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# FINANCIAL STABILITY REPORT

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# **FOREWORD**

The adoption of the law on credit institutions and similar bodies in December 2014<sup>1</sup> marked a major development in macro-prudential oversight, which is now entrusted to the Systemic Risk Coordination and Monitoring Committee (SRCMC) set up by this law. Chaired by the Governor of Bank Al-Maghrib, the committee is composed of representatives of the central bank, the supervisory authorities of insurance and capital markets and the Ministry of Economy and Finance. The primary mission of the committee is to assess systemic risks to the financial system and coordinate the actions of its members in overseeing the institutions under their respective control, monitoring systemically important financial institutions and financial conglomerates and crisis resolution.

In 2015, the committee met twice. It reviewed the risks to the financial system, using in particular a systemic risk map covering banking and insurance sectors and capital markets. It also reviewed the soundness indicators of systemically important institutions and approved the second issue of the Financial Stability Report for the year 2014.

Operationally, the financial authorities strengthened their coordination, mainly with the implementation of the provisions on data exchange framework<sup>2</sup> they adopted in 2014, and continued to enhance and expand the scope of the analytical framework for macro-prudential oversight. The latter was extended to cover risks specific to pension plans and was supplemented with analyses on contagion channels between banks and their branches abroad and the interconnections between banks and insurance companies.

Another highlight of 2015 was the third Financial Sector Assessment Program (FSAP) mission, which was jointly conducted by the IMF and the World Bank at the request of the Moroccan authorities. The mission assessed the soundness of the financial system, the arrangements of micro and macro-prudential oversight, banking resolution framework, capital market regulation, market infrastructure and financial inclusion.

The mission underlined the progress made in the financial system and recognized the determination of the Moroccan authorities to develop a macro-prudential framework in line with the relevant international standards. It also highlighted the resilience of the banking system and noted the strengthening of the crisis management framework, in view of the progress made in terms of regulations, which provides for ad-hoc legal instruments and mechanisms as well as for a conventional and coordination framework among financial system supervisors. The recommendations of the mission focused mainly on enhancing the institutional framework

<sup>1</sup> The law was published in the Official Bulletin No. 6328 of January 22, 2015.

<sup>2</sup> This framework defines information to be exchanged both in normal times and times of crisis.

for macro-prudential oversight, implementing some of its instruments and brining the banking resolution framework into alignment with the standards of the Financial Stability Board, with regard to the least-cost principle for public funds.

\* \* \* \* \*

This issue of the Financial Stability Report was jointly prepared by the financial sector regulators. It consists of four chapters, covering the following topics:

- 1. Major international and national macroeconomic developments, their related risks and their impact on the financial system;
- 2. The financial position of nonfinancial sectors and their ability to discharge their financial obligations with respect to the financial system;
- 3. Assessing the soundness and resilience of the financial institutions. Analysis focuses on the main risks to the sectors of banking, insurance and pension funds;
- 4. Developments in capital markets and market infrastructure, with emphasis on the assessment of major risks to market stability and systemically important infrastructures.

These chapters are preceded by a general overview of the economic and financial trends related to financial stability.

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# **OVERVIEW**

# Reduced risks stemming from external factors

In 2015, the global economy grew at a modest 3.1 percent, its lowest record since 2009, reflecting a sharp deceleration in emerging economies and a broadly moderate recovery in developed countries. The year under review also saw a decline in oil and other commodity prices, as well as a depreciation in the currencies of major advanced and emerging economies against the U.S. dollar.

Financial conditions generally improved in advanced economies, in connection with slow economic consolidation and continued accommodative monetary policies. In contrast, conditions in the financial markets of emerging economies worsened, mainly due to the uncertainty around the prospects for weak growth in these countries.

Domestically, external vulnerabilities subdued and the risk arising from the external position remained limited. Current account deficit narrowed further for the third year in a row and run at 1.9 percent of GDP in 2015 after 7.9 percent in 2013. This easing is chiefly attributable to the sizeable decline in energy and food prices, coupled with the momentum in the automotive sector sales and the increase in of phosphate prices and its derivatives, boosted by the dollar appreciation. This improvement contributed to the build-up of net international reserves, which stood at 224.6 billion dirhams, or the equivalent of 6 months and 24 days of goods and service' imports.

### **Continued fiscal consolidation**

The fiscal consolidation which started in 2013 held steady, as deficit declined to 4.4 percent of GDP in 2015, after 4.9 percent in 2014, mainly due to lower subsidy costs and higher proceeds from income tax and VAT. Treasury debt stood at 63.8 percent of GDP compared with 63.5 percent in 2014, reflecting a 9.1 percent value increase in its domestic component and a 0.3 percent decrease in outstanding foreign debt. Overall public debt rose to 80.1 percent of GDP, due to increased external debt of state-owned companies and institutions. The outlook for Treasury debt, based on budget forecasts of the Finance Act 2016 and Bank Al-Maghrib's 2017 macroeconomic outlook, suggests that Treasury debt would increase to 65.7 percent in 2016 and to take a downturn starting 2017.

# Persistently sluggish nonagricultural sector

Risks to the financial system arise mainly from domestic economic activity. The GDP growth by 4.5 percent in 2015, up from 2.6 percent in 2014, was more driven by the good performance of the agricultural sector, while the value added of nonagricultural activities grew by merely 1.9 percent, compared with 2.5 percent in 2014.

The persistent weakness in nonagricultural activities is a source of concern to the domestic economy, insofar as it reflects the difficulty facing the economic fabric to return to pre-crisis growth levels<sup>3</sup>.

# Contraction in bank lending to nonfinancial corporations and a fresh surge in nonperforming loans

Nonagricultural activities, which are among the key determinants of bank lending, remained sluggish and impacted lending to the nonfinancial sector, causing it shrink to 0.5 percent. Bank loans to households slightly decelerated to 5.6 percent, while those granted to nonfinancial corporations fell by 2 percent.

In connection with the economic situation, nonperforming loans continued to increase, albeit at a slower rate of 9.2 percent compared with 20 percent in 2014, and their ratio to bank loans went up to 7.4 percent from 6.9 percent in 2014 and 5.9 percent in 2013.

Household debt stabilized at 30 percent of GDP and household nonperforming loans edged down for the first time in three years, reaching 7.5 percent from 7.8 percent in 2014. However, a survey of a sample of households who renewed or newly obtained a consumer loan in 2015 shows that the average debt burden continues the upward trend seen over the past years.

The financial debt of nonfinancial corporations fell to 71 percent of GDP, driven mainly by the contraction in their bank debt. Their nonperforming loans further increased to 44 billion dirhams in 2015, or 9.7 percent of their bank debt.

The debt of private corporations declined more markedly, as their financial debt fell for the first time in ten years, reaching 48 percent of GDP. The financial debt of state-owned corporations continued to rise strongly<sup>4</sup>, driven mainly by its foreign component.

A survey of a sample of 1684 private and state-owned nonfinancial corporations, with a total turnover of 232 billion dirhams and a financial debt of 198 billion dirhams, shows that their trade payables exceeds 6 months of purchases while the amounts owed to customers declined somewhat to 2.8 months of turnover. These payment deadlines rose to alarming levels for some sectors, particularly property development, construction and transport and communication. The analysis of the causes behind this situation points to the need to strengthen the legal framework (reform of the law on payment deadlines) and ensure its effective implementation.

<sup>3</sup> The nonagricultural value added grew on average by 4.7 percent between 2003 and 2012.

<sup>4</sup> This debt accounted for 23 percent of GDP.

# Resilience of banks and insurance companies amid lower margins and higher risk cost

This year, banks' results shrank by 6.5 percent, under the pressure of narrow intermediation margins and high costs of credit risk, while market income was more modest. The level of banks' capital remained broadly in line with the requirements, with an average equity ratio of 13.7 percent and a tier 1 capital ratio of 11.8 percent. Loan loss provisions increased 13 percent, raising the cover rate of nonperforming loans to 68 percent, from 65 percent a year earlier. General provisions to cover non-incurred losses rose by 5.7 percent. In 2015, banks' liquidity deficit eased, primarily due to the build-up in foreign exchange reserves, which resulted in a lesser recourse to refinancing from the markets.

The stress tests conducted broadly confirmed the resilience of banks to shocks emanating from macroeconomic conditions, their liquidity position as well as their exposure to their branches abroad. However, they are vulnerable to potential shocks likely to affect the quality of credit of their large counterparties.

The activity of the insurance sector grew by 7 percent. The yield rate of this sector slightly contracted from 9.9 to 9.1 percent, due to a deterioration in the net financial income. Similarly, unrealized gains continued to trend down, impacted by the poor performance of the stock market, and made up on average 5.9 percent of representative assets. Liquid assets of insurance companies accounted for nearly 2.5 times their current liabilities, reflecting a strong ability to meet their potential cash outflows. Their solvency margin, covering the underwriting risk, stabilized on average at more than four times the regulatory minimum. However, the transition to a risk-based solvency prudential regime would require recapitalization of some insurance companies.

# Fragile situation of pension funds and worrying deterioration in the civil service pension scheme exacerbated by its delayed parametric reform

For the second year in a row, the liabilities paid by the pension schemes exceeded the contributions perceived. The financial sustainability of some pension schemes continues to be undermined by their technical imbalance due to the poor pricing and the significant level of liabilities. This situation is particularly worrying in the civil service pension fund which slipped into its second deficit since 2014 and its reserves are likely to be depleted by 2022. The delay in the implementation of the parametric reform caused the fund to worsen further.

# Capital markets remain concentrated and shallow

Despite declining rates, activity in the private debt market contracted sharply, more particularly in the compartment of certificates of deposit.

Stock market capitalization shrunk by 6.4 percent, driven primarily by the poor performance of MASI (-7.22 percent). Besides, the concentration of the stock market on a limited number of issuers and business activities is a source of vulnerability in a context fraught with difficulties experienced by some large issuers in 2015. There is need both for vigilance about the financial situation of large companies strongly linked to the financial system and for a deep market. The acceleration of reforms to develop these markets is also required.

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# **CHAPTER 1**

MACROECONOMIC DEVELOPMENTS

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### **Overview**

In 2015, the global economy grew at a modest 3.1 percent in 2015, reflecting further moderate recovery in advanced countries and deceleration in emerging and developing countries.

Financial conditions improved overall in developed economies, but worsened in major emerging economies, due to the uncertainty around their weaker economic outlook.

Domestically, current account deficit eased further for the third consecutive year to stand at 1.9 percent of GDP in 2015. This improvement is chiefly attributable to the sizeable easing in energy and food prices, coupled with the momentum in exports of phosphates and the automotive industry. Net international reserves rose to 224.6 billion dirhams, representing the equivalent of 6 months and 24 days of imports of goods and services, one and half month higher than in 2014.

The national economy expanded by 4.5 percent in 2015, driven mainly by the good performance of the agricultural sector. However, nonagricultural activity remained sluggish in 2015 and grew by 1.9 percent, largely below its pre-crisis levels.

In the labor market, unemployment declined to 9.7 percent, despite weak job creation. This may be explained by the drop in participation rate by 0.6 point. Headline inflation rose to 1.6 percent from 0.4 percent in 2014, while core inflation virtually stabilized at 1.3 percent.

The fiscal consolidation which started in 2013 held steady in 2015, with deficit declining to 4.4 percent of GDP in 2015, from 4.9 percent in 2014. Treasury debt slightly rose to 63.8 percent of GDP compared with 63.5 percent in 2014. Based on Bank Al-Maghrib's outlook and the budget forecasts of the Finance Act 2016, Treasury debt is expected to take a downturn starting 2017.

Turning to monetary policy, the Board of Bank Al-Maghrib kept the key rate at 2.5 percent, which broadly led to an easing in interest rates. Under such conditions, bank lending rose by 2.8 percent.

In the real estate market, prices slightly rose, as reflected by the Real Estate Price Index which was up 0.6 percent year on year, after contracting by 0.4 percent in 2014. Under these conditions, property sales fell by 2.7 percent, reflecting declines in sales of residential property, urban land and commercial property.

# I.1 INTERNATIONAL DEVELOPMENTS

Deceleration in emerging countries continue to slow down global growth

In 2015, global growth slowed down to 3.1 percent, its lowest level since 2009. This situation, falling short of expectations, can be explained by the increasing deceleration of activity in emerging countries.

In advanced economies, moderate recovery continued, with growth inching up from 1.8 to 1.9 percent in 2015. In particular, the euro area posted a 1.6 percent increase in GDP from 0.9 percent a year earlier, mainly reflecting stronger domestic demand. In Morocco's major European partners, two trends could be seen:

- On the one hand, growth accelerated from 1.4 to 3.2 percent in Spain and rose from 0.2 to 1.1 percent in France. Similarly, Italy's economy grew by 0.8 percent;
- On the other hand, after a marked pick-up in 2014, growth edged down from 1.6 to 1.5 percent in Germany and fell from 2.9 to 2.2 percent in the United Kingdom, largely due to falling investment.

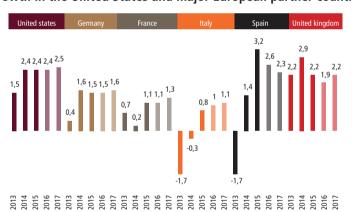
In the United States, GDP growth stagnated at 2.4 percent, below expectations, reflecting weak external demand. Japan's economy grew from nil to 0.5 percent, driven mostly by the increase in government consumption.

In emerging and developing countries, growth decelerated sharply from 4.6 to 4 percent. This reflects the faltering in Chinese economy, the GDP of which dropped to 6.9 percent from 7.3 percent, in response to lower investment and manufacturing production. Similarly, GDP contracted by 3.7 percent in Russia and 3.8 percent in Brazil due, in part, to weaker commodity prices. In contrast, growth picked up from 7.2 to 7.3 percent in India and from 2.9 to 3.8 percent in Turkey.

In the Middle East and North Africa, in response to heightened geopolitical and social tensions together with falling energy prices, growth slowed down from 2.6 to 2.3 percent. Except for Egypt where GDP picked up from 2.2 to 4.2 percent, growth fell from 3.6 to 3.4 percent in Saudi Arabia, 4.6 to 3.9 percent in the United Arab Emirates, 3.8 to 3.7 percent in Algeria and 2.3 to 0.8 percent in Tunisia.

With declining commodity prices, GDP growth in Sub-Saharan Africa dropped from 5.1 to 3.4 percent, mainly reflecting the slowdown in economic activity from 4.3 to 4 percent in Gabon, 9.2 to 7.7 percent in the Democratic Republic of Congo and 7.5 to 6.1 percent in Mali. In contrast, GDP in Ivory Coast and Senegal rebounded from 7.9 to 8.6 percent and 4.3 to 6.5 percent, respectively.

# Growth in the United States and major European partner countries



Source: IMF

The outlook for global growth over the mediumterm will mostly depend on activity in emerging countries Concerning growth prospects, the IMF April 2016 outlook revised downward global growth for 2016. The global economy is expected to grow at a modest 3.2 percent, slightly higher than in 2015. This reflects stagnation in advanced economies at 1.9 percent, and a slight improvement in emerging and developing countries from 4 percent in 2015 to 4.1 percent. In 2017, global growth is projected at 3.5 percent, with the increase in growth in emerging and developing countries to 4.6 percent. Growth in developed countries is projected to increase modestly to 2 percent.

With regard to Morocco's main European partners, GDP growth in 2016 is expected to stagnate in Germany and France at 1.5 percent and 1.1 percent, respectively, before increasing to 1.6 percent and 1.3 percent in 2017. Growth in Italy is expected to continue to gradually improve to 1 percent in 2016 and 1.1 percent in 2017, while growth in the United Kingdom is projected to slightly decelerate to 1.9 percent in 2016 before rebounding to 2.2 percent in 2017. Growth in Spain is also expected to slow down to 2.6 percent and further to 2.3 percent.

Growth in MENA region should continue to be dragged by somewhat lower energy prices. It is expected to grow at a modest 2.9 percent in 2016 before rebounding to 3.3 percent in 2017.

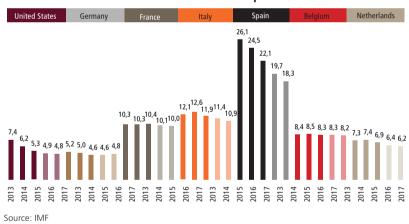
Growth prospects for Sub-Saharan African countries will continue to vary across countries In Sub-Saharan Africa, growth is expected to decelerate from 3.4 to 3 percent in 2016, before improving to 4 percent in 2017. These projections point to uneven trends across countries. Thus, growth is expected to slow to 8.5 percent then to 8 percent in Côte d'Ivoire and should rise to 6.6 percent and 6.8 percent in Senegal. In Gabon, GDP growth is forecast to slow to 3.2 percent in 2016 before increasing to 4.5 percent in 2017.

Labor market situation improved markedly

With regard to the labor market, the situation broadly improved in major advanced economies, as indicated by declines in unemployment rate in the United States from 6.2 to 5.3 percent, in Japan from 3.6 to 3.4 percent, in the United Kingdom from 6.2 to 5.4 percent, and in the euro area from 11.6 to 10.9 percent. In the main host countries of Moroccans abroad, unemployment rates decreased in Spain from 24.5 to 22.1 percent, in Italy from 12.6 to 11.9 percent, in Belgium from 8.5 to 8.3 percent, in the Netherlands from 7.4 to 6.9 percent and in Germany from 5 to 4.6 percent, but rose slightly in France to 10.4 percent from 10.3 percent.

In addition, the improvements in labor market conditions should hold steady over the medium term, as indicated by the IMF outlook. In major emerging and developing countries, unemployment rate stabilized at 4.1 percent in China, but increased from 4.8 to 6.8 percent in Brazil and from 5.2 to 5.6 percent in Russia.

Change in the unemployment rate in the United States and main host countries of Moroccan expatriates



Continued decline in commodity prices

Impacted by abundant supply and weaker demand, especially from emerging countries, commodity prices fell sharply. This decline affected both energy products (45.1 percent) and non-energy products (15 percent).

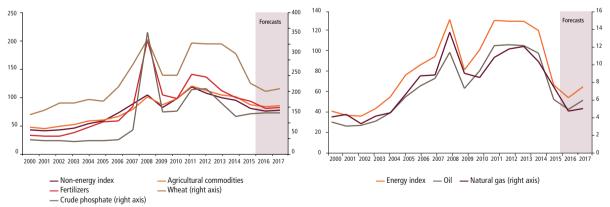
The decline in the prices of energy products mainly reflects the fall in oil price by 47.2 percent to an average of 50.8 dollars a barrel, compared with 96.2 dollars in 2014. Similarly, the prices of natural gas and coal declined by 34.4 percent and 19.8 percent, respectively.

Concerning non-energy products, the fall in their prices reflects prices drop by 21.1 percent for metals and minerals, by 13.1 percent for agricultural products, and by 5 percent for fertilizers. Specifically, the prices of iron, wheat and soya dropped by 42.4 percent, 22.7 percent and 20.6 percent, respectively.

As for crude phosphate, its price picked up by 6.6 percent to 117.5 dollars per ton. However, the prices of urea, diammonium phosphate (DAP) and triple superphosphate (TSP) declined by 13.7 percent, 2.9 percent and 0.9 percent, respectively.

Prices of precious metals also declined by 10.4 percent in 2015, probably in response to the dollar appreciation and the fall in demand, among other things. The prices of gold, silver and platinum dropped by 8.3 percent, 17.6 percent and 23.9 percent, respectively.

### Developments and projections of commodity prices in US\$ (2000-2017)



Source: World Bank

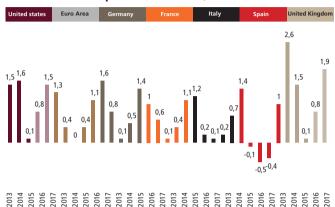
According to the World Bank April 2016 projections, commodity prices would drop further in 2016, in response to abundant supply and weaker growth prospects in emerging and developing countries, but should pick up in 2017, supported by the improvement in demand. Oil price is expected to decline from 50.8 dollars a barrel in 2015 to 41 dollars in 2016, before increasing to 53.3 dollars in 2017. For its part, the price of wheat would decline by 11.8 percent in 2016, then increase by 4.4 percent in the year after. As for the price of crude phosphate, it is projected to inch up from 117 dollars per ton to 120 dollars in 2016, and then edge down to 119 dollars in 2017.

Sluggish demand in some countries, coupled with falling commodity prices, contributed to easing inflationary pressures

The sizeable declines in foodstuff and energy prices along with the still untapped output potential led to the easing in risks to price stability. Global inflation decreased from 3.2 to 2.8 percent in 2015, primarily reflecting a decline from 1.4 to 0.3 percent in advanced countries, while consumer prices in emerging and developing countries stabilized at 4.7 percent.

In the same vein, inflation dropped in the United States (from 1.6 to 0.1 percent), Japan (from 2.7 to 0.8 percent), and the euro area (from 0.4 to 0 percent). In Morocco's main European partners, inflation stood at 0.1 percent in Germany, France, the United Kingdom and Italy, reflecting declines by 0.7, 0.5, 1.4 and 0.1 percentage points, respectively. In Spain, prices declined further to 0.5 percent from 0.1 percent a year earlier. In emerging and developing countries, inflation decelerated further especially in China and India, where it stood at 1.4 percent and 4.9 percent, respectively. However, inflation increased from 7.8 to 15.5 percent in Russia and from 6.3 to 9 percent in Brazil, driven mainly by the depreciation in their currencies.

# Inflation in Morocco's major advanced partner countries, in %



Source: IMF

In its April 2016 outlook update, the IMF revised downward its inflation forecast for advanced countries to 0.7 percent in 2016 and 1.5 percent in 2017, on account of continuous declines in oil prices. In emerging and developing countries, inflation is projected to fall to 4.5 percent in 2016, then to 4.2 percent in 2017, mainly reflecting the dissipating effects of currency depreciations in some countries.

Financial conditions in 2015 improved further in advanced countries but continued to worsen in emerging countries In 2015, financial conditions broadly improved in advanced economies, with stronger activity and ongoing accommodative monetary policies. In contrast, uncertainty around growth prospects in emerging countries induced a worsening in their financial markets.

In terms of monetary policies, the Federal Reserve (FED) rose its key rate in December 2015 by 25 percentage points to a range between 0.25 and 0.5 percent. The European Central Bank (ECB), the Bank of England and the Bank of Japan kept their policy rates unchanged at low levels, while pursuing quantitative easing measures. Except for Brazil, which tightened

its monetary policy to contain inflationary pressures, other major emerging countries, like China, India and Russia, reduced their policy rates, on several occasions, to support the economy. In Sub-Saharan Africa, the Central Bank of West African States (BCEAO) kept its key rate unchanged at 2.5 percent, while the Bank of Central African States (BEAC) lowered its rate by 50 basis points in July to 2.45 percent.

The growing concerns about the impact of tightened monetary policy in the United States, coupled with weakness in economic activity in emerging countries and the ongoing accommodative monetary policies in the main advanced countries, resulted in depreciations in the main currencies of advanced and emerging economies against the dollar.

Bank lending, on the other hand, improved further in the United States, expanding on annual average from 4.7 to 7.7 percent in 2015. In the euro area, it reversed a long contraction, standing at 0.5 percent. Lending in main emerging countries grew at a slower pace from 16.1 to 4.3 percent in Russia, 11 to 8.2 percent in Brazil from 20.5 to 18.6 percent in China.

Concerning the 10-year sovereign yield rates, they decreased from one year to another in advanced countries, benefiting of renewed investors' confidence. Average yield rates decreased in the United States from 2.5 to 2.1 percent, in Germany from 1.2 to 0.5 percent and in France from 1.7 to 0.8 percent. Similarly, they decreased in Spain from 2.7 to 1.7 percent and in Italy from 2.9 to 1.7 percent. In main emerging countries, the 10-year sovereign yield rate increased in Brazil from 12.2 to 13.8 percent, but decreased in China from 4.2 to 3.4 percent and in India from 8.6 to 7.8 percent.

Indexes of stock markets broadly continued to perform well in 2015 in main advanced countries. The EUROSTOXX50 increased by 9.5 percent on average, the Dow Jones Industrial by 4.8 percent and the NIKKEI225 by 23.8 percent. As for emerging countries, the MSCI EM<sup>5</sup> dropped by 9 percent, mainly reflecting the fall in stock market indices in Russia, Brazil and Turkey as well as the decline in the Chinese index as of June.

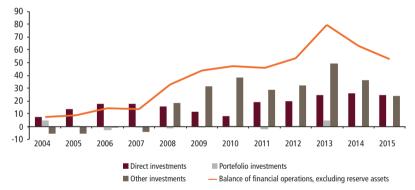
<sup>5</sup> Morgan Stanley Capital International for Emerging Markets is a composite index designed to measure equity market performance in emerging markets.

# I.2 DOMESTIC MACROECONOMIC DEVELOPMENTS

In 2015, risks from the external position remained low

In 2015, the current account deficit narrowed further for the third consecutive year, from 7.9 percent of GDP in 2013 to 1.9 percent in 2015, on account of the improvement in the trade balance. Trade deficit in 2015 eased by 19.2 percent to 151.3 billion dirhams, or the equivalent of 15.4 percent of GDP compared with 20.3 percent of GDP a year earlier. This decrease was driven by the decline in imports by 5.6 percent, coupled with the decline in energy and food prices and the increase by 7.1 percent of exports, supported by further momentum in the automotive sector sales and higher exports of phosphate and its derivatives.

# Financial transactions balance and its components, in billion dirhams



Source: Foreign Exchange Office

The services surplus increased from 2.9 billion to 62.1 billion dirhams, or 6.3 percent of GDP, reflecting the easing in the deficit of transportation services. In contrast, travel balance fell by 5.5 percent, after an improvement of 2.2 percent a year earlier. At the same time, net income deficit fell by 4.3 billion to 18.9 billion dirhams, covering a decrease by 26 percent in the outflows of FDI dividends to 13.9 billion dirhams and an increase by 33.1 percent in revenues from overseas financial investments to 1.8 billion dirhams.

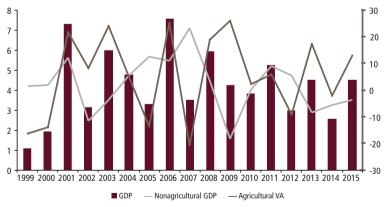
The surplus of the capital account and financial transactions excluding reserve assets decreased from 73.2 billion dirhams in 2014 to 55.1 billion, or 5.6 percent of GDP compared with 7.9 percent a year earlier. This decline particularly reflects decreases by 12.6 billion dirhams in portfolio investments to 1.3 percent of GDP, by 4.2 billion dirhams in other investments to 1.7 percent of GDP and by 1.7 billion in direct investments to 2.5 percent of GDP.

# Strengthened net international reserves

Under these conditions, the stock of net international reserves increased by 42.7 billion dirhams to 224.6 billion, or the equivalent of 6 months and 24 days of goods and services' imports, a month and a half more than in the previous year. Based on the forecasts of Bank Al-Maghrib, the said reserves are expected to build up to cover 7 months and 18 days in 2016, and 8 months and 6 days in 2017.

In 2015, national growth reached 4.5 percent, primarily driven by the increase in agricultural activity by 12.8 percent Thanks to a record cereal production, the agricultural value added grew by 12.8 percent, expanding domestic growth from 2.6 percent in 2014 to 4.5 percent in 2015. However, nonagricultural activities continued to be sluggish in 2015, as their value added grew by a mere 1.9 percent.

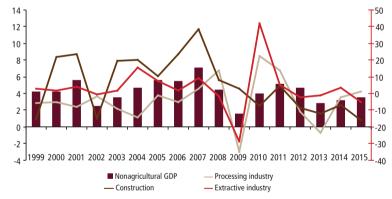
### Change in GDP components, in %



Source: High Commission for Planning (HCP)

By sector, the secondary sector grew by only 2.8 percent in 2015, with a contraction in mining activities and a further weakening in the construction sector. In fact, the activity in the mining sector slowed down by 5.1 percent after it rose by 3.4 percent in 2014 while the construction sector's value added continued its downward trend observed since 2012, to post a modest growth by 0.8 percent in 2015. This deceleration, coupled with the decrease in the number of real estate transactions, represents an increasingly significant concern, in view of the spillover effects of the sector on other economy sectors as well as on the financial system. Moreover, processing industries grew by 4.3 percent in 2015 from 3.5 percent a year earlier. As to the services sector, its growth slowed down to 1.2 percent.

# Change in nonagricultural GDP and the value added of the construction sector, extractive industries and the processing industry, in %

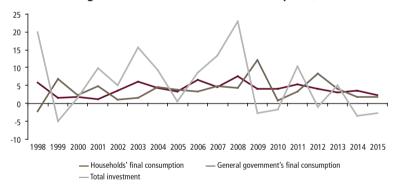


Source: High Commission for Planning (HCP)

The low growth of nonagricultural activity is a major source of concern for domestic economy. In fact, the risk of national activity to financial stability remained very high in 2015 and should remain so until 2017. This situation mainly reflects the inability of our economic fabric to recover its pre-crisis growth potential.

Domestic demand continues to support national growth but still remains below its long-term average Domestic demand decelerated to 0.9 percent in 2015 from 1.2 percent in 2014 and its contribution to growth decreased from 1.3 percentage points to 1 point. This decrease mainly reflects a slower pace of growth in households' final consumption from 3.5 to 2.4 percent, despite the increase in agricultural revenues. In contrast, the general government final consumption grew further to 1.9 percent. Gross investment further decreased, albeit at a slower pace, from 3.4 to 2.7 percent and its contribution to growth was negative at 0.9 points from 1.2 points a year earlier. By component, the gross fixed capital formation increased by 1.5 percent after two successive declines of 1.3 percent on average, and change in inventories was down 53.3 percent after a decline of 13.2 percent, thus contributing negatively to growth by 1.3 percentage points.

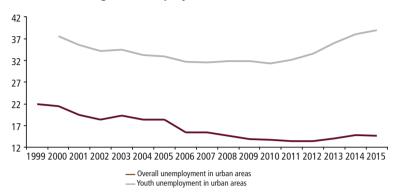
### Change in investment and final consumption, in %



Source: High Commission for Planning (HCP)

Employment market analysis shows that unemployment slightly decreased to 9.7 percent from 9.9 percent a year earlier, primarily due to the decrease in the participation rate. In urban areas, it decreased from 14.8 to 14.6 percent with in particular an increase from 38.1 to 39 percent among the youth aged 15-24 years.

# Change in unemployment in urban areas, in %



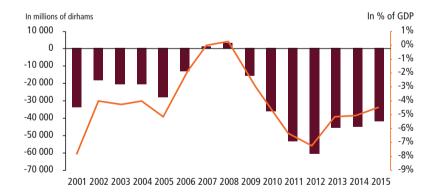
Source: High Commission for Planning (HCP)

In 2015, the consumer price index posted an increase by 1.6 percent from 0.4 percent in 2014, mainly prompted by soaring volatile food prices. Core inflation virtually stagnated relative to 2014 and stood at 1.3 percent in 2015.

Fiscal consolidation, which begun in 2013, continued

The budget deficit fell from 4.9 percent of GDP in 2014 to 4.4 percent in 2015. This easing resulted primarily from the decrease in subsidy expenses with the fall in oil prices and increase in proceeds from income tax and VAT.

# Change in fiscal balance



Source: Ministry of Economy and Finance

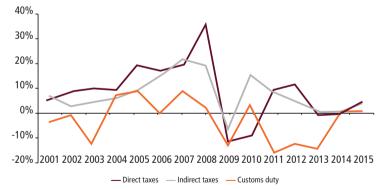
Except for corporate tax and import VAT, the bulk of tax revenues improved well

In 2015, tax revenues increased by 3.8 percent to 205.8 billion dirhams. Receipts of direct tax improved by 4.1 percent from 0.3 percent in 2014, driven by an increase of 8.4 percent in income tax revenues to 36.8 billion. However, the revenues from corporate tax decreased by 0.4 percent to 41.3 billion dirhams, due to a base effect following exceptional revenues recorded in 2014.

Indirect tax revenues amounted to 100.6 billion, up 3.5 percent after a decrease by 0.9 percent in 2014. This change reflects an improvement of VAT receipts by 2.5 percent to 75.3 billion dirhams, reflecting an increase in domestic VAT by 9.3 percent to 29.5 billion. However, proceeds from import VAT dropped by 1.4 percent to 45.8 billion, in response to the decrease in the value of imports. As to domestic consumer tax revenues (DCT), they increased by 6.4 percent to 25.4 billion, mainly with an increase by 10 percent to 15.3 billion in energy products.

Proceeds from customs duties slightly dropped by 0.3 percent to 7.7 billion dirhams. In contrast, registration and stamp duties increased by 7 percent to 16.7 billion.

# Change in major tax receipts, in %



Source: Ministry of Economy and Finance

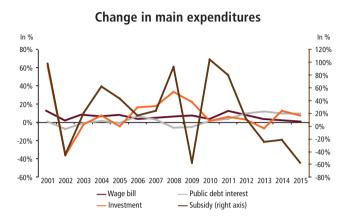
Nontax revenues fell sharply due to the decline in grants from GCC countries Nontax revenues fell from 33.6 billion to 25 billion dirhams, mainly reflecting the decline in grants from GCC countries to 3.7 billion dirhams compared with 13.1 billion dirhams in 2014. Similarly, monopoly receipts declined by 8.4 percent to 9 billion, including a decrease by 66.7 percent to 1 billion of dividends paid by OCP and the collection of a sum of 1.7 billion as duties from 4G phone licenses.

The decline in international energy prices resulted in a significant reduction of subsidy costs

In 2015, the Treasury overall expenditure decreased by 1.4 percent to 282.1 billion, after an increase by 2 percent in 2014, mainly with the drop by 57.2 percent in subsidy costs to 14 billion and the increase in other categories, especially the costs of investment and the other goods and services. In fact, the latter stood at 57 billion, up 12.4 percent. Similarly, debt servicing charges increased by 10.1 percent to 27.3 billion, mainly reflecting an increase by 10.7 percent to 23.3 billion in domestic debt interest payments.

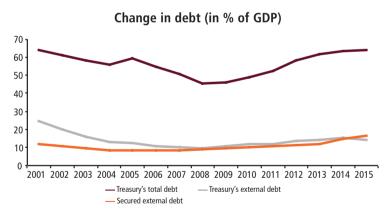
Changes in revenues and Treasury current expenditure resulted in budget savings of 10.2 billion, as against 3.2 billion in 2014, thus covering 17.4 percent of investment issues. These issues moved up by 7.8 percent, with an implementation rate of 119 percent compared with the Finance Act.

Given the 6.9 billion reduction in the stock of arrears, Treasury deficit amounted to 49.6 billion, financed almost exclusively from the domestic market which contributed 49.5 billion dirhams, instead of 36.4 billion in 2014. Net external flows were limited to 54 billion dirhams, as against 9.3 billion in the previous year which saw a bond issue on international markets.



Source: Ministry of Economy and Finance

The ratio of total Treasury debt increased, covering a drop by 1 point of GDP in the ratio of Treasury's external debt The outstanding amount of Treasury debt stood at 626.8 billion dirhams, representing 63.8 percent of GDP, instead of 63.5 percent in 2014. This trend mainly reflects an increase by 9.1 percent in the value of domestic component to 486 billion, or 49.2 percent of GDP. The outstanding amount of external debt declined by 0.3 percent to 140.8 billion dirhams, or 14.3 percent of GDP compared with 15.3 percent a year earlier.

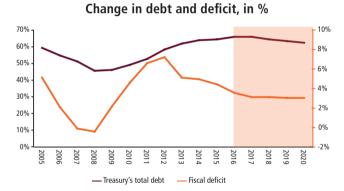


Source: Ministry of Economy and Finance

The outstanding amount of overall public debt<sup>6</sup> increased by 8.7 percent to 786.8 billion, representing 80.1 percent of GDP from 78.3 percent in 2014.

Looking ahead, Treasury debt should begin to decrease starting 2017 to stand at around 60 percent of GDP by 2020. It is expected to move up from 63.8 percent of GDP in 2015 to 65.7 percent in 2016 before falling to nearly 65 percent in 2017.

In terms of sustainability, the primary balance is close to the average debt stabilizing balance, generally indicating sustainable debt, provided that the adjustment seen since 2013 is maintained.



Source: Ministry of Economy and Finance and BAM forecasts

# Continued easing of interest rates

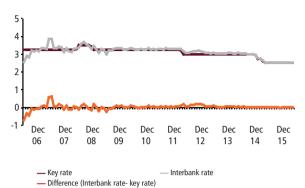
In 2015, Bank Al-Maghrib maintained its key rate at a record low of 2.5 percent.

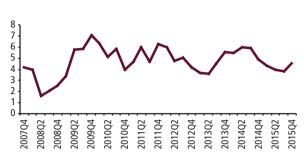
In the interbank market, the weighted average rate decreased to 2.5 percent on average, down by 44 basis points compared with 2014, mainly reflecting reductions in the key rate in September and December 2014.

<sup>6</sup> Treasury and public corporations and institutions.

### Change in key rate and interbank rate, in %

### Real lending rate, in %





Source: BAM

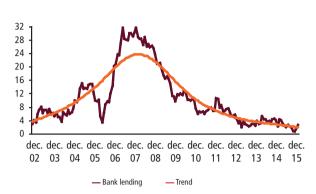
Lending rates declined further in 2015, thus continuing their downward trend which started in 2011. The overall lending rate stood at 5.73 percent on average, down 28 basis points compared with 2014. This decline affected all loan categories, with equipment loans and cash advances, in particular, dropping by 67 basis points to 5.07 percent and by 26 points to 5.71 percent, respectively.

In real terms, contraction was more pronounced- with rates moving from 5.3 to 4.3 percent due to a higher inflation rate in 2015 than in the previous year.

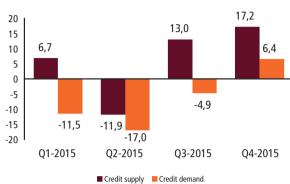
Strong deceleration of bank lending to nonfinancial corporations

In 2015, despite the expansion in loans to nonfinancial corporations by 19.8 percent after a drop by 11.4 percent a year earlier, the growth of bank credit remained limited to 2.8 percent, reflecting a strong decline in loans to the nonfinancial sector. The annual growth of lending to this sector slowed down from 4.4 to 0.5 percent. According to Bank Al-Maghrib's survey on lending conditions, this trend could be attributed to a decline in corporate demand, while banks would have broadly eased supply criteria.

# Change in bank lending, in %



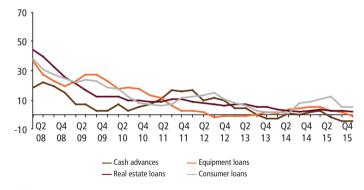
# Change in supply and demand of lending to corporations (Diffusion index), in %



Source: BAM

The credit breakdown by economic purpose points to a decline by 4.9 percent in cash advances after a rise by 3.1 percent in 2014. In the same context, equipment loans slowed down from 4.6 to 0.1 percent, while real estate loans from 2.7 to 1.7 percent and consumer loans from 9.2 to 4.9 percent.

Change in main credit categories, in %



Source: BAM

Slight depreciation of the exchange rate

The dirham's effective exchange rate depreciated slightly by 0.1 percent in nominal terms, while in real terms it appreciated by 0.5 percent reflecting that inflation in Morocco is broadly higher than that of main partner countries and competitors.

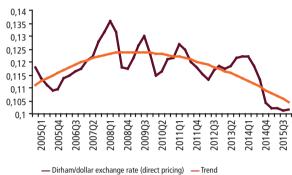
The national currency depreciated 13.9 percent vis-à-vis the US dollar, reflecting namely the effect of the trading basket adjustment in April 2015.

### Real effective exchange rate and its trend

# 2013q3 = 2014q2 = 2015q1 = 2015q4 = 201

2012Q4

# Dirham/dollar exchange rate (direct pricing)



Source: BAM

99

94

89

Decline of real estate transactions amid slight rebound in prices and lower interest rates

- Real effective exchange rate

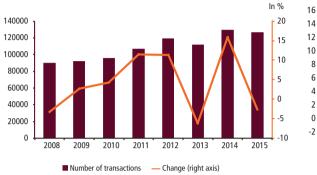
In the real estate market, the Real Estate Price Index (REPI) slightly declined further by 0.6 percent in 2015 after a decline of 0.4 percent in 2014, reflecting the absence of significant fluctuations over these two years.

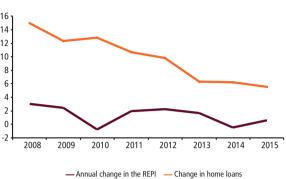
The analysis by category of assets shows that this change reflects an increase by 0.9 percent in residential property prices and by 0.7 percent in urban land. In contrast, professional property prices fell by 2.1 percent, in connection with the decline in the prices of commercial premises and offices by 2.1 percent and 3.2 percent, respectively.

Under these conditions, real estate transactions declined by 2.7 percent in 2015, but remained above the average posted during the last three years. The decline in sales affected all asset categories, namely residential, land and professional assets.

#### Annual change in the number of transactions

## Annual change in the REPI and growth of home loans, in %





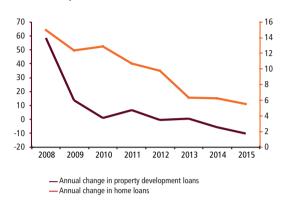
Source: BAM - ANCFCC

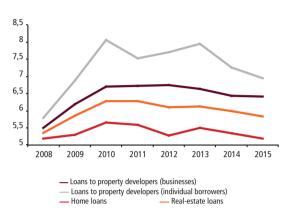
Under these conditions, the absolute gap between the growth of loans to developers and home loans slightly rose from 11.8 to 15.7 percentage points, mainly due to the sharp decrease in loans to developers. This gap stands above the average observed between 2008 and 2014.

Real estate loans rates continued to ease, with the reductions in key rates in 2014. In fact, lending interest rates for home loans went from 5.4 percent in 2014 to 5.2 percent in 2015, while interest rates for loans to developers dropped from 7.3 to 6.9 percent in the category of individual entrepreneurs and stabilized at 6.4 percent in the category of companies.

Change in the gap between the growth in property C development loans and home loans, in %

### Change in lending rates on real estate loans, in %





Source: ANCFCC and BAM

In 2015, real estate loans continued their trend of the previous years, reflecting a slowdown in home loans and a decline in loans to developers. In fact, home loans increased by 5.5 percent compared with 6.2 percent a year earlier. Meanwhile, the outstanding amount of property development loans fell further from 5.6 to 10.2 percent on a year-to-year basis, in line with the process of deleveraging and debt restructuring of some major property developers who went through some difficulties.

# **CHAPTER 2**

THE FINANCIAL SITUATION OF NONFINANCIAL UNITS

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#### **Overview**

Financial assets of households expanded further in 2015, as reflected by the dynamic growth in their deposits as well as the increase in their investments in securities. Their indebtedness grew broadly in line with GDP.

Analysis of the data gathered from a sample of households having renewed their consumer loans or obtained new ones during 2015 shows that their debt ratio rose to 31.1 percent from 30 percent in 2014.

Households' payment default rate fell for the first time since 3 years, to 7.5 percent.

As to nonfinancial corporations, their financial debt slowed down in line with their bank debt contraction. This trend was more pronounced in private corporations, where the financial debt has, for the first time in 10 years, declined to 48 percent of GDP. In contrast, financial debt of public nonfinancial corporations grew further (23 percent of GDP in 2015), mainly driven by its external component.

The study of financial data gathered from a sample of 1684 public and private nonfinancial corporations shows that payment deadlines of business-to-business loans have been extended again, particularly for private companies, and reached worrying levels for the very small, small and medium-sized enterprises (VSMEs) and some business sectors, notably property development, construction, transportation and communication. This situation, which weighs heavily on company treasuries, requires an accelerated reform of the legal framework (laws on payment deadlines) while ensuring its effective implementation.

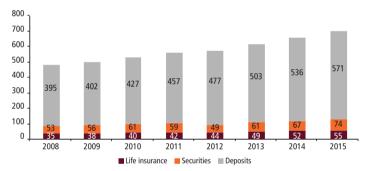
As to corporations' payment defaults, they grew further to represent 9.7 percent of their bank debt.

#### **II.1 HOUSEHOLDS**

Households' financial assets continued to grow in terms of bank deposits, securities and life insurance investments. Moroccan households' financial assets stood at 700 billion dirhams in 2015, up 7.1 percent from 6.8 percent in 2014.

The structure of these assets remained stable over the last three years, with bank deposits representing 82 percent, while securities and life insurance investments representing 10 percent and 8 percent, respectively.

#### Change in households' financial assets, in billion dirhams



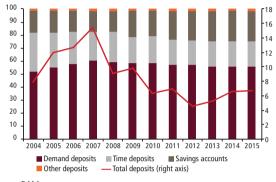
Source: BAM and ACAPS

The increase in these assets mainly concerned deposits, which grew further to 6.7 percent from 6.6 percent in 2014.

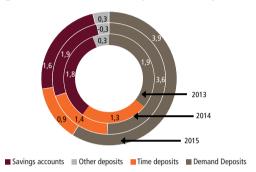
The outstanding amount of demand deposits stood at 320 billion dirhams in 2015, up 7 percent compared with previous years, representing 46 percent of households' financial assets. Their assets with banks in the form of savings accounts continue to represent 24 percent of their deposits, with an outstanding amount of 135 billion dirhams, and grew by nearly 6.6 percent, lower than in the previous year.

Time deposits continue to represent 19 percent of these assets, despite the deceleration in their outstanding to 4.6 percent after 7.1 percent a year earlier, and totaled 108 billion dirhams.

#### Structure and change of households' deposits, in %



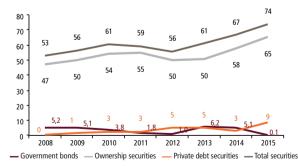
Contribution of deposit categories to the overall growth of household deposits, in % points



Source: BAM

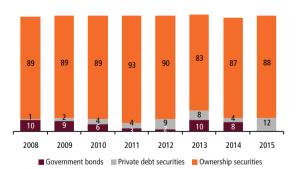
Household investments in securities reached a total of 74 billion dirhams by the end of 2015, up 10.9 percent from 9.8 percent a year earlier. This growth was mainly driven by investments in ownership securities which grew by 12.8 percent to 65 billion dirhams, representing 88 percent of the total, followed by private debt securities which increased to 9 billion dirhams, from 3 billion dirhams in 2014, accounting for 12 percent of the total. The share of investments in government bonds fell to less than 1 percent.

Change in securities held by households, in billion dirhams



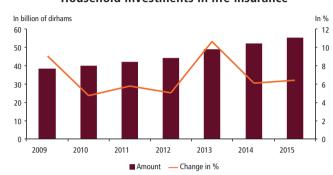
Source: BAM

Breakdown of households' securities, in %



Household investments in life insurance contracts grew by 6.4 percent in 2015 after 6.1 percent in 2014.

#### Household investments in life insurance

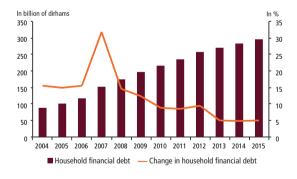


Source: ACAPS

Household financial debt grew with the increase in consumer and home loans, although the latter's growth slowed down Household financial debt grew by 5.1 percent from 4.8 percent a year earlier, reaching a total amount of 297 billion dirhams.

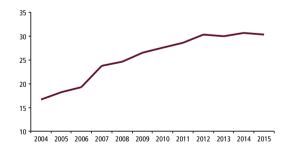
The ratio of this debt to GDP stood at 30 percent, almost the same level as in 2014. Compared with other economies, this ratio stood at a higher level than developing and emerging countries, and remains below the levels observed in advanced economies.

#### Change in household financial debt

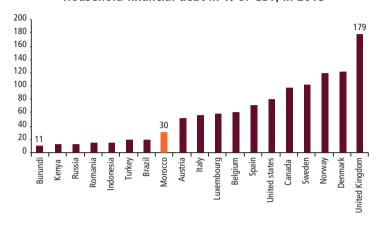


Source: BAM

#### Moroccan household financial debt, in % of GDP



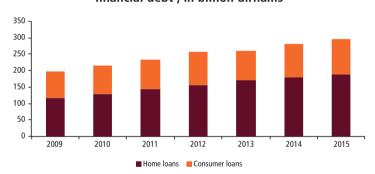
Household financial debt in % of GDP, in 2015



Source: IMF

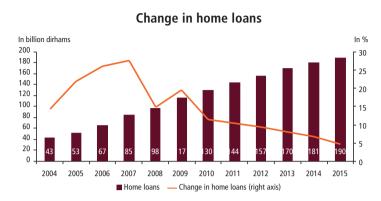
Household financial debt continued to be mainly directed to financing real estate purchases The breakdown of household financial debt remained broadly stable. On average, home loans accounted for about 64 percent, while consumer loans represented nearly 36 percent.

Change in the composition of household financial debt , in billion dirhams



Source: BAM

Household loans to finance real estate purchases continued the downward trend which began in 2010. Their growth rate decelerated from 6.7 percent in 2014 to 5 percent in 2015, mainly due to a drop by 1.6 percent in the new production of loans which totaled nearly 27 billion dirhams at the end of 2015. This slowdown comes, this year, in the context of a decline by 3.5 percent in residential real estate sales, concomitant with the increase in their prices by 0.9 percent.

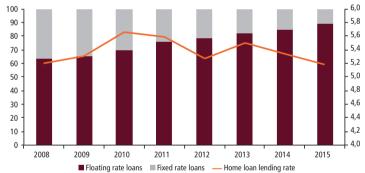


Source: BAM

Strong Households preference for fixed-rate home loans

In a context of falling interest rates of home loans, households continued to prefer fixed-rate loans, which represented 89 percent of their home loans in 2015, a share that continues to grow from one year to another.

## Breakdown of home loans between fixed and floating rates, in %



Source: BAM

Households are taking out real estate loans on increasingly longer periods, which suggests some pressure on their income. Home loans with a repayment term ranging between 20 and 30 years represented 57 percent of the outstanding amount of housing loans by the end of 2015, as against 55 percent in 2014, while loans with a repayment term ranging between 10 and 20 years accounted for only 35 percent, compared with 37 percent a year earlier.

Analysis of the profile of housing loans beneficiaries suggests a drop in the share of households whose income is 4,000 dirhams to 32 percent, from 38 percent in 2014 and 40 percent in 2013, in favor of households with higher incomes. In fact, the share of households with an income ranging between 4,000 and 10,000 increased from 34 to 38 percent, while that of households with incomes exceeding 10,000 accounted for 30 percent of home loans, instead of 28 percent previously.

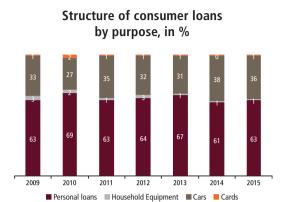
The majority of borrowers, that is nearly 79 percent, are employees and civil servants, followed by craftsmen and merchants with 14 percent; 64 percent of these beneficiaries are aged between 30 and 49 years. Beneficiaries aged 50 years or older represent 29 percent of the total. Young borrowers, aged less than 30 years, who are less likely to contract real estate loans, represented only 7 percent of the sample beneficiaries.

The growth rate of households' consumer loans rebounded after two years of low increase

After two years of low growth, households' consumer loans surged by 5.8 percent in 2015, to 106.4 billion dirhams. 63 percent of this debt was mostly geared to finance personal projects, followed by car purchases with 36 percent.

As in home loans, households are increasingly obtaining consumer loans with longer repayment terms. The share of loans with maturities exceeding 5 years went from 49 percent in 2009 to 64 percent in 2015, whereas that of loans with a maturity of 2 to 5 years only represented 28 percent; loans of a maturity of less than 2 years did not exceed 8 percent.

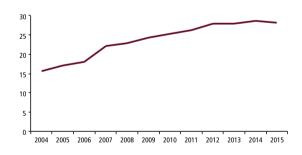
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Source: BAM

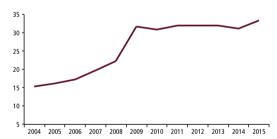
By place of residence, households residing in Morocco accumulated a debt of nearly 276 billion dirhams, up 4.6 percent in 2015, compared with 5.3 percent in 2014. Its ratio to GDP fell to 28.1 percent after 28.6 percent in 2014. Moreover, households' debt of Moroccans residing abroad grew by 12 percent in 2015, representing around the third of their remittances, an almost stable ratio since 2009.

#### Financial debt of resident households, in % GDP



Source: BAM et Foreign Exchange Office

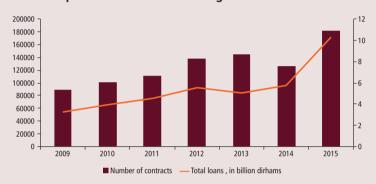
## Financial debt of nonresident households, in % of nonresidents' remittances



#### Box N°1: Financial debt of a sample of households

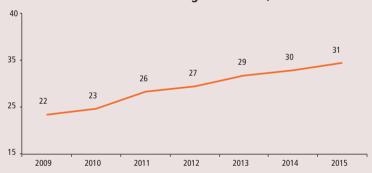
The present box provides an analysis of financial debt of a sample of private individuals totaling 182.471 consumer loan contracts. It also provides an overview on the breakdown of this debt, by socio-professional category, age group, and income group. Emphasis is placed on households running up a debt burden exceeding 40 percent of their income.

#### Sample of individuals obtaining new consumer loans



Source: Credit institutions' databases, BAM calculations

#### Change in the debt burden relative to income for a sample of households obtaining new loans\*, in %



Source: Credit institutions' databases, BAM calculations

(\*) Beneficiaries of new loans

#### Box N°1: continued

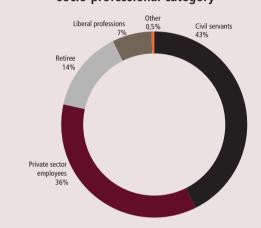
The indebtedness of households covered by this study continues to trend up. In 2015, it stood at 31.1 percent, as against nearly 30 percent in the 2014 survey.

The breakdown of households who obtained consumer loans remained broadly stable.

Most of consumer loans were contracted by the category of civil servants, representing nearly 43 percent compared with 43.5 percent in the 2014 survey. Their average debt burden in 2015 stood at 32.5 percent compared with nearly 30 percent a year earlier.

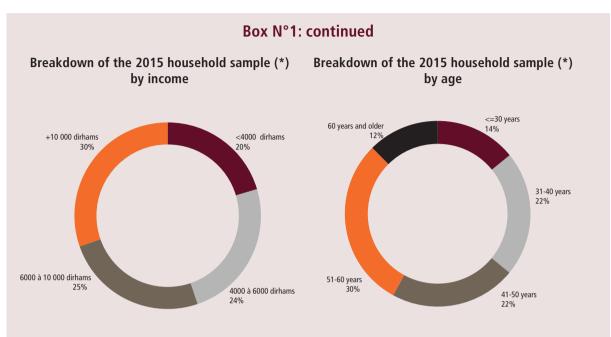
Private sector employees came second, representing almost 36 percent of the sample, with a debt rate of around 31 Source: Credit institutions' databases, BAM calculations percent of their income, compared with (\*) Beneficiares of new loans 31.6 percent in 2014.

#### Breakdown of the household sample (\*) 2015 by socio-professional category



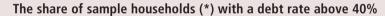
Retirees and persons exercising a liberal profession accounted for 14.2 percent and 6.9 percent of the sample population, respectively. Their debt burden stood at around 27.6 percent and 30.1 percent.

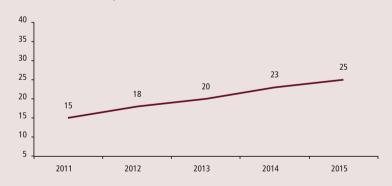
Households with the most significant debt rates are those earning the highest incomes. Those whose salary exceeds 6,000 dirhams have debts accounting for 33 percent of their income, those whose salary is between 4,000 and 6,000 run a debt representing nearly 31 percent of their income, whereas those with a salary below 4,000 dirhams have an average debt rate of about 27 percent.



Source: Credit institutions' databases, BAM calculations (\*) Beneficiaries of new loans

By age group, the most indebted individuals were those aged between 41 and 60 years old, with a share representing about half of the study sample, and an average debt rate of around 33 percent. Those aged between 31 and 40 years old represented 24 percent of the sample and showed an average debt rate of 31.6 percent. Persons aged less than 30 years old had an average debt rate of 27.8 percent of their income.



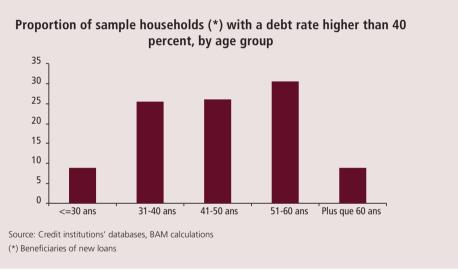


Source: Credit institutions' databases, BAM calculations (\*) Beneficiaries of new loans

#### Box N°1: continued

Households running a debt exceeding 40 percent of their income accounted for 25.1 percent of the entire surveyed sample, as against 23.1 percent in 2014. This population is mainly composed of civil servants and private sector employees (83.9 percent) and individuals with a salary above 6,000 dirhams (67.1 percent).

In addition, and as shown in the chart below, the share of households whose debt is higher than 40 percent is more pronounced among older people. Individuals aged 51 years and above accounted for about 40 percent, followed by the 41-50 years age group with a share of 26.2 percent then those whose age ranges between 31 and 40 years old with a share of 25.4 percent. Those aged less than 30 years old represented only 9 percent.



Household payment defaults fell for the first time in 3 years

After three years of significant increase (15 percent on average), the growth in household payment defaults was limited to 0.8 percent in 2015, bringing the default rate<sup>7</sup> to about 7.5 percent from 7.8 percent in 2014, reflecting a marked slowdown in home loan payment defaults.

Thus, household default rate stood at 6.1 percent for their home loans and 10 percent for consumer loans, compared with 6.4 percent and 10.4 percent a year earlier, respectively.

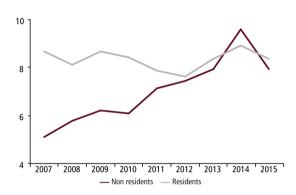
<sup>7</sup> Household default rate corresponds to the share of nonperforming loans in their total financial debt.

The decrease of this rate covered both resident households and nonresident households, standing respectively at 6.9 percent and 6.3 percent as against 7.7 percent and 8.7 percent by the end of 2014.

#### Households' nonperforming loans rate, in %

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# Households' nonperforming loans rate, by residence, in %

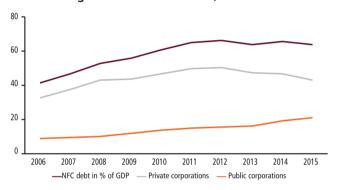


Source: BAM

#### **II.2 NONFINANCIAL CORPORATIONS**

Nonfinancial corporations' debt slowed down, particularly with the decline in their banking debt After a growth by 6.1 percent in 2014, the annual rate of the financial debt of nonfinancial corporations (NFC) slowed down by 2.8 percent to a total of 696 billion dirhams. This slowdown covers, on the one hand, a decline by 2 percent in private corporations' debt, and on the other hand, a slowdown in the debt of public corporations at 14.5 percent. Relative to GDP, this debt ratio stood at 71 percent.

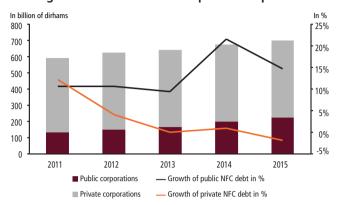
Change in NFC financial debt, in % of GDP



Source: BAM

Private corporations' financial debt declined to 48 percent of GDP by the end of 2015, from 52 percent of GDP a year earlier. This decrease is mainly attributed to a decline by 2.4 percent in banking loans, which represented 89 percent of their financial debt, and to a lesser extent, by a decline in their market debt by 10.6 percent.

#### Change in the financial debt of public and private NFC



Source: BAM

Public corporations' financial debt continued to grow strongly, though at a slower pace of 14.5 percent, with a total debt of nearly 227 billion dirhams, or 23 percent of GDP. This growth was mostly driven by the increase in its external component by 17 percent and, to a lesser extent, by market and banking loans which increased respectively by 11 percent and 8 percent.

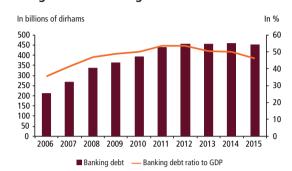
NFC' banking loans, representing a major source of their financing, have been contracted Banking loans, which represented 66 percent of nonfinancial corporations' debt, declined by 1.6 percent to a total of 453 billion dirhams, or the equivalent of 46 percent of GDP. Bond debt continued to trend downward, declining by 1.8 percent corresponding to about 9 percent of nonfinancial corporations' financial debt.

Corporations' external debt increased by 18.7 percent to nearly 176 billion dirhams, reflecting the increase in the external financing of some public corporations' investments, which raises questions about the coverage of these corporations in terms of foreign exchange risk.

#### Structure of NFC financial debt, in %

#### 100% 90% 90% 70% 60% 50% 10% 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

#### Change in NFC banking debt and its ratio to GDP

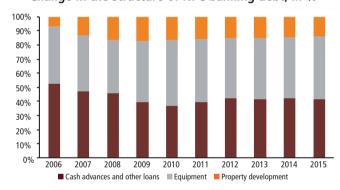


Source: BAM

Corporations' banking debt continues to be mainly directed to financing their investments and cash requirements

Corporations continue to take out loans from credit institutions primarily to finance their needs in terms of equipment and cash; loans geared to such purposes accounted for 45 percent and 42 percent of their banking debt, respectively. Loans financing property development accounted for about 13 percent.

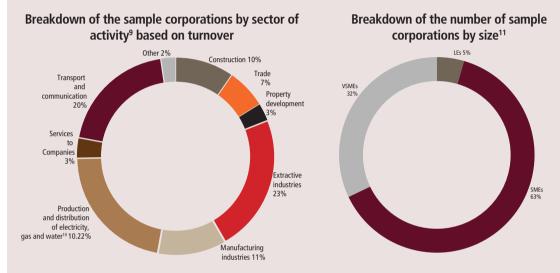
#### Change in the structure of NFC banking debt, in %



Source: BAM

#### Box N°2: Indebtness Study of a sample of nonfinancial corporations

The study covered a sample of 1684 nonfinancial corporations<sup>8</sup> with a turnover of 232 billion dirhams and a financial debt of 198 billion dirhams. This sample is broken down as follows:



Source: OMPIC, Ministry of Economy and Finance, BAM calculations

Long-term debt rate<sup>12</sup> of sample corporations broadly increased, reaching 39 percent as against 36 percent a year earlier. This development mainly reflected the increase in the debt of corporations operating in the extractive sector and to a lesser extent, those of property development and construction, which posted a debt rate above the average of the sample, with 42 percent, 55 percent and 58 percent, respectively.

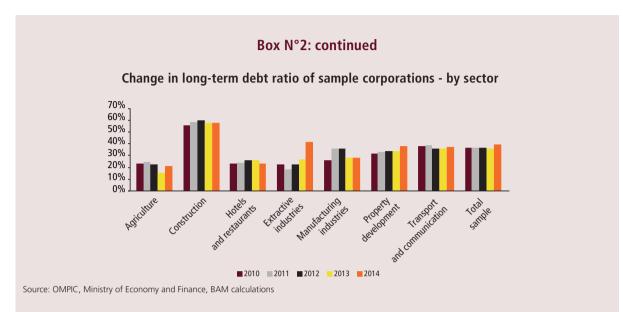
<sup>8</sup> Corporations for which accounting data of the last five years were available.

<sup>9</sup> Sectors of activity are those included in the Credit Institutions' Chart of Accounts, with the aggregation of some sectors and the singling out of corporations operating in property development at the construction sector. Corporations working in several sectors of activity are included in the sector with the most important share in terms of turnover.

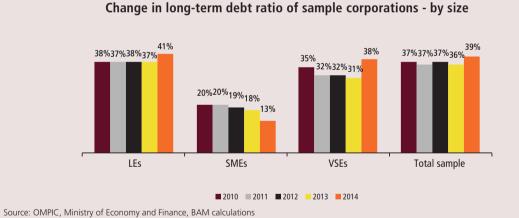
<sup>10</sup> ncluding the hydrocarbon sector.

<sup>11</sup> Large enterprises (LEs) refer to corporations whose turnover exceeds 175 million dirhams; SMEs refer to those with a turnover ranging between 3 and 175 million dirhams; and VSMEs refer to those with an annual turnover below 3 million dirhams.

<sup>12</sup> Long-term debt rate is the ratio of a corporation's long-term debt to its permanent capital.



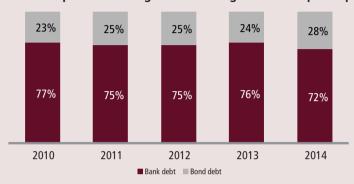
By size, the debt ratio of Large Enterprises (LEs) and Very Small Enterprises (VSEs) increased to 41 percent and 38 percent, respectively, while that of Small and Medium Entreprises (SMEs) declined to 13 percent.



The share of banking debt, which constitutes the major financing source of the sample corporations, declined to 72 percent in favor of bonds, the part of which increased to 28 percent.

Box N°2: continued

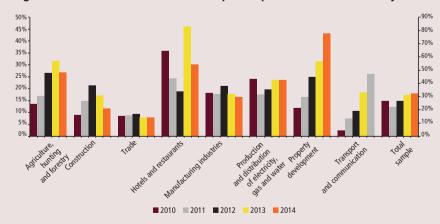
#### Change in the composition of long-term financing debt of sample corporations



Source: OMPIC, Ministry of Economy and Finance, BAM calculations

To finance their cash requirements, the sample corporations also resorted to short-term financing, which increased by 2 percent and represented 18 percent of their turnover. Disparities among sectors are particularly pronounced and, for some, are inherent to the nature of the activity. Similarly to the previous years, property development corporations accounted for the highest cash debt, representing 78 percent of their turnover, as against 57 percent a year earlier. The increase in this ratio is due to the 35 percent erosion of their turnover. Four other sectors showed a debt level higher than the sample average, namely hotels and restaurants (30 percent), agriculture (27 percent), transport and telecommunications (26 percent), and the distribution and production of electricity, gas and water (24 percent).

Change in cash debt relative to the sample corporations' turnover - by sector (\*)



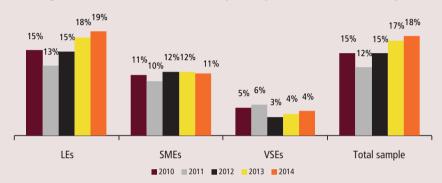
Source: OMPIC, Ministry of Economy and Finance, BAM calculations

(\*) Right axis for the property development sector.

#### Box N°2: continued

By size, short-term financing is higher among large enterprises, representing 19 percent of their turnover, whereas it only represents 11 percent of SMEs and 4 percent for VSEs.

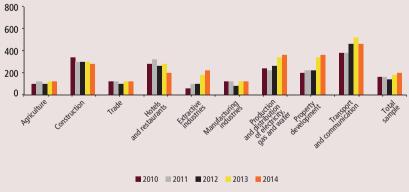
Change in cash debt relative to sample corporations' turnover - by size



Source: OMPIC, Ministry of Economy and Finance, BAM calculations

In addition to financial debt, sample corporations also resorted to commercial debt which expanded in 2014 to 191 purchasing days compared with 187 days a year earlier. This debt reached very significant levels in corporations operating in the sectors of transportation and telecommunications, property development and construction, with 467, 368 and 279 days, respectively.

Change in amounts due to suppliers by purchasing days of sample corporations - by activity sector

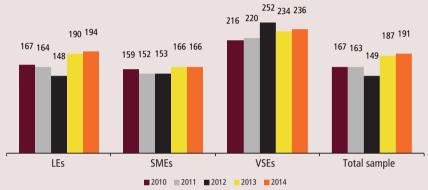


Source: OMPIC, Ministry of Economy and Finance, BAM calculations

#### Box N°2: continued

By size, amounts due to suppliers stood at high levels, reaching 236 days of purchases for VSEs, as against 234 days in 2014, and 194 days for LEs, and 166 days for SMEs.

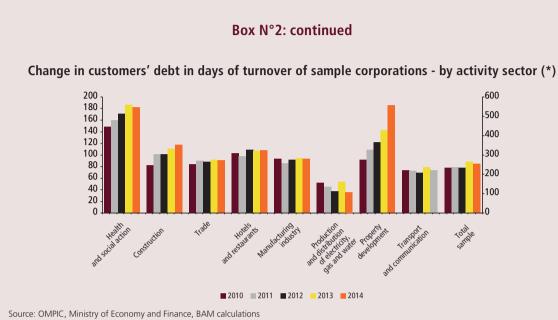
#### Change in debt amounts due to suppliers of providers on buying days-by size



Source: OMPIC, Ministry of Economy and Finance, BAM calculations

However, sample corporations reported shorter payment deadlines from their customers, which stood at 85 days of turnover, as against 88 days a year earlier. Similarly to previous years, the property development sector continued to observe extremely long payment deadlines, with a peak of 557 days, recording the longest level among the sectors represented in the sample. Corporations of the construction sector and manufacturing industries continued to report long payment deadlines from clients, standing at 117 days and 91 days, respectively.

Corporations operating in the production and distribution of electricity, gas and water sector posted the shortest payment deadlines, 36 days of turnover.

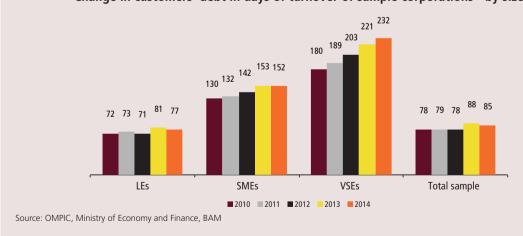


Source: OMPIC, Ministry of Economy and Finance, BAM calculations (\*) Right axis for the property development sector.

Taking account of the size, if large enterprises' payment deadlines shortened to 77 days of turnover, those of VSEs extended by 11 days to 232 days while those of SMEs stabilized around 152 days.

These findings on the change in commercial debt and client debt confirm worries about the problem of payment deadlines, particularly for VSEs, and the need to reform the law relating thereto and ensure its implementation.

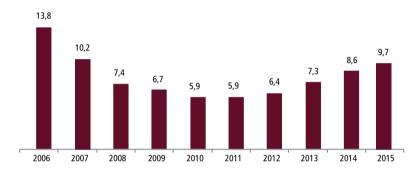




## Corporations' payment defaults slowed down

After the significant increase throughout the last four years, payment defaults of nonfinancial corporations slow down to 10.6 percent in 2015, totaling 44 billion dirhams. After standing at 8.6 percent, the ratio of these defaults to corporations' bank debt increased to 9.7 percent, heightened by the decrease of credit volume.

#### Change in the rate of NPL of nonfinancial corporations, in %



Source: BAM

By activity sector, corporations' payment defaults grew at varying rates. Nonperforming loans of the construction sector grew by 5 percent, markedly down from 2014. Those of industrial sector corporations increased by 24 percent due to the difficulties encountered by some industry segments. Payment defaults of the hotel industry decreased by about 1 percent, as against a strong increase of 63 percent in 2014.

The highest NPL rates are those observed in the hotel sector with 23 percent followed by the trade sector and transportation and communication sector by 14.2 percent and 11.4 percent, respectively. The default rate of the industrial sector stood at 9.6 percent while the construction sector showed an NPL rate of 6.3 percent.

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# **CHAPTER 3**

THE SOUNDNESS OF FINANCIAL INSTITUTIONS

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#### **Overview**

In an environment characterized by a deceleration in credit and a new rise in payment defaults, banks' results broadly declined by 6.5 percent, mainly in response to the shrinking interest income, the increased cost of risk and the falling trading income. To cover credit risk, banks set specific provisions, accounting for 68 percent of nonperforming loans, compared with 65 percent in 2014. The general provisions to cover latent risks reached 6.5 billion dirhams.

Meanwhile, banks' equity capital and liquidity cushions strengthened further. The average capital ratio stood at 13.7 percent while the ratio of tier 1 capital stood at 11.8 percent. Similarly, their liquidity improved markedly, mainly driven by the build-up in foreign exchange reserves. Recourse to advances from Bank Al-Maghrib decreased on average to 35 billion dirhams, from 55 billion dirhams a year earlier.

The sound foundations of the banking sector were broadly confirmed by the findings of stress tests, which underlined the ability of banks to withstand plausible macroeconomic shocks. Contagion risk, which reflects banks' exposure to their subsidiaries abroad, remained low. Banks are, nevertheless, vulnerable to potential shocks likely to affect the quality of credit of their larger counterparties.

The activity of the insurance sector expanded by 7 percent. Unrealized gains of insurance companies fell again to merely 5.9 percent of their representative assets, impacted by the poor performance of the stock market.

Liquid assets of insurance companies accounted for nearly 2.5 times their current liabilities, thus reflecting a strong ability to meet their potential cash outflows.

The solvency margin, covering the underwriting risk, stood at 408 percent of the regulatory minimum by the end of 2015, compared with 406 percent at the end of 2014. Still, this rate is expected to decrease following the adoption of the risk-based solvency principle.

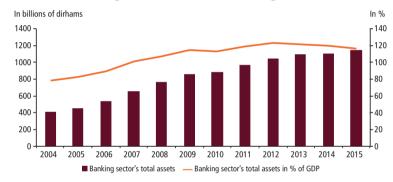
The financial situation of pension schemes remained vulnerable, particularly the pension schemes of civil servants. The benefits provided by these schemes exceeded their contributions for the second year in a row. Their technical imbalance continued to decelerate due to poor pricing and a significant level of liabilities. This situation, endangering the sustainability of pension schemes in the long run, is more critical for the pension scheme of civil servants, which run another deficit following the one recorded in 2014, while its reserves might run out in 2022, if its parametric reform is not implemented urgently. Financing this deficit would surely affect public finances, financial markets and households.

#### III.1 THE BANKING SECTOR<sup>13</sup>

Amid limited growth of loans to customers, the banking activity grew with the increase in deposits employed in part as cash operations

After its decline in 2014, the activity of 19 universal banks, as measured by their total assets, rose by nearly 4 percent by the end of 2015. However, its ratio to GDP continued the downward trend which started 3 years earlier, and stood at 117 percent compared with its 123 percent peak in 2012. This trend is mostly driven by the transactions carried out with credit institutions, which increased by almost 20 percent and, to a lesser extent, by loans to customers. The change in banks' assets was primarily refinanced by customer deposits, which increased by 6.4 percent, a rate higher than that of loans.

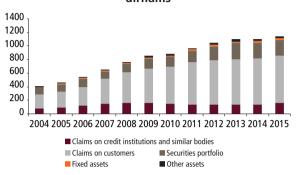
#### Change in the size of the banking sector



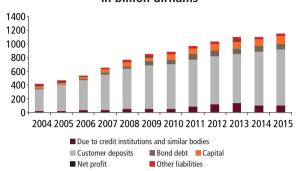
Source: BAM

<sup>13</sup> This section identifies the main indicators of the soundness of the banking sector calculated on an individual basis.

## Change in the structure of banks' assets in billion dirhams



## Change in the structure of banks' liabilities, in billion dirhams



Source: BAM

The share of loans to customers in total bank assets fell down to nearly 61 percent

In terms of structure, banks assets continued to be predominated by loans to customers, which accounted for nearly 61 percent by the end of 2015, down 0.9 point, in favor of operations undertaken with credit institutions, which increased to 14.4 percent, from 12.5 percent a year earlier.

Customer deposits represented 72 percent of bank liabilities

These assets remain predominantly financed by customer deposits, which represented 72 percent of banks liabilities, up 2 points compared with 2014, to the detriment of bond refinancing the share of which regressed by 1 point, and of liabilities from credit institutions which lost 0.8 points, reflecting a lesser recourse to cash advances facilities of Bank Al-Maghrib.

Bank loans to customers continued to be mainly denominated in local currency The majority of loans was granted in local currency, while those granted in foreign currency accounted for barely 2.2 percent at end of 2015 compared with 3.4 percent a year earlier.

The banks' credit portfolio is diversified at the sectoral level Banks continued to ensure diversified financing at the sectoral level, with the IHH<sup>14</sup> index, which measures the concentration of loans granted to companies, hovering around 0.13 since 2010. The share of loans granted to the financial sector stood at 13 percent, while that of loans to the construction sector

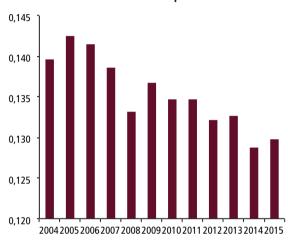
<sup>14</sup> The Herfindahl-Hirschmann Index measures market concentration. Its value ranges between 0 and 1. The higher the index, the bigger the concentration

accounted for slightly more than 11 percent, 70 percent of which constituted of loans to real-estate developers, compared with an average of 75 percent over the last 5 years. Loans to the manufacturing sector accounted for 10.5 percent.

#### Sectoral breakdown of bank loans in 2015

#### Agriculture Extractive industries 2% Energy and water Households 33% Manufacturing industries 10.5% Construction Other services Hotels Transportation & Communications 4% Financial activities Trade 6%

HHI index measuring the concentration of bank loans to enterprises



Source: BAM

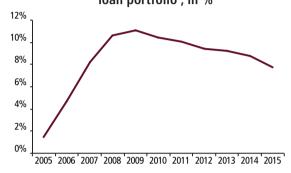
Loans to enterprises and enterprise groups exceeding 5 percent of banks' capital declined due to the deleveraging of some major operators Banks' balance sheet liabilities on "large debtors" <sup>15</sup> accounted for 54 percent of corporate loans in 2015. By including off-balance sheet liabilities to the banks, these debts represented nearly three times their equity, a level lower than that of 2014 where they stood at 3.4 times and than the average of 3.5 times recorded from 2004 to 2013. This decrease is driven by the deleveraging process of some major borrowers in trouble, particularly those in the real estate development sector.

Despite this downward trend, the level of these liabilities remained significant, especially with the increase in banks' exposure to some major groups without having full knowledge of their consolidated financial situation and their recourse to private debt.

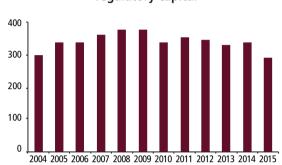
<sup>15</sup> A large debtor is any counterparty or group of counterparties benefiting from a loan exceeding 5 % of a bank's capital.

In response, Bank Al-Maghrib has undertaken a reform with a view to improving the financial transparency of enterprise groups towards banks.

Change in the share of real-estate loans in banks' loan portfolio , in %



Banks' exposure to major debtors, in % of their regulatory capital



Source: BAM

Box N°3: Reform project initiated by Bank Al-Maghrib to improve the financial transparency of entreprise groups towards banks

The reform project defines the minimum information requirements to be fulfilled by credit institutions in the investigation and monitoring of credit files of counterparties belonging to groups cumulating a bank debt equal to or higher than 500 million dirhams. These requirements include:

- the group's consolidated financial statements certified by statutory auditors;
- the group's bank debt;
- the private debt of the group's counterparties, including planned future issuances.

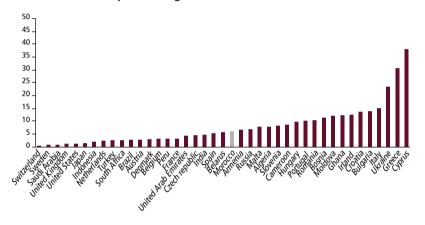
The reform also requires that credit institutions examine a solvency report on the enterprise group prior to granting loans.

To ensure a better implementation of these provisions, a weighting of 150 percent, instead of 100 percent, will be applied to the exposures of credit institutions to the groups for which financial information does not comply with the requirements set by this reform. The implementation of the weighting increase will be gradually introduced from 2016 to 2018.

The coverage ratio of nonperforming loans stood at 68 percent as against 65 percent a year earlier

Nonperforming loans recognized by banks grew by 9.2 percent in 2015, down from 20 percent in 2014, to reach 57.7 billion dirhams, which brings the rate of NPLs to 7.4 percent as against 6.9 percent in 2014 and 5.9 percent in 2013.

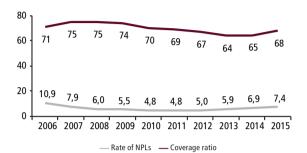
#### Nonperforming loans to total loans, in %



Source: IMF

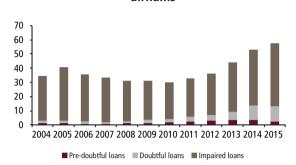
Loans classified as impaired represented 77 percent of total NPLs. Their share rose sharply from one year to another, up 5.6 billion dirhams since the end of 2014. The outstanding amount of doubtful loans rose slightly by 0.1 billion dirhams, to 18 percent instead of 20 percent a year earlier, while predoubtful loans decreased by 0.8 billion dirhams, to 4 percent, as against 6 percent in 2014.

## Bank NPLs and their coverage ratio by provisions, in %



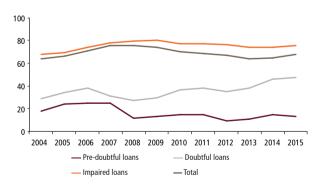
Source: BAM

## Structure of banks' NPLs by category, in billion dirhams



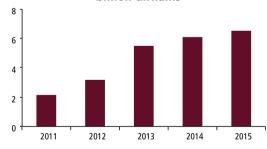
In 2015, the specific provisions made up by banks were up 14.7 percent from the end of 2014, bringing the rate of NPLs coverage to 68 percent from 65 percent in 2014. By category of NPLs, impaired loans represented 76 percent, with 47 percent for doubtful loans and 13% for pre-doubtful loans. In addition to the above provisions, banks set general provisions for the coverage of potential risks. These provisions totaled 6.5 billion dirhams, or the equivalent of nearly 3.1 times the level recorded by the end of 2011, or an increase by nearly 5.7 percent from 2014.

Coverage ratio by loan category, in %



Source: BAM

Change in general provisions made by banks , in billion dirhams



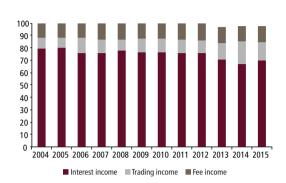
Banks returns fell in 2015 due to the squeezing intermediation margin, the rising cost of risk and the adjustment of the trading income In a context of slowdown in credit activity, banks' profit reached 9.4 billion dirhams, down 6.5 percent from the previous year. This decline reflects a tightening in interest income from customer operations, the increase of banks' cost of risk and the decline of trading income by 23 percent after an exceptional rise for two consecutive years, amid falling interest rates in the bond market.

#### Banks' cost of risk Change in the trading income, in % 0,8 In million dirhams In % 9000 45 0,6 8000 40 0,4 35 7000 30 6000 0,2 25 5000 20 4000 0 3000 15 2000 -0,2 1000 -0.4 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 ■ Banks' cost of risk — Banks' cost of risk / Gross operating profit

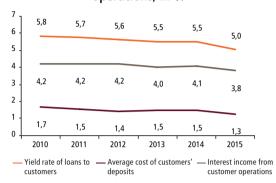
Source: BAM

The decline in the results of these operations led to a drop by 1.1 percent in net banking income, despite the increase in the fee income by 6.4 percent. Interest income, which is the main source of bank income (72 percent of NBI in 2015), increased by 3.8 percent, driven by the slowdown in loans to customers coupled with the decrease in lending rates.

#### Structure of bank NBI, in %



## Change in bank income from customer operations, in %

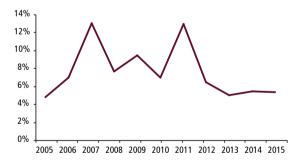


Source: BAM

Banks' general operating expenses increased by 5.4 percent, or the equivalent of nearly 21.4 billion dirhams, bringing the average income ratio to 49 percent.

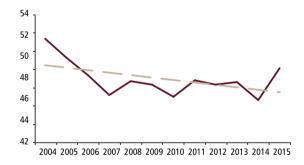
The decline in banks' income caused a decline in the return on equity (ROE), which lost more than 1 point, standing at 9.1 percent. Meanwhile, the return on assets (ROA) stood at 0.8 percent.

#### Change in general operating expenses, in %



Source: BAM

#### Average loan-to-deposit ratio, in %



# Banks equity maintained the same levels of the previous year

Banks' regulatory capital amounted to 112 billion dirhams, which represents a slight increase by 0.8 percent compared with the previous year. Banks' equity structure remained unchanged, with Tier 1 accounting for 86 percent, as against 87 percent a year earlier.

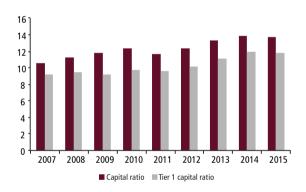
Risk-weighted assets reached 815.5 billion dirhams, up 1.4 percent from the end of 2014. As in the previous years, they consisted mostly of credit risk weighted assets with a share of 85 percent.

The average capital ratio stood at 13.7 percent while that of Tier 1 stood at 11.8 percent (higher than the regulatory minimum of 9 percent), with both experiencing a near-stagnation compared with the end of 2014.

## Banks' regulatory capital, on social basis in billion dirhams

### 120 100-80-60-40-20-2007 2008 2009 2010 2011 2012 2013 2014 2015

#### Banks' average capital ratio - on social basis, in %

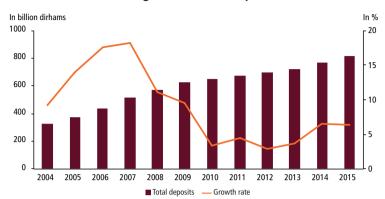


Source: BAM

The dynamic growth in customer deposits and the consolidation of foreign exchange reserves helped reduce bank liquidity deficit

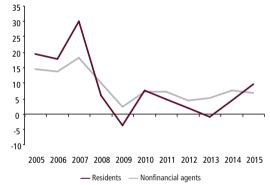
Customer deposits slightly declined in 2015, from 6.6 percent in 2014 to 6.4 percent, with a total outstanding amount of 819 billion dirhams. This trend reflects the decline in the growth pace of household deposits, constituting more than 70 percent of total deposits. Moroccan residents' deposits decelerated from 7.5 percent in 2014 to 7 percent while deposits by Moroccan expatriates rose by 5.7 percent, compared to 4.4 percent a year earlier. These amounted to 164 billion dirhams by the end of 2015.

#### Change in customer deposits



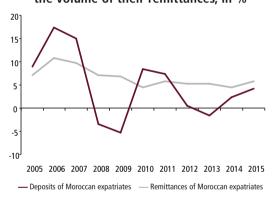
Source: BAM

## Change in deposits of resident households and other nonfinancial units, in %



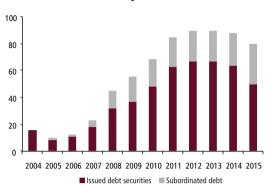
Source: BAM

## Change in deposits of Moroccan expatriates and the volume of their remittances, in %

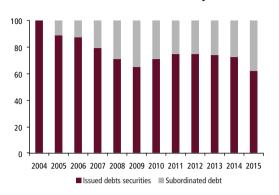


Deposits of other nonfinancial agents rebounded again, increasing by 9.4 percent after 4.5 percent the previous year, reversing the downward trend observed since 2010. However, deposits of financial sectors, representing 4 percent of total deposits, consisting mainly of deposits of mutual funds and insurance companies, decreasing by 20 percent after an increase of 23 percent in 2014.

#### Bond debt issued by banks, in billion dirhams



Structure of bond debt issued by banks, in %



Source: BAM

The decrease in banks' recourse to the bond market continued in 2015, in response to the momentum in deposits and the decrease in the need for refinancing. In fact, the outstanding amount of bond debt stood at 80 billion dirhams, declining further by 9.1 percent after the decline by 2.1 percent in the previous year. Issued debt securities, which represent 62 percent of the overall bond debt, accounted for this contraction with their decline by 21.5 percent, which was slightly offset by subordinated debt, which rose by nearly 23 percent.

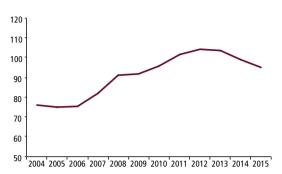
In the same context, banks resorted less to the advances of Bank Al-Maghrib, which totaled an average amount of 35 billion dirhams in 2015 (23 billion dirhams by the end of the year), compared with an average of 55 billion dirhams in 2014 (42 billion dirhams by the end of the year).

The easing in banks' liquidity deficit was reflected by a better loan to deposit ratio, standing at 95 percent instead of 99 percent in 2014.

#### Liquid and realizable assets, in billion dirhams

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

#### Change in banks' loan to deposit ratio, in %



Source: BAM

200

180

160 140

120

100

80 60

40

20

Banks' liquid assets increased by 25.3 percent from the end of 2014, and continued to be dominated by Treasury bonds.

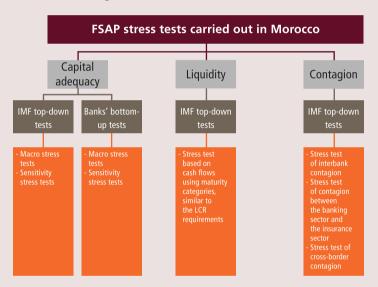
Similarly, the liquidity coverage ratio (LCR), calculated by dividing a bank's stock of high-quality liquid assets by its total net cash outflows over a 30-day period, reached 168 percent in 2015, thus achieving a significant improvement well above, on average, the minimum threshold of 60 percent set for 2015<sup>16</sup>.

<sup>16</sup> Targeted minimum threshold by the end of 2018 of 100%

#### Box N°4: Results of FSAP17 stress tests

In 2015, the IMF and the World Bank conducted a joint assessment of the Moroccan financial system, to evaluate its soundness, the oversight system (both micro and macro-prudential), bank resolution, market capital regulation, market infrastructures and financial inclusion.

In this context, stress tests were conducted to assess both banks' capital adequacy and their exposure to liquidity and contagion risks. These tests covered eight banks representing about 90 percent of banking sector assets, using two approaches: a "top-down" approach conducted by the IMF, and a "bottom-up" approach performed by banks, with the guidance and coordination of Bank Al-Maghrib.



• The **capital adequacy stress tests** were based on the assumption of a three-year trend in NPLs over the period 2015-2017, driven from macroeconomic variables and shaped as a baseline scenario founded on the projections laid down in IMF's World Economic Outlook, and an adverse scenario assuming a recession in Europe and a sharp rise in oil price volatility, impacting GDP growth.

<sup>17</sup> The FSAP (Financial Sector Assessment Program) was created in 1999 by the IMF to conduct a full and profound analysis of the financial sector of its member countries. In developing and emerging countries, the assessment consists of two sections: an assessment of financial stability carried out by the IMF, and an assessment of financial development conducted by the World Bank.

#### Box N°4: continued

The results of these stress test, following the top-down and bottom-up approaches, demonstrated the resilience of the banking system to potential macroeconomic shocks.

- The sensitivity stress tests related to the concentration risk were conducted according to top-down and bottom-up approaches, assuming the payment default of some large debtors of banks. The findings of these stress tests revealed that banks are highly exposed to concentration risks.
- Liquidity stress tests were carried out according to a baseline scenario, in which deposit withdrawal rates and the valuation discounts applied to liquid assets were calibrated based on the stress indications provided by the Basel III LCR, and to a more adverse scenario built on the assumption of a stressed LCR. These stress tests which were conducted according to a top-down approach concluded that banks' vulnerability to liquidity risks was manageable.
- Contagion stress tests were implemented according to a top-down approach. Three stress tests were carried out:
  - An **interbank contagion stress test** which demonstrated that banks' exposure to this risk was very limited.
  - A stress test on contagion between banks and insurance companies which concluded that insurance companies are vulnerable to the banks' defaults risks, but not the reverse.
  - A cross-border contagion stress test demonstrating banks' limited exposure to cross-border contagion resulting from direct links with their subsidiaries abroad.

The results of macro stress tests conducted by Bank Al-Maghrib generally demonstrate banks' resilience to macroeconomic shocks

Bank Al-Maghrib regularly conducts macro stress tests to assess the impact of macroeconomic conditions' shocks on the banking sector. In 2015, the stress test carried out considered two scenarios- a baseline scenario taking into account BAM's macroeconomic predictions and an extreme scenario assuming the realization of risks emanating from emerging countries, on the global scale.

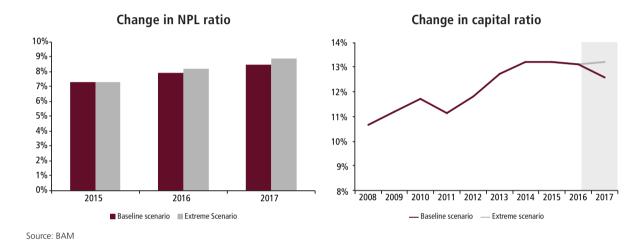
The baseline scenario assumes a GDP growth of merely 1.2 percent due to the downturn in the agricultural value added, while inflation rate should remain at 1.6 percent. Moreover, the weak corporate demand should continue to hamper bank credit growth, which is expected to stand at 2.5 percent on a year-to-year basis. In 2017, the dissipation of the negative impact of the agricultural year, coupled with the improvement in the activity in the euro zone should support GDP growth which is set to reach 4 percent. As to inflation, it should decline by 1 percent due to the dissipation of the impact of the volatile-price products. As for bank credit, its growth rate is projected to surge, mainly driven by the easing in monetary conditions in real terms.

The extreme scenario assumes the materialization of risks originating from emerging countries on the global scale. The continued slowdown in China and in countries that are currently experiencing economic difficulties is expected to significantly impact economic activity worldwide. These developments would induce a slowdown in the euro zone, which should lead to a decrease in foreign demand for Morocco. Thus, growth is expected to decelerate in 2016, to nil percent (in the context of contraction in agricultural value added), the inflation rate should decrease to 0 percent, while credit is set to contract by 0.5 percent, mainly due to the deterioration in economic activity and further deleveraging of large companies. In 2017, the impact of the shock is expected to continue, albeit with a slight improvement in growth.

#### **Macroeconomic scenarios**

		2015	2016	2017
CDD gweyyth yete	Baseline	4,5	1,2	4,0
GDP growth rate	Extreme	4,5	0	0,3
Interest rate	Baseline	2,5	2,25	2,25
Interest rate	Extreme	2,5	2,25	2,25
Inflation rate	Baseline	1,6	1,6	1,0
inflation rate	Extreme	1,6	0	0,2
Credit growth rate	Baseline	2,8	2,5	3
	Extreme	2,8	-0,5	-0,1

Stress test results indicate that the rate of nonperforming loans, according to the baseline scenario, is expected to stand at around 8 percent in 2016 and 2017 while it is expected to vary between 8.5 percent and 8.9 percent according to the extreme scenario. Under these circumstances, banks should maintain their resilience to shocks, while keeping capital ratios at a level higher than 12 percent in the horizon of 2017 according to both scenarios.



Further strengthening in the macro-prudential oversight framework

Bank Al-Maghrib initiated a reform of regulations governing banks' equity, which is expected to allow, inter alia, the implementation of the Basel III standard on countercyclical equity. The purpose of this equity is to protect banks against credit cycle fluctuations and the accumulation of systemic risks associated with excessive credit growth. Thus, if all of these conditions are met, Bank Al-Maghrib may request from banks to provide a countercyclical equity buffer composed of core equities, the level of which stands within a range of 0 percent to 2.5 percent of weighted risks.

On the other hand, the implementation of arrangements governing systemically important banks, in line with recommendations of the Basel Committee on the processing of systemically important banks on the domestic level, is underway. These arrangements include three main components:

- A framework for identifying these banks.
- Specific prudential requirements including additional overload equities aimed at strengthening the absorption capacity of these banks' losses.
- Preparation by these banks of an ex ante internal restructuring plan in normal times.

#### **III.2 THE INSURANCE SECTOR**

## Continued growth of the insurance sector activity

In 2015, the turnover of the insurance sector in Morocco, as measured by issued premiums, recorded a turnover of 30.4 billion dirhams, up 7 percent. The penetration rate, corresponding to the ratio of issued premiums to GDP, stood at 3.2 percent.

The issuance amount included:

- Life insurance and capitalization operations with 10.56 billion dirhams (35 percent of the total) as against 9.4 billion in 2014, up12.4 percent;
- Non-life operations with 19.6 billion dirhams (65 percent of the total) as against 18.8 billion in 2014, up 4.4 percent;
- Reinsurance acceptances with 213 million dirhams as against 202 million in 2014, up 5 percent.

## Specialization risk remains low

The breakdown of issued premiums by insurance categories reflects the predominance of life insurance and capitalization category, which preponderated, in terms of total issuances: 35 percent of the total, followed by the category of engine land vehicles, with a share of 32 percent; maternity health insurance with a share of 11 percent and insurance for work accidents with a share of 7 percent. These four insurance categories represented over 85 percent of the overall turnover.

The Moroccan insurance market structure is, therefore, no exception to other insurance markets.

In fact, despite lower interest rates, life insurance remains attractive, taking into account the lack of investment alternatives.

As for the automobile category, it is mandatory and will continue to grow organically, owing to the expansion in the automobile fleet. Therefore, the insurance sector does not seem vulnerable to the specialization risk in the short term.

However, automobile insurance still runs a risk related to prices and margins in the medium term.

The overall profitability of insurance companies experienced a slight deterioration

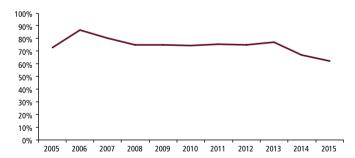
The overall profitability measured by the ratio of net profit to insurance companies' capital declined slightly due to a slight deterioration in net financial income from 9.9 percent to 9.1 percent.

# Net profit/ Capital 16% 14% 12% 10% 8% 6% 4% 2% 0% 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Source: ACAPS

For its part, the claims to premium ratio improved from 66.9 percent in 2014 to 62.4 percent in 2015.

#### Net amount of claims/ net premiums

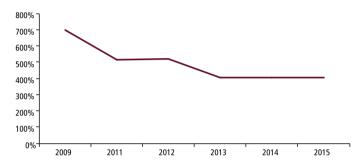


Source: ACAPS

The coverage of the solvency margin exceeded current regulatory requirements

The solvency margin level, covering underwriting risk, stood at 408 percent of the regulatory minimum by the end of 2015, as against 406 percent at the end of 2014. However, this rate is expected to fall with the adoption of the risk-based solvency principle.

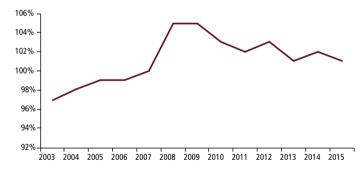
#### Coverage rate of solvency margin



Source: ACAPS

The ratio of coverage of technical provisions by covering assets stabilized at around 102 percent.

#### Coverage rate of technical provisions by covering assets

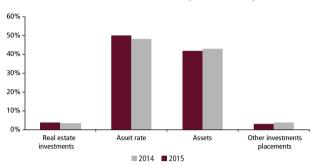


Source: ACAPS

Insurance companies investments remain overexposed to equity risks

Net investments of insurance and reinsurance companies grew by 4.6 percent in 2015 to reach more than 127 billion dirhams.

#### Investments structure (2014-2015)



Source: ACAPS

The share of equity in insurance companies' investments remained important at 43 percent.

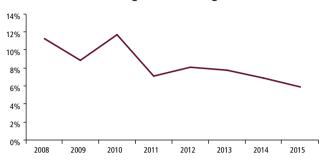
Exposure of insurance companies to interest rate risk, measured through a stress test calibrated with a bond portfolio rate shock of 100 basis points, is contained. The results of these stress tests demonstrate that insurance companies meet the solvency prudential requirements.

The exposure of insurance companies to market risk was measured through a stress test based on a stock shock, calibrated on the basis of a 10 to 25 percent decrease of the value of the listed shares they hold. The results of these stress tests demonstrate that insurance companies meet the solvency prudential requirements.

The exposure of insurance companies to real estate risk was also measured through a stress test based on a real estate investment shock, calibrated on the basis of a 10 to 25 percent decline. Stress test results indicate that insurance companies meet the solvency prudential requirements.

For their part, unrealized gains declined in 2015, due to the underperformance in the stock market, representing only around 5.9 percent of the covering assets as against 6.80 percent in 2014.

#### Unrealized gains/ covering assets



Source: ACAPS

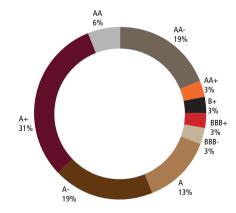
Insurance companies are exposed to counterparty risk related to the exposure of some issuers

The insurance sector runs a counterparty risk related to its exposure to some issuers in terms of investments. Indeed, this exposure reached 30 percent of sector's capital in some cases.

On average, 27 percent of the shares of assignees are guaranteed by deposits, 73 percent are transferred to the Central Reinsurance Company (SCR), which benefits from the State guarantee, and 2 percent are held by foreign reinsurers which most of them are rated BBB minimum.

Up to 81 percent of the retrocession transactions by the SCR are made with reinsurers rated AA minimum.

#### Retrocession reinsurers rating conducted by SCR

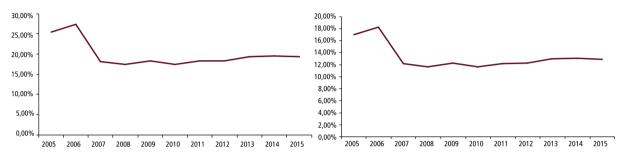


Source: ACAPS

Consolidation of arrears visà-vis insurance holders and intermediaries The exposure of insurance companies to the risk of unpaid debts of insurance holders and intermediaries remained almost stable. Indeed, the shares of these unpaid debts in equity rose respectively to 19.3 percent and 12.9 percent, in 2015.

#### Exposure on insurance holders / capital

#### Exposure on intermediaries / capital



Source: ACAPS

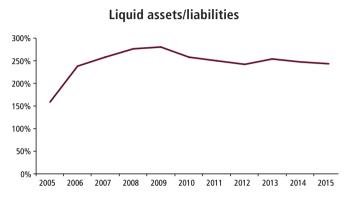
#### Box 5: Regulations governing insurance companies-intermediaries relationship

In order to better regulate the relationship between insurance and reinsurance companies and insurance intermediaries, the insurance regulatory authority took two major initiatives, which are as follows:

- The first was introduced by Insurance and Social Welfare Department's circular no. IA/15/24 of July 16, 2015 which requires the establishment of a contractual framework between companies and insurance intermediaries for the collection of premiums and payment, and payment of claims. The circular also aims to curb the payment facilities granted haphazardly by insurance intermediaries and reduce debts and risks on insurance holders.
- The second initiative is of a legislative nature and involves the redesign of Book IV of the Insurance Code. One key measure of this redesign was the introduction of the obligation, for insurance intermediaries, to separate the bank accounts related to insurance operations from those aimed for personal-use. This measure seeks to achieve greater transparency in the management of funds collected by insurance intermediaries.

Liquid assets of insurance companies exceed the double of current liabilities

Liquid assets of insurance companies accounted for nearly 2.5 times their current liabilities, reflecting a strong ability to cover their potential cash outflows. The liquidity ratio stood at 243 percent.



Source: ACAPS

To improve its image, the insurance sector undertook a mediation system

A new mediation system was introduced. This system, which became operational since January 2016, is one of the key measures of the program contract (measure 70 under the objective of improving the sector's image). It aims to enhance the relationship with customers and streamline the settlement of a number of issues.

#### Box 6: The insurance sector introduces mediation arrangements

The insurance sector introduced mediation arrangements, which became effective as of 1st January 2016.

This alternative of dispute resolution aims to improve the relationship with customers, streamline the resolution of a number of issues and spare insurance holders the systematic recourse to courts.

Conflicts eligible for mediation are those that have not been subject to legal action and the amount of which exceeds 5000 dirhams, exclusively involving individuals against insurance companies. The use of mediation services is free of charge and is binding to the insurance company whenever the amount does not exceed 50.000 dirhams.

The designation and follow-up of the mediator activities are exerted by a commission composed of two representatives of the ACAPS and two representatives from the Moroccan Federation of Insurance and Reinsurance companies (FMSAR).

> On the regulatory level, the year 2015 was marked by the adoption by the Council of Government of the 59-13 draft law amending and supplementing Law No. 17-99 on the insurance code. The amendments concern, in particular, the introduction of the principle of risk-based solvency, improvement of the governance of insurance and reinsurance companies and the enhancement of transparency. They also provide for the establishment of a legal framework for Takaful insurance and the establishment of the obligation of some «construction» insurances.

> Furthermore, it should be noted that arrangements to regulate the treatment of systemically important insurers in Morocco are under study, with a view to complying with the relevant recommendations of the International Association of insurance Supervisors and the Financial Stability Board.

These arrangements will include specific prudential requirements for this category of insurers and standards governing the preparation of a resolution plan by the insurers.

# Box N°7: Revision of the methodology adopted in 2013 for global systemically important insurers (G-SII)

The initial identification methodology was published by the International Association of Insurance Supervisors (IAIS) in 2013. This methodology is based on a relative scoring system. Thus, 18 indicators were defined to estimate the size and the nature of the international activity, the weight of non-traditional non-insurance activities (NTNI), the interconnection and substitutability. The score of an insurer is a weighted average of the results for each indicator. Today, only the relative positioning of each insurer, in a sample of 50 international groups, determines the score to the various indicators. The IAIS recognizes the need to monitor and modify the required valuation method. To this end, it plans to revise this valuation method once every three years.

In the context of the revised methodology draft, absolute thresholds for some indicators were introduced. The score will no longer be determined solely by the insurer's position in relation to the sample for a given criterion, but also depending on its position vis-à-vis a reference value: IAIS suggests the use of absolute reference values for a limited number of indicators to address the issue of standardization of these indicators. The score of an insurer must also take account of market developments and / or market size.

#### **III.3 PENSION SCHEMES**

The level of services provided by pension scheme exceeded, for the second year in a row, that of collected contributions

In 2015, the contributions raised by the pension scheme<sup>18</sup> accounted for 40 billion dirhams, or the equivalent of 4.48 percent of GDP. They were collected from an employed population contributing 4.28 million as against 4.18 million in 2014, up 2.4 percent in response to the positive growth of CNSS contributors. The benefits provided by these schemes accounted for 42.7 billion dirhams, or 4.78 percent of GDP.

Pension schemes assets increased by 3.87 percent from 250.3 billion dirhams in 2014 to 260 billion dirhams in 2015.

#### Change in pension schemes assets, in billion

100 90 80 70 60 50 40 30 20 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 — CMR — CNSS — RCAR — CIMR

Change in pension schemes benefits, contributions, and technical balance of pension schemes, in million dirhams

	Contributions		Ben	efits	Technical balance	
	2014	2015	2014	2015	2014	2015
CMR	21 923	22 046	23 470	25 256	-1 547	-3 210
RCAR	2 294	2 314	4 388	4 762	-2 094	-2 448
CNSS	9 145	9 719	8 517	9 067	628	652
CIMR	5 843	6 076	3 439	3 612	2 404	2 464
Total	39 205	40 155	39 814	42 697	-609	-2 542

Source: ACAPS

Pension scheme investments noted an increase in UCITS shares at the expense of bond allocation Apart from the long-term deposits segment of social security to the CDG (37 billion dirhams), the 2015 investments<sup>19</sup> carried out by the other three pension schemes amounted to 221 billion dirhams, with a growth rate of 6.4 percent compared to 2014, as against 6.8 percent a year earlier, thus achieving an average annual increase of 6.7 percent over the last 6 years.

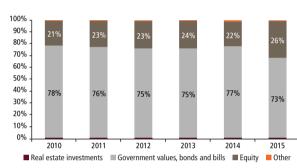
<sup>18</sup> The RPC and RPM, managed by the CMR, the RCAR, the CNSS and the CIMR.

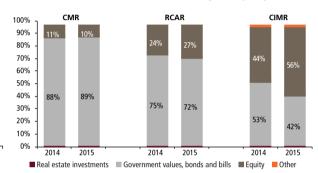
<sup>19</sup> Investments: Investments of the RCAR, the CMR and the CIMR. Available funds of the CNSS shall be deposited at the Deposit and Management Fund, by virtue of the Dahir bearing law No1.72.184 of 27 July 1972.

The structure of these investments was characterized by a decline in bond category<sup>20</sup> which went from 77 in 2014 to 73 percent in 2015, as against an increase of Equity category<sup>21</sup> from 22 to 26 percent over the same period. This trend is due to a change in the investment structure of CIMR and RCAR.

#### Structure of pension investments

#### Structure of investments by company

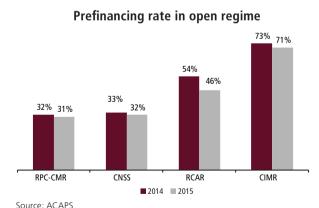


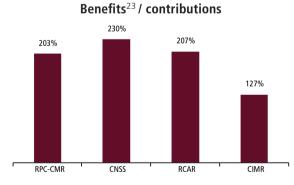


Source: ACAPS

The underpricing of pension schemes and the significance of cumulative affiliates' liabilities weighs heavily on their technical balance

Overall, the technical balance of pension schemes remained vulnerable and indicated the underpricing of the rights granted under these schemes. This can be seen through the low levels of the pre-financing rate<sup>22</sup> (31 percent for Civil Pension (RPC), 32 percent for the CNSS and 46 percent for RCAR). Concerning CIMR, and while its pre-financing rate stands at 71 percent, its technical balance remains vulnerable to the demographic factor because of the optional nature of the scheme.





20 Bonds, UCITS bonds, Monetary UCITS and 50% of various UCITS units

<sup>21</sup> Equity, UCITS equity and 50% of various UCITS units

<sup>22</sup> Sum of the assets available in the base year and updated revenues, related to liabilities that cover updated future expenditure and liabilities in projections in «closed regime»

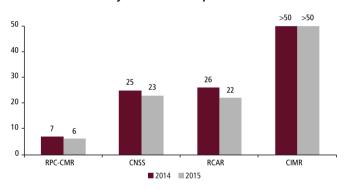
<sup>23</sup> Relation calculated based on the average profile of each regime taking into account their own hypotheses in terms of mortality, pension upgrades, and technical rates...

Continued deterioration of the financial viability of basic schemes

CIMR assets are expected to remain positive throughout the period of projection. As to those of mandatory schemes, they will run out in various horizons. The situation of the RPC is critical as it experienced a technical deficit for the second consecutive year - its assets are expected to run out by 2022. RCAR assets will be depleted in 2038 and those of CNSS in 2039.

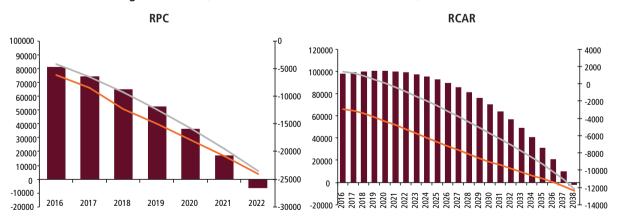
The total balances<sup>24</sup> of RCAR and CNSS should remain positive until 2020 and 2023, respectively. For the RPC, the financial management of its reserves can no longer allow the absorption of the technical deficit of the scheme, leading to an overall balance deficit starting from 2016.

#### Number of years to the depletion of assets

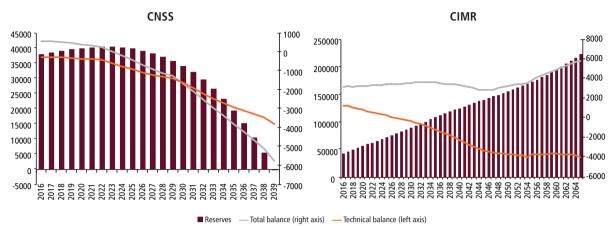


Source: ACAPS

#### Change in reserves, technical balance and total balance, in million dirham



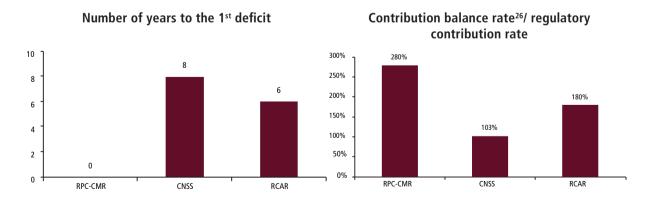
<sup>24</sup> Total balance= technical balance + financial products of assets



Source: ACAPS

The headroom for mitigating pension schemes imbalances continues to shrink particularly the civil pension schemes

The room for maneuvering through the financial imbalances of pension schemes is shrinking. The RPC has gone into a phase of structural deficit. Acting only on the sole contribution rate<sup>27</sup> to ensure the balance of the scheme would lead to an unsustainable rate. The measures to be taken should on the one hand allow for increasing the scheme's liabilities and on the other hand reduce its own financial liabilities, hence, the urgent need to implement the reforms suggested by the government. CNSS still benefits from the positive demographic factor. A sustainable increase in the contributions rate would allow for achieving the balance of the scheme in a reasonable horizon of time. As to RCAR, it has only six years before recording its first overall deficit. This period is barely sufficient to redress the situation of the scheme in the public Pole.



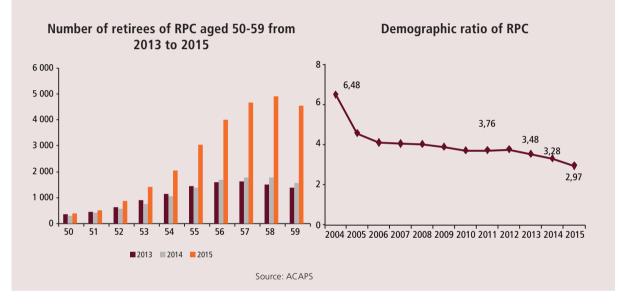
Source: ACAPS

<sup>25</sup> Pursuant to Article 7 of the Decree no 2-95-789 of November 20, 1996, taken for the application of law 43-95 on the reorganization of the CMR, which provides an increase in the contribution rate in case reserves reach the minimum of 2 times the average spent in the last three yeats.

<sup>26</sup> Corresponding to the contribution rate allowing for an asset not to be cancelled until the end of projection horizon (2065)

#### Box N° 8: Delay in the implementation of the parametric reform in the RPC

The situation of RPC-CMR deteriorated further in 2015, registering, for the second year, a technical deficit of 2.8 billion dirhams after a deficit of 0.9 in 2014 (the deficit for the year 2016 is expected to reach 6 billion dirhams). The delay in the implementation of the parametric reform has led not only to the deterioration of the financial situation of the scheme, but also to the increase of the number of early retirement departures, aggravating the demographic ratio of the scheme which rose from 3.48 affiliates to each retiree in 2013 to 2.97 in 2015.



#### **III.4 INTERCONNECTIONS BETWEEN FINANCIAL INSTITUTIONS**

Interconnections between financial institutions constitute a potential channel of contagion whereby risks spread within the financial system. It is therefore important to study these interconnections to assess risks to the stability of this system. This is one of the criteria defined by the Financial Stability Board and the Basel Committee to identify systemically important financial institutions. Such an analysis may concern financial institutions, capital markets and payment and settlement systems. The present section studies domestic interbank linkages, interconnections between banks and insurance companies in Morocco, as well as interconnections between banks and their subsidiaries abroad.

#### A. DOMESTIC INTERBANK INTERCONNECTIONS

The interbank contagion stress test confirms the absence of domino-effect contagion risk, given the weak multilateral interconnections between actors

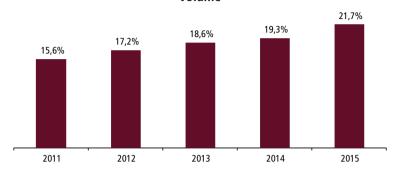
In 2015, volumes traded on the money market remained concentrated around a limited number of operators, particularly as regards borrowings which are marked by a high level of concentration, with one bank mobilizing more than half of the exchanges.

Thus, the interbank contagion stress test, conducted quarterly since 2009 to assess the propagation of a liquidity problem originating from one institution to others, shows that the money market is resilient. This resilience, perceived in the absence of a plausible domino effect, reflects the absence of any multilateral interconnections between the different actors.

#### **B. INTERCONNECTIONS BETWEEN BANKS AND THEIR OVERSEAS SUBSIDIARIES**

The contribution of overseas subsidiaries to the activity of the three banking groups continues to strengthen In 2015, the contribution of overseas subsidiaries to the consolidated activity of the three Moroccan banking groups strengthen further, reaching 21.7 percent of the overall assets, against 19.3 percent a year earlier. Collected deposits and issued credits by subsidiaries represented 22 and 20 percent of the consolidated deposits and credits, respectively.

#### International activity contribution to the consolidated activity volume

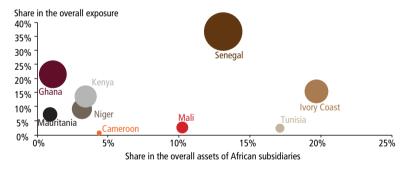


Source: BAM

Moroccan banks' exposures to their overseas subsidiaries remain limited with a low contagion risk

Despite their increase by 5 percent compared with the end of 2014, loans granted by the three banks and their subsidiaries abroad remained limited and geographically diversified. These loans have mainly been directed to Senegal, with a share of 34 percent, followed by those oriented towards Ghana and Ivory Coast.

#### Major exposures of Moroccan banks to their subsidiaries in Africa



Source: BAM

A stress test was conducted as part of the assessment of the Moroccan banks' resilience to a potential contagion risk from their overseas subsidiaries. The test was based on the assumptions of defaults of various subsidiaries inducing a loss in the capital of their parent banks.

The findings indicated a very low impact on parent banks, given their capital bases and the limited level of these exposures.

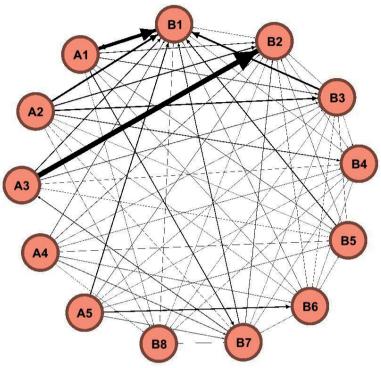
#### C. INTERCONNECTIONS BETWEEN BANKS AND INSURANCE COMPANIES

Insurance companies' exposure to banks remains more significant than the reverse

Banks' exposure to the insurance sector represented only 0.4 percent of their assets and 1 percent of their liabilities. These liabilities are mainly composed of deposits and debt securities, followed by equity securities.

Furthermore, the exposures of insurance companies to the banking sector constitute a significant share of their assets amounting to about 18 percent compared with 2 percent of their liabilities.

These assets are primarily composed of equity and property securities (80 percent), debt securities (11 percent) and deposits (9 percent).



Bi: Bank i - Ai: Insurance i

Nodes represent banks and insurances. Arrows represent the inter-institutions exposure. Width of the arrow refers to the degree of exposure.

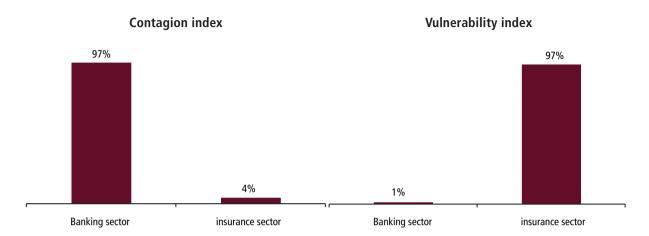
Source: BAM - ACAPS

A stress test on a sample of 8 banks and 5 insurance companies of considerable size, was conducted to assess the vulnerability of these institutions.

The retained scenario is based on a number of simulations. Each simulation measures the impact of a payment default of a counterparty (debtor) on the other institutions (lender): domino effects.

Based on the stress test, two indicators are determined:

- A **contagion index** measuring the loss percentage of the capital of the other institutions due to the default of an institution.
- A vulnerability index assessing the average percentage of capital loss incrured by an institution due to the default of others.



Source: BAM - ACAPS

The outcome of this stress test highlights the vulnerability of insurances to banking defaults, but not the reverse. Indeed, the contagion index is higher in banks, while the index of vulnerability is more significant for the insurance sector.

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## **CHAPTER 4**

CAPITAL MARKETS, MARKET INFRASTRUCTURES AND MONEY IN CIRCULATION

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#### Overview

*In 2015, bank liquidity improved further in response to the build-up in foreign exchange reserves.* In this context, the central bank decreased the outstanding amount of its interventions by 45 percent year on year, to 23 billion dirhams.

Despite the falling rates, activity in the private debt market contracted sharply, especially in the segment of certificates of deposits.

In the stock market, market capitalization shrank by 6.4 percent after a slight rebound of 7.4 percent in 2014. The market was negatively affected by investor uncertainty, prompted by the publication of 11 profit warnings in the first half of the year, as well as by the difficult situation experienced by some major issuers, such as SAMIR and ADI.

Net assets of UCITS increased by 9.8 percent. Over the past five years, the overall increase stood at 46.8 percent, or an average annual growth of 8.24 percent. Net assets of UCITS represented, in 2015, 34.2 percent of GDP, as against 33.4 percent a year earlier. UCITS constitute drivers likely to spread risk within the financial system. Therefore, a set of prudential regulations is introduced to prevent counterparty, liquidity and leverage risks.

Market infrastructures in 2015 did not cause any disruption to financial stability. In fact, the Moroccan Gross Settlements System (SRBM) operated smoothly as evidenced by the low risk of end-of-day payment order rejection and the absence of any payment default of intraday advances granted to participants. The Moroccan Interbank Remote Clearing System (SIMT) also performed well as shown through the high clearing rate achieved by the system and the reduction by nearly 87 percent in the cash requirements for the settlement of participants' commitments. Furthermore, several reforms were undertaken to reduce operational risk in particular through the deployment of the Business Continuity Plan (BCP) of the GSIMT.

The supply of money in circulation continued smoothly by providing operational inventories based on a geographical breakdown. A BCP was also introduced based on the constitution of strategic inventories.

Despite these developments, major risks from the markets and market infrastructures continue to emanate from the structural shallowness of financial markets and the high concentration of both liquidity in the banking sector and the monetary market as well as issuers in the stock market, the subscribers in the assets market and the participants in market infrastructures.

#### IV.1 CAPITAL MARKETS

#### A. MONEY AND BOND MARKETS

#### Continued improvement in bank liquidity

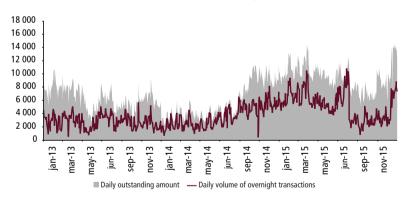
In 2015, the refinancing requirement for banks under the rule of reserve requirements absorbed more than 22 billion dirhams (compared with nearly 28 billion dirhams in 2014), closing the year 2015 with a deficit of 18.6 billion dirhams.

In this context, the central bank has reduced the outstanding amount of interventions to 23 billion by the end of 2015 (of which 7 billion under core operations) after 42 billion dirhams in 2014.

#### Higher forward transactions in the unsecured interbank market

The volumes traded in the interbank unsecured market amounted to nearly 10 billion dirhams on average, up from 5.7 billion the previous year, due to the growth in forward transactions, whose average outstanding amount increased by 93 percent from 2.2 billion dirhams in 2014 to 4.3 billion in 2015.

#### Volumes traded in the interbank market, in millions of dirhams

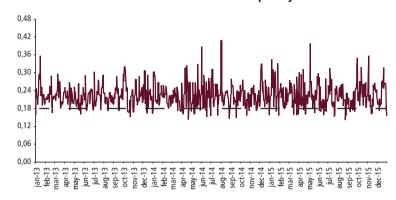


Source: BAM

#### Persisting concentration in the money market

Bank liquidity remains unevenly distributed among banks, with more than 70 percent of total reserves being held by the three largest banks. As in the previous years, the HerfindahlHirschman Index (HHI) of bank liquidity stood at 0.20, above the 0.18 threshold.

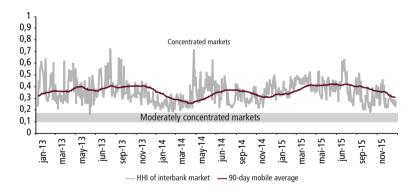
# Concentration of bank liquidity



Source: BAM

This structure is also reflected on unsecured lending and borrowing which remained highly concentrated, especially in borrowings, with an HHI of 0.37, as one sole bank accounted for more than half of resources in this market segment.

# Concentration of the overnight unsecured interbank market



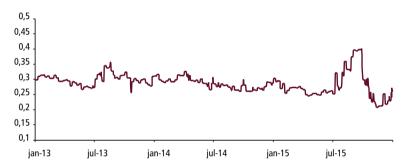
Source: BAM

On the other hand, the repo market recorded a lower concentration compared with other segments, with an HHI of 0.14, therefore falling within the category of moderately concentrated markets due to its extension to other operators, particularly mutual funds. Borrowings in the repo market, however, remained concentrated around banking institutions, with a share of 66 percent of the overall volume.

# Concentration of refinancing from the central bank

The high concentration of bank liquidity is reflected in the distribution of the central bank injections. As in the previous years, nearly 80 percent of central bank money benefits a small number of institutions. The HHI of BAM injections has hovered around 0.28 over the past three years.

# Concentration of refinancing from Bank Al-Maghrib



Source: BAM

# Reduced pressure on the collateral<sup>27</sup>

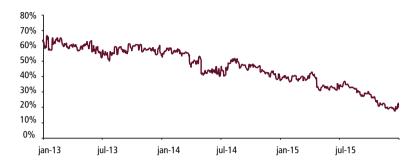
The pressure on the collateral diminished further during 2015. In fact, the share of the collateral mobilized by banks in relation to their own holdings of eligible assets stood, on a daily average, at 32 percent, as against 48 percent in 2014 and 59 percent in 2013.

This development was due to the significantly lower central bank interventions, particularly 7-day advances, due to the improvement in bank liquidity conditions.

Thus, the share of the outstanding amount of refinancing operations secured by private securities in the total injections of Bank Al-Maghrib moved up to 45 percent on average in 2015 from 23 percent a year earlier.

<sup>27</sup> Pressure on collateral is an indicator of banks' capacity to obtain refinancing from the central bank. The higher this indicator is, the more important is banks' exposure to the risk of pressure on liquidity.

#### Share of banks' collateral mobilized

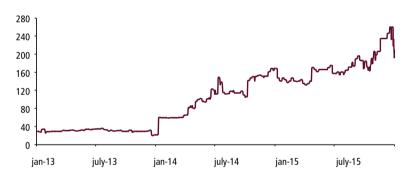


Source: BAM

#### Extended average duration of BAM interventions

Consequently, the average duration of BAM interventions significantly extended to 174 days from 105 days and 30 days in 2014 and 2013, respectively.

# Average duration of BAM interventions (in days)



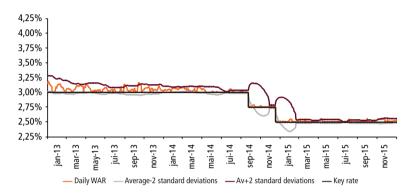
Source: BAM

# Reduced money rates

The rate of overnight advances remained close to the key rate throughout 2015, averaging 2.51 percent, that is a difference of 1 basis point instead of 2.2 basis points in 2014.

The interbank rate fluctuated between 2.50 percent and 2.56 percent and its volatility, measured by its standard deviation, declined to 0.01 from 0.15 in 2014. The ease of bank liquidity reduced the sensitivity of the interbank rate to the occasional movements of liquidity tightening, which usually put transient pressure on the interbank weighted average rate.

# Unsecured overnight interbank WAR: trend and volatility



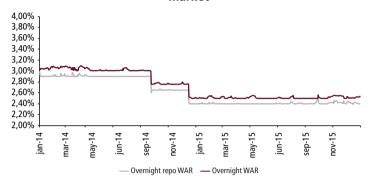
Source: BAM

Confirmed efficiency of money market price formation

Similarly, the differences between maximum and minimum interest rates observed on the same day in the unsecured money market continued to narrow from 6 basis points in 2014 to 4 basis points in 2015. Rate differences in the repo market stabilized on average at 2 basis points over the past two years. These developments reflect a more efficient price formation in the money market.

In addition, rate deviation between financing in the unsecured market and collateralized market reached nearly 10 basis points in 2015 as against 12 basis points a year earlier, reflecting some connection in the rate formation in the two segments, amid lower risk aversion.

### Overnight WAR in the repo market and in the unsecured interbank market

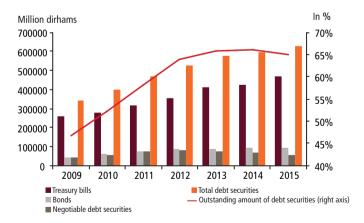


Source: BAM

A systemic debt market with slower growth

The volume of the debt market reached 626.6 billion dirhams by the end of 2015, with an average annual growth of 10.3 percent over the period of 2009-2015. However, the growth rate declined during the period 2013-2015 to an annual average of 5.9 percent from 13.6 percent during the period 2009-2012. After stagnating in 2014, the ratio of the debt market to GDP fell slightly to 65 percent in 2015 from 66 percent in 2014. The stability of this market is essential for the stability of the Moroccan financial system, given the significance of its size, its interconnection and its role in the financing of the economy and in liquidity.

#### Outstanding amount of debt securities

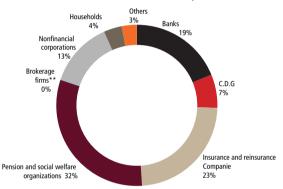


Source: Maroclear, Ministry of Economy and Finance, and AMMC calculations

Significant exposure of financial institutions and pension and social welfare organizations

In 2015, the debt market was largely interconnected with the various economic agents. Pension and social welfare organizations are the top investors accounting for 31 percent, or about 195 billion dirhams compared with 183 billion dirhams in 2014. Financial institutions combined (banks, insurance companies and CDG) account for nearly 49 percent of the total debt securities, with nearly 307 billion dirhams.

# Direct and indirect\* holding of debt securities at end-2015 (in millions of dirhams)



Source: Account keepers, Maroclear, ACAPS. (\*) Through mutual funds. (\*\*) Own account positions with Maroclear

Increase in Treasury issuances despite the easing in budget deficit The public debt segment remains the first investment alternative for investors, on account of the security it offers and the lack of other investment alternatives.

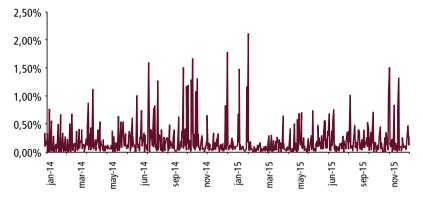
The presence of the Treasury in the domestic market remained important, as it mobilized significant amounts despite the easing in the budget deficit mainly due to lower subsidy expenses and higher tax revenues. This presence reflects the decrease in Treasury international issuances.

Excluding securities exchange transactions, Treasury issues rose markedly in 2015 to 126 billion dirhams, 60 percent higher than in 2014. The outstanding amount of Treasury bills increased to nearly 470 billion dirhams as at-end 2015, up 10 percent compared with end-2014.

Public debt secondary market remains shallow and volatile

However, the secondary market is still shallow with a relatively low turnover rate stabilizing at 0.4 percent. Banks and mutual funds are the key players in this segment, recording respectively 55 percent and 33 percent of sales and 48 percent and 43 percent of acquisitions during the year.

# Daily turnover rate in Treasury bond secondary market



Source: BAM

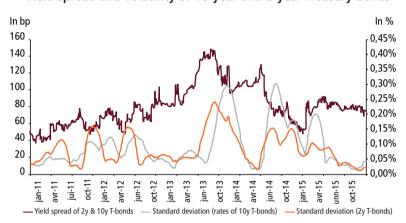
Continued decrease of yield rates

The yield curve declined further reflecting lower yields on all maturities, except those relating to 30-years bills, which rose by 157 basis points to 4.99 percent.

In this context, the standard deviation of 2-year and 10-year T-bill rates amounted respectively to 4 and 2 basis points in 2015 as against 24 and 10 basis points a year earlier.

In addition, the yield spread between the 2-year and 10-year rates rose to 76 basis points in 2015, 35 basis points lower than 2014, reflecting a sharp tightening in 2-10 year deviations, accompanied by a flattening in the yield curve.

#### Yield spread and volatility of 10-year and 2-year Treasury bonds

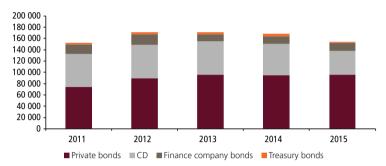


Source: BAM

Underdeveloped private debt market, with new decrease in its outstanding amount The private debt market remains underdeveloped, with a very narrow and very little transparent secondary compartment.

The total outstanding private debt stood at nearly 156 billion dirhams, continuing the downward trend that started in the previous year. This development resulted primarily from the decrease in the stock of outstanding negotiable debt securities, particularly certificates of deposit, prompted by the improvement in bank liquidity.

#### Outstanding private debt (in million dirhams)



Source: BAM-Maroclear

Decreased issuance of negotiable debt certificates Overall, issues of negotiable debt securities declined by around 40 percent year on year, to nearly 42 billion dirhams in 2015. This development was mainly driven by the decrease by nearly 55 percent in debt securities issues -primary component of the negotiable debt securities market- to a volume of 21 billion dirhams.

Higher issuance of private bonds, driven by banks

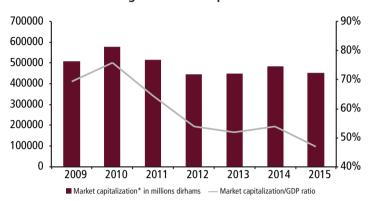
Private bond issuance slightly increased by 7 percent during 2015, to nearly 15 billion dirhams. The main issues were made by the banking sector which concentrated almost 40 percent of the overall volume.

# **B. THE STOCK MARKET**

A systemic market capitalization regardless of the decline

As the stock market capitalization represents 47 percent of GDP, any significant shock in the stock market would threaten the stability of the Moroccan financial system. Market capitalization decreased by 6.4 percent in 2015 to 453 billion dirhams, following a slight rebound of 7.4 percent in 2014. This decline is primarily driven by the underperformance of the MASI index by -7.22 percent.

#### Change in market capitalization



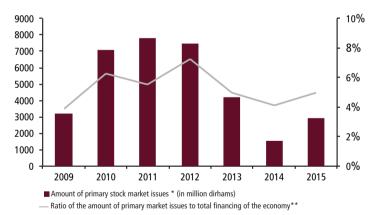
(\*) Excluding bonds

Source: Casablanca Stock Exchange, Ministry of Economy and Finance

The contribution of the stock market to financing the economy remains marginal

Stock market's contribution to financing the economy remains marginal despite its slight increase by 5 percent, after declining for two consecutive years. In fact, this rate stood at 7 percent in 2012. The amount of funds raised through the stock market went up from 1.5 billion dirhams in 2014 to 2.9 in 2015.

#### Change in securities issued in the primary market



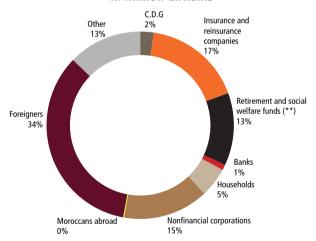
(\*) Excluding bonds (\*\*) Primary stock market issues + change in outstanding debt securities, securitization mutual funds and venture capital investment funds + change in outstanding loans of financial institutions

Source: Casablanca Stock Exchange, Bank Al-Maghrib, Maroclear, and AMMC calculations

Exposure to the stock market is quite large but that of the banking sector is limited

Different categories of economic agents invest in the stock market. However, the volume of investments varies across these categories. In fact, banks' exposure was very limited to 4.3 billion dirhams by the end of 2015, or the equivalent of 0.95 percent of market capitalization, while the exposure of financial institutions as a whole (banks, insurance companies and the CDG) make a total of 92.4 billion dirhams- or 20.4 percent of market capitalization, primarily from insurance companies. Foreigners remain the largest investors with 155 billion dirhams, or 34.4 percent of capitalization as against 152 billion dirhams in the end of 2014. The year 2015 saw a relatively significant decline in stock market investments of nonfinancial corporations (66.8 billion dirhams as against 102 billion dirhams by the end of 2014), and households (23 billion dirhams as against 63 billion dirhams in the end of 2014). The exposure of pension and social welfare funds is relatively high at 13 percent or 56.8 billion dirhams.

### Direct and indirect\* ownership of market capitalization at end-2015 in million dirhams



Source: Banks, Maroclear, ACAPS

(\*) Via UCITS

(\*\*) Including non-listed stocks (distribution is unavailable)

The stock market did not benefit from the broadly favorable macroeconomic environment

In 2015, despite a favorable macroeconomic environment, marked by an improvement in the economic situation of Morocco's main partner countries, particularly in the euro area, a domestic growth rate of 4.5 percent as well as a reduction in fiscal and trade deficits, the Casablanca Stock Exchange ended the year 2015 with a negative annual performance. The two reference indexes of the Casablanca Stock Exchange posted an annual underperformance by 7.22 percent, to 8925.71 points for MASI, and by 7.49 percent to 7255.21 points for MADEX.

The market was adversely affected by a climate of investor uncertainty, prompted by the publication of 11 profit warnings in the first half-year and the difficult situation of some major issuers, such as SAMIR and ADI. In fact, the pace of growth of the Casablanca Stock Exchange was not in line with real indicators of activity and profitability of listed companies for 2015, as their total turnover (excluding SAMIR and ADI which did not publish their financial statements) and overall net income slightly increased by 3.6 percent and 1.6 percent respectively compared with 2014.

The outlook for 2016 seems mixed, due to sluggish domestic growth and uncertainties around global growth. In addition, the growth of stock market indexes for Morocco's main economic partners in 2015 remains uneven. These indicators do not suggest an improvement in the external demand for Morocco.

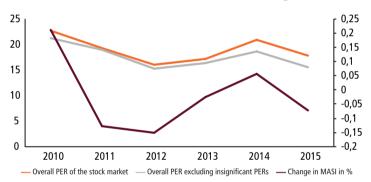
Change in stock market indexes in partner countries

	2010	2011	2012	2013	2014	2015
United States (Dow Jones)	+11,0%	+5,5%	+7,3%	+26,5%	+8,7%	-3,3%
France (CAC 40)	-3,3%	-17,0%	+15,2%	+18,0%	-0,5%	+8,5%
Spain (Ibex 35)	-17,4%	-13,1%	-4,7%	+21,4%	+3,7%	-7,2%
Italy (FTSE MIB)	-13,2%	-25,2%	+7,8%	+16,6%	+0,2%	+12,7%

The risk of formation of a speculative bubble is very low

At the end of 2015, the PER of the Casablanca Stock Exchange fell to 17.9 times from 20.9 in 2014 and 22.7 in 2010, in correlation with the change in MASI. Taking into account the average net income over the past five years, the PER was almost stable in 2015 at 17.4 times as against 17.7 in 2014. If the Casablanca Stock Exchange PER stood at a relatively high level, it is because it is penalized by the fact that 22 percent of listed companies, representing only 6 percent of the total market capitalization, have insignificant PERs due to their very low or negative results. In fact, excluding the aforementioned companies, the Stock Exchange PER stood at 15.5 times in 2015. In view of the above, the risk of a speculative bubble formation in the Casablanca Stock Exchange is very low in 2015.

#### PER of the Casablanca Stock Exchange



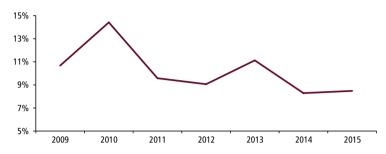
Source: Casablanca Stock Exchange data + AMMC calculations (excluding SAMIR for the year 2015)

(\*) Overall capitalization of the Casablanca Stock Exchange by the end of the year x/sum of net profit of listed companies for the year x

Low stock market liquidity is becoming structural

The Casablanca Stock Exchange liquidity remains very low. In 2015, it almost remained at the same level, as it reached 8.49 percent as against 8.25 percent in 2014. This weakness in liquidity does not boost market efficiency and may constitute an aggravating factor, in the event of pressures on the market, which would increase transaction costs and accelerate a possible drop in prices.

# Change in stock market liquidity



(\*) The liquidity ratio is a moving average of the non-doubled monthly volume of the central and OTC markets relative to the end-of-month capitalization, calculated on a year-on-year basis.

Source: Casablanca Stock Exchange

Volatility seesawed within a range that remains relatively moderate

The measurement of historical volatility of the Casablanca Stock Exchange is determined on the basis of annualized standard deviations of daily performances of the MASI and MADEX indexes. It designates the tendency of deviating from the average historical evolution of the two indexes. This measurement shows that the volatility of the Casablanca Stock Exchange was trending upward in 2015 and in May 2016, after declines for three consecutive years. In 2015, it reached 8.27 percent for MASI and 8.70 percent for MADEX and respectively 9.89 percent and 10.21 percent in May 2016. The increase in volatility in 2015 could be explained by multiple events relating to listed companies, particularly the published profit warnings. Nevertheless, the volatility of the Casablanca Stock Exchange remains at moderate levels relative to the volatility of international stock markets, such as Paris and Amsterdam which amounted respectively to 23.55 percent and 23.50 percent in 2015.

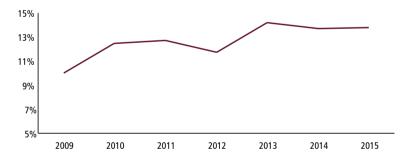
#### **Annualized volatility** 14% 12% 10% 8% 6% 4% 2% 2010 2011 2012 2013 2014 2015 - MASI - MADEX

Source: Casablanca Stock Exchange

The impact of a potential financial crisis appears to be limited, yet a herd behavior is not to be overlooked

By the end of 2015, foreigners held 13.8 percent of the floating stock, as against 13.7 percent in 2014, and 14.2 percent in 2013. Yet, the total floating stock represents only 23.37 percent of the market stock capitalization. The impact of a possible global financial crisis on the Casablanca Stock Exchange through the withdrawal of foreign capital may be amplified by a herd behavior among local investors.

# Share of foreign capital in the floating stock



Source: Account keepers, AMMC calculations

The high level of concentration in the stock market requires enhanced measures to promote listing in the stock exchange

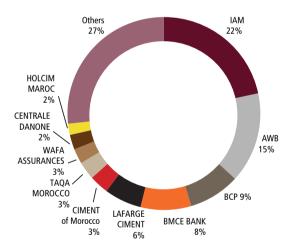
The concentration of the stock market on some issuers is expanding further, with five listed values representing 64 percent of the total stock market capitalization, compared with 56.8 percent in 2014 and 54 percent in 2013. Itissalat Al Maghrib, by itself, represents 22 percent of these values, followed by Attijariwafa Bank with 15 percent.

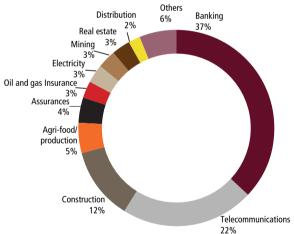
By economic sector, the significant weight of banks was rose slightly in 2015 to 37 percent from 35 percent in 2014 and 34.6 percent in 2013, followed by the telecommunications sector (22 percent) and the sector of Building and Construction (12 percent). These three sectors represent 71 percent of the stock market capitalization.

The concentration of the stock market on a very limited number of issuers and sectors of activity is a source of vulnerability for the financial stability. This concentration requires, on the one hand, caution about the financial situation of large companies that have a strong connections with the financial system and, on the other hand, improved access conditions to the stock market for companies in order to promote diversification of the listed securities.

# Issuer-based breakdown of market capitalization by at December 31, 2015

# Sector-based breakdown of market capitalization



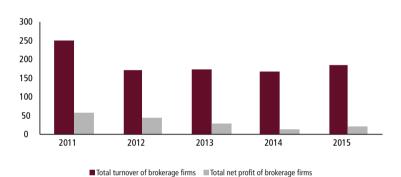


Source: Casablanca Stock Exchange, AMMC calculations

Despite its improvement, the activity of brokerage firms continues to suffer from lack of market liquidity

Revenues of brokerage firms improved by 10.1 percent from 168 million dirhams in 2014 to 185 million dirhams in 2015, after a fall by 3 percent in 2014. This improvement enabled brokerage firms to generate a total turnover of nearly 22 million dirhams, up 57.1 percent compared with 2014. However, the revenues and gains of brokerage firms remain relatively limited primarily due to the weak stock market liquidity.

# Change in brokerage firms' turnover and consolidated results



Source: Brokerage firms

# Box 9: Regulatory and performance guarantee arrangements

The regulatory and guarantee arrangements designed to ensure the smooth running of the market are based on the following:

- Prudential rules applicable to brokerage firms;
- A performance guarantee procedure for stock exchange operations managed by the Casablanca Stock Exchange and based on margin calls depending on the transaction volumes of each brokerage firm;
- A segregation of customer securities holdings at the central depository (Maroclear) and at the securities accounting of account custodians;
- Restrictions in terms of investing customer cash holdings.
- A guarantee fund set up with the aim to compensate customers of brokerage companies placed in liquidation. Its funds are perceived from the semi-annual dues of brokerage firms (account custodians). The amount of such contributions is determined as a percentage of the volume of securities and cash held by each company. The amount of this fund by the end of December 2015 increased to almost 39 million dirhams, from 37 million dirhams in 2014 and 35 million dirhams in 2013.

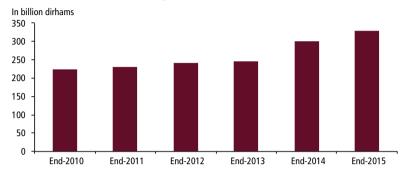
In light of these guidelines, the guarantee fund will be activated only when the bankruptcy of a brokerage firm is due to a fraud in customer assets. Recourse to this fund has not been necessary up to now during the registered cases of liquidated brokerage firms.

#### C. ASSET-MANAGEMENT MARKET

The role of mutual funds is increasingly important in mobilizing savings and financing the economy

Net assets of mutual funds rose from 300.55 billion dirhams at end-2014 to 330.12 billion dirhams at end-2015, up 9.8 percent. Over the last five years, the overall increase stood at 46.8 percent, an average annual growth of 8.24 percent. It represented, at end-2015, 34.2 percent of GDP, as against 33.4 percent at end-2014 and 28 percent at end-2013.

# Change in the net assets of mutual funds (last weekly net asset value of 2015)



Source: Mutual funds management companies, AMMC calculations

The number of operating mutual funds rose to 406 by the end of 2015 (from 384 a year earlier) and is divided into 45 SICAV<sup>28</sup> and 361 FCP<sup>29</sup>. With 149 funds, "ILTB"<sup>30</sup> mutual funds remain the most numerous. This predominance is also observed in terms of assets under management since the category "ILTB" posts, at end-2015, an outstanding amount of 175.1 billion dirhams, or nearly 53 percent of total net assets.

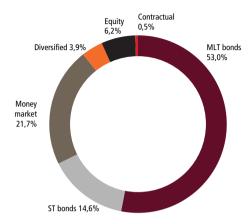
The net assets of contractual funds remains very limited despite the strong growth by 69.2 percent. It rose from 1.04 billion dirhams in 2014 to 1.76 billion dirhams in 2015. All contractual funds in activity are accompanied by credit institution guarantees. Their structure must be validated upstream by the AMMC in line with the proposed contract.

<sup>28</sup> Investment company with variable capital.

<sup>29</sup> Investment funds.

<sup>30</sup> Intermediate and long-term bond funds.

Category-based structure of mutual funds net assets at end-2015



Source: Mutual funds management companies, AMMC calculations

Mutual funds represent vehicles that may propagate risks within the financial system

With a portfolio of 234.8 billion dirhams, or 71.1 percent of the total volume of mutual funds, financial firms largely top the list of categories of economic units holding units of mutual funds. Accordingly, mutual funds may spread the risk of capital markets to financial firms. Conversely, mutual funds may also diffuse the possible failures of financial firms to the capital markets through massive redemptions of units or shares to recover liquidities.

# Breakdown of net assets by type of investor at December 31, 2015, in millions of dirhams

	Equity and diversified funds	Bond funds	Money market funds	Contractual funds	Funds total	Share (in%)
Financial corporations, including:	26 622	175 052	32 968	158	234 800	71,1%
Banks, CDG and finance companies	4 396	58 982	9 063	3	72 444	21,9%
Insurance companies and pension and welfare institutions	21 736	105 837	20 100	117	147 791	44,8%
Mutual funds and other portfolio companies	470	8 378	1 809	39	10 696	3,2%
Brokerage firms	0	150	763	0	913	0,3%
Other financial corporations	19	1 705	1 232	0	2 957	0,9%
Nonfinancial corporations	1 165	32 696	32 207	1 453	67 521	20,5%
Resident natural persons	4 475	14 984	5 940	148	25 547	7,7%
Nonresident natural and legal persons	1 026	726	494	4	2 249	0,7%
TOTAL	33 288	223 458	71 608	1 763	330 117	100%

Source: Mutual funds management companies, AMMC calculations

The stability of UCITS depends on the stability of the stock markets and debt securities

In view of the constituent assets, mutual funds are largely exposed to market, counterparty, liquidity and indebtedness risks.

Regarding market risk, the stability of mutual funds is highly dependent on the stability of the market for debt securities and, to a lesser extent, on equity securities. Indeed, the mutual funds' assets composition shows an important link with those markets insofar as they represent respectively 74.32 percent and 6.27 percent in 2015 as against 71.77 percent and 7.25 percent in 2014.

Breakdown, at end-2015, of the overall assets of mutual funds by asset category

Category	Amount	Structure
Listed securities	21 630 517 533,96	6,27
Stocks	20 337 576 270,74	5,89
Private Bonds	1 276 516 237,64	0,37
Bonds Issued or guaranteed by Government	16 425 025,58	0,00
non-listed securities	266 900 003 130,49	77,33
Stocks	139 658 595,15	0,04
Private Bonds	41 472 468 153,25	12,02
Bonds Issued or guaranteed by Government	166 760 258 730,19	48,31
Negotiable debt securities	48 282 299 490,41	13,99
Mutual fund shares/units	10 245 318 161,50	2,97
Other assets elements	56 621 961 402,82	16,40
Total assets	345 152 482 067,28	100,00

Source: Mutual funds management companies, AMMC calculations

A set of prudential rules has been put in place to prevent counterparty, liquidity and leverage risks. Indeed, mutual funds must comply at all times with the rules on the composition of assets which specify the proportions of securities, pensions and liquidities constituting the mutual funds' portfolio, as well as the maximum level of debt they are allowed to obtain.

Overall, mutual funds are required to act in the exclusive interest of their holders of units or shares.

# Box 10: Prudential framework on mutual funds

The prudential framework governing the financial risks of mutual funds is based on the following:

#### Risk division rules

- A mutual fund may not use more than 10 percent of its assets in securities of the same issuer, or 15 percent for listed equity securities whose weighting in the benchmark index exceeds 10 percent
- The total value of equity securities that a mutual fund may hold with the issuers in which it invests more than 10 percent cannot exceed, in any case, 45 percent of its assets.
- A mutual fund may not invest in:
  - negotiable debt instruments issued by legal entities whose shares are not listed in the stock exchange,
  - units of venture capital investment organizations,
  - or securitization mutual funds,
  - more than a specified percentage of its assets. This percentage is set by an order of the Minister of Finance, after seeking the opinion of the AMMC and cannot exceed 20 percent.

# Repo-related rules

- A mutual fund may hold in its assets the amount of receivables representing the repo operations it carries out as the transferee. These claims cannot exceed 100 percent of its assets.
- Exposure of the mutual fund to counterparty risk on the same party as a result of the above repurchase agreements is limited to 20 percent of its assets.

#### Box N°10: continued

# Rules on securities lending transactions

- A mutual fund may carry out securities lending transactions within a maximum limit of 10 percent of its assets.
- This limit may be increased to 100 percent when the borrower provides cash or securities as collateral. Such securities must not be issued or guaranteed by the borrower or by an entity belonging to the same group of the borrower.
- The value of the collateral must, throughout the term of the loan, be at least equal to the value of the securities on loan.

# Rules on borrowing

- The cash borrowings which a mutual fund is authorized to obtain may at no time exceed 10 percent of the value of its assets.
- When a mutual fund performs:
  - repo operations as a transferee,
  - securities lending operations as borrower,

The sum of outstanding debts representing repurchase operations, outstanding debts representing borrowed securities and cash borrowings must not exceed the 10 percent limit mentioned above.

# Rules on investment abroad

- Every mutual fund is authorized to make investments abroad within the limit of 10 percent of the value of its assets.
- All prudential rules to which are subject Moroccan mutual funds remain applicable to investments abroad.

Securitization and venture-capital are still underdeveloped

By the end of 2015, the number of operating securitization investment funds (SIF) reached 7 as against 6 in 2014 and 5 in 2013 with a total outstanding amount of 4.78 billion dirhams, up 6.4 percent compared with 2014.

#### Number and net assets of CVIF/CCIF and SMF by the end of 2015

	Number of funds	Net assets (in millions of dirhams)		
CVIF/CCIF	4	202,7		
SMF	7	4 778,13		

Source: Maghreb Titrisation

Regarding venture capital, the outstanding amount of investments reached 5.5 billion dirhams in 2015, up 12.2 percent, after increase by 16.7 percent a year earlier.

Despite the relatively high growth in these two segments of the asset-management market, their size remains limited and far from posing a threat to the financial stability of the country.

The business of individual portfolio management is being regulated

The individual portfolio management activity is not yet subject to regulatory obligations in terms of reporting and business conduct rules. The scope of the significance of this activity to financial activity cannot be assessed for lack of relevant data concerning. A draft law governing portfolio asset management for third parties is currently going through the legislative process. Its entry into force will allow access to statistics on the volumes of assets managed through individual management contracts, necessary for the analysis of related risks.

This draft law is proposed by the Ministry of Economy and Finance in coordination with the AMMC and professionals. It aims to regulate this activity in terms of authorizations, licensing and business conduct rules.

#### IV.2 MARKET INFRASTRUCTURES

Financial market infrastructures (IMFs) for the clearing, settlement and reporting of financial transactions (payment systems, central counterparty clearing house, securities central depositories, securities settlement-delivery systems, and data central repositories) constitute the backbone of the financial system and provide networks through which financial transactions are handled.

Given their central role, IMFs carry significant financial and/ or operational risks and increase interdependences between participants in the markets in which they operate. IMFs' proper functioning is therefore essential for preserving financial stability.

The importance of IMFs for the stability of the financial system induced the reinforcement of the relevant international regulations and norms. In this regard, the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) decided in 2010 to review and update the international norms applicable to IMFs. Following a public consultation, the new «Principles for Financial Market Infrastructures» (PIMF) were published in April 2012.

These principles promote the safety and efficiency of financial market infrastructures and define standards for those considered to be systemically important. According to these principles, a financial market infrastructure is considered "systemically important" when it has the potential to trigger or transmit disruptions or shocks within the financial system domestically or even internationally.

The new principles also include detailed provisions related to central counterparty clearing houses and central data repositories processing transactions by over-the-counter derivatives and incorporate specific minimum requirements by providing more detailed guidance and widening the scope of the previous standards to tackle new risk management issues, of which:

- financial resources and risk management procedures used by a given IMF in cases of participants' failure;
- operational risk mitigation;
- links and other interdependencies between IMFs through which financial and operational risks are likely to spread;
- segregation and probability of clients positions and of the collateral covering them;
- risks related to the indirect participation of IMFs;
- the general activity risk to the IMF managing company;

In addition to these new principles, the responsibilities of regulatory authorities in implementing these standards as part of their financial market infrastructures' oversight and monitoring missions have also been updated.

There are five IMFs in Morocco, namely the Moroccan Gross Settlement System (SRBM), the Moroccan Interbank Remote Clearing System (SIMT), the securities settlement-delivery system of Maroclear, the trading and clearing systems of the Casablanca Stock Exchange and the electronic money system of the Interbank Electronic Money Center. Those identified as systemically important and reported as such include, to date, the SRBM, the SIMT, Maroclear and the Casablanca Stock Exchange.

Bank Al-Maghrib is the authority invested with the core mission of overseeing these payment systems by virtue of article 10 of the Law No. 76-03 on the Statute of Bank Al-Maghrib. To that end, it is duly entitled to take all necessary measures to facilitate

the transfer of funds and ensure the proper functioning and safety of market infrastructures.

In order to complement its statuary missions relating to the oversight of IMFs, Bank Al-Maghrib developed a multilateral convention on market infrastructures oversight, in consultation with the GSIMT, the Interbank Money Market, Maroclear and the company managing the Casablanca Exchange Stock.

This convention, signed in January 2009 to define the terms of the oversight by Bank Al-Maghrib of these infrastructures and their managers' obligations, has transposed the principles and standards defined by BIS and IOSCO as a reference for the Bank to exercise its oversight mission of these market infrastructures.

Meanwhile, and in order to formalize the provisions of the multilateral convention on oversight, the draft law on the status of Bank Al-Maghrib provides for the establishment of a new legal framework to regulate payment systems, by expanding the Bank's powers in this area, and incorporate requirements for the systems to be resilient and be able to withstand a systemic shock. In addition, the draft provides for the requirement of a prior authorization from the Central Bank for all trading systems (payment, clearing or delivery settlement) under its supervision.

To ensure better oversight of IMFs, Bank Al-Maghrib plans to deploy, by the end of 2016, a new oversight methodology, which will ensure the development of a mechanism for the measurement and monitoring of the various risks to IMFs. This mechanism aims to adapt the monitoring of incurred risks while allowing for a better understanding of IMFs risk profiles.

This would provide a tool that can be used for the rating of IMFs in five risk areas:

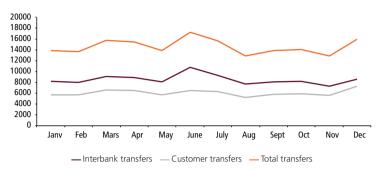
- Organization (Governance and internal control): To assess the IMF strategy and its objectives, as well as the capacity of the governing and management bodies capacity to implement them.
- Risk Management: To assess the capacity of a given IMF to manage its own risks in an integrated and exhaustive manner, including those incurred by its participants.
- Settlement: To assess the capacity of a given IMF to ensure final and irrevocable settlements and physical delivery of assets.
- Operational risk and IS: To assess the operational risk management arrangements developed by a given IMF, including the procedures and controls performed to identify and monitor risks, and the solidity of the business continuity plan and physical and information security.
- Access, communication and transparency: To assess the ability of a given IMF to ensure an equitable and open access to all participants, and to provide the relevant information to participants and to the public.

This tool will serve also in the assessment of compliance of these IMFs with the 24 BIS principles.

# A. MOROCCAN GROSS SETTELEMENT SYSTEM (SRBM)

By the end of 2015, the SRBM enabled the aggregate processing of 175 178 transfer orders, down 0.27 percent compared with the previous year. The overall value of these orders rose by 6.61 percent, from 4539 billion dirhams in 2014 to 4839 billion dirhams in 2015.

#### Change in the transfer orders settled in the SRBM in 2015



Source: BAM

Measuring the efficiency of the SRBM liquidity mechanisms is ensured through the calculation and monitoring of the three key indicators, namely the delay indicator, the intraday liquidity ratio and the cash flow ratio.

Higher queued transactions and lower amounts

Open positions are a warning indicator for the fluidity of SRBM settlements, and therefore, for the ability of banks to fulfill their intraday commitments. During 2015, the delay indicator<sup>31</sup> recorded a daily average of 30.65 percent as against 28.18 percent a year earlier. Despite its slight increase, this index shows a low rejection risk, at the end of the day of pending payment orders in the system and denotes the fluidity of the system. It should be recalled that five risk levels were identified and rated on a scale going from the lowest score "1" to the highest "5".

- First level: [0%; 21%]; score 1: (Very low)
- Second level:] 21%; 41%]; score 2: (Low)
- Third level:] 41%; 66%]; score 3: (Medium)
- Fourth level:] 66%; 81%]; score 4: (High)
- Fifth level:] 81%; 100%]. Score 5: (Very high).

Furthermore, only 31 transactions, out of a total volume of 8.5 billion dirhams, were rejected by the system at the end of the

<sup>31</sup> The delay indicator combines the two dimensions of the period during which the operation which remained open, its waiting time in the system and its amount.

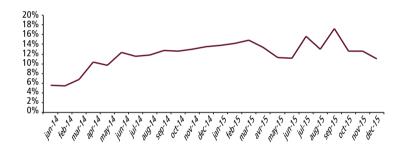
trading day due to the unavailability or insufficiency of funds of the central settlement accounts of instructing participants.

The provision of intraday credit<sup>32</sup>, intended to ensure the smooth running of the settlement process and prevent disruptions in the system, has grown in importance since the introduction of the real-time settlement.

No payment default in intraday facilities

SRBM participants' recourse to advance facilities granted by Bank Al-Maghrib in 2015 stood at 6.6 billion dirhams on a daily average, representing over 13 percent of the total transfer orders issued by SRBM participants. No repayment default of intraday advances granted to participants was reported during 2015.

# Change in intraday liquidity ratio in 2014-2015



Source: BAM

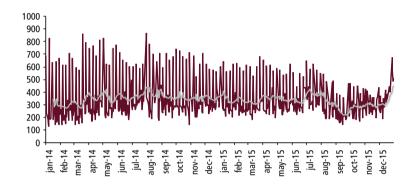
The cash-flow ratio increased following the cut in the required reserve ratio

This ratio, reflecting the efficiency of the structure of a payment system, is calculated by dividing the total payments made through SRBM to the sum of banks' required reserves and intraday credit. A system with a low cash-flow ratio can be inefficient but can be also safer if banks hold a relatively high level of reserves to cushion liquidity shocks. The cash-flow ratio stood on daily average at 331 percent during 2015 as against

<sup>32</sup> The intraday liquidity ratio is the ratio between the overall intraday liquidity and the total of operations carried out at the SRBM. It measures the use degree of intraday liquidity within the SRBM and may also reflect the level of difficulties registered at the money market which push banks to have recourse to intraday liquidity.

350.5 percent during 2014. The significant rise in cash-flow ratio (240.1 percent in 2012) is mainly attributed to the increase in SRBM transactions as well as to the drop in the required reserve ratio from to 2 percent.

# Change in the cash-flow ratio in 2014-2015

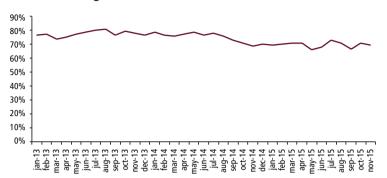


Source: BAM

Significant concentration rate of the five largest participants

In 2015, the five largest banks accounted on average for 70 percent of securities exchange operations, while the remainder is divided among the other fourteen banking institutions. It should be noted that if the participant with the largest payment obligation in a payment system defaults on payment and the securities processed in the system are highly concentrated on a small number of participants, the financial consequences could be substantial for the other participants. According to the European standards, a concentration rate of 80 percent (which is the market share of the five largest participants) is particularly alarming.

#### Change in the concentration ratio 2013-2015



The SRBM platform presented a high availability level

During 2015, only two major incidents occurred, disrupting the SRBM trading day, which brought the annual availability average to 99.58 percent. The system recorded an availability rate of 100 percent throughout eight months. The changeover operations of the SRBM technical platform from the primary to the backup website were successful and respected the initial schedule.

# **B. MOROCCAN INTERBANK REMOTE CLEARING SYSTEM (SIMT)**

The activity of the Moroccan Remote Clearing System (GSIMT) expanded further in 2015, by 7 percent in number and 9.2 percent in value, with respectively 65.7 million operations instead of 61.3 million a year earlier, and 1630 billion dirhams of accumulated cleared amounts instead of 1615 billion in 2014.

### Annual growth of interbank exchanges of means of payment 2011-2015

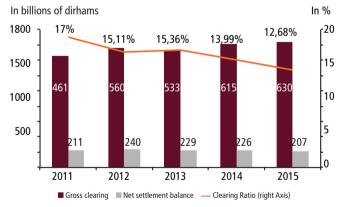


Source: GSIMT

#### A high clearing level

Over the year 2015, the clearing ratio<sup>33</sup> stood at a low level of 12.68 percent, reflecting a high clearing effect of the system and a decrease by around 87 percent in liquidity requirement to settle commitments of participants. The downward trend in this ratio since 2011 reflects a significant drop in the funds allocated to the unwinding of settlement balances reconciled to the gross exchanged amounts.

# Annual change in the clearing ratio 2011-2015



Source: GSIMT

<sup>33</sup> The clearing ratio allows for the assessment of the effectiveness and performance of the system in terms of clearing the exchanged gross amounts at its level. It measures the share of net settlements of the value of gross transactions. A low clearing ratio indicates that the system exerts a substantial clearing effect. A clearing ratio equal to or below 10% entails special vigilance.

#### Non-mobilization of the Permanent Guarantee Fund

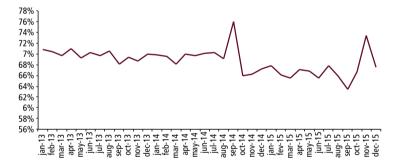
The Permanent Guarantee Fund (PGF) put into place by the GSIMT to control financial risks in the system aims to ensure an average coverage of 85 percent of the end-of-day trading balance.

In 2015, the PGF amount stood at 518.8 million dirhams and ensured coverage of 93 percent, on average, of the end-ofday clearing balances in the above-mentioned period. In 2015, there was no mobilization of PGF, despite the significant debtor positions registered this year (the maximum debtor position of the year reached 1600 million dirhams).

#### Important concentration ratio of the five largest participants

In 2015, the five largest banks concentrated an average of 67 percent of exchanges, lower than the critical threshold of 80 percent. The remaining third was shared across the remaining 14 banking institutions.

#### The share of the five largest banks in GSIMT exchanges



Source: BAM

# **Business continuity and** information security

The GSIMT business continuity system was deployed in 2014 with the implementation of an IT Back-up Plan (IBP). Its strategic steering is ensured by the Crisis Committee, chaired by the Director General and composed of the Chairman of the Board and Vice-Presidents. The operational management of this system is ensured by the IT department and the IBP correspondent. The business continuity plan is tested twice a year based on crisis simulation scenarios, in order to introduce staff members to the management of situations of vulnerability and to validate the proper functioning of the plan.

In 2015, the GSIMT expanded its risk coverage scope to other business aspects, by integrating the human and logistical components so as to safeguard the operational capability of the SIMT.

In 2015, the SIMT availability rate, which measures the system's performance, posted overall a high level of nearly 99.99 percent.

### C. SECURITIES SETTLEMENT-DELIVERY SYSTEM (MAROCLEAR)

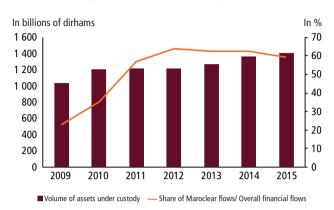
As the sole central securities depository in Morocco, Maroclear stands at the heart of the securities industry as a post-market infrastructure, particularly by assuming key functions, such as ensuring custody of securities registered in accounts and managing the settlement/delivery system that allows the unwinding of all types of operations on securities accepted by the central Depository.

The volumes of assets34 under custody and the important flows cause high exposure of the Moroccan financial system

Assets under custody as well as the flows processed by Maroclear represent an important element in the assessment of the systemic risk. In 2015, assets stood at 1401.4 billion dirhams. Compared with 2014, the outstanding amount of Treasury bonds and UCITS in 2015 rose respectively by 44.1 and 30.2 billion dirhams. The consolidated value of orders received from the Maroclear branches and settled in the MGSS in 2015 stood at 7589 billion dirhams, down 26.18 percent compared with 2014. This decline was mainly driven by a drop in the volume of advances granted by Bank Al-Maghrib, as part of its monetary policy operations, processed at the repo branch.

<sup>34</sup> Assets under custody as well as the flows processed by Maroclear represent an important element in the assessment of systemic risk.

#### Change in Maroclear activity indicators



Source: Maroclear, Ministry of Economy and Finance, BAM, AMMC calculations

Completion of the standardization project to further secure the «securities» branches

With the completion of the standardization project, the TCS Bancs V6 business solution became operational and contributed to the deployment of ISO 15022 messaging standard in most of the trading processes, particularly the Repo's, OTC and OST branches, which further strengthened the security of their exchanges. In anticipation of the substantial increase in volume of message exchanges between Maroclear and its affiliates, Maroclear set up a Gateway solution for the management of data exchanges. In addition, Maroclear initiated in 2015 a process for the deployment of an exchange monitoring solution. This modular solution to be gradually introduced will eventually improve the quality of the operations and assistance services provided to members.

Incident control in the unwinding platform

Since the deployment of the new platform in 2010, the number of recorded incidents remained broadly under control. The system's availability rate stood at 100 percent over the year 2015. As to the Telecom network load, it reached an average monthly level of 8 percent over the same year.

#### Continued improvement of the information security management system

As part of the continuous improvement of the Information Security Management System, an external monitoring audit, in accordance with the ISO certification cycle, was conducted by the certification body Bureau Veritas. As a result of this audit, the system was ISO 27001 certified for the second consecutive vear.

#### Security system upgrading

In the face of multiple security threats to the IT system, Maroclear started, as a first step, the reconstruction of its network architecture and the upgrading of its safety arrangements. During 2015, various actions were taken. These include:

- upgrading all network equipment by implementing the recommendations of the 2014 and 2015 audits action plans;
- renewing the current robust authentication solution for external users' access;
- renewing internal firewalls, which will be completed in the first half of 2016.

## Strengthening the governance system

Over the year 2015, Maroclear initiated actions to reinforce its internal control arrangements. A review of several sets of procedures was conducted to verify the existence of a first-level control points and assess the effectiveness of these controls in light of their associated risks and propose the required improvements. Second-level controls were deployed based on the maturity of the first-level control arrangements and the risk profile of businesses to be controlled.

## Strengthening Maroclear's legal basis

FMIs' participants and their customers may face unexpected, uncertain or unmanageable credit or liquidity risks, which may also generate or amplify systemic risks if the legal framework for activities and operations is inadequate, vague or unclear.

During the year 2015, Maroclear conducted a census of all laws, standards and regulations governing the depositary. These laws, standards and regulations were analyzed with a view to monitoring compliance in their implementation and identifying non-compliance risks.

The new IMFs principles published by BIS indicate that the investments of an IMF should consist of instruments of minimal credit, market and liquidity risks.

#### Investment risk under control

In 2015, the Treasury portfolio was invested according to three investment horizons, namely: short-term, medium-term and long-term. The investments involved only the various types of secured instruments: Money market funds and short-term mutual funds, time deposits, Treasury bills and bonds generating an annual gain of 7.6 million of dirhams.

#### D. TRADING AND CLEARING SYSTEMS OF THE CASABLANCA STOCK EXCHANGE<sup>35</sup>

Market infrastructures controlled by the managing company generally carry a low operational risk

Organizational, material and technical means developed by the managing company of the Casablanca Stock Exchange to ensure the proper functioning of the stock exchange market enable secure exchanges.

The trading system and the overall IT systems of the Casablanca Stock Exchange represent some of the most critical aspects for the proper functioning of the market. Some indicators were developed to monitor the capacities and performances of the IT system in real time.

Over the last four years, the trading system of the Casablanca Stock Exchange posted an availability rate of 100 percent and a higher capacity than the volume processed.

After an incident-free 2014, the year 2015 experienced some incidents that disrupted the regular functioning of the market. The incident that took place on 21 September 2015 led to a delay in opening of the trading session.

<sup>35</sup> This paragraph deals with the aspects related to operational risks, as the other risks have already been discussed in paragraph IV-1-B on the stock market.

#### A constantly improving business continuity plan

The IT security management system at the Casablanca Stock Exchange was certified compliant with the ISO 27001 standard. As part of this system, a Business Continuity Plan (BCP) was set up and tested in 2013. This BCP was updated in 2014.

### Maintenance and development risks remain generally under control

The managing company was able to renew the maintenance contracts of the existing "Sungard" and "Euronext" tools until September 2016. This renewal is part of the overall project of acquiring a new trading platform. In this respect, agreements were concluded in June 2014 with the London Stock Exchange for the deployment of a new platform in addition to strategic support. The process was initiated with the service provider and is expected to be fully operational by July 2016.

## Development of an internal control mechanism in 2015

In 2015, the Casablanca Stock Exchange formalized its internal control mechanism by conducting permanent and periodic controls, and ensuring follow-up of corrective actions.

A risk mapping has been established and should be updated annually. The internal audit and internal control functions have been separated while strengthening the workforce by recruiting a head of internal audit.

## Box N°11: Assessment of the FSAP mission

The Financial Sector Assessment Program (FSAP) mission, conducted in Morocco in 2015, also covered the assessment of two existing financial market infrastructures and the assessment of the responsibility of regulatory authorities in terms of infrastructure monitoring. Finally, this mission also made recommendations on the operational project of the Central Counterparty Clearing House.

According to the FSAP mission, the adoption of the draft law on the statutes of Bank Al-Maghrib, establishing a new legal framework for the IMFs, will allow the Bank to further strengthen its responsibilities in the oversight of these IMFs.

As to the assessment of MGSS's compliance with the Principles for Financial Market infrastructures (PIMF), the FSAP mission concluded that MGSS was broadly in line with international standards.

Furthermore, the assessment of Maroclear's compliance with the PIMFs indicated that the achievement of its full compliance with the standards would require immediate implementation of the recommendations relating to the implementation of an integrated management framework of the financial risks inherent to the activity of the central depositary and of manager of the securities settlement-delivery system, by developing a remote backup site- with a risk profile that is different from the main site.

As to CCP, the FSAP mission noted that its implementation should be in line with the principles of CPMI/ IOSCO and the best practices. General guidelines focusing on the control of the inherent risks of such business have been formulated, mainly in relation with guarantee schemes to be implemented in the event of default by a clearing member, given the systemic nature of CCP as a market infrastructure which concentrates all risks (credit, liquidity, operational, etc.)

#### **E. CYBER-RESILIENCE**

#### Upsurge in cyber-attacks internationally

DDos attacks (Disturbed Denial of Service) aimed at disrupting the IT systems of financial institutions have become commonplace worldwide. The damage to financial institutions reputation which might arise from these attacks may have significant consequences in the event of sustainable unavailability and undermine customer confidence. Simultaneous large-scale attacks targeting several institutions could even represent a systemic risk if financial actors and other counterparties suspend their operations with these institutions.

There is also another type of attack that could have a more serious impact. The APTs-"Advanced Persistent Threats"- where sophisticated techniques of intrusion combined with denial of access rights to IT systems might in fact allow hackers to directly access (for a long time) the most sensitive applications and databases of financial institutions, particularly those related to bookkeeping and retail payment flows. Such attack, if successful, could result in a substantial damage to the financial situation and reputation of the targeted institution, and may even pose a risk to its business continuity. The accuracy of data related to transactions and to customer positions could be affected, which would impact a large number of economic agents dealing with the bank and its customers, especially institutions.

The table below on risk mapping, on the international scale, classifies cyber-hackers according to their potential impact.

				Incidence			
Cyber-hackers	Financial theft or fraud	Theft of intel- lectual property related to strate- gic plans	Disturbance of operations	Destruction of primary infrastructure	Reputation damage	Threats to life and security	Regulatory impact
Organized							
Cyber-militants							
High level op- ponents							
Internal agents							
Third parties							
Gifted lone hackers							

■Very high ■ high ■ Moderate ■ Low

Note: These ratings are based on an assessment of risks to financial institutions conducted by Deloitte Source: Deloitte Center for Financial Services (2014)

#### The need for reinforcing cyber-resilience of Market infrastructures

Given the cross-border dimension and highly evolving nature of cyber risk, cyber security is considered a public issue of global concern; hence, many studies are conducted on the subject at the international level. The various initiatives can be listed as follows:

- The working group of CPMI/ IOSCO has recently published its report on market infrastructures cyber-resilience;
- In the EU, the «Network and Information Security» (NIS) directive provides for the obligation imposed on companies and digital platforms to report security incidents. Coordination is entrusted to the European Network and Information Security Agency.

Morocco is not immune from these threats, but for the moment, national IMFs have not reported any major incident related to cyber-attacks. In 2016, Bank Al-Maghrib's priority lies in developing the minimum standards to be observed by the managers of financial markets infrastructures to further

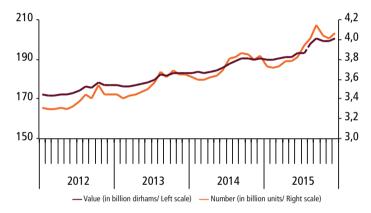
strengthen their cyber-resilience capacities. As a first step, minimal standards will be defined for IMFs to observe them in conducting periodic tests of IT systems intrusion.

## IV.3 SUPPLY OF CURRENCY IN CIRCULATION

Supply of currency to the economy by providing operational stocks based on a predefined geographical breakdown

Demand for cash continued to trend upward, as evidenced by the increase in currency in circulation from one year to the other. Exceeding the threshold of 200 billion dirhams, for the first time, currency in circulation stood at 206 billion dirhams by the end of 2015, up 7.4 percent from 2014. This increase, which is the most significant after the peak of 9 percent in 2011, mainly reflects the impact of the good crop year.

## Change in banknotes and coins in circulation in number and value

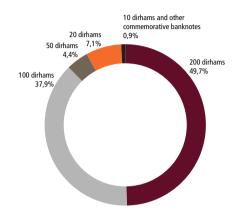


Source: RAM

Banknotes represent 99 percent of currency in circulation. This volume increased by 7.4 percent to 203 billion dirhams, or the equivalent of 1.4 billion banknotes.

The breakdown of banknotes in circulation, in number, still shows the predominance of 200 dirham- denomination notes, which rose by 0.4 point, to account for 49.7 percent by the end of 2015. The share of the 100 and 50 dirhams denominations stabilized respectively at 37.9 percent and 4.4 percent. The share of 20 dirham denomination decreased from 7.4 to 7.1 percent.

#### Breakdown of banknotes in circulation in 2015



Source: BAM

The volume of banknotes supplied to the economy reached 2.3 billion in 2015, up 9 percent from 2014.

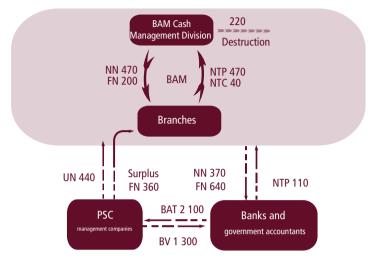
Bank Al-Maghrib provided 44 percent of the supply through its branches, with an outflow of 1014 billion notes, up 0.2 percent from 2014. These outflows consisted of 37 percent of new banknotes, 27 percent of fit notes from automatic processing by BAM and 36 percent of fit notes by private sorting centers (PSCs) and deposited at BAM as cash surplus of commercial banks.

Thanks to the delegation by BAM of the qualitative processing of banknotes in circulation, the rest of the supply valued at 1294 billion denominations was ensured by the 12 PSCs, the contribution of which steadily increased from 50 percent in 2011 to 72 percent in 2015, including fit notes surplus deposited with BAM.

Setting up a business continuity plan for cash activity based on the constitution of strategic stocks

In fact, this activity enabled significant optimization of the qualitative logistics of the processing of banknotes. It has significantly expanded since its launch 10 years ago. The year 2015 was marked by the merger of the BCC and G4S groups. Today, only two management companies of PSCs are operating throughout the Kingdom: BCC, with 5 PSCs, and Brink's which opened its seventh center in Temara in 2015.

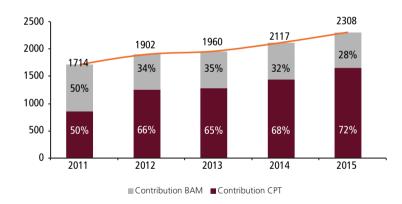




NN: New notes FN: Fit notes UF: Unfit notes NTP: Notes to process NTC: Notes to cancel

Source: BAM

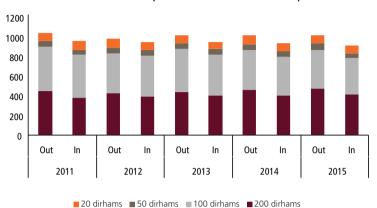
# Contribution of BAM and PSCs in overall outflows in 2011-2015 (in million denominations)



Source: BAM

It should also be noted that the development of the PSC's role in the cash cycle has contributed to the stabilization of the movements of banknotes in BAM branches. Since then, cash outflows and banknote deposits stood at an average of about 1 billion notes over the last 5 years.

Change in banknote outflows and deposits at BAM branches in 2011-2015 (in million denominations)



Source: BAM

On another level, the risk of counterfeiting is still limited in our country. The counterfeiting rate decreased by 0.5 points compared with 2014, to stand at 7.6 false banknotes per million banknotes in circulation. This rate remains low compared to counterfeiting rates internationally. In contrast, the value of counterfeit notes detected in 2015 remained limited to 1.3 million dirhams, with a slight increase of 1.2 percent.

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# LISTE DES ABRÉVIATIONS

ACAPS	AUTORITÉ DE CONTRÔLE DES ASSURANCES ET DE LA PRÉVOYANCE SOCIALE (SUPERVISORY AUTHORITY OF INSURANCE AND SOCIAL WELFARE)
АММС	AUTORITÉ MAROCAINE DU MARCHÉ DES CAPITAUX (MOROCCAN CAPITAL MARKET AUTHORITY)
BAM	BANK AL-MAGHRIB
BCEAO	CENTRAL BANK OF WEST AFRICAN STATES
ВСР	BUSINESS CONTINUITY PLAN
BEAC	CENTRAL BANK OF AFRICAN STATES
BIS	BANK FOR INTERNATIONAL SETTLEMENTS
CCIF	COLLECTIVE CAPITAL INVESTMENT FUNDS
ССР	CENTRAL COUNTERPARTY CLEARING HOUSE
CDG	Caisse de dépôt et de gestion (deposit and management fund)
CIFS	COLLECTIVE INVESTMENT FUNDS
CMI	CENTRE MONÉTIQUE INTERBANCAIRE (INTERBANK ELECTRONIC MONEY CENTER)
CPMI	COMMITTEE ON PAYMENTS AND MARKET INFRASTRUCTURES
CPSS	COMMITTEE ON PAYMENT AND SETTLEMENT SYSTEMS
ECB	EUROPEAN CENTRAL BANK
FDI	FOREIGN DIRECT INVESTMENT
IMF	FINANCIAL MARKET INFRASTRUCTURE
GCC	GULF COOPERATION COUNCIL
GDP	GROSS DOMESTIC PRODUCT
GOI	GROSS OPERATING INCOME
нні	HERFINDAHL-HIRSCHMANN INDEX
IAM	ITISSALAT AL MAGHRIB
ILTB	INTERMEDIATE AND LONG-TERM BONDS
IMF	INTERNATIONAL MONETARY FUND
IOSCO	INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS
IS	CORPORATE TAX
IT	INCOME TAX
LCR	LIQUIDITY COVERAGE RATIO
LE	LARGE ENTREPRISES
MADEX	MOROCCAN MOST ACTIVE SHARES INDEX
MASI	MOROCCAN ALL SHARES INDEX
MENA	MIDDLE EAST AND NORTH AFRICA
NDS	NEGOCIABLE DEBT SECURITIES
PER	PRICE EARNING RATIO
SCR	SOCIÉTÉ CENTRALE DE RÉASSURANCE (CENTRAL REINSURANCE COMPANY)
	SOCIETE CENTRALE DE REASSONANCE (CENTRAL REINSONANCE CONFANT)

SIMT	Système interbancaire marocain de télécompensation (moroccan interbank remote clea- ring system)
SMES	SMALL AND MEDIUM-SIZED ENTERPRISES
SMF	SECURITISATION MUTUAL FUNDS
SRBM	SYSTÈME DES RÈGLEMENTS BRUTS DU MAROC (MOROCCAN GROSS SETTLEMENT SYSTEM)
ТВ	TREASURY BONDS
TD	TIME DEPOSITS
UCITS	UNDERTAKINGS FOR COLLECTIVE INVESTMENT IN TRANSFERABLE SECURITIES (MUTUAL FUNDS)
VAT	VALUE ADDED TAX
VCIF	VENTURE CAPITAL INVESTMENT FUNDS
VSES	VERY SMALL ENTERPRISES
VSMES	VERY SMALL, SMALL AND MEDIUM SIZED ENTERPRISES
WAR	WEIGHTED AVERAGE RATE

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