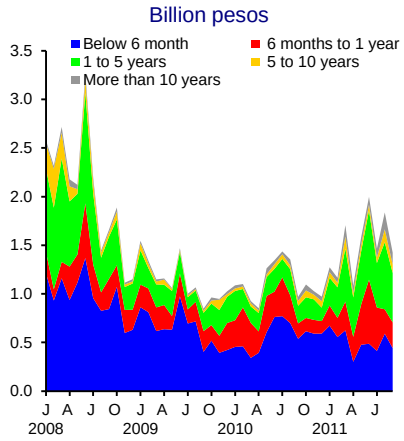


Figures as of September 2011.
Source: Banco de México.

Foreign counterparties have participated in the derivatives market mainly through TIIE interest rate swaps (graph 68). Contracts traded in such instruments are mostly standard ones; that is, they have defined maturities (graph 68c) and similar coupon terms (mostly 28 days).

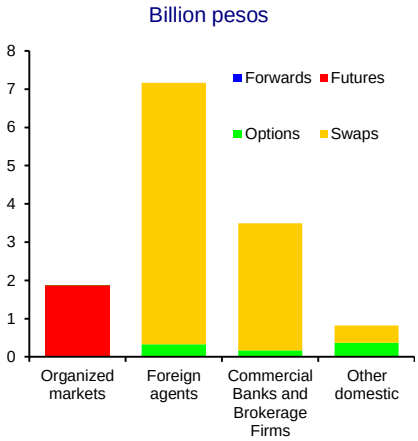
Graph 68
Current notional value and turnover in the interest rate derivatives market

a) Monthly turnover by maturity[1/ 2/]



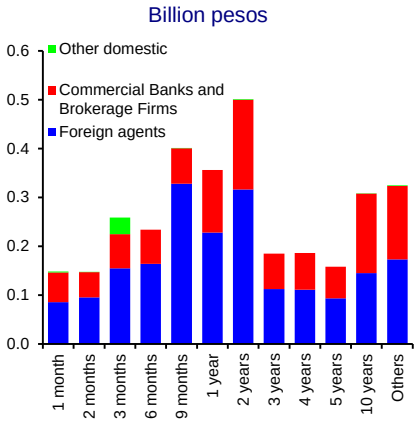
Figures as of September 2011.
Source: Banco de México.
1/ Figures in pesos. Includes purchases and sales.
2/ Turnover on the date the transaction is agreed.

b) Current notional value in interest rate derivatives by type of instrument and remaining time to maturity[1/]



Figures as of September 2011.
Source: Banco de México.

c) 2011 turnover of TIIE swaps by maturity[1/ 2/]



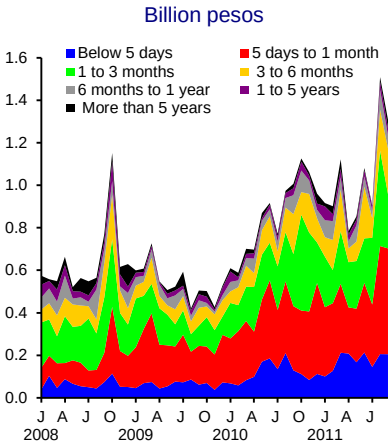
Figures as of September 2011.
Source: Banco de México.

Foreign investors have also actively participated in exchange-rate-indexed futures, mainly with short-term maturities (graph 69). Turnover in these instruments increased since the end of 2009 due to their having been used to structure carry trades.[77] This market could benefit from the partnership between Grupo BMV and the Chicago Mercantile Exchange Group (CME) established in April 2011. The partnership will enable derivative buy/sell orders to be executed between both markets, thereby making it more possible to invest in such instruments in Mexico. Likewise, regulatory changes applicable to the derivatives market issued by Banco de México in October 2010 boost its potential. Such changes enable banks to undertake transactions with commodities as underlying assets on the condition that settlement takes place by calculating the differences in cash rather than through the physical delivery of the underlying asset. Goods that can be used as underlying assets are yellow corn, wheat, soy, sugar, pork, natural gas, aluminum and copper. By allowing direct access to all types of derivative products, the partnership is expected to lower transaction costs, help raise the level of development, and deepen the derivatives market in Mexico.

Meanwhile turnover in organized markets, mainly MexDer, was buoyant in the second quarter of 2011, especially in TIIE interest-rate-indexed instruments (graph 67b). Likewise, in the year to the date of writing, MexDer sought to attract a growing number of investors by offering new products that take account of the domestic and international situations.

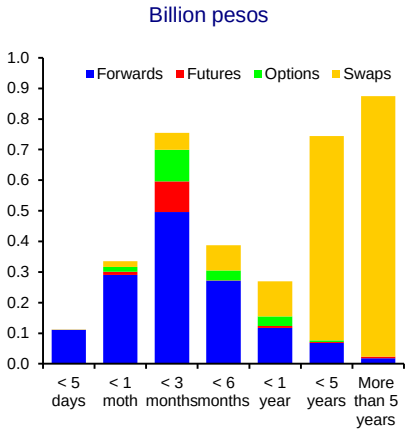
Graph 69
Current notional value and turnover in exchange rate derivatives

a) Monthly turnover of exchange-rate derivatives by maturity [1/ 2/]



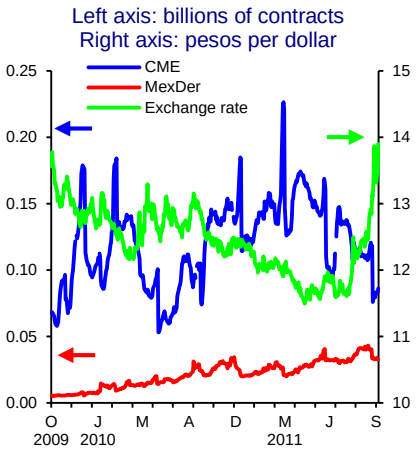
Figures as of September 2011.
Source: Banco de México.
1/ Figures in pesos. Includes purchases and sales.
2/ Turnover on the date the transaction is agreed.

b) Current notional value of exchange-rate derivatives and remaining time to maturity[1/]



Figures as of September 2011.
Source: Banco de México.

c) Open exchange-rate future contracts in MexDer and CME and peso-dollar exchange rate[1/]



Figures as of September 2011.
Source: Banco de México.

First, as mentioned, following the inclusion of Federal Government securities in Citigroup's WGBI in October of last year, foreign investors have included these bonds in their portfolios. Consequently, turnover in these securities

[77] See box 2 of the June 2010 Financial System Report: "Foreign currency carry trading."

has shown sustained growth. These derivatives have mainly traded on the MexDer. Likewise, MexDer listed new futures on 5- and 30-year M-bonds to meet growing demand for long-term securities. Besides greater turnover in Mexican sovereign bonds, there was also a large increase in turnover in U.S. Treasury note futures, which were mainly traded on the CME.

Over the last two years, open peso-dollar exchange-rate future contracts on the MexDer maintained a high correlation with open contracts of the same instruments traded on the CME. The latter have in turn displayed a high negative correlation with the exchange rate (graph 69c). Furthermore, at the end of last year and the beginning of this, MexDer listed a couple of instruments with stock indexes as their underlying assets. Siefores, which were authorized by Consar to invest a larger percentage of their assets in such instruments to maximize returns, are the target market.

5. Financial system infrastructure

Operating problems at entities that are part of the financial system's infrastructure could give rise to full-blown interruptions with the consequent adverse effects on the real economy. This infrastructure comprises large- and small-value payment systems; securities deposit and debt and equity settlement systems; financial product central counterparties; and the checking and credit card clearing house.

This section describes and analyzes:

- The Electronic Interbank Payment System (SPEI)
- The Banco de México Accountholders Service System (SIAC)
- The Securities Deposit, Administration and Settlement System (DALI)
- The Central Securities Counterparty (CCV)
- Asigna Clearing and Settlement (Asigna)
- Continuous Linked Settlement (CLS)

Of the financial system's infrastructure components, the SPEI, SIAC and DALI are considered systemically important based on the criteria in the Law on Payment Systems.[78] The Law guarantees the finality and irrevocability of payments made through it.

The Electronic Interbank Payment System (SPEI)

The SPEI[79] is a real-time interbank transfer system run by Banco de México. Banks can use the SPEI to transfer funds between each other in local currency either on their own or clients' behalf. The SPEI settles both, the large-value payments of banks and company treasuries, and the small-value payments of individuals, payroll payments, and supplier payments.

The main characteristics of the SPEI are:

- Transaction settlement based on participants' balances in the system. There are no credit relationships in the SPEI, either between participants or between them and the system.
- Acceptance of payment instruments of any amount.
- Clearance takes place in settlement cycles of 20 seconds at most. Transactions that cannot be settled within one cycle are settled as follows:

[78] At the beginning of each year, Banco de México determines and publishes in the Official Federal Gazette, the payment systems it considers to be systemically important in accordance with the Law on Payment Systems, which provides that for a payment system to be deemed systemically important the following criteria must be met: i) at least three participating banks; and ii) a monthly average settlement amount of at least 100 billion UDIs. The systems operated by the central bank are considered systemically important even if they do not settle the aforementioned average amount.

[79] The SPEI began operating in August 2004.

- The capacity to process a large number of payments in a relatively short period of time.
- Offers participants facilities for connecting their systems with the SPEI.
- SPEI participants must credit their clients' accounts 30 seconds after receiving the corresponding transfer amount. The mechanism mentioned in the previous point makes this possible.
- A digital signature is used to guarantee participants' identities and the integrity of payment messages.

With respect to security, real-time settlement of SPEI payments enables participants to better manage risks, as it enables them to rapidly close open positions. Thus, the SPEI does not generate credit risk for its participants. The use of digital signatures and the firmness and irrevocability of payments provides legal certainty. Furthermore, the connection implemented by the SPEI enables participants to undertake Straight Through Processing, thus reducing operating risks and costs.

With respect to efficiency, the clearing process optimizes the use of participants' liquidity by reducing the amount of funds they should have in the system for settling their transactions. The SPEI'S capacity to process a large number of payments without restrictions on the amount enables participants to use the same system to process large- and small-value payments by simplifying payment processes and reducing costs. The participation of non-bank banks in the SPEI encourages competition among financial agents, improves market functioning and benefits public users of financial services.

The SPEI's characteristics enable Banco de México to charge participants very low rates. The SPEI is a modern, safe and efficient payment system that does not accumulate or spread risks among participants or other systems. Furthermore, the efficient use of liquidity and expeditious settlement of transactions are especially useful during times of crisis when liquidity may become scarce and there is a more urgent need to close open positions.

A total of 46 banks (commercial and development) currently participate in the SPEI, and 36 non-bank banks, as well as Telecomm, DALI and CLS (table 13). Participants that process the largest number of payments in this system include the Federal Government. In July 2011, the SPEI settled a daily average of approximately 422,000 transactions amounting to 1.13 trillion pesos (graphs 70a and b). A total 83 percent of all payments corresponded to amounts below 50,000 pesos.

The SPEI fully complies with the best international practices for systems of its kind. It is one of the few real-time payment systems in the world that processes a large number of small-value payments. Besides the advantage of a single medium for processing large- and small-value payments, SPEI's benefits reach the public in general.

Table 13
SPEI participants

Type of institution	Number of participants		
	jul-09	jul-10	jul-11
Commercial banks	40	40	40
Brokerage firms	16	17	18
Development banks	6	6	6
Money exchanges	6	5	5
Insurance companies	4	5	5
Multiple purpose financial institutions	1	1	1
Limited purpose financial institutions	1	1	1
Popular financial institutions	2	2	3
Pensionfund management	1	1	1
Mutual fund management companies	1	1	2
CLS	1	1	1
DALI	1	1	1
TELECOMM	0	1	1
Total	**80**	**82**	**85**

Source: Banco de México.

Banco de México's Accountholders Service System (SIAC)

The SIAC[80] is a system run by Banco de México which manages the current accounts of banks and other financial entities and the public sector. SIAC participants can undertake transfers on their own behalf in local currency and in real time.

SIAC participants have transferred their payment processes to the SPEI, thus using the SIAC for the main functions of current-account administration and liquidity provision.

The SIAC provides the liquidity the financial system needs. Banco de México provides banks with intraday liquidity through the SIAC, specifically via two channels: i) current-account overdrafts, which are guaranteed mainly by mandatory long-term deposits (DRM); and ii) same-day repo transactions in which Banco de México receives government securities as collateral. SIAC participants may transfer funds to SPEI and DALI at any time during normal operating hours.

The SIAC contributes to the sound functioning of infrastructure by providing liquidity securely and efficiently. The mechanism strictly controls the provision of liquidity in order to virtually eliminate the credit risk to which the central bank is exposed. It also facilitates participants' management of their liquidity, establishing clear rules and expeditious mechanisms for obtaining it and offering facilities for sending it to the SPEI or DALI at any time as required.

In July 2011, the SIAC settled an average 475 transactions daily, worth 80 billion pesos (graphs 70a and b). That same month, banks obtained intraday

[80] The SIAC began operating in 1990 and was Mexico's first real-time electronic payments system. In its day, SIAC was a big step forward in terms of interbank payment processing, far more efficient and secure than the previous system based on manual processes. However, its design does not contemplate all of the characteristics of a modern payments system, such as providing participants with facilities for processing transfers on clients' behalf.

liquidity through guaranteed loans amounting to a daily average 220 billion pesos. Banks also obtained liquidity through intraday repurchase agreements for a daily average 260 billion pesos (graph 70c). A total of 135 institutions participate in the SIAC.

The Securities Deposit, Administration and Settlement System (DALI)

The DALI[81] is a system that keeps a record of debt securities and stocks issued in Mexico and registers and settles direct buy/sell transactions, repurchase agreements and securities lending among depositors. Besides recording and processing the issuance and placement of securities, the DALI also manages the collection of interest, dividends and amortizations, as well as swaps, conversions, subscriptions, mergers, and the segregation and reconstitution of securities, among other things. The DALI is managed by the Institución para el Depósito de Valores, S.A de C.V. (S.D. Indeval) and is regulated, monitored and overseen by the CNBV and Banco de México.

In order to settle its depositors' transactions, the DALI processes three types of basic instructions: payment-free, securities transfers, and cash transfers. In the case of money and cash transfers, the DALI uses a practice known as Delivery versus Payment (DvP) based on which delivery of securities from the seller to the buyer is linked to the corresponding payment from the buyer to the seller. This way a securities transfer is never settled if the associated payment is not made and vice versa. To implement DvP, the DALI offers its depositors securities and cash accounts on which overdrafts are not allowed. Furthermore, the DALI does not grant depositors credit and employs an optimal clearing model designed by Banco de México through which transactions are settled virtually in real time (every 2 minutes maximum).

The DALI is a system that offers depositors security for several reasons, the most important being that its buy/sell transactions, whether direct or repo, do no expose depositors to principal risk. Another reason is that the Indeval system is a highly automated one and also facilitates the automation of participants' transaction settlement processes, thereby lowering operating risk and also costs. An additional advantage is the use of digital signatures and the irrevocability of transaction settlements under the Law on Payment Systems, which make the DALI a secure system from a legal standpoint.

Furthermore, the DALI is also an efficient system, not only because it enables institutions to lower operating costs, but also because its clearing algorithm allows it to make optimal use of liquidity in the securities and cash institutions must maintain in the system in order to settle all of their transactions. Low DALI balance requirements not only minimize depositors' financial costs but permit the direct participation of a number of institutions in transaction settlement. This is particularly important for small institutions with a low trading volume and low securities and cash availability.

[81] The DALI is a relatively new system. It began operating in November 2008 after Banco de México required the Indeval to replace the previous system which had design defects that generated significant operating risk and prevented it from complying with best international practices for systems of its kind. Banco de México participated in and closely monitored the development of the DALI.

Easier access to the DALI and low operating costs not only encouraged competition in the securities market, making it possible for intermediaries to offer issuers and investors improved services at lower costs, but also promoted the market's development, liquidity and depth.

The DALI does not generate risks for its participants or the financial system in general. Furthermore, it prevents risks from spreading through the system to other participants or systems. This significantly contributes to financial system stability, since the DALI processes more than three-quarters of total transactions in Mexico's payment systems.

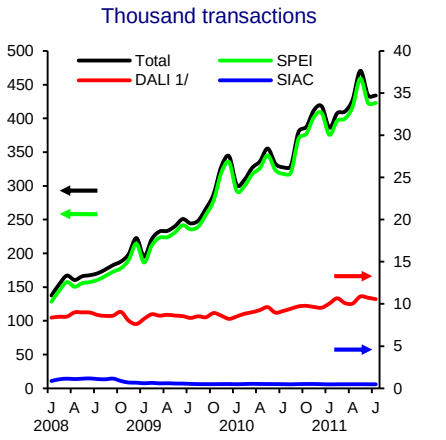
Efficient liquidity provision, along with near real-time settlement, make the DALI especially valuable in times of crisis when liquidity usually becomes scarcer due to the urgent need to close open positions in order to lower risk.

The DALI currently has 110 depositors, including banks, brokerage firms, the central securities counterparty, and Banco de México itself. In July 2011, the DALI settled a daily average of 10,500 transactions worth 2.4 trillion pesos (graphs 71a and b). Around 82 percent of them corresponded to government securities, 17 percent to bank and other company debt securities transactions, and less than 1 percent to stock market transactions (graph 71b).

On the international front, frequent optimal clearing makes the DALI a unique world-class system. Another important characteristic of the DALI is that it virtually meets best international practices for securities settlement systems.

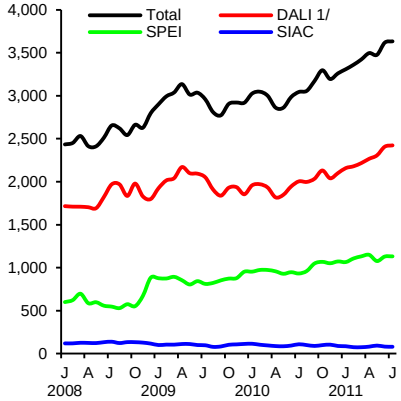
Graph 70
Systemically important systems

a) Average number of daily transactions



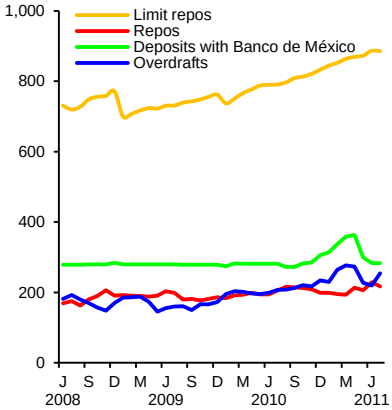
Figures as of July 2011.
Source: Banco de México.
1/ The DALI replaced the SIDV in November 2008.

b) Daily average value



Figures as of July 2011.
Source: Banco de México.

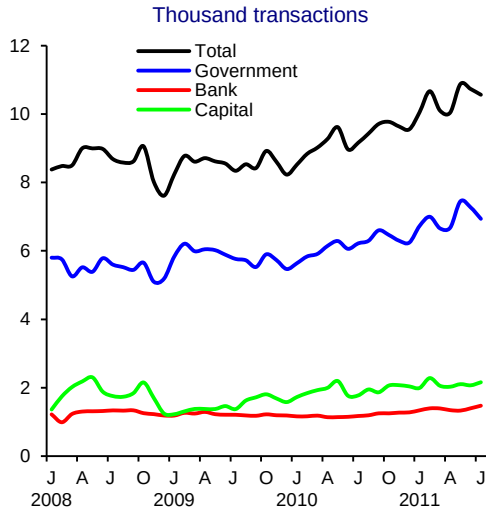
c) Use of Banco de México's intraday liquidity



Figures as of July 2011.
Source: Banco de México.

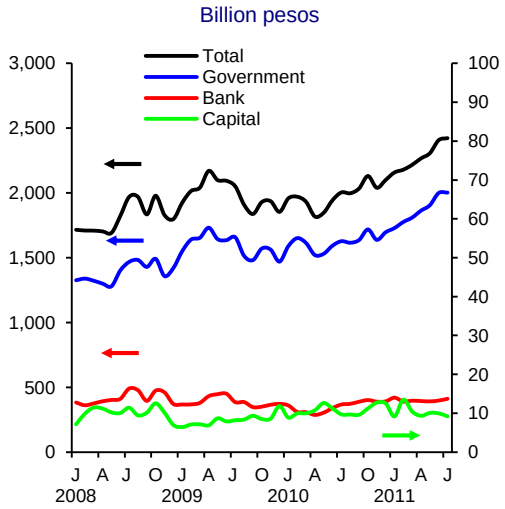
Graph 71
Securities settlement system

a) Average number of daily transactions



Figures as of July 2011.
Source: Banco de México with Indeval figures.

b) Daily average value transacted



Figures as of July 2011.
Source: Banco de México with Indeval figures.

The Central Securities Counterparty (CCV)

The CCV[82] is the entity responsible for clearing and settling all stock transactions negotiated on the BMV. By acting as a central counterparty for all of the transactions it accepts, the CCV is the reciprocal creditor and debtor of the rights and obligations associated with the transactions. The CCV is part of Grupo BMV (the Mexican stock exchange), and is regulated, supervised and overseen by the CNBV and Banco de México.

In order to manage the risks to which it is exposed, the CCV has a series of procedures and resources known as a security network. This network's main measures include collateral requirements from settlement agents. There are two types of requirements, the first aiming to cover potential price variations in transaction securities with a confidence level of 99%; such resources comprise the so-called contributions fund. The CCV also requires settlement agents to create the clearing fund, which can be used to share losses derived from a participant's noncompliance if contributions to the fund are not sufficient to cover such losses.

The CCV also has a reserve fund comprised of the sanctions and penalties the CCV has charged settlement agents as well as its own capital to meet noncompliance by settlement agents.

The CCV security network provides market participants with certainty and enables them to participate in the BMV without having to worry about the counterparty credit risk of the institution that closes its bids. The CCV also makes

[82] In 2001 Congress amended the Securities Market Act in order to introduce the concept of the central securities counterparty and in February 2004, the SHCP granted the CCV a concession to act as a stock market central counterparty. Thus CCV replaced the multilateral clearing mechanism Indeval had implemented for stock market settlement.

transaction settlement more efficient because by acting as a buyer and seller of all of each participant's sales and purchases, it implicitly implements multilateral clearing, which reduces the number and value of deliveries and payments, thereby lowering liquidity risks and transaction costs as well as costs associated with transaction settlement risk management.

The recent financial crisis demonstrated that markets with the best performance and a lower loss of liquidity were those that operated with central counterparties. In particular, the CCV plays a key role in the sound working of the stock market by limiting the risk of participant noncompliance and stopping risk from spreading to other participants, thus contributing to the stability of the Mexican financial system as a whole.

The CCV currently has 26 settlement agents, 25 brokerage firms and a bank. In July 2011, the CCV settled a daily average 42,000 transactions worth around 11 billion pesos.

In order to comply as much as possible with best international practices, the CCV has established a work plan that will result in it replacing its current information system with a new one that is scheduled to begin operating at the end of 2012.

Asigna Clearing and Settlement (Asigna)

Asigna[83] is responsible for clearing and settling futures and options contracts traded in the Mexican Derivatives Market (MexDer). In order to perform this function, Asigna acts as the central counterparty of all contracts; in other words, Asigna comes between the two original counterparties, replacing the original contract with two new ones, one in which it acts as the buyer to the original seller and one in which it acts as the seller to the original buyer. Asigna is part of Grupo BMV and is regulated, supervised and monitored by the SHCP, CNBV, and Banco de México.

In order to process its transactions, Asigna values current contracts on a daily basis and determines gains and/or losses for each; on the basis of this valuation, it subsequently calculates the net amounts that each settlement agent must pay or receive. Payments are made through a settlement bank. At the expiration date, Asigna offers either cash settlement or delivery of the underlying asset, depending on the original terms of the contract.

The management of Asigna's risks is based on collateral requirements; in other words, initial margins for new contracts and margin calls in the case of open contracts. Collateral requirements are calculated to cover the change in overnight prices with a confidence level of 99%. On the basis of these collateral requirements, settlement agents create a contributions fund. Furthermore, Asigna requires that its settlement agents make contributions to the clearing fund, which can be used to share losses derived from agents' failure to comply. The last component in Asigna's security network is the capital belonging to each settlement agency and to Asigna.

[83] Asigna was established as a management and payment trust in 1998, in accordance with provisions issued by the authorities.

Asigna collateral requirements and procedures enable it to lower and efficiently control the counterparty credit risk of the contracts it manages, thereby providing MexDer traders with certainty and efficiency with respect to transaction clearing and settlement. This is because on the one hand, central counterparties enable participants to trade securely in blind markets in which the identity of the counterparties is unknown, while on the other Asigna enables economies of scale afforded by the centralized management of settlement risks and multilateral clearing efficiencies. Taken together, these characteristics lower liquidity risks and transaction costs, as well as the settlement and risk management costs of trades, especially important in derivatives markets due to the longer maturities and higher leverage involved compared with spot markets.

Asigna is a key component of an organized derivatives market, and its secure and efficient functioning contributes to financial system stability.

Only trusts created especially for the purpose and operated by banks or brokerage firms can be Asigna settlement agents. To date, five banks manage the trusts that participate in Asigna. In July 2011, the daily average notional amount of contracts traded was 20.8 billion pesos, of which 68.6 percent corresponded to interest-rate futures, followed by federal government bond futures with 16.1 percent, U.S. dollar futures with 10.2 percent, BMV IPC futures with 5 percent, and the rest corresponding to options and other futures contracts.

Asigna is currently working on the modernization of its technology infrastructure in order to better comply with minimum international standards for the financial infrastructure component.

Continuous Linked Settlement (CLS)

The CLS[84] is a foreign exchange transaction settlement system that eliminates settlement risk or Herstatt risk.[85] It is run by the CLS-Bank, a bank that is headquartered in New York and whose only purpose is to settle trades processed this way. Direct participants, which are CLS shareholders, settle foreign exchange trades in 17 currencies.

The CLS uses a payment-versus-payment (PvP) settlement model in which one currency is delivered against delivery of the other currency. To achieve this, the CLS synchronizes the delivery of currencies for each trade using accounts it holds with all central banks that issue participating currencies. The CLS uses a clearing process at the beginning of the day and a settlement process often executed during the day and asks participants to deliver to it only net debtor amounts in each currency.

The complexity and systemic importance of the CLS means that it must be equipped with a robust operating continuity and oversight framework. The

[84] The CLS began operating in 2002 and was created at the request of the central banks of the foreign exchange market's most active currencies, since it is important to eliminate foreign exchange trade settlement risk to procure the stability of the international financial system. Initially, the CLS settled trades only for seven currencies: the Australian dollar, the U.S. dollar, the euro, the Swiss franc, the pound sterling, and the Japanese yen. Later a further ten currencies were included, the Mexican peso among them, which began to be settled using this system in 2008.

[85] The forex trade risk of a counterparty delivering a currency and not receiving the corresponding currency in return.

central banks of the 17 currencies participating in the CLS Oversight Committee and operators of the payment systems involved participate in a group along with the CLS to monitor operating risks on an ongoing basis and take the necessary measures to manage them.

The CLS eliminates the settlement risk of the foreign exchange transactions it processes. An estimated 58 percent of total global foreign exchange market transactions are processed using the CLS.

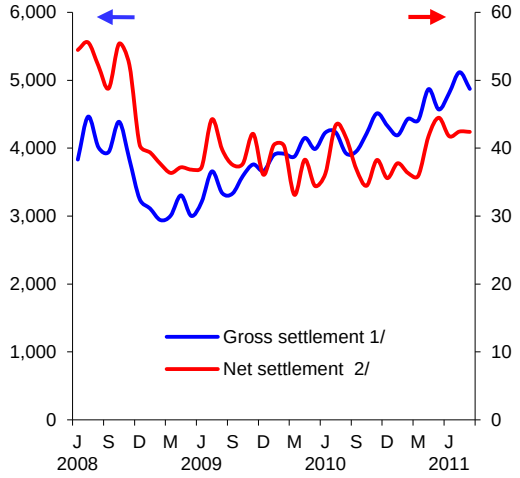
The CLS is a secure and efficient system. Besides eliminating settlement risk, it has established similar measures to those of a central counterparty which facilitate transaction settlement. Its participants also benefit from the efficient use of liquidity as a result of the system's clearing process, considerably reducing the funds which have to be delivered to CLS to settle trades.

The CLS has 61 direct participants through which it provides settlement services to more than 9,000 indirect participants. As of July 2011, the CLS settled a daily average USD 4.8 trillion (graph 72a). With respect to the Mexican peso, as of the same date, the CLS settled transactions worth a daily average USD 36 billion, 55 percent more than in July 2010 (graph 72b). This growth was far higher than the overall growth in CLS transactions for the same dates, which was 24 percent.

Graph 72
Settlement of foreign exchange transactions on the CLS

a) Daily average amount settled in all currencies through the CLS system

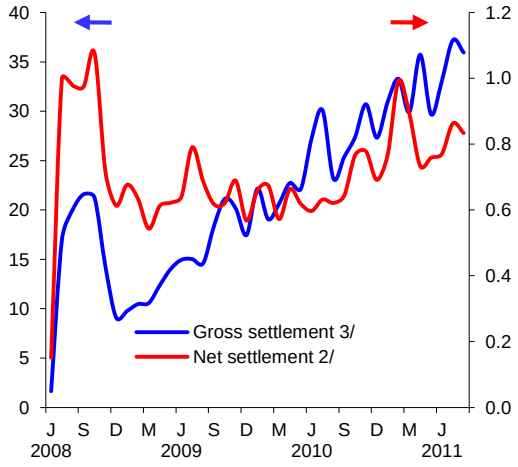
Billion dollars



Figures as of July 2011.
Source: CLS Bank.

b) Daily average amount settled in pesos through the CLS system

Billion dollars



Figures as of July 2011.
Source: CLS Bank.

1/ Gross settlement: value of transactions settled on the CLS.
2/ Net settlement. Total amount necessary to settle gross transactions.
3/ Gross settlement: total value of transactions including the peso that are settled on the CLS.

The CLS meets best international practices for systems of its kind and performed impeccably during the 2008 financial crisis, which helped maintain financial stability.

Best international practices

Standard documents for all financial market infrastructure components contain the best practices recommended by international organizations, mainly the BIS. However, in order to contribute to the strengthening of financial infrastructure, international organizations decided to review the current principles of best practices,[86] with the following key objectives:

- Concentrate best-practice principles in a single document to be published at the beginning of 2012.
- Use recent experiences, especially those obtained during the 2008 financial crisis, to propose improvements to current practices.
- Extend the scope of the recommendations to other financial products, mainly OTC derivatives, for which sweeping reforms are also planned as described at the end of this section.

Banco de México, as a permanent member of the BIS Payment and Settlement Systems Committee, has participated actively in the creation of new best practices standards.

Reforms to OTC derivative markets

The 2008 financial crisis brought to the fore a lack of transparency with respect to the credit exposure of over-the-counter (OTC) derivative market participants, which resulted in a loss of confidence and liquidity in markets at critical moments in time and increased systemic risk. Consequently, and in pursuit of greater transparency and lower systemic risk linked to the OTC derivative market, in September 2009, the G20 agreed on the following measures:

- Promote the standardization of derivative products.
- Encourage the negotiation of such trades through centralized markets or electronic platforms.
- Clear and settle trades through central counterparties when appropriate; otherwise, raise the capital requirements of derivative transactions that because of their complexity or lack of liquidity can only be traded bilaterally.
- Record all derivative trades in central data registries.

The G20 also established that such commitments should be met by the end of 2012 at the latest.

The strengthening of the OTC derivatives market and compliance with G20 objectives brings with it the possibility of adding new components to Mexico's financial system infrastructure as listed below.

[86] This project is taking place through some committees organized by the CPSS (Payment and Settlement Systems Committee). The IOSCO (International Organization of Securities Commissions) has also played an important role in this task.

Electronic platforms for OTC derivative trading

OTC derivative markets are currently not that transparent mainly because of the bilateral and private nature of the trades, as well as limited available information about the transactions. During times of financial stress, such characteristics can make OTC derivative markets less reliable, in turn increasing liquidity risk for participants and for the market as a whole.

Equity markets and electronic trading platforms often provide greater levels of transparency than trading in OTC derivative markets. Such transparency would include publication of bid/ask quotes, as well as facts about certain products.

Another distinguishing trait of electronic trading platforms is that they are usually subject to internal and external standards. Oversight helps regulators detect and prevent market abuses and reduces system risk.

Central counterparties for clearing and settling OTC derivative transactions

One of the main problems that any financial market faces is that non-compliance by a participant may result in heavy losses for counterparties. This can give rise to a situation in which other market participants are also unable to cover their positions with other counterparties, triggering a series of losses derived from the interconnection between participants and in turn a string of defaults. OTC markets are especially vulnerable to a default by one participant, because such markets usually consist of few participants.

Nevertheless, the clearing and settlement of OTC derivative instruments through central counterparties helps lessen systemic risk through better credit risk management, multilateral clearing, increased market transparency, and by replacing risk and bilateral agreements with the security network of a central counterparty.

As central clearing for some products will be a regulatory requirement rather than a market decision, authorities should place special emphasis on central counterparty access criteria in order to prevent the artificial entry barriers and to create highy concentrated trade settlement services. Furthermore, and derived from the greater risk associated with OTC derivative transactions, one issue that takes on greater importance is the establishment of very strict risk management procedures including resolution plans for the central counterparty if an extreme event puts the authorities in the position of having to declare it bankrupt.

Central registry for recording OTC derivative trades

As mentioned, one of the main problems the Mexican financial authorities faced during the 2008 crisis was a lack of information about the OTC derivative positions of some market participants.

Reporting trade information to a central registry will not only result in greater market transparency, but also enable authorities to detect exposures and

risks that could potentially compromise financial market stability. In particular, a central information registry is of great help to the authorities in:

- Evaluating systemic risk and financial stability.
- Overseeing the market.
- Supervising market participants.

Finally, a working group comprised of the country's financial authorities is evaluating regulatory and/or legal mechanisms and changes that will make it possible to reform the OTC derivatives market in Mexico. The authorities are also analyzing the possibility of promoting new infrastructure components for the Mexican financial system with a view to making the system more robust and efficient, besides complying with the G20 agreement on OTC derivatives.

6. Financial position of households, firms and the public sector

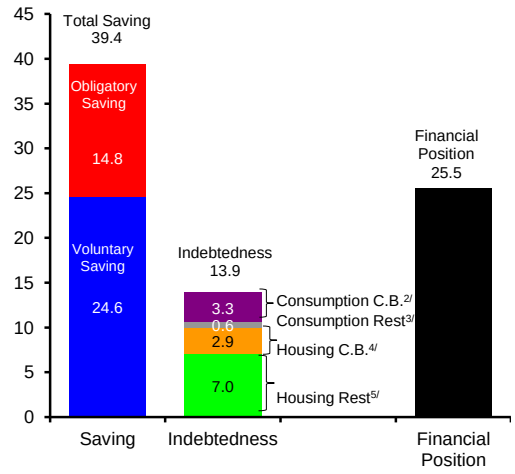
6.1. Households

The financial position of households with respect to the financial system (defined by the difference between monetary aggregate M2 assets held by households and their debt with the financial system) amounted to 25.5 percent of GDP in the second quarter of 2011 (graph 73a). That figure was 0.8 percentage points below the one observed for the same period in 2010, as over the last 12 months household financing, especially consumer credit, grew at a stronger rate than financial savings. Although the financial position of households decreased slightly over the last year, it displayed a bigger surplus than for the year preceding the 2008 financial crisis (graph 73b).

Graph 73
Financial position of households

a) Balances as of June 2011

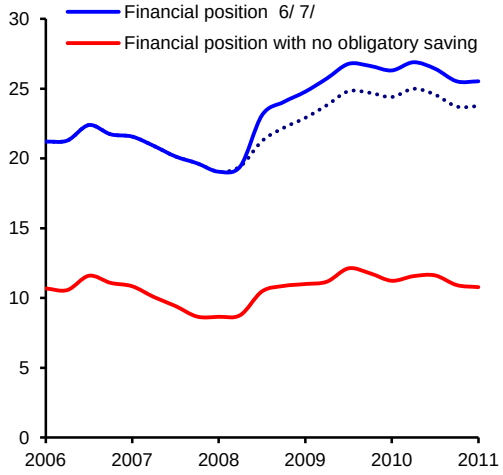
Percentage of GDP[1/]



Figures as of June 2011.
Source: Banco de México.

b) Financial position of households

Percentage of GDP [1/]



Figures as of June 2011.
Source: Banco de México.

1/ The sum of the parts may not coincide with the total due to rounding. Figures corresponding to June 2011 are expressed as a percentage of the average nominal GDP in the last four quarters.
2/ Includes credit granted by commercial banks and their sofome ER subsidiaries.
3/ Includes credit granted by development banks, sofoles, sofome ER and popular savings and loan entities.
4/ Includes credit granted by commercial banks.
5/ Includes credit granted by development banks, sofoles, sofome ER, Infonavit and Fovissste.
6/ Financial assets (M2 households), less financial liabilities (financial system debt). Excludes equity holdings.
7/ The dotted line shows the financial position excluding the effect of amendments to the ISSSTE Law on the financial position of households.

Household financial savings, defined as M2 held by households, posted relatively stable growth during the first half of 2011. In June 2011, this aggregate increased by a real 4.3 percent year on year, similar to the same month in 2010, when it grew by a real 4.5 percent year on year (graph 74a). Voluntary household

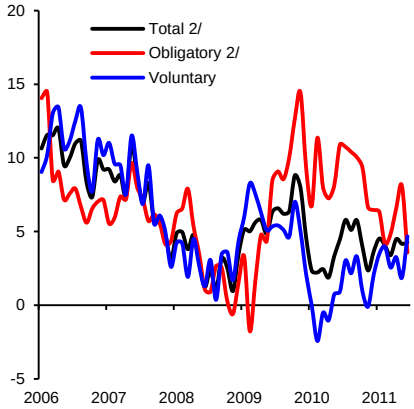
savings recorded real annual variations above those observed the previous year. In June 2011 they recorded a real year-on-year increase of 4.7 percent while a year earlier they grew by a real 0.9 percent year on year. This performance was benefited by stronger economic growth rates. Meanwhile, obligatory savings grew at a real year-on-year rate of 3.6 percent reflecting a recovery in employment. Nevertheless, real growth in this aggregate eased compared with the 10.9 percent rate recorded for the same year-earlier month, as it was affected by a lower valuation of the assets comprising it (graph 74a).

After several quarters of declining rates, household credit began a gradual recovery as of the second half of 2010, reflecting a clean-up of banks' consumer loan portfolios in the wake of the international financial crisis of 2008. In June 2011, household credit grew at a real annual rate of 7.2 percent on the back of real consumer credit and mortgage loan expansion rates of 8.8 and 6.7 percent, respectively. These growth rates contrast with annual variations for these two components in June 2010 of -5.4 percent for consumer loans and 0.6 percent for mortgage loans (graph 74b). As mentioned, higher growth rates in these credit components can be traced to higher levels of employment as well as improvements in the quality of the consumer loan portfolio. Within this category, recent strong growth in payroll loans is notable, since they are cheaper than credit card loans (graph 74c).

Graph 74
Financial savings and household credit

a) Voluntary and obligatory household savings[1/]

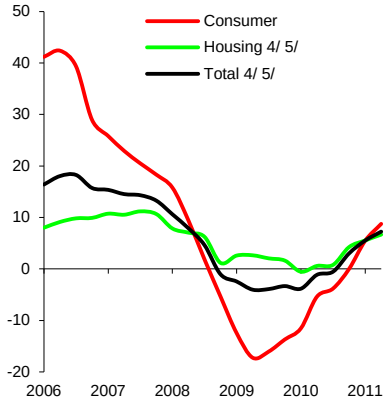
Real YoY percentage change



Figures as of June 2011.
Source: Banco de México.

b) Total household financing by destination [3/]

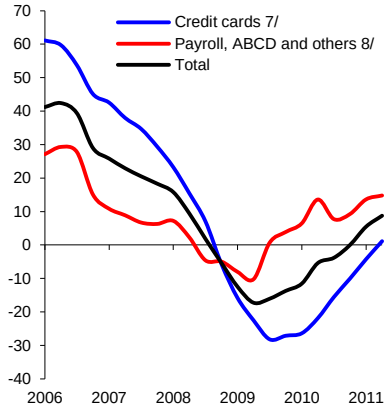
Real YoY percentage change



Figures as of June 2011.
Source: Banco de México.

c) Consumer credit[6/]

Real YoY percentage change



Figures as of June 2011.
Source: Banco de México.

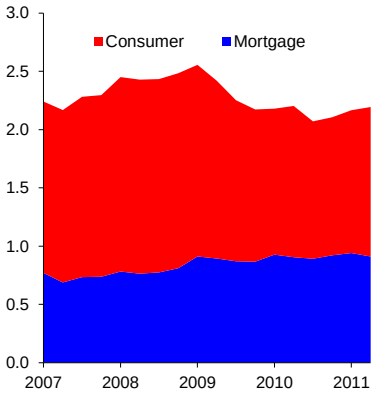
1/ Defined as monetary aggregate M2 in the power of households. Voluntary savings is the difference between savings in household financial instruments (M2 households) and obligatory savings. Obligatory savings include retirement funds (IMSS and ISSSTE) invested in monetary aggregate instruments, housing funds (Infonavit and Fovissste) and Pensionissste bonds.
2/ Figures between December 2008 and November 2009 have been adjusted to exclude the effect of amendments to the ISSSTE Law.
3/ Includes the total credit of banks, leasing companies, sofoles, sofome ER and popular savings and loans entities as well as Infonavit and Fovissste loans. These figures are affected by the conversion of some non-bank financial intermediaries into unregulated ENR sofomes.
4/ Figures between January and December 2007 have been adjusted so they are not distorted by the reclassification of corporate-sector bridge loans for homebuilding.
5/ Growth rates between December 2007 and November 2008 have been adjusted so they are not distorted by the inclusion of Fovissste in the statistics.
6/ Includes direct bank loans, loans associated with bank restructuring programs, credit granted by credit card sofomes, and the total credit of non-bank financial intermediaries.
7/ Refers to credit granted by commercial banks through credit cards.
8/ ABCD includes loans for the purchase of consumer durables and other consumer loans from banks and other non-bank banks. This category also considers credit cards other than those granted by commercial banks.

In the second quarter of 2011, the total household debt service and consumer and mortgage loan components accounted for 2.2, 1.3 and 0.9 percent of disposable household income, respectively (graph 75).[87] [88] These levels were similar to those observed for the year-earlier quarter.

Graph 75
Household debt service

a) Household debt service

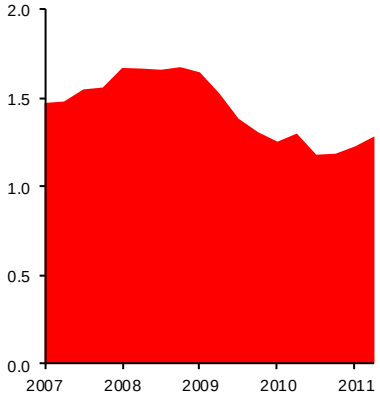
Percentage of household disposable income [1/]



Figures as of June 2011.
Source: Banco de México.

b) Consumer credit debt service [2/]

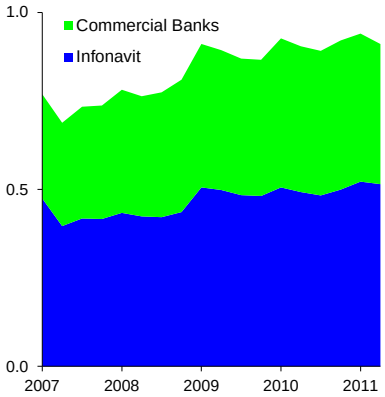
Percentage of household disposable income [1/]



Figures as of June 2011.
Source: Banco de México.

c) Mortgage loan debt service [3/]

Percentage of household disposable income [1/]



Figures as of June 2011.
Source: Banco de México.

1/ Disposable household income was calculated using INEGI data.
2/ The consumer loan debt service is the payment of interest and commissions on consumer loans granted to households by commercial banks.
3/ The mortgage loan debt service is the payment of interest and commissions on mortgage loans granted to households by commercial banks and Infonavit.

6.2. Non-financial private companies

Total financing granted to non-financial private companies accounted for 17.4 percent of GDP (figure 3) as of the second quarter of 2011, 10.7 percentage points of which corresponded to the internal component and 6.8 percentage points to the external component.[89] Within internal financing, bank loans remain the main source of funding for companies, accounting for 8.0 percent of GDP

Following a period of contraction derived from the 2008 international financial crisis, total financing to non-financial private companies resumed growth in June 2010, which lasted for all of that year and the first half of 2011, driven by both domestic and external recovery in financing (graph 76a). In June 2011, total financing grew a real annual rate of 4.9 percent due to variations in internal and external components (in constant pesos) of 8.8 and -0.8 percent, respectively. The external financing growth rate was negative due to exchange rate

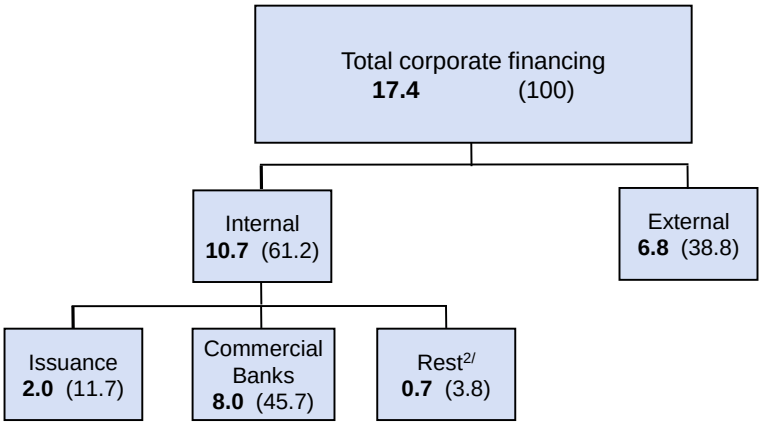
[87] Debt service is defined as the payment of interest and commissions paid by households on consumer and mortgage loans granted by commercial banks as well as on loans taken out with Infonavit.

[88] Disposable household income was calculated using INEGI data. Figures for 2010 and 2011 are preliminary.

[89] Data related to funding granted by non-financial private companies is published every quarter and is available through the second quarter of 2011. Domestic financing to this sector comprises bank and non-financial private companies, as well as private debt issuances. External financing includes direct debt (foreign retail bank loans and other credit) and funding through private debt issuances abroad.

appreciation between September 2010 and June 2011. However, growth in the dollar balance for the same period was 12.3 percent.

Figure 3
Total financing to non-financial private companies
Percentage of GDP [1/]



Figures as of June 2011.
Source: Banco de México.
1/ Due to rounding, the sum of the parts does not coincide with the total. Numbers in blue correspond to the balance as of the second quarter of 2011 expressed as a percentage of annual average nominal GDP. The black numbers in brackets correspond to the percentage share of each item in non-financial private company total financing as of the second quarter of 2011.
2/ Includes credit granted to leasing companies, factoring companies, credit unions, popular savings and loans societies, sofoles and sofome RE.

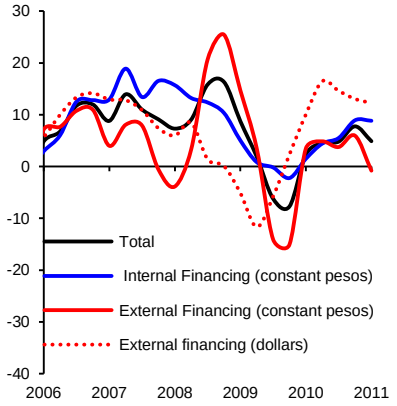
The positive trend in internal financing was mainly driven by the recovery in credit, which displayed a favorable trend in growth as of the second quarter of 2010 (graph 76b). The real annual growth in credit granted by banks and other non-bank financial institutions to companies stood at 9.1 percent as of June 2011 compared with -1.2 percent for the year-earlier month. The credit recovery was consistent with the performance of and prospects for economic activity as well as the perception of better conditions in terms of access to bank credit and its cost, as reflected in the results of Banco de México's Credit Market Situation Evaluation Survey (graph 76c).

Meanwhile, financing through domestic debt issuances displayed real year-on-year growth of 7.9 percent in June 2011. In contrast, for the same month of the previous year, growth in domestic market securities as a means of financing was 14.5 percent in real year-on-year terms. A lower growth rate for such financing over the last year versus the previous one partially reflects the aforementioned credit recovery.

Graph 76
Total financing to non-financial private companies and perception of bank credit access conditions and cost

a) Total financing to companies

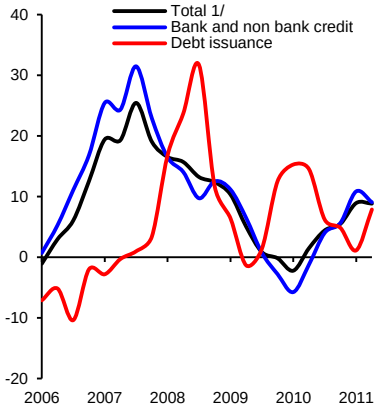
YoY percentage change



Figures as of June 2011.
Source: Banco de México.

b) Internal financing to companies by instrument

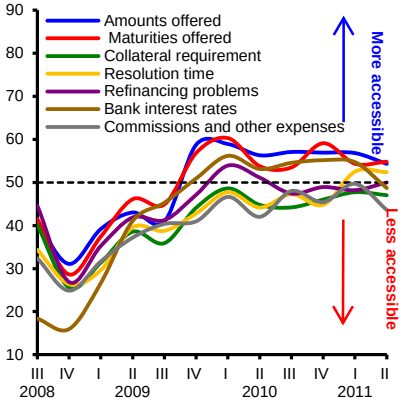
YoY percentage change



Figures as of June 2011.
Source: Banco de México.

c) Perception of credit market access conditions and cost

Companies with new loans, diffusion indexes 2/



Figures as of June 2011.
Source: Banco de México.

1/ These figures are affected by the conversion of some non-financial private companies into unregulated sofomes (NRE).
2/ Defined as the sum of the percentage of companies that said they were cheaper plus half the percentage of companies that said there were no changes.

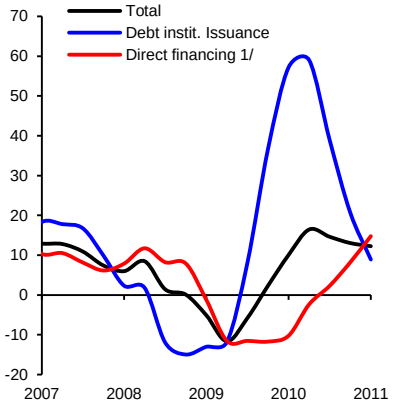
Following a strong contraction caused by the 2008 international financial crisis, external financing to non-financial private companies starting growing in the second half of 2009 (in dollar terms) (graph 77a). External financing in dollars registered annual growth of 12.3 percent in June 2011 compared with 10.1 percent for the year-earlier month.

The increase in external financing in the second half of 2010 and the first half of 2011 was a reflection of greater external direct financing, which grew 14.8 percent year on year in dollars as of the second quarter of 2011, while for the year-earlier period it decreased 10.3 percent. Growth over the last year to the date of writing was largely due to a strong increase in credit granted by external suppliers, while financing from foreign private banks continued to show no signs of reactivation (graph 77b).

Mexican companies were still able to tap external debt markets, but the growth rate slowed (graph 77c). In June 2011, year-on-year growth in dollar-denominated external debt issuances was 8.9 percent while for the year-earlier month it was 57.2 percent. Slower growth was due to two things. First was very strong growth in June 2010 on a low comparison base as a result of the reopening of the external debt market following the contraction caused by the 2008 international crisis. Second, during the second half of 2010 and the first half of 2011, companies resorted to alternative sources of financing, in particular commercial bank loans.

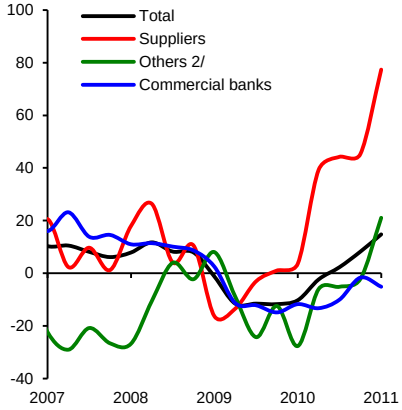
Graph 77
External financing to non-financial private companies

a) External financing in dollars to non-financial private companies



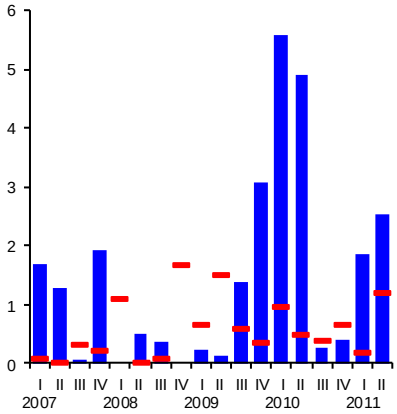
Figures as of June 2011.
Source: Banco de México.

b) External direct financing in dollars to non-financial private companies



Figures as of June 2011.
Source: Banco de México.

c) External debt placements of non-financial private companies 3/



Figures as of June 2011.
Source: Banco de México.

1/ Refers to credit granted by commercial, bilateral banks (Ex-Im Banks), suppliers and other external banks.
2/ Includes bilateral banks (Ex-Im Banks), the World Bank International Finance Corporation (IFC), and balances of bonds with a capital default.
3/ The red lines show debt falling due in the quarter.

6.3. Public-sector borrowing requirements

Public-sector finances were favorable in the second half of 2010 and the first half of 2011 due to prudent management of public finances and a rebound in public revenues derived from economic recovery and higher oil prices during this period, as well as fiscal reforms which came into effect in 2010.[90]

Budget revenue in 2010 surpassed the level provided for in the Federal Revenue Law, which permitted an increase in public expenditure above the approved amount, as well as compliance with the fiscal balance target. The public-sector traditional deficit was 370.5 billion pesos (2.8 percent of GDP), and 102.0 billion pesos (0.8 percent of GDP) excluding investment in Pemex, amounts that are slightly above the approved ones but within the limits established in the Federal Law for Budget and Fiscal Accountability (LFPyRH).[91] Public-Sector Borrowing Requirements (RFSP) totaled 3.5 percent of GDP in 2010, a level close to the one forecast in the approved fiscal balance (3.3 percent of GDP).[92]

[90] The highest income tax rate (ISR) for individuals and corporations increased from 28 percent to 30 percent; the flat rate business tax (IETU) increased from 17 to 17.5 percent; the value added tax (IVA) increased from 15 percent to 16 percent and from 10 percent to 11 percent in border cities; a special tax (IEPS) on diverse products and services rose; and the IEPS was levied on telecommunications.

[91] In order to assess compliance with the fiscal balance target, LFPyRH establishes a margin of deviation equivalent to 1 percent of total net expenditure approved in the Federal Budget for each fiscal year (31.8 billion pesos in 2010).

[92] The RFSP corresponds to the broadest measure of the fiscal stance by including additional financing needs (Pidiregas, Fonadin, IPAB and Debtor Support Programs) in the traditional public balance and the expected loss or gain on credit granted by development banks and funds and trusts regulated by the CNBV.

For the first time since the LFPyRH came into effect, the fiscal package used the exception clause to permit a temporary deficit in the traditional public balance, since it was forecast that in 2010 and 2011 GDP would trail its potential growth.[93] As part of the counter-cyclical measures considered in the package to offset this effect, a budget deficit excluding investment in Pemex of 90 billion pesos was approved in 2010, which would be lowered in 2011. Thus, for 2011, and in accordance with the aim of gradually withdrawing the countercyclical stimulus applied the previous year, a traditional public deficit of 356.5 billion pesos (2.5 percent of GDP) was approved; excluding investment in Pemex it was 70.2 billion pesos (0.5 percent of GDP). In GDP terms, these levels were below those of 2010, which were 2.8 and 0.8 percent, respectively. Meanwhile, RFSP 2011 estimates account for 2.9 percent of GDP, 0.6 percentage points below the 2010 level.

As of the first half of 2011, the traditional public balance and RSFP were consistent with amounts approved for the year. Despite international economic uncertainty, Macroeconomic projections for 2011 based on information as of September 2011 reflected a slightly better scenario compared with the approved fiscal package. In particular, a similar level of economic growth was expected to the one forecast and a higher Mexican-mix oil price. These two factors, along with disciplined public expenditure, means approved public finance targets will be reached in 2011.

Public debt policy has shown a high degree of flexibility since 2010 in order to take advantage of better conditions in local and international financial markets. With respect to domestic debt, the government securities placement structure was modified to return to the one prevailing before the international financial crisis, and as a result long-term bonds recovered their relative importance in the government's total quarterly placements. The weighted average maturity of government bonds increased from 2,332 days in June 2010 to 2,682 days in June 2011 (graph 78a).[94] [95] Consequently, government security refinancing needs decreased from 0.71 times in June 2010 to 0.60 times in June 2011 (graph 78b).[96]

On the external front, the Federal Government continued to place debt in international markets, strengthening benchmark bonds and broadening and diversifying the investor base. Placements in 2011 to the date of writing have taken advantage of historical lows in capital markets.

[93] In 2009 the LFPyRH fiscal balance rule was modified so that the budget deficit excluding investment in Pemex should be zero. Including investment in Pemex, the public balance may present a deficit for up to the amount of the investment.

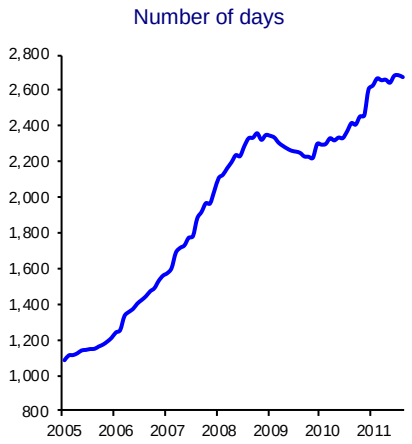
[94] The extension of government security maturities in 2010 and 2011 has played a key role in implementing a fixed-rate and Udibonos-syndicated placement mechanism (see financial market section).

[95] The weighted average maturity is defined as the weighted sum (with respect to the nominal amount outstanding) of the remaining maturity of each of the current securities.

[96] Refers to the number of times the sum of the maturities observed in the last 12 months represents the average balance of Federal Government internal securities for that period.

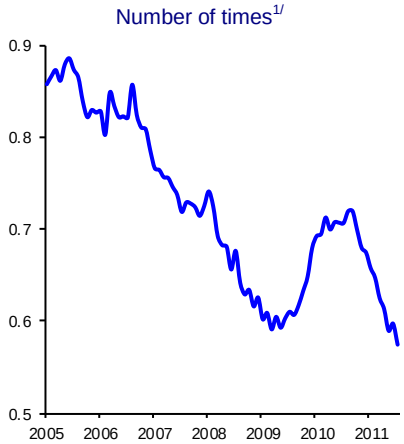
Graph 78
Public-debt indicators

a) Weighted average maturity of government debt in local currency



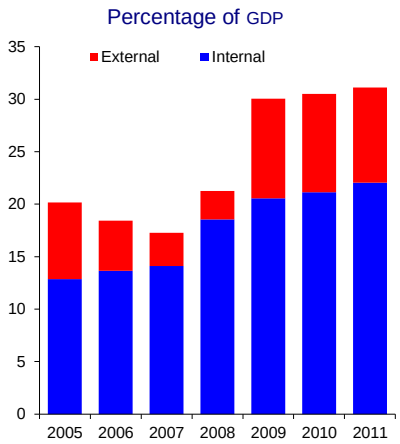
Figures as of August 2011.
Source: Banco de México.

b) Internal government security refinancing requirements



Figures as of July 2011.
Source: Banco de México.

c) Federal public-sector net debt



Figures as of June 2011.
Source: SHCP.

1/ Refers to the number of times the sum of the maturities observed in the last 12 months represents the average balance of Federal Government internal securities for that period.

As of June 2011, federal public-sector net debt was 31.1 percent of GDP, 0.6 percentage points above the December 2010 balance (graph 78c).[97] This increase is consistent with the traditional public deficit for the same period. The external debt component represented 29.1 percent of this balance (at the end of 2010 it was 30.7 percent), while the other 70.9 percent corresponded to the internal component (69.3 percent at end-2010).

The level of indebtedness of states and municipalities has increased strongly in recent years partly due to slower economic activity caused by the international financial crisis. According to SHCP information, total debt grew at a fast pace, from 1.6 percent of GDP in 2001-2008 to 2.3 percent of GDP as of June 2011. However, higher indebtedness has not been wide-spread among states. Similarly, the level of indebtedness is still relatively low and does not therefore represent systemic risk. However, its recent trend should be monitored, as:

- Some of it expires in the short term.
- Not all states have a good review system for public accounts.
- It could compromise fiscal sustainability in some states.

In its June 23, 2011 session, the Financial System Stability Council recommended to the SHCP and CNBV the adoption of measures that generate incentives to improve transparency and encourage states to develop prudent fiscal policies and banks to improve their lending processes through modifications to reserve-creation regulations, among others. Accordingly, the CNBV modified standards in October 2011.

[97] A broader measure of public-sector debt in Mexico is the Public-Sector Borrowing Requirement Historical Balance (SHRFSP), which, along with the liabilities of the Federal Government and Organisms and Companies, includes additional liabilities (Pidiregas, Fonadin, IPAB, and Debtor Support Programs) and the equity balance of development banks and Funds and Trusts regulated by the CNBV (which are negative). As of June 2011, the SHRFSP amounted to 35.2 percent of GDP, 0.3 percentage points more than at the end of 2010.

7. Risk of contagion and stress tests

Systemic risk refers to the possibility of events materializing that because of their nature can interrupt the normal operation of the financial system with adverse consequences for the real economy. While it is not possible to summarize the level of systemic risk in a single indicator, the origins of systemic events can be identified. These include:

- Situations of stress, illiquidity or insolvency for financial institutions which are important due to their size, interconnection with other similar institutions, or because they provide services that are essential to the functioning of the economy and cannot be easily offered by other financial-system participants.
- Alterations or disruptions in the normal operation of financial markets.
- Operating disturbances at entities that are part of the financial system's infrastructure.
- A weak financial position for households, companies, or the public sector derived from excessive indebtedness or a strong drop in income.
- Exposures to common risks or highly correlated risks for a large number of financial institutions.
- Regulations, methodologies or procedures that exacerbate financial-asset price movements by encouraging similar behavior among regulated entities.
- Extreme macroeconomic imbalances.
- Exogenous shocks which because of their nature can have an impact on the financial system through sudden movements in financial asset prices.

Systemic events are caused by the combination of several such factors, or the fact that one of them is very drastic. In this section, we examine the level of systemic risk in the financial system that may derive from:

- The bankruptcy or failure of a bank with direct effects on others in the system.
- Banks' exposure to common risks or highly correlated risks or disturbances that worsen the macroeconomic environment and weaken several such entities at the same time.

7.1. Contagion risk

Direct exposures between institutions and contagion risk

Transmission channels make it possible for isolated events not deemed systemic on their own to take on a systemic dimension. Thus, the bankruptcy of one financial institution can result in the bankruptcy of others and produce a systemic event. This risk is commonly known as "contagion risk," which can be: (i) direct, when it stems from exposures among institutions, or (ii) indirect, when it stems from agents' response to conditions of uncertainty and asymmetrical information, which can in turn affect different intermediaries, for example, through bank runs.

In this section, we examine the risk of direct contagion based on daily information on risk exposure among banks, brokerage firms, mutual funds and Siefores, as well as their exposure to foreign banks. Using this information we perform exercises to assess the direct impact on the Mexican financial system of the hypothetical failure of each of the country's banking institutions and brokerage firms, as well as the failure of foreign financial institutions.[98]

Direct risk positions among financial intermediaries change continuously over time. The largest exposures are related to securities, followed by FX transactions (graph 79a). Banks are the financial intermediaries with the largest exposures (graph 79b). From the point of view of systemic contagion risk, commercial banks' exposure to other banks is the largest, followed by their exposure to foreign counterparties, while mutual funds and brokerage firms are mainly exposed to commercial banks.

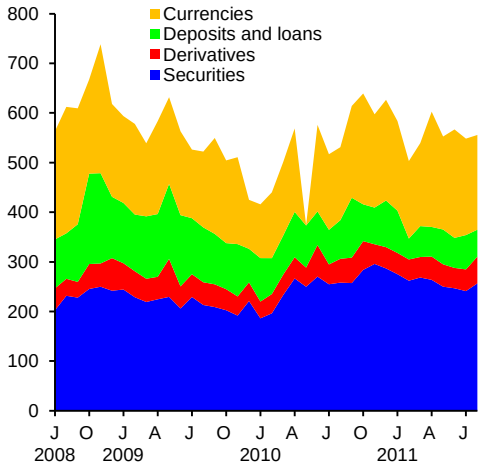
Graph 80a shows how in 2011 the risk of contagion increased, measured as the number of banks whose capital would fall below 4 percent in the event the worst possible chain of contagion was triggered. However, graph 80b shows how with the exception of the fourth quarter of 2008 and the first quarter of 2009, the percentage of financial system capital that would have been compromised in the worst contagion chain would have remained at relatively similar levels.

[98] The risk analysis presented in this report is an extension of those performed in previous years' reports. The extension involves considering the interaction of the country's banks and key foreign banks with brokerage firms, Siefores (pension funds) and mutual funds. To do this, we used the same methodology described in the 2005 Financial System Report but also included brokerage firms, mutual funds and Siefores, as well as foreign financial intermediaries. The worst possible contagion chain was used for each day of the period examined. The impact was measured using the sum of the value of bank and brokerage firm assets with a capital adequacy ratio of below 8 percent and a capital consumption ratio of above 100 percent. Direct exposures in the Mexican financial system to the sovereign debt of some countries were also initially included; however, as they were not important during the time horizon analyzed, in the end they were not included in the analysis. The foreign financial institutions considered in this analysis are those to which financial intermediaries have the most exposure.

Graph 79
Risk provisions of commercial banks, brokerage firms, Siefores and investment funds

a) Value-at-risk positions between intermediaries by transaction type

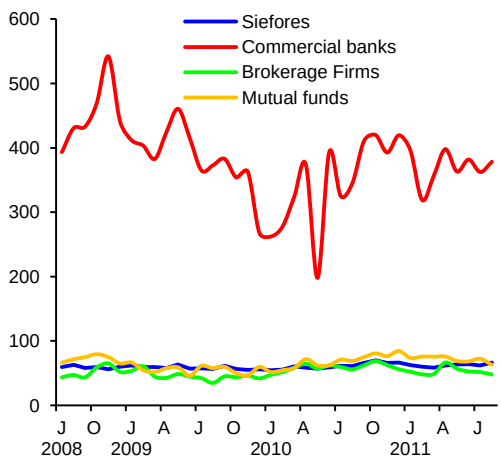
Billion pesos



Figures as of August 2011.
Source: Banco de México.

b) Value-at-risk positions by type of intermediary

Billion pesos

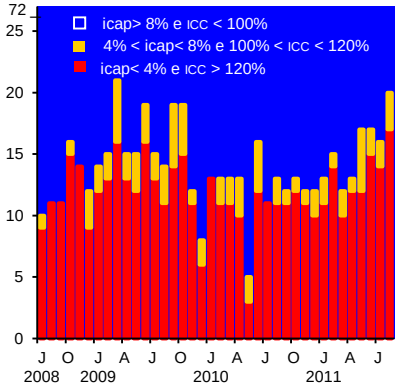


Figures as of August 2011.
Source: Banco de México.

Graph 80
Main results of the computation of contagion[1/ 2/ 3]

a) Capital adequacy ratios resulting from the daily triggering of the worst chain of contagion

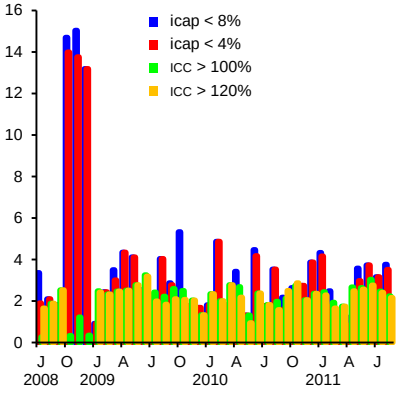
Number of banks and brokerage firms



Figures as of August 2011.
Source: Banco de México.
icap: capital adequacy ratio.
ICC: capital consumption ratio.

b) Assets of banks whose capital would be affected in the event of a daily triggering of the worst chain of contagion

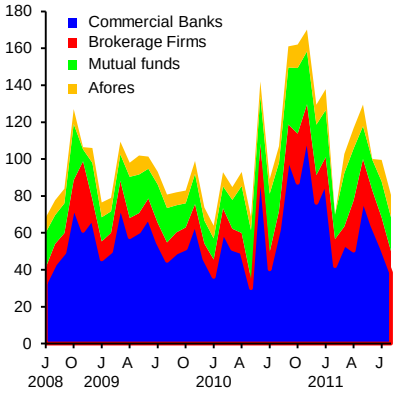
Percentage of bank and brokerage firms' assets



Figures as of August 2011.
Source: Banco de México.

c) Maximum losses by type of institution

Billion pesos



Figures as of August 2011.
Source: Banco de México.

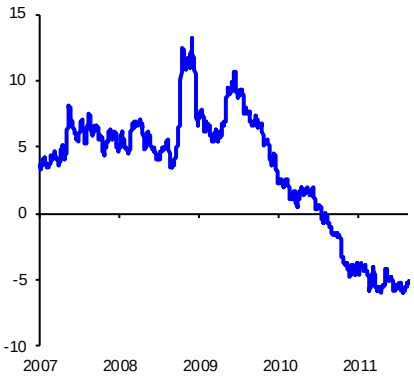
1/ Assumptions: loss given default 100 percent, a capital adequacy ratio of 8 percent and a capital consumption ratio of 100 percent.
2/ The number of banks with a capital adequacy ratio of below 8 percent or 4 percent and the number of brokerage firms with a capital consumption index of above 100 or 120 percent as well as the percentage of bank and brokerage firm assets affected by the chain of contagion; does not include the institution that initially fails.
3/ The results were calculated based on financial institutions' exposures at the end of each month.

Worst contagion-chain losses are consistent with the size of each intermediary and are larger for banks, followed by brokerage firms. The results of the exercise show that the failure of some banks would trigger the insolvency of other intermediaries. However, even in the worst contagion chain, the impact would be fairly limited in terms of the percentage of financial-system assets affected.

The net exposures of commercial banks resident in Mexico to their foreign counterparties rose considerably during some phases of the crisis. As of the second half of 2009, however, such exposures displayed a sustained decrease. Currently, Mexican banks maintain a net debtor position (graph 81a). The bigger risks are related to financial intermediaries domiciled in the United States and Europe (graph 81b and c).

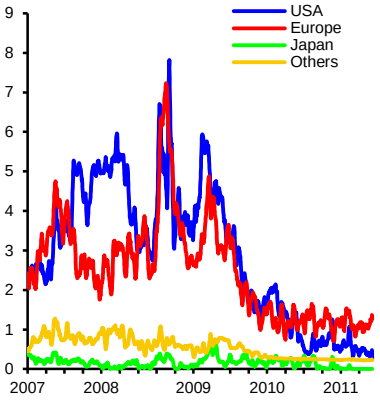
Graph 81
Net positions of Mexican banks with foreign banks

a) Net position



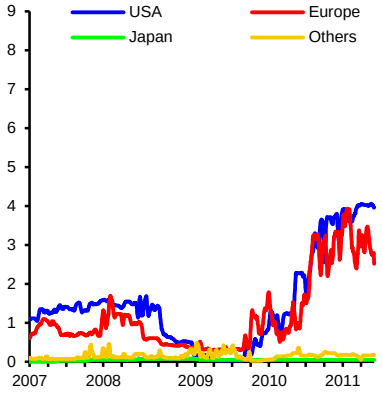
Figures as of August 2011.
Source: Banco de México.

b) Creditor positions with various counterparties



Figures as of August 2011.
Source: Banco de México.

c) Debtor positions with various counterparties



Figures as of August 2011.
Source: Banco de México.

The higher the exposure to other financial entities in relation to their capital, the more vulnerable financial institutions are to direct interbank contagion. This is why there are institutions which because of capital size are immune to direct interbank contagion. In other words, the sum of their interbank exposures is far lower than their capital.

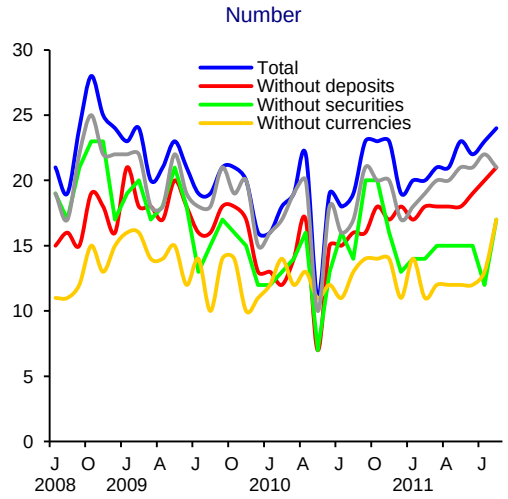
There are also cases in which the sum of institutions' exposures to other financial entities is so large in relation to their capital that in the remote case of a default by all such counterparties, their capital adequacy ratio or capital consumption ratio would fall below the regulatory minimum.[99] Only institutions in this situation are susceptible to being weakened by direct contagion. This implies that it is possible to know the number and size of the institutions that could default when another or other institutions default before simulating possible rounds of contagion. While an important exposure is a necessary condition, that alone does

[99] A different limit can be defined to determine whether an institution is overexposed. For example, if the sum of its interbank exposures surpasses short-term liabilities.

not determine the solvency of an institution that could be affected when its counterparties default. In addition to a heavy exposure, a large enough number of the counterparties of an institution must default for its capital to fall below the regulatory minimum (graph 82).

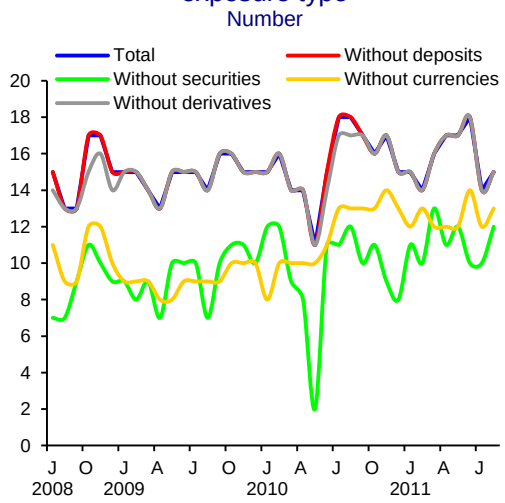
Graph 82
Exposure of banks and brokerage firms based on transaction type

a) Banks with large exposures by exposure type



Figures as of August 2011.
Source: Banco de México.

b) Brokerage firms with large exposures by exposure type



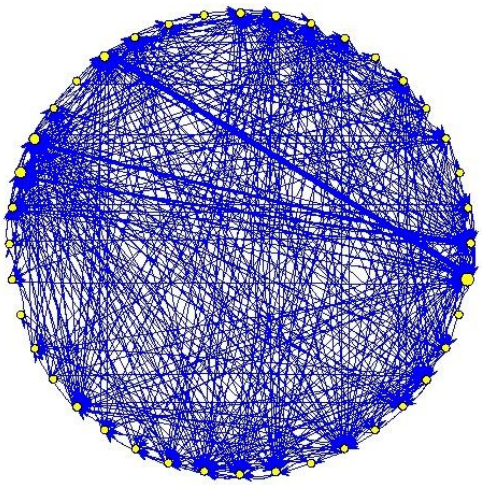
Figures as of August 2011.
Source: Banco de México.

Network analysis in systemic risk measurement

The matrix of exposures can be interpreted as a network[100], the links between each pair of institutions being represented by the size of their obligations. Graph 83 shows two examples of networks, one with the exposures among banks (graph 83a), and the other of exposures among banks, brokerage firms, Siefores and mutual funds, as well as among all those intermediaries with their foreign counterparties (graph 83b).[101]

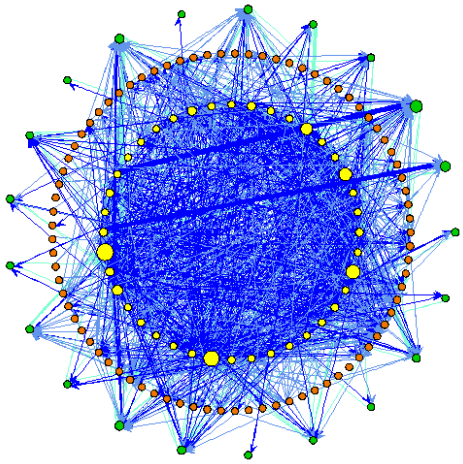
Graph 83
Network analysis of direct interbank risk positions

a) Mexican interbank market



Figures as of August 2011.
Source: Banco de México.

b) Network of exposures between Mexican financial intermediaries and their foreign counterparties



Figures as of August 2011.
Source: Banco de México.

Several measures can be used to examine the importance of a network's nodes or links. They are called centrality measures and help to define the importance of each bank in the network based on its connectivity[102] and the number and amount of exposures. Several criteria can be used to assess a bank's centrality in the network, including the number of connections (number of counterparties), the amount of resources flowing through it, and the number of steps required to reach another bank. A centrality index can be created for each institution in the network, which summarizes these criteria using the principal components technique (graph 84).

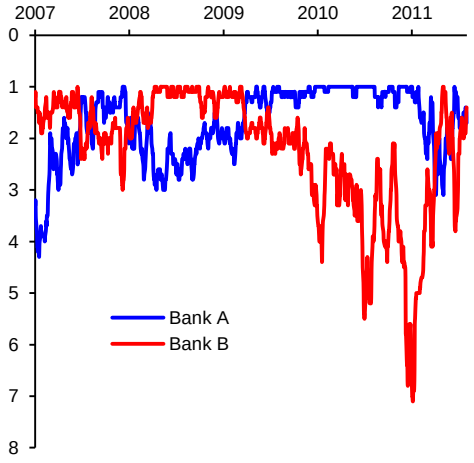
[100] A network typically describes bilateral relationships in a group of entities of interest. There are many types of relationships among individuals and institutions that can be analyzed using a network approach; for example, scientific collaboration, public transport networks, and capital flows, among others.

[101] Banco de México does not have information on exposures among the foreign counterparties of Mexican intermediaries.

[102] A bank's connectivity in a network can be characterized by its closeness to other banks in the network, the number of lenders and borrowers it is connected to, and the number of routes that pass through each bank, among others.

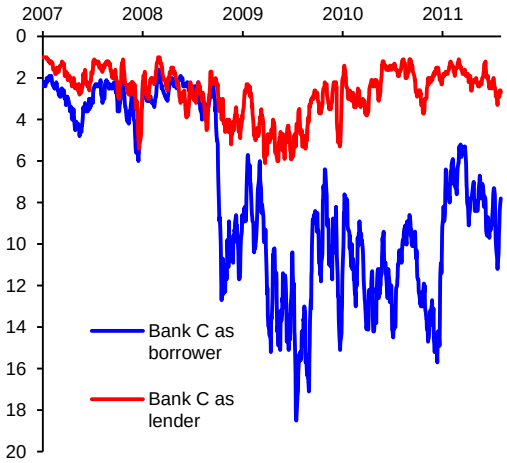
Graph 84
Network analysis of direct interbank risk positions[1/]

a) Changes in the centrality position of banks A and B in the interbank market
Position



Figures as of August 2011.
Source: Banco de México.
1/ Using the network of daily interbank exposures.

b) Centrality by role of bank C in the interbank market
Position



Figures as of August 2011.
Source: Banco de México.

Common exposures

This section analyzes changes in economic variables that could have the greatest simultaneous effect on financial institutions. To estimate the relationship between macroeconomic and financial variables, a Vector Autoregressive (VAR) model is used. From this model it is possible to generate macroeconomic scenarios that include values for the key financial variables. The impact these scenarios would have on each bank and brokerage firm is subsequently assessed, and loss distributions for these institutions and for the system as a whole are obtained.[103]

Loss distributions generated by the model enable the financial system's sensitivity to changes in specific macroeconomic variables and movements in financial variables to be obtained. Thus, for example, it is possible to determine how variations in interest rates and the exchange rate would impact other macroeconomic variables and the balance sheets of banks and brokerage firms. Results for each of the scenarios are derived from the common exposures of financial institutions. Also, the effects of contagion can be assessed among institutions when the solvency of some is affected by disruptions associated with each scenario.

Below we present the results of simulation exercises performed using the risk positions of intermediaries and the risk positions among intermediaries for

[103] See Box 5 of the 2010 Financial System Report for an explanation of the model used. Unlike the June 2010 report, the 2011 report also assesses the impact of brokerage firms. Throughout this section, "system" is taken to mean banks and brokerage firms.

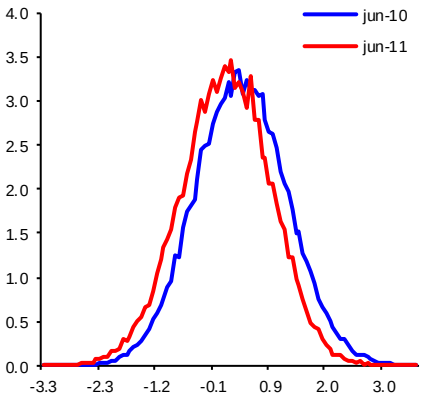
the months of June 2010 and 2011.[104] The main results show low potential losses. Also, the profit-and-loss distribution as a percentage of banks' net capital for June 2011 shows higher risk levels than for June 2010 (graph 85a). In contrast, in the case of brokerage firms, the June 2011 distribution has more scenarios with losses, but the tails are less fat (graph 85b). The loss distribution for the system as a whole (banks and brokerage firms) also reflects higher risk levels (graph 85c).

The results show that losses in the face of the scenarios described as a percentage of net capital are not significant for the system as a whole. However, in the case of some banks or brokerage firms, losses could take their capitalization levels below the regulatory minimum, triggering a contagion process that could cause the system's losses to increase. The risk of contagion processes being triggered was greater in June 2011 than it was in June 2010, as graph 80a shows.

Graph 85
Loss and gain distributions

a) Loss and gain distribution for banks

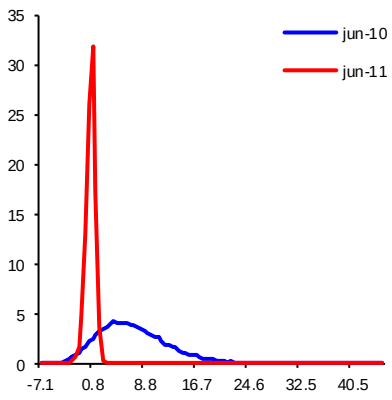
Horizontal axis: percentage of net capital
Vertical axis: percentage frequency



Source: Banco de México.

b) Loss and gain distribution for brokerage firms

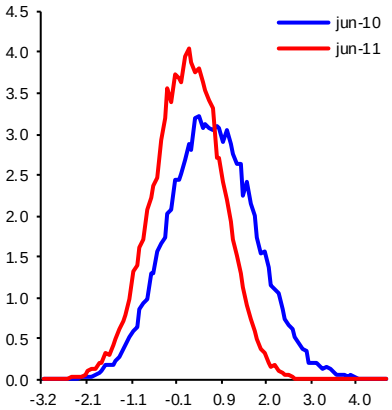
Horizontal axis: percentage of net capital
Vertical axis: percentage frequency



Source: Banco de México.

c) Loss and gain distribution for the system

Horizontal axis: percentage of net capital
Vertical axis: percentage frequency



Source: Banco de México.

[104] In each case, information corresponding to the period in question was used; in other words, to estimate VAR and the forecast generated in June 2010, only information through the end of the first half of 2010 was used. For each year, 30,000 scenarios were generated.

7.2. Macroeconomic-based stress scenarios and sensitivity tests

In this section we analyze the performance of financial institutions under extreme conditions or stress.[105] One of the advantages of these tests is that they permit an analysis of the effects of extreme circumstances (scenarios on the tail of the distribution).[106] To perform this exercise, extreme adverse scenarios with movements in risk-factor levels equivalent to three standard deviations on average were built (graph 86a). Their impact on banks and brokerage firms was subsequently evaluated. Finally, the contagion effect was taken into account. The outcome of this process permitted an evaluation of what combination of changes in macroeconomic and financial variables was required to increase the system's fragility. Graph 86b shows the loss distribution associated with such scenarios. In these scenarios losses were larger than in the previous section's scenarios. It was also found that after taking the contagion effect into consideration, the loss distribution had higher levels of losses.

Table 13 shows the level of losses institutions could incur and their variation in the year. In these scenarios banks, could record losses equivalent to 12.5 percent of their net capital after taking contagion effects into account, which is a slight increase on the previous year's level. Meanwhile, brokerage firms could register bigger losses equivalent to 22 percent of capital, a significant decrease compared with levels of the previous year. The values shown represent average losses obtained from a considerable number of scenarios. By taking scenarios with the worst losses on the distribution into account, the impact on banks' capital adequacy ratios could reach three points on average. It should be acknowledged that these exercises underestimate losses derived from credit risk, as these losses tend to materialize over longer time horizons than the ones employed here.

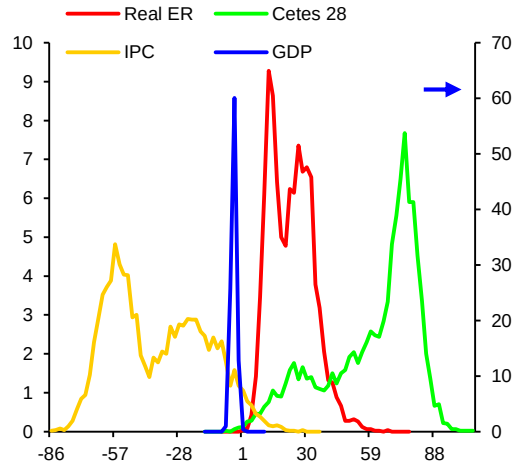
[105] In order to undertake the stress tests, the same model as in the previous section is used, and scenarios are generated that represent extreme movements in macroeconomic variables.

[106] Stress tests are used to evaluate the effects that the occurrence of adverse but feasible scenarios would have on a series of financial assets. Using this procedure it is possible to detect vulnerabilities of institutions in situations where risk factors reach extreme values. Stress tests should be used to complement other risk estimates that work well under normal circumstances but underestimate risks during times of crisis (e.g., the VaR).

Graph 86
Distribution of stress scenarios and loss distribution under those scenarios: June 2011

a) Distribution of percentage changes in some variables used

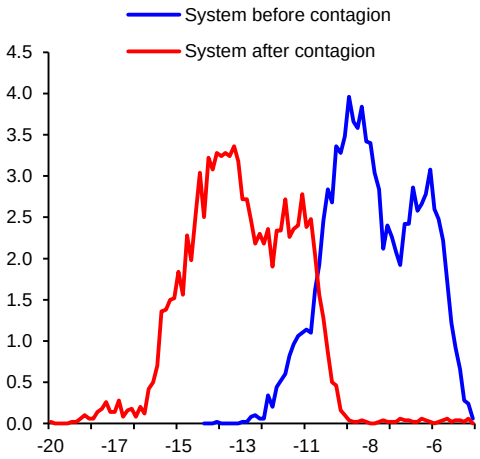
Horizontal axis: percentage change
Vertical axis: percentage frequency



Figures as of June 2011.
Source: Banco de México.

b) Loss and gain distribution of the system before and after contagion

Horizontal axis: percentage of net capital
Vertical axis: percentage frequency



Figures as of June 2011.
Source: Banco de México.

Table 14
Losses under stress scenarios

	Average loss as a percentage of net capital (percent)					
	System		Commercial Banks		Brokerage Firms	
	Before contagion	After contagion	Before contagion	After contagion	Before contagion	After contagion
jun-10	10.0	11.1	9.5	10.3	20.3	28.2
jun-11	8.2	13.0	8.1	12.5	8.3	22.2

Source: Banco de México.

Credit stress tests

During this exercise, the potential losses to commercial banks that would occur as a result of a sharp increase in defaults on creditor obligations were estimated. A scenario was built in which the probability of default on each type of loan portfolio was increased on a straight-line basis over an 18-month time horizon to three times the current level before subsequently reducing it to its original level 18 months later. Thus the exercise has a 3-year horizon. In order to estimate the impact of the estimated losses during the stress period, a capital adequacy ratio was calculated on the assumption that changes in capital are due only and exclusively to changes in the performance of the loan portfolio. Interest generated by the loan portfolio is accumulated.[107] On the basis of these assumptions, the trend in delinquency rates differs according to the loan portfolio type.

In the stress exercises, the delinquency rate is higher in the consumer loan portfolio, which already presented the highest indexes. Under this extreme scenario, the system's capital adequacy ratio could decrease by up to 7 percentage points. However, despite the "severity of the scenario," the banking system as a whole maintains an average capital adequacy ratio above the regulatory minimum, although the individual losses of some banks could push their ratios to levels below the minimum. However, losses generated under this scenario could be offset by profits generated through other business lines during the period of analysis.

In sum, the stress tests show how even during extreme events with low probability, banks and brokerage firms should on average maintain adequate levels of capital, and the potential contagion would affect only a relatively small percentage of the system's assets.

[107] On the basis of the assumption that the loan portfolio is not amortized and that changes are therefore due only to expected losses (considering possible loan portfolio recoveries) and the interest generated. The details of these assumptions and the respective calculations can be consulted in Box 29 of the 2007 Financial System Report.

8. Balance of risks and conclusions

The balance of risks faced by the Mexican financial system and the overall economy significantly deteriorated during the first nine months of 2011 due to the lack of confidence triggered by the E.U. sovereign debt crisis and the slowdown in the world economy.

Consequently, the main risks the Mexican financial system faces are on two fronts: the impact that the worsening of the E.U. crisis could have on the solvency and liquidity of E.U. banks and the sovereign debt of those E.U. countries with weaker fiscal positions. A scenario of this type could give rise to illiquid and dysfunctional international financial markets as well as contractions in the volume of credit granted by the affiliates of some E.U. banks. Higher levels of uncertainty and a greater deterioration in risk perception derived from further potential deterioration in Europe could also cause a strong reversal in capital flows to emerging economies. Furthermore, lower U.S. growth could have a negative effect on Mexico's economy. There are other risk factors that should also be borne in mind, including the effects of financial reforms approved in developed countries on global banks and the countries where they are present.

Deterioration in Europe

As mentioned, during the first nine months of 2011, the international economic environment worsened significantly due to prevailing uncertainty in Europe over the fiscal sustainability of some of the region's member states. Delays and difficulties in the pursuit of a satisfactory solution to the Greek debt problem only complicated matters. Programs announced by the E.U. authorities did nothing to ease doubts about the ability of Greece and other E.U. periphery countries to meet their medium-term debt obligations; neither did they prevent other countries such as Spain and Italy, and to some extent France, from being affected.

The Mexican financial system could be affected due to the impact caused by the deterioration in sovereign risk indicators and the fiscal positions of some E.U. countries on euro-area financial entities. It is common knowledge that the E.U. financial institutions are involved in the Mexican financial system mainly through investments in financial groups, banks, and sofomes. Regarding investments in financial groups and banks, direct contagion of affiliates by their head office is limited by two factors: first, regulations require affiliates to maintain their own capital and liquidity, and second, very strict limits are placed on their exposures to their respective head offices.

Slowdown in economic growth

The main risk to the Mexican economy comes from the possibility of a sudden slowdown in the U.S. economy. U.S. economic growth forecasts underwent significant downward revision in 2011. At the same time enthusiasm for countercyclical fiscal and monetary policies was replaced by concerns related to higher public debt and central bank balances.

Although the risk of the global economy falling into another recession is moderate, it is once again rearing its ugly head in markets. The main mechanism for it spreading to the Mexican financial system would be the trade link between the U.S. economy and Mexico. In such circumstances, external demand for Mexico's manufacturing exports would weaken, affecting other internal aggregate demand components along with economic growth. In this scenario, another fall-off in lending would be likely, and delinquency rates would probably increase.

Sudden reversal of capital flows

The deterioration in the global outlook derived from greater uncertainty in the E.U. zone and expectations of slower global economic growth is driving capital inflows into emerging economies. In addition to an interest-rate spread favoring these countries is the view that interest rates in developed countries will remain low for an extended period of time. However, as mentioned in previous reports, the amount of capital flowing into emerging economies represents an important medium-term risk, mainly because they could suddenly reverse for at least two reasons, among others: i) a change in the risk-return relationship when developed economies begin to withdraw their monetary stimulus, and ii) a deepening of the global crisis, forcing foreign investors to seek less risky assets.

The first risk factor has recently eased, the reason being that economic growth prospects in developed economies have been lowered owing to the flare-up of the E.U. sovereign debt crisis and high levels of indebtedness in developed countries like the U.S. and the U.K. Likewise, the fiscal consolidation plans put in place by such countries could pose an obstacle to economic recovery. Furthermore, skepticism about whether fiscal goals can be achieved and the perception that the fiscal correction will be a hard and drawn-out process will likely continue to lessen the appeal of developed economies for investors.

However, the distrust generated by the E.U. sovereign debt crisis and U.S. downgrade could exacerbate risk perception among investors. The weak fiscal positions of most developed economies could threaten the implementation of support measures for a troubled financial institution. Prevailing market uncertainty with respect to this situation has significantly eroded the value of financial entities and could trigger a reversal of capital flows into other emerging economies.

Decrease in global bank risk appetite due to financial regulatory reforms

The international reform that the G20 has been promoting through the Financial Stability Board (FSB) has no precedent in the recent history of the international financial system, at least in terms of its scope and importance as well as the international cooperation efforts required. An important part of the reform agenda corresponds to resolving financial regulation flaws that the crisis has brought to light, especially in developed countries.

Consequently, reforms contemplated by the international regulatory agenda could have some undesired impacts on emerging economies. In particular, there are three issues worth highlighting: (i) the consistent and even implementation of international financial reforms; (ii) the increase in trading book

capital requirements; and (iii) the scope of regulatory reforms implemented in some developed economies with respect to OTC derivative transactions.

First, there is the risk of the international regulatory agenda not being consistently and evenly implemented in countries or jurisdictions that are home to global banks. This could have a negative impact on host countries with a large presence of foreign bank subsidiaries. Differences in the implementation or interpretation of regulation in countries where parent companies are located could put some financial institutions at a disadvantage versus other institutions in countries where the affiliates operate.

The second issue is related to the risk treatment of some trading book exposures. New capital requirements under Basel III introduce large capital requirements for counterparty risk and the concentration of trading book risks. These additional charges could have an unfavorable impact on some emerging countries where foreign banks have a large presence. For example, Basel III contemplates sovereign debt not being subject to capital requirements when denominated and financed in local currency. The reason for this is that sovereign debt can be considered a risk-free asset, especially in countries that have not stopped issuing their own currency. However, global bank affiliates consolidate their financial statements with those of their parent companies, which consider the sovereign debt of the country where their affiliates operate as foreign. As a result, they usually apply capital requirements in line with the global rating of such debt or their own internal models. New Basel III capital requirements for counterparty and trading book risks are substantial and have the potential to influence the risk appetite of global banks for emerging-economy financial assets.

A similar problem could arise from restrictions on banks and their subsidiaries regarding their own trading book activities. Liquidity in debt and derivative markets in many emerging economies depends fundamentally on risk taking and the active participation of banks. Regulatory constraints imposed by the parent company on the participation of subsidiaries in certain markets, should they materialize, could have a big adverse impact on the liquidity and depth of local financial markets.

Finally, the scope of reforms adopted in other countries in relation to OTC derivative transactions is worth special mention. Specifically, one of the most important reform proposals concerns the requirement to settle standard derivative transactions through central counterparties. Regulators must establish which OTC transactions should be traded and settled in this way, and which may continue to be traded in OTC markets. A very large share of the transactions that take place in financial markets involve intermediaries located in different countries. Therefore, it is important that: (i) different countries be consistent in their adoption of the regulations; and (ii) the potential extraterritorial application of some local laws be checked, as some might be applicable to the financial activities of banks' foreign affiliates. Mutual recognition agreements between central counterparties and transaction depositories deserve special attention.

Conclusions

During the period of analysis, the international economic environment became more complicated and uncertain. Ongoing monetary and fiscal stimulus actions implemented by developed countries and some emerging economies failed to generate conditions for sustained economic growth. In fact, active fiscal policies contributed to transforming the financial crisis into a sovereign debt crisis, further fueling uncertainty. In addition, the absence of a defined strategy and the amount of time that elapsed with no definitive and credible measures for resolving sovereign debt troubles only exacerbated the uncertainty.

In this complicated and highly adverse international environment, Mexico's prudent and responsible monetary and fiscal policies set it apart. These policies, along with the local financial system's proven capacity for absorbing the direct effects of the crisis during its most critical points, helped maintain investor confidence. Efforts undertaken in recent years to clean up public finances, keep inflation under control, strengthen regulations and improve financial institution oversight processes, as well as develop local financial markets, paid off.

These factors contributed to generating certainty and increased the financial system's resilience. That is why the economy displayed a robust rate of expansion beginning in the early months of 2011. As a result, both domestic demand and employment rebounded, with all sectors of the economy experiencing a sustained recovery in bank credit. Regarding the latter, the terms and conditions under which commercial credit was granted improved: maturities became longer and borrowing rates decreased. Development banks played a big role in the current environment by mitigating the adverse effects of the crisis on credit markets and economic activity through the application of countercyclical policies and by servicing market segments with low credit penetration.

With respect to non-bank banks, several issues are worth noting. First, Siefores offered affiliated members better returns and there was a downtrend in the fees charged. Second, insurance-sector profits registered a slight decrease despite an increase in premiums charged. This was due to lower income from financial products and higher expenses related to claims, including the agriculture and cattle-breeding sectors following the worst freezes in the last fifty years in northern Mexico. Third, despite brokerage firms assuming greater risk, capitalization levels remained above required levels; profits decreased due to lower trading income and the revaluation of securities, currencies and derivative transactions (a situation similar to that of banks). Fourth, sofome activities weakened across sectors after the onset of the international financial crisis; funding to these intermediaries decreased from the very start of the crisis, hurting especially mortgage sofomes which are exposed to bigger risks due to balance mismatches and high delinquency rates.

Fiscal soundness and low and stable inflation facilitated the deepening of the government debt market. The weighted average maturity of peso-denominated government debt increased, in turn making public finances more sustainable. A factor that played a decisive role in this progress was the floating-rate regime. Banco de México's sporadic interventions in the foreign exchange market generally occurred in accordance with transparent rules known to all market participants in advance. The single aim of such interventions was to encourage orderly functioning of the market. Foreign exchange policy contributed

to the peso becoming one of the few emerging-market currencies that trades 24 hours a day.

The operating standards of entities that form part of the financial system's infrastructure contributed to their sustained financial stability, while at the same time enabling larger transaction volumes. As a result of G20 commitments, the country's financial authorities began to take actions to promote the standardization of derivative transactions, foster trading through centralized markets and electronic platforms, and enable transaction clearing and settlement through central counterparties and the registration of derivative transactions in central information repositories.

Stress tests show that in the aggregate, banks and brokerage firms have enough capital to absorb potential losses resulting from extreme situations that are unlikely to occur. However, the severity of the impact differs across institutions. These stress tests assume variations equivalent to three standard deviations in main risk factors such as the exchange rate, interest rates and the probability of default.

Despite the strengths of the Mexican financial system, the considerable deterioration in the international environment calls for financial authorities to remain alert to risks that could represent a threat to the financial system as well as adopt timely prudential measures to reduce the likelihood of such risks materializing and to mitigate their effects on the financial system and the economy. Recent changes to loan-loss provision regulations set by the CNBV should help financial intermediaries better internalize the risks they incur.

One of the main risks the financial system faces in the current environment is of course the impact of the E.U. debt crisis. Cases of insolvency or illiquidity among E.U. banks and interruptions in the normal functioning of international financial markets could have an impact on local entities exposed to financial intermediaries in that region. Also worth noting are changes to limits on transactions subject to credit risk with related parties. One aim of these changes is to limit bank affiliates' exposures to head offices.

While economic policy has focused on maintaining and increasing confidence in the macroeconomic environment, this certainty is but one requirement; it is not enough in itself to guarantee a sustained and accelerated pace of economic growth. Progress must continue to be made on strengthening the conditions required for an environment of monetary and financial stability to flourish. Stability provides the foundation for structural reforms that are essential to consistently higher rates of economic growth. Given an outlook of modest economic growth in developed economies in the coming years, the need for progress is even more pressing on pending structural reforms that would drive private investment and create more permanent and well-paid jobs, and channel resources efficiently towards more productive uses.