



## MONETARY POLICY REPORT

Document prepared for  
the Bank Board  
27 March 2007

بنك المغرب

## LIST OF ABBREVIATIONS AND SYMBOLS USED

BAM	:	Bank Al-Maghrib
CLI	:	Cost of Living Index
GDP	:	Gross Domestic Product
HCP	:	High Commission for Planning
HP	:	Hodrick-Prescott
IMF	:	International Monetary Fund
MASI	:	Morocco All Shares Index
UCITS	:	Undertaking for Collective Investment in Transferable Securities
VAT	:	Value Added Tax

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## OVERVIEW

In the fourth quarter of 2006, annual inflation stood at 3.6%, which represents a rate near to that of the previous quarter. In February 2007, on a year-to-year basis, it reached 2.7%, against 1.9% the previous year. On the other hand, the underlying inflation index, which better reflects the fundamental trend in prices, registered a slowdown, rising by 2% instead of 2.9% in February 2006.

Concerning economic activity, the available data indicate that the year 2007 will probably see a slowdown in the pace of increase of domestic demand, essentially attributable to the foreseeable deceleration in resident households' consumption. The dynamism of investment, on the other hand, is expected to continue, in conjunction with the completion of major infrastructure projects. According to the estimates regarding the output gap, which in the previous report showed a positive gap between actual and potential output in 2006, production in the first quarter of 2007 would be below its potential level. This development is confirmed by the results of the survey carried out by Bank Al-Maghrib which reveal a slight drop in the rate of output capacity utilization in the industrial sector.

For the year as a whole, with the assumption of a cereal harvest totalling 53 million quintals, the added value of the agricultural sector is projected to drop by nearly 12%, while activities in the secondary and services' sectors are expected to see an overall increase of 5.5%. Altogether, GDP should grow by approximately 3%, compared to 8.1% in 2006.

At the foreign level, the outlook remains favourable as to a continuous decline in import prices, except for oil. After a pick-up in the previous year, particularly in connection with the rise in oil prices, inflation slowed down in the main industrialized countries in early 2007. Nevertheless, the forecasts indicate a risk of oil prices rising over the forthcoming months, due to the weak refining capacities and the drop in production by OPEC. In addition, the risk of an accelerating inflation, in particular in our main partners, persists, as witnessed by the increase by 25 basis points of the ECB key rate in March 2007.

With regard to monetary and financial conditions, it should be noted that the Bank Board had raised in December 2006 the rate applied to liquidity withdrawals on calls for tenders by 25 basis points. In addition to the recent decline in the growth of monetary and credit aggregates, the available data seem to indicate a slight tightening during the first two months of 2007, in particular with a rise in short-term interest rates and a stability of medium and long-term interest rates. Further, the continuing strong appreciation of assets prices should prompt caution.

Altogether, the analysis of recent developments shows that, on the whole, pressures on demand, and therefore on prices, have slightly eased off.

For the whole year 2007, as a number of risks weighing on prices have not materialized, the forecasts show an easing of inflationary pressures. After a rate of 3.3% in 2006, which included the one-off impact of the increase in some VAT rates, the central inflation forecast would stand at around 2%, in a range of 1.5% to 3.1%, taking into account the balance of risks.

These uncertainties are related to the international environment, in particular to oil prices, the evolution of activity and inflation in our major partners and, at the domestic level, to the important volume of economic agents' cash holdings, the drop in agricultural supply and the possible revaluation of wages in a pre-election context. In the event of the materialization of these risks, there is a strong possibility for inflation to go beyond the central forecast.

## 1. OVERALL DEMAND TREND<sup>(1)</sup>

The year 2006 was characterized by the strengthening of domestic demand, in terms of both consumption and investment. Indeed, thanks to the rise in rural household income, after a good harvest year, as well as to the higher remittances of Moroccans living abroad, overall final consumption was up by 10.3% in current prices, clearly above the 3.7% registered in 2005. Moreover, in a context of attractive interest rates, the expansion of consumer credit also contributed to increased households' purchases. As to the consumption of non-market services provided by the general government, it registered in 2006 a rise of 3%, compared to 6.9% in 2005 and 9.4% in 2004. Conversely, public investment continued its strong rise in 2006, thanks to the consolidation of capital goods expenditure and the acceleration of real estate and public works investments. Under such circumstances, budget deficit was contained at about 1.7% of GDP, against 2.8% in 2005.

Growth prospects for early 2007 are expected to be marked by unchanging upward trends in domestic demand, in spite of a slowdown in resident households' consumption due to a possible dip in rural households' income. In addition, the demand for investment in 2007 should profit from the continuation of major infrastructure projects as well as from the actions lying within the framework of the INDH (National Initiative for Human Development) and the highway and low-cost housing programmes.

### 1.1 Output

Economic growth picked up in the fourth quarter of 2006, with a 7.4% rise in GDP, on a year-to-year basis, after the increase of 6.5% in the previous quarter. Agricultural GDP grew by 30.3% in the fourth quarter of 2006, as the rebound in output affected all crops, particularly cereals and early fruits and vegetables intended for export.

The non-agricultural GDP improved as well, with growth rising from 3.2% in the third quarter of 2006 to 4.1% in the fourth quarter. This acceleration was registered in all branches of activity, with relatively high growth rates in building and public works (6.3%), trade (6.5%) and transport and telecommunications (5.0%).

Altogether, GDP growth for the whole year 2006 reached 8.1%. The agricultural sector contributed 4.2 points, against 1 point for trade activities and 0.6 point for the processing industries. Although its weight in the structure of overall GDP has been moving downwards over the past 20 years, in favour of the secondary and tertiary sectors (Chart 1.1), the agricultural sector remains a decisive factor for Morocco's economic strong growth, considering its impact on households' incomes and in view of the extent of its output fluctuations.

Given the rainfall deficit registered as early as the beginning of the agricultural season 2006/2007, our estimates show that the agricultural sector output for the year 2007 would see a downturn that would certainly have a negative impact on the output of the other sectors. In fact, the added value of the agricultural sector during the first quarter of 2007 is expected to fall by 10% to 12%, whereas non-agricultural activities would rise by 3.8%.

**Table 1.1 Evolution of quarterly GDP in volume per major branch of activity (base 100=1980)**

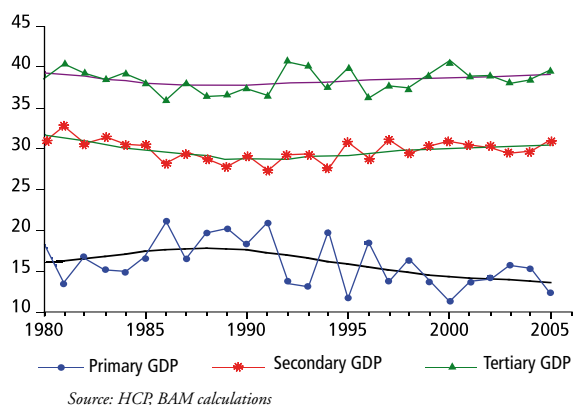
	2005	2006				2007
		Q1	Q2	Q3	Q4	Q1*
<b>Agriculture, forestry and fishing</b>	17.7	30.3	32.2	29.9	30.3	-10.0
<b>Non-agricultural GDP</b>	5.2	3.4	4.4	3.2	4.1	3.8
Mining industry	5.2	-2.9	0.2	0.3	9.1	1.5
Energy	18.3	-0.1	1.9	-1.6	-20.0	0.5
Processing industries	2.6	3.9	5.1	2.9	2.7	3.4
Building and public works	5.9	7.7	6.0	6.6	6.3	7.0
Trade	2.2	8.8	8.9	6.7	6.5	7.5
Transport and communication	7.1	6.2	5.6	6.2	5.0	6.5
Other market services	3.0	3.4	3.5	3.1	4.1	3.0
General government	5.1	-1.5	1.2	-0.3	3.8	0.5
Import duties and taxes	8.5	3.6	5.0	4.9	4.0	5.0
<b>Gross Domestic Product</b>	<b>1.7</b>	<b>6.7</b>	<b>7.9</b>	<b>6.5</b>	<b>7.4</b>	<b>4.0</b>

Source: HCP, BAM calculations

(\*) BAM forecasts

<sup>1</sup> The annual data relating to the national aggregates are presented according to the new national accounting system, base 1998.

Chart 1.1 GDP evolution by sector (in %)



Building and public works sector would continue to grow at a steady pace (7%), due to the important public and private investments. Trade, transport and telecommunication activities would follow their upward trend, with growth rates near to 7.5% and 6.5%, respectively, in the first quarter of 2007. A slight slowdown is expected to occur in the processing industries sector, which would grow by 3.4% in the first quarter of 2007, against 3.9% in the previous quarter.

For the year 2007 as a whole, with the assumption of a cereal harvest totalling 53 million quintals, the added value of the agricultural sector, according to the HCP estimates, is expected to drop by 12%, while the secondary and services sectors would see an overall increase of 5.5%. Altogether, GDP is expected to rise by about 3%, instead of 8.1% in 2006.

## 1.2 Consumption

In 2006, gross national disposable income grew by 11.5% compared to 5.6% in 2005, some 70% of which was assigned to final consumption expenditure. The latter increased by 10.3% in current prices, against 3.7% in 2005. Household final consumption registered a rise of 12.8%, against 2.7% in 2005. In constant prices, it would have grown by 9.4%, instead of 1.1% in 2005 and 5.3% in 2004. Thus, household consumption would have contributed 65% to GDP growth, instead of

only 25% in 2005. Such fluctuations reflect in part the close correlation between agricultural output, on one hand, and household consumption, on the other hand, account taken of self-consumption.

With regard to the consumption of services provided by the general government, it would have registered a rise of 2.3% in real terms, similar to the rate attained in the previous year but clearly below that reported in 2004.

In 2007, national final consumption is expected to increase by about 4.3% in current prices, against 10.3% in 2006. This slowdown is attributable to a moderate increase in resident household consumption, which would fall to 3% against 12.8% in 2006. With respect to general government consumption, it would grow by more than 8.5% instead of 3% in 2006, due to the rise in the operating expenses.

## 1.3 Investment

Investment expenditure has increased at a steady pace with a growth rate of approximately 11% since 2004, with a comparable level being expected for 2007. This rapid expansion is largely attributable to the implementation of large-scale projects, especially in the sectors of housing, tourism and industry, as well as to the actions undertaken by the state as regards the business environment improvement. The dynamism of investment is also due to the renewed confidence of both national and foreign market participants in the national economy, thanks to the reforms currently underway.

In fact, after a rise of 10.5% in 2006, gross fixed capital formation is expected to rise by nearly 11% in 2007. In real terms, it is estimated to have grown by 7.5% in 2006 and contributed to economic growth with about 2 percentage points, which represents a practically constant percentage since 2004. Investment rate, considering changes in stocks, is expected to reach 29.9% of GDP in 2007, against 29.4% in 2006. Finally, the public sector is expected to contribute considerably to investment with an overall amount of 91 billion dirhams in 2007, up by 10.4% compared to 2006. The scheduled

investments centre on basic infrastructure, in particular water, electricity, health, roads, dams, ports, transport, telecommunications, education and vocational training.

The initiation of large infrastructure projects and low-cost housing programmes have also boosted the building and public works' sector and improved competitiveness. Moreover, it is worth mentioning that the continued improvement of the business environment has contributed to the strengthening of private investment.

Foreign direct investments reached more than 27 billion dirhams in 2006. Previously stimulated by privatization and portfolio investments, this year they are further linked to operations concerning the extension of output capacities and the renewal of facilities. The new investments mainly concerned the electrical and electronic industry, textile and clothing, cement plants, chemical and pharmaceutical industry, food industry, telecommunications and metallurgical industry. Large-scale projects launched in 2007 particularly concern the completion of the Tanger-Med port complex, the national highway programme and the development of the Bouregreg Valley as well as of other tourist sites, especially within the framework of the Plan Azur.

Altogether, considering changes in stocks, investment expenditures are estimated at about 165 billion dirhams. They were widely covered by national savings, estimated at 192 billions, thereby creating a financing capacity with regard to foreign countries.

## 1.4 Foreign trade

The Moroccan economy is increasingly open to the outside world. The rate of economic openness, measured by the ratio of foreign trade to GDP, is estimated at 54.4% in 2006, which represents a growth of 12% over the past five years.

In 2006, exports achieved a good performance, with a growth rate of 11.2% after the 12.9% observed in 2005. With regard to imports, the net slowdown in the increase of the energy bill in 2006 (5.1% against 64.7% in 2005) made it possible to significantly reduce their rate of expansion, which fell back to 11% against 16.8% in 2005.

Taking account of tourism receipts, corresponding to the sale of services to non residents, overall exports of goods and services, in terms of national accounts, increased by 14.7% in 2006, following the 13.3% rise in 2005. In constant prices, they rose by 10.8% in 2006, contributing 3.4% to the growth of GDP.

On the other hand, imports of goods and services rose by 10.5% in current prices and by 6.1% in constant prices, showing a deficit in resources down by 11% in one year, equivalent to nearly 5% of GDP against 6% in 2005. This improvement, which is more indicative of the surge in exports, especially of services, than of the considerable increase of imports, shows that the strong rise in consumption registered in 2006 mainly concerned non-tradable goods.

Considering the current account of the balance of payments, given in particular the continued expansion of remittances by Moroccans living abroad, it registered in 2006 a surplus of 21 billion dirhams, which represents 3.7% of GDP.

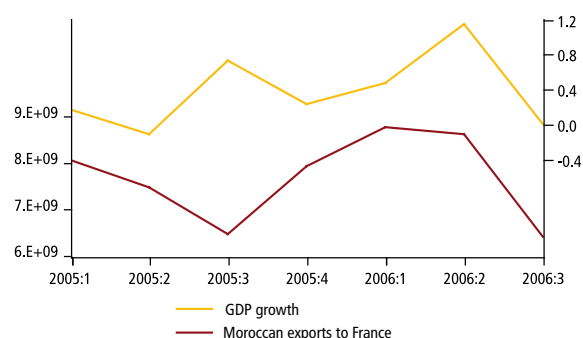
In January 2007, trade progressed at a steady pace. Analysis of foreign trade data shows that Moroccan exports heavily depend on the economic situation prevailing in the Euro area which continues to absorb more than 70% of Morocco's foreign sales. In fact, the year-to-year 7.5% rise in exports in January 2007 may be attributed to the economic expansion of partner countries, in particular France (Chart 1.2) and Spain whose respective shares in Morocco's exports amounted to 29.2% and 22.5%. Exports also benefited from other positive factors, notably the improvement in price competitiveness.



Good performance levels were also registered with regard to the sale of clothing items and phosphates and its derivatives, which respectively contributed 28% and 14% to the overall rise in exports.

Imports, in turn, grew by 13.1%, on a year-to-year basis, mainly reflecting the expansion of purchases linked to the development of productive activities and to the purchase of consumer goods.

**Chart 1.2 Moroccan exports and foreign demand  
(quarterly data)**



Source: HCP; BAM calculations

### **Box 1.1: Main contributions of the new national accounting system**

With the adoption of this new system, it has become possible to:

- widen the national output base used for the calculation of the GDP;
- to carry out a more accurate analysis of the performance of the national economy, as it has become possible to develop satellite accounts for the individual analysis of the main activities;
- to obtain more meaningful data on the sectors' real activity, thanks to the elimination of the effect of taxation in the assessment of output (the latter is currently evaluated at "ex-works price" and will be henceforth evaluated at the "base price", which is exclusive of taxes, except for the trade tax and the non-deductible VAT).

The adoption of this new accounting framework should therefore considerably improve the conceptual relevance of the «new» calculated aggregates.

## 2. PRESSURES ON OUTPUT CAPACITY

The previous report's estimates had shown that the output gap, measuring the difference between actual and potential output, was positive in 2006, which is likely to fuel inflationary pressures. Nevertheless, some recent developments, except those regarding the job market, tend to reveal mitigated pressures on output capacity.

### 2.1 Pressures on capacity

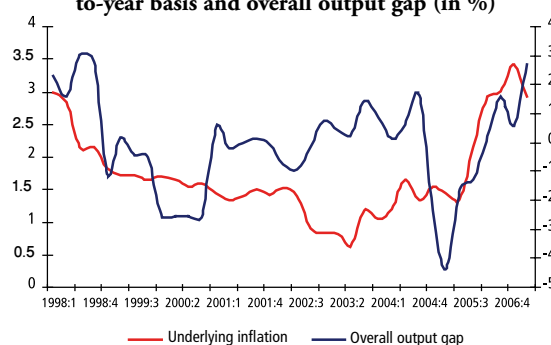
According to Bank Al-Maghrib's estimates, growth in the year 2006 remained above the economy's potential growth, as the overall output gap remained positive.

However, the outlook for the first quarter of 2007 shows that output will be slightly below its potential level. This downward trend is confirmed by the findings of Bank Al-Maghrib monthly survey on the economic situation, which show a capacity utilization rate of about 71% in the first two months of 2007, slightly below the level recorded in the fourth quarter of 2006. For the year as a whole, economic growth is expected to decline to 3% instead of 8.1% in 2006, the output gap thereby becoming negative. However, non-agricultural growth is expected to keep on a steady pace during the year 2007, at around 5.5% against 5.2% in 2006.

The development of the apparent labour productivity, here measured as the ratio of non-agricultural GDP to urban employment, also sheds light on the pressures being exerted on output capacity. As from 2004, and more particularly in 2005, there has been a steady increase in the apparent labour productivity of the non-agricultural sector, which yet seemed to decline in early 2006 under the influence of the rapid expansion of employment. However, apparent productivity resumed its upward trend starting from the second half of 2006, under the joint effect of the continued growth of non-agricultural GDP and the fall in the rate of occupied persons.

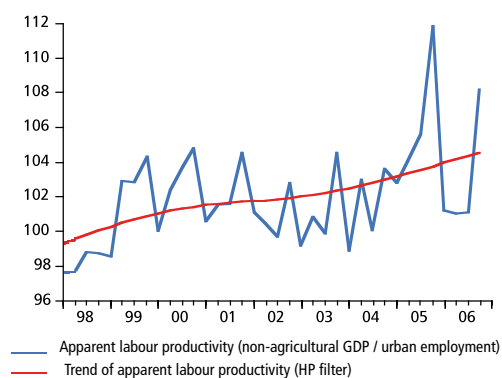
Beyond these cyclical fluctuations, it seems that labour productivity is radically improving. The structural reforms undertaken for several years now (trade opening, privatization, improved

Chart 2.1 Underlying inflation on a year-to-year basis and overall output gap (in %)



Source: HCP and BAM estimates

Chart 2.2 Apparent labour productivity (base 100 = 2000)



Source: HCP and BAM estimates

governance and business climate) as well as the increased public and private investments may explain this positive trend.

By strengthening corporate supply and lowering production unit costs, output gains contribute to mitigating pressures on capacities and moderating tensions on prices.

## 2.2 Pressures on the labour market

At the end of 2006, the situation of the labour market in Morocco was marked by a net improvement in urban areas (Table 2.1). In fact, annual net job creation amounted to 300,000 jobs, more than 90% of which in urban areas, against an average annual job creation of 200,000 jobs over the past 6 years. The main sources of employment were the building and services sectors, which respectively contributed up to 107,000 and 215,000 new jobs, followed by the industrial sector, with 22,000 jobs. On the other hand, employment in the agricultural sector fell by 49,000 jobs.

This generally favourable economic situation of the job market led to a drop of 135,000 in the number of unemployed persons compared to 2005 and a fall in the national unemployment rate from 11.1% to 9.7% from one year to another. This is an exclusively urban performance as the unemployment rate of city dwellers fell from 18.4% to 15.5% against a quasi-stagnation in rural areas (from 3.6% to 3.7%).

Chart 2.3 Urban unemployment rate, quarterly data



Table 2.1 Job market indicators

	2004	2005	2006	
			Q1	Year
<b>National occupied active population</b>	<b>3.6</b>	<b>0.9</b>	<b>3.2</b>	<b>3.1</b>
<b>Urban occupied active population</b>	<b>4.4</b>	<b>1.3</b>	<b>8.7</b>	<b>6.1</b>
National employment rate	46.9	45.9	46.0	46.3
Urban employment rate	37.4	36.6	37.7	37.8
National unemployment rate	10.8	11.1	10.9	9.7
Urban unemployment rate	18.4	18.4	17.2	15.5
National activity rate	52.6	51.5	51.7	51.3
Urban activity rate	45.8	44.9	45.5	44.7

Source: HCP

(1) Change on a year-to-year basis

### 3. IMPORT PRICES

The downward trend in consumer goods' import prices, which started in the third quarter of 2006, was evident in the fourth quarter of 2006 and early 2007. This situation, together with the drop in oil prices on the international market, is expected to have a favourable impact on Morocco's imported inflation for the whole of 2007. However, the depreciation of the dirham against the euro, even though recently mitigated, will undoubtedly weigh on import prices.

#### 3.1 World inflation

After a rapid rise during the previous year, mainly in connection with the surge in oil barrel prices, inflation in the major industrialized countries slowed in early 2007 (Table 3.1). This development is mainly attributable to the 15% decrease in oil prices compared to the same month of the previous year, as well as to the impact of tight monetary policies.

#### 3.2 Oil prices

The downward trend of oil prices since September 2006 slowed down in 2007. The average price of the Brent barrel during the last five months was about \$59, standing at \$53.6 in January 2007 before rising to \$57.7. This trend is largely explained by reduced output in OPEC countries and the closing of several American refineries, in spite of the fact that demand was relatively moderate.

In Morocco, pump prices, which are indexed to world oil prices, continued their downward trend with another reduction in January 2007 following that of October 2006.

However, the expectations of market participants worldwide, the shortage of spare refining capacity and the risks linked to the geopolitical tensions foreshadow a risk of increased world prices over the remainder of 2007, with an average annual price estimated at \$65 a barrel.

#### 3.3 Import prices

Over the past few years, import prices have witnessed a downward trend, due in particular to the moderation of prices on international markets,

**Table 3.1 Recent evolution of world inflation**

*On a year-to-year basis*

	2004	2005	2006	2007
	jan.	jan.	jan.	jan.
United States	1.9	3.0	4.0	2.1
Eurozone	1.9	1.9	2.4	1.8
France	2.0	1.6	2.0	1.2
Spain	2.3	3.1	4.2	2.4
Japan	-0.3	0.2	-0.1	0.0

*Source: IMF*

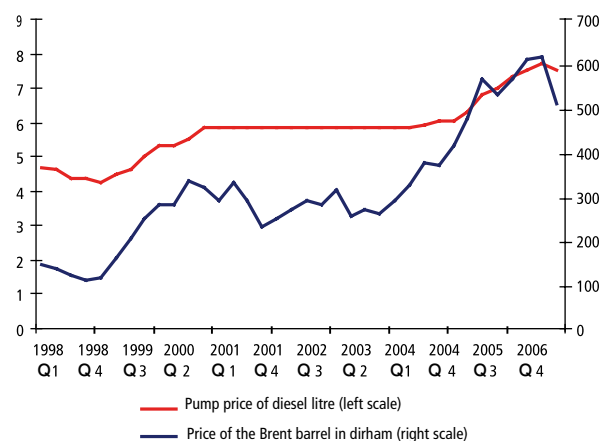
**Table 3.2 Oil products selling price in the domestic market**

*On a year-to-year basis*

	2005	2005	2006	2006	2006	2007	
	May	Aug	Feb	Sept	Oct	Jan	Feb
Premium gasoline	9.85	10.35	10.51	11.07	10.5	10.25	10.25
Regular gasoline	9.45	9.45	-	-	-	-	-
Lamp oil	6.46	6.96	7.46	-	-	-	-
Diesel oil	6.46	6.96	7.46	7.98	7.47	7.22	7.22
Diesel 350	7.7	8.2	9.34	9.93	9.38	9.13	9.13
Industrial fuel (Dh/ton)	2.581	2.881	3.307	3.374	3.174	2.874	2.874

*Source: Ministry of Energy and Mining*

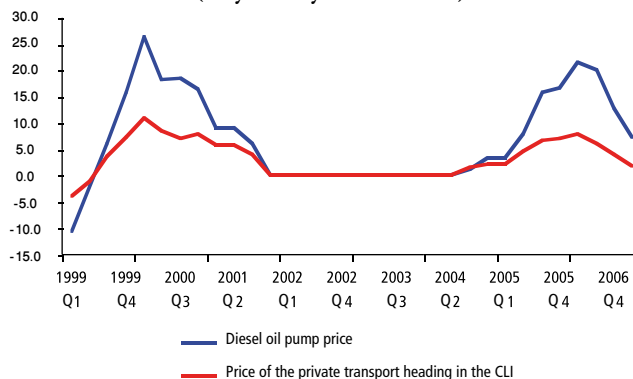
**Chart 3.1 World oil price and Morocco's pump price**



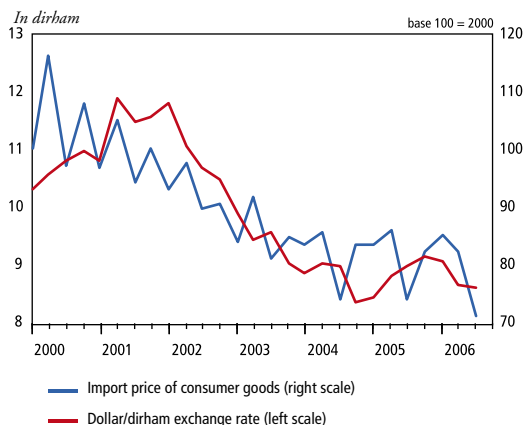
the dismantling of tariffs and the opening up of the Moroccan economy to foreign countries. This development has mainly concerned the import prices of consumer goods, as shown in Chart 3.3.

The 2006 fourth quarter data show a continuation of this trend, in particular in the import prices of finished consumer goods denominated in dollar.

**Chart 3.2 Fuel pump price and transport price**  
(on year-to-year basis in %)



**Chart 3.3 Import prices of consumer goods and the exchange rate**



## 4. MONETARY CONDITIONS AND ASSET PRICES

Since the meeting of the Bank Board in December 2006, the bank's intervention rate for 7-day liquidity withdrawal operations on call for tenders increased by 25 basis points, moving from 2.50% to 2.75%.

While remaining generally favourable, monetary conditions have slightly tightened in early 2007. Short-term interest rates, except those applied to time deposits with banks, have increased compared to the levels registered at the end of 2006, while the rates applied on short and long term treasury bills remained almost unchanged. Growth of money supply and credit, which seemed superior to the growth of the economic activity in the fourth quarter of 2006, slightly slowed down in January. Financial assets' prices, based on the evolution of the Casablanca Stock Exchange prices, continue their appreciation, although at a slightly slower pace. Finally, the trend of the exchange rate reversed, as the Dirham lightly appreciated against the Euro at the end of the first two months of 2007 while it depreciated against the U.S. dollar.

### 4.1 Monetary conditions

#### 4.1.1 Liquidity and implementation of monetary policy

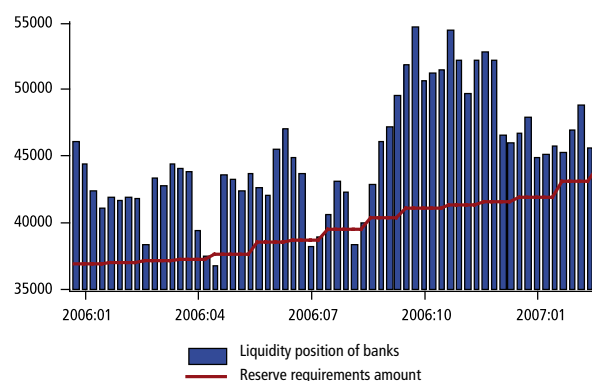
At the fourth quarter of 2006, the structural liquidity position of banks (see Box 4.1) showed a substantial improvement and reached 50.3 billions, thus exceeding the average reserve requirements by about 9 billions (Chart 4.1). In these conditions, the interbank rate, which amounted to 2.93% in the third quarter, dropped by 57 basis points and became, on average, in line with the rate applied to 7-day liquidity withdrawal operations on call for tenders by Bank Al-Maghrib, namely 2.50%.

Based on the analysis of economic, monetary and financial trends observed in 2006, the Bank Board raised, during its meeting held on 19 December, the rate for 7-day liquidity withdrawal operations on call for tenders, by 25 basis points, bringing it to 2.75%, while maintaining unchanged the other rates applied to the other instruments. This decision led to a rise in the interbank rate.

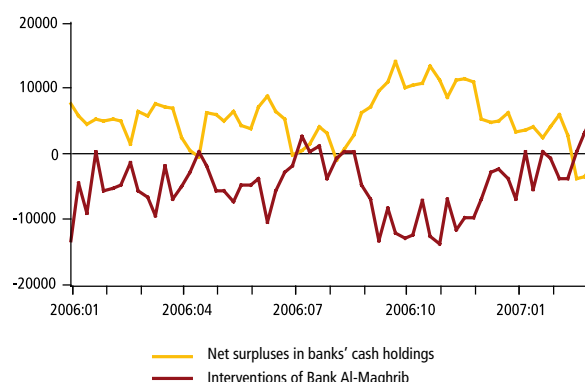
In early 2007, the supply and demand conditions in the money market bring out two different profiles (Chart 4.2).

In the period between the first week of January and the second week of February, the expansionary effect of the return flow of notes and coins circulation has made up for the restrictive influence of the improvement of the Treasury net

**Chart 4.1 Structural liquidity position of banks and reserve requirements amount**  
(Weekly data in millions of dirhams)



**Chart 4.2 : Net liquidity surplus and interventions of Bank Al-Maghrib**  
(Weekly data in millions of dirhams)

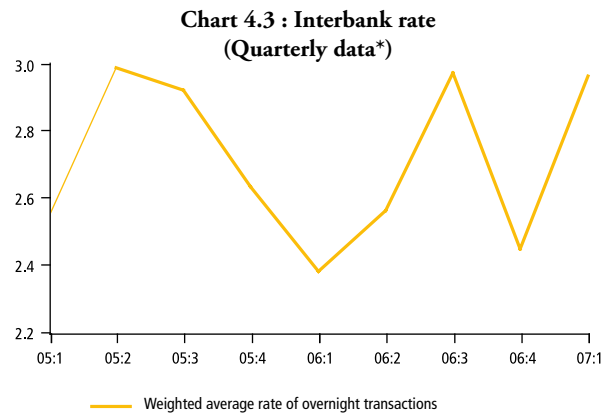


(1) Excluding cash holdings in notes and coins.

position, leaving banks' liquidity situation almost unchanged. In spite of the slight increase of the demand for the central bank's money, due to the increase of the reserve requirements, banks' cash holdings recorded, during this period, a net surplus of about 3.6 billion Dirhams. Bank Al-Maghrib mopped up this surplus mainly through 7-day liquidity withdrawal operations on call for tenders at a rate of 2.75%, which led to a rise of 35 basis points in the interbank rate compared to the average level registered in the last quarter of 2006.

Starting from the last week of February, banks' cash holdings underwent the joint restrictive effect of the drop in Bank Al-Maghrib's net foreign assets and the rise in the reserve requirements and in the Treasury's account held at the central bank, showing a deficit of 3.3 billions, principally covered by 7-day advances on call for tenders, at a rate of 3.25%.

Altogether, the rise of the bank's intervention rate, combined with the stagnation and then the drop in the liquidity position of banks at the end of the first ten weeks of 2007, led to an increase in the interbank rate in comparison to the level of the last quarter of 2006 (Chart 4.3).



(\* Data of first quarter 2007 correspond to the daily average of the period from 01/01/07 to 18/03/07)

**Box 4.1 Structural liquidity position of banks**

Bank liquidity is generally considered as the capacity of credit institutions to meet their cash commitments at their maturity. The first indicator evaluating **the surplus in liquidities** or the banks' financing requirement at a given moment is **the structural liquidity position of banks (SLPB)** which reflects the impact of all the autonomous factors.

$$\begin{aligned}
 \text{SLPB} &= \text{Net foreign assets} + \text{Advances to the Treasury} - \text{Treasury accounts} + \text{Other assets} - \text{Other liabilities} - \text{Notes and coins in circulation} \\
 &= \text{Net foreign assets} + \text{Treasury net position} + \text{Other net items} - \text{Notes and coins in circulation}
 \end{aligned}$$

Once the structural liquidity position of banks has been determined, the other component determining the level of banks' cash holdings is **the reserve requirements system** which creates an additional need for the central-bank money. Hence, banks' net liquidity surplus equals the SLPB, minus the reserve requirements.

### 4.1.2 Interest rates

Short rates, except for those on bank deposits, followed the same pattern as the interbank rate, with a significant drop in the last quarter of 2006 followed by a rebound in early 2007. At the same time, the downtrend of the rates for short and medium term treasury bonds slowed down in January and then reversed in February 2007. Finally, in 2006, the tendency of lending rates was, on the whole, similar to that of the Treasury issues rates.

The rates applied to short term Treasury issues are the ones which depend the most on the interbank rate evolution. In the fourth quarter of 2006, they registered significant drops compared to previous issues, prior to trending upwards on the whole at the end of the first two months of 2007, in parallel with the increase of the overnight interest rate.

With regard to **deposit rates**, which increased by an average 12 basis points in the last quarter of 2006 (Chart 4.4), the weighted average rate of six and twelve-month deposits dropped in January, to 3.46%.

The evolution of rates on **medium and long-term** treasury issues is mainly determined by variations of short-term rates and the expectations of economic actors. After a downward trend in 2006, these rates slowed and then recovered in the first and second months of 2007 respectively, under the influence of the current and foreseeable rise in short-term rates.

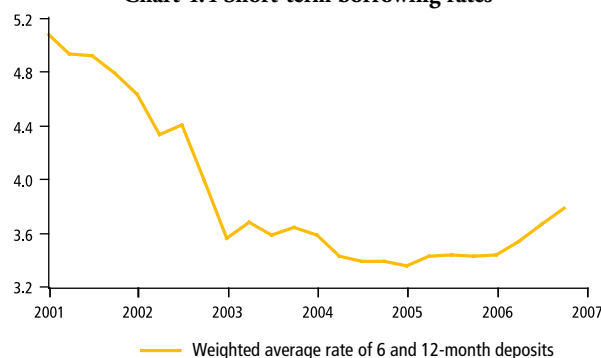
According to the data contained in the quarterly survey of banks, the lending conditions generally relaxed in the last quarter of 2006 (Table 4.3). The rates on medium and long term credits, particularly real estate credit, continued the steady drop which began in the second quarter.

Short-term credit rates, under pressure in the third quarter, fell off considerably in the last quarter, in connection with the decline of the interbank rate.

Table 4.1 Short-term rates (quarterly data)

	2005	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 jan./feb.
13-week treasury bills	2.45	2.65	2.62	-	2.52	2.73
26-week treasury bills	2.54	-	2.78	-	2.62	2.85
52-week treasury bills	2.89	3.06	3.00	-	-	3.48
6 and 12-month deposits	3.40	3.43	3.52	3.65	3.77	3.49

Chart 4.4 Short-term borrowing rates

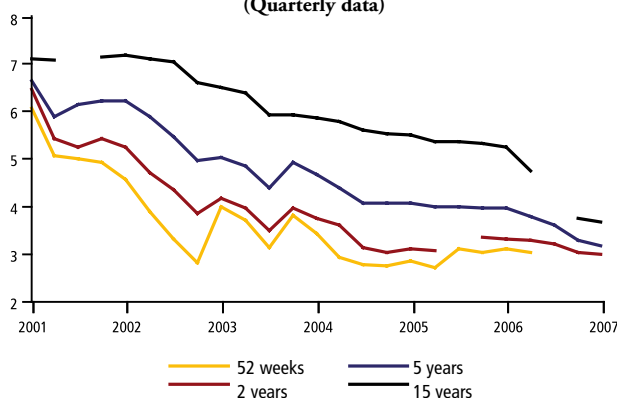


(\*) The data of the first quarter of 2007 correspond to the average of January and February.

Table 4.2 Rates of long and medium-term treasury bills

	2005	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 jan./feb.
2 years	3.13	3.29	3.24	3.16	2.99	2.96
5 years	3.97	3.91	3.75	3.56	3.23	3.14
10 years	4.78	4.51	4.26	4.11	3.52	3.40
15 years	5.35	5.20	4.71	-	3.72	3.65

Chart 4.5 Treasury bills rates (Quarterly data)





### 4.1.3 Money, credit and liquid investments

#### M3 evolution

In the fourth quarter of 2006, the M3 aggregate rose by 15.7% compared to the same period in 2005. This growth is basically due to the strong rise in net foreign assets and lending to the economy, as well as to the increase in interest rates, which favoured the strengthening of time deposits. Therefore, these factors have compensated, to a great extent, for the rise in demand for UCITS securities which should exert a moderating effect on monetary growth, all other things being equal.

In early 2007, the return flow of notes and coins credit balances and the decrease of credit interest rates led to the weakening of M3 whose level at the end of February exceeded the level recorded in December 2006 by no more than 0.3%

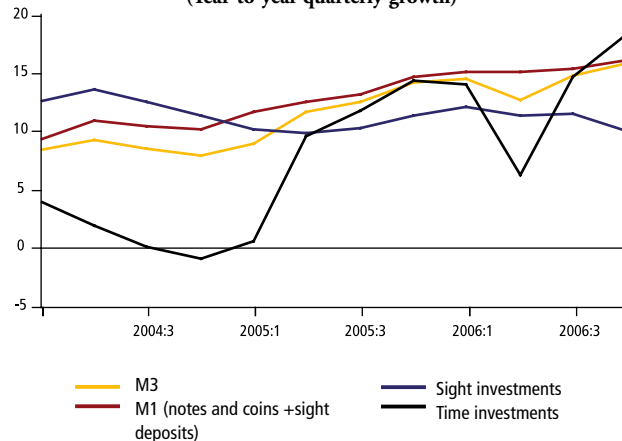
During the past few years, the M3 aggregate progressed at a pace well above that of economic activity. Nevertheless, the evolution of both money and economic activity may diverge without any risks for price stability. The gap between M3 growth and GDP growth, which remains positive in 2006, does not represent a direct measurement of the liquidity surplus in the economy.

Indeed, the optimal level of liquidity of the economy is measured, through the equilibrium level of M3, as estimated by the demand for money function,

Table 4.3 Lending rates in 2006

Weighted average rate	March	June	Sept	Dec.
Debtor accounts and cash facilities	5.71	6.79	7.00	6.81
Equipment loans	7.83	8.67	7.60	6.58
Real estate loans	7.21	6.73	6.31	6.34
Financial loans and sundry debtors	7.32	6.95	8.37	7.05
Consumer loans	9.80	8.24	8.66	8.65
All loans	6.25	7.16	7.15	6.88

Chart 4.6 Monetary growth (Year-to-year quarterly growth)



#### Box 4.2 Quarterly survey on interest rates

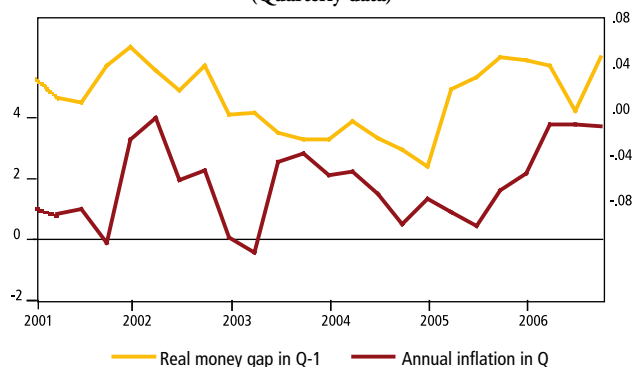
Until 2005, to analyze the financing conditions in the economy, Bank Al-Maghrib used to refer to the average credit cost as the only indicator. The latter, calculated on the basis of balance sheet data of the banking system, as being the ratio of interests received to the average outstanding credit, contains one major deficiency. In fact, its level provides indication of the rates applied both to new contracts as well as to all the loans granted over previous years and not yet paid in full. Its highly persistent variations reflect those of marginal lending conditions as well as modifications in banks' assets structure.

Since the start of 2006, Bank Al-Maghrib has conducted a quarterly survey on lending rates. In this respect, banks are asked to provide information concerning the rates applied, according to the category of borrower, the type of credit and instalments. Although the data communicated by banks are not yet optimal, their reliability and quality, along with the response rate, are improving from one survey to another. Therefore, the findings of this survey are used by Bank Al-Maghrib for internal analyses as well as for the purpose of the present report.

thus taking into consideration, in addition to the activity measured by the GDP, all the factors explaining the money evolution, in particular its underlying velocity of circulation and the interest rate which determines the opportunity cost of cash holdings (Box 4.3). If M3 exceeds its equilibrium level so measured, giving rise to a positive money gap, liquidities are considered as abundant in the economy and can therefore accelerate inflation over the following quarters.

Chart 4.7, which depicts the evolution of « money gap » and inflation over the period 2000 Q1-2006 Q4, shows that the money gap is an advanced indicator of inflation, alongside with other factors such as production costs and import prices. Thus, all other things being equal, the drop in the average money gap estimated in 2006, could indicate a moderation of inflationary pressures in the forthcoming quarters.

Chart 4.7 Money gap and inflation  
(Quarterly data)

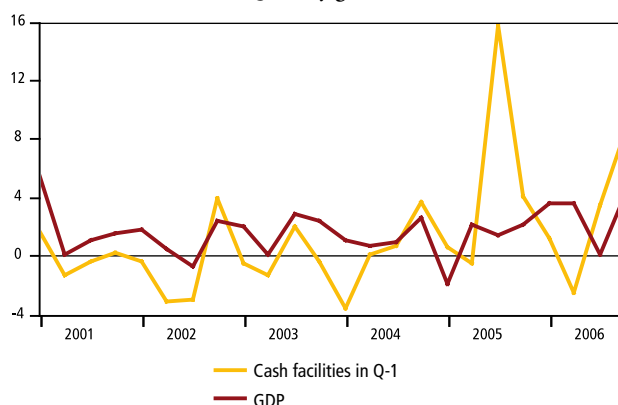


**Bank loans**

Stimulated by an easing of the lending conditions and continued expansion of economic activity (Chart 4.8), bank loans rose at an annual rate of 15.5% in the last quarter of 2006. In fact, cash advances increased by 16.2% compared to their level in the same period of 2006, while real estate credit increased by 27.4%, as a result of the sustained demand and the low interest rates. The other loan categories also trended upwards, with 14.1% for equipment credit and 25.9% for consumer credit.

In early 2007, the short-term dynamism of the various categories seems to indicate a slowdown in the upward trend observed so far. This trend particularly concerns equipment credit which, at the end of January 2007, registered a monthly rise of only 0.8% instead of 6.3% in December 2006, while liquidity credit dropped by 0.7% after increasing by 4.9%. Real estate and consumer credits, on the other hand, recorded increases close to the averages registered in 2006. Overall, bank credit grew by 0.1% compared to 3.4% in the previous month, and 2.3% in January 2006.

Chart 4.8 Cash facility and economic activity  
(Quarterly growth)



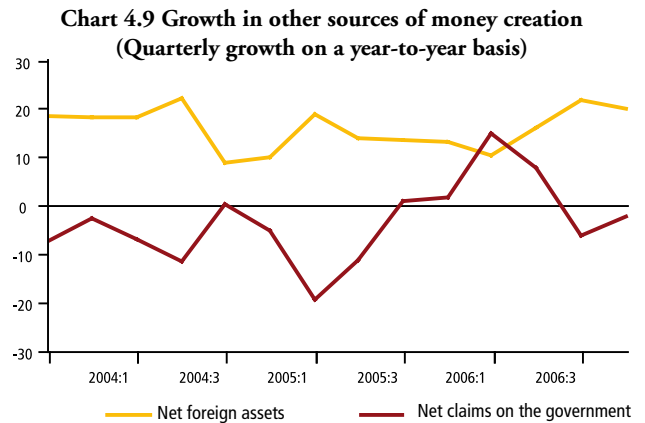
**Other sources of money creation**

In the fourth quarter of 2006, net foreign assets grew by nearly 20% on a year-to-year basis. In spite of this expansion, foreign exchange reserves contributed only 15% to money creation in the fourth quarter of 2006, instead of 32% in the same period of 2005, due to the rapid growth in lending to the economy.

In January 2007, monthly growth in net foreign assets stood at 0.7%, i.e. an annual rate of 8.2%, largely below the rate recorded in the entire year 2006.

Net claims on the government continued to exercise a moderating effect on money creation, which allowed mitigating the effect of the strengthening of net foreign assets over the recent years (Chart 4.9). In spite of their recovery in December, their average level in the fourth quarter of 2006 remained below that of the same quarter of 2005.

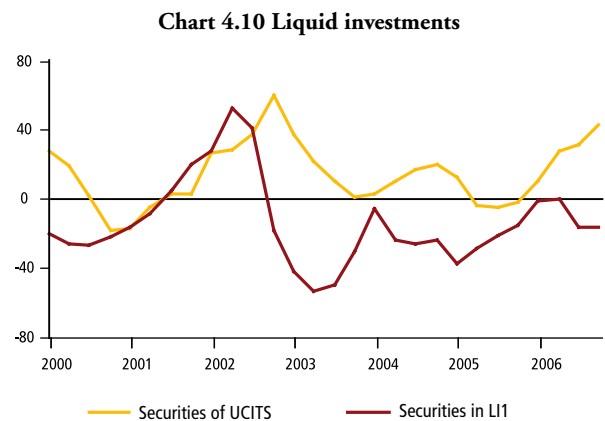
In January 2007, the monthly growth in net claims on the government reached 1.9%, a pace below that recorded in December 2006.



**Liquid investments**

Liquid investment aggregates include, in addition to the negotiable debt securities and Treasury bills (LI1), all UCITS securities held by non-financial agents, representing thereby a measurement of investments substituting the monetary assets included in M3.

The strengthening in demand led to a steady acceleration in UCITS securities throughout 2006, with a peak of 42.4% in the fourth quarter. This increase is also due to the appreciation in the value of bond and share UCITS, as a result of the drop in interest rates on new issues in medium and long-term bonds and the rapid rise in indices on the Casablanca Stock Exchange.



**4.1.4 Exchange rate**

At the end of the last quarter of 2006, the dirham appreciated, on average, by 1.01% against the

dollar, while it fell by 0.23% against the euro, compared to the previous quarter. A reversal of this trend was recorded in 2007, as the national currency, on the average of the first two months of the year, rose by 0.25% against the euro and, conversely, depreciated by 1.09% against the dollar.

### 4.2 Asset prices

At the end of 2006, stock exchange prices increased sharply, as the MASI index grew by 17.47% compared to September and market capitalization increased by 11.80%, to reach 417.1 billion dirhams in December 2006. The listing of ten new stocks contributed 45 billion dirhams or 10.8% to this rise. As for the turnover, it more than doubled compared to the third quarter of the year, reaching, at the end of December, 166.4 billions. This performance of the stock exchange market is particularly attributable to the good condition of listed companies and to the growing interest of investors for securities, especially with the enforcement of attractive fiscal measures.

The year 2007 seems to be following the same trend. In fact, compared to December 2006, the MASI index grew by 13.1% at the end of February 2007 and market capitalization increased by 52.1 billions, thus reaching 469.2 billion dirhams.

For real estate assets, pressures on prices may have grown in parallel with the rise in domestic as well as foreign demand.

Chart 4.11 Dirham bilateral exchange rate (Monthly data)

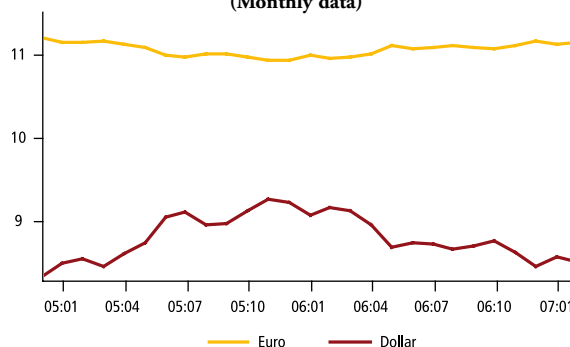
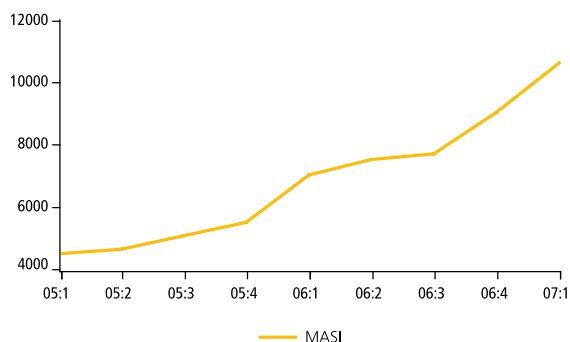


Chart 4.12 MASI index evolution (Quarterly data)



### **Box 4.3 Evaluation of the money equilibrium level**

To assess the optimum level of the supply of money to the economy, several methods can be used. First, the comparison of the growth rate of M3 and the nominal GDP may allow an evaluation of the more or less excessive nature of money growth during a given period, taking into consideration the average variation in the velocity of circulation of money. In fact, this simple method implies that money is principally needed for transaction purposes or for precaution, with the variations automatically indicating the current and future orientation of nominal demand.

Second, the statistical filters make it possible to smoothen money series, so as to bring out the underlying trend of money supply and to correct these series taking account of portfolio effects or other supposedly transient shocks, which can send monetary signals not related to the evolution of income or economic activity.

The approach based on the demand for money function explicitly links information on the behaviour of money variables to other macroeconomic variables emanating from the real and financial sphere in order to obtain the equilibrium path of the money supply. At its equilibrium level, the money supply is an increasing function of economic activity, as measured by GDP and a decreasing function of the opportunity cost, as assessed by the interest rate.

## 5. RECENT INFLATIONARY TRENDS

After the annual rise of 3.6% registered in the fourth quarter of 2006, the cost of living index increased by 2.7%, year-to-year, in February 2007, in comparison to 1.9% in the previous year, mainly due to the slowdown in fresh produce. As to the underlying inflation index, it was up by 2% instead of 2.9% in February 2006, indicating an easing in inflationary pressures. However, the forecasts of the survey on the industrial sector suggest an uptrend in finished products prices for the next quarter.

### Evolution at the end of February 2007

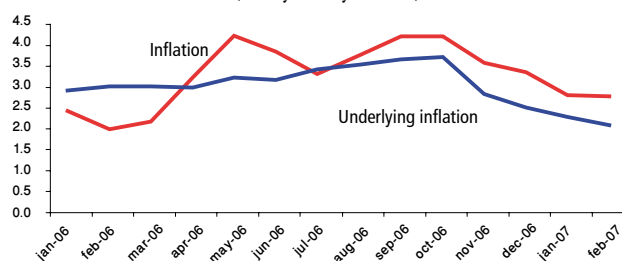
In February 2007, the cost of living index showed a monthly drop of 0.1%, identical to that of January. This change is mainly attributed to the fall of 0.6% in fresh produce prices, principally fresh vegetables (-4.7%). The cost of private transport remained unchanged in February, after the cut in oil pump prices in January, in connection with the decrease in oil prices on the international market.

As to the **underlying inflation index**, it stabilized at the same level as that of January. The biggest rises concerned the price of jewellery (0.6%), hospitalization (0.3%) and entertainment (0.4%), while the greater decreases were recorded for household appliances (-0.2%), furniture items (-0.2%) and leisure durables (-0.2%).

The results of the monthly survey on the economic situation conducted by Bank Al-Maghrib in the industrial sector indicate a drop in the producer price in February 2007 compared to the previous month, mainly in the chemical and para-chemical industries and the electrical and electronics sectors.

However, industrialists' forecasts indicate an upward trend in the price of finished products over the next three months. In addition, the orders received exceed the finished product inventories held by companies, which may create pressures on prices in all industrial branches, except for the electrical and electronics industry which rather expect a drop in prices.

**Chart 5.1 Inflation and underlying inflation**  
(On a year-to-year basis)



**Table 5.1 Inflation and underlying inflation**

	The year 2006				feb. 06 feb. 05	feb. 07 feb. 06
	1 <sup>st</sup> quarter	2 <sup>nd</sup> quarter	3 <sup>rd</sup> quarter	4 <sup>th</sup> quarter		
<b>Inflation</b>	<b>2.1</b>	<b>3.7</b>	<b>3.7</b>	<b>3.6</b>	<b>1.9</b>	<b>2.7</b>
Fresh produce*	-1.1	5.9	4.4	5.9	-2.2	5.1
Private transport	8.0	6.1	4.0	1.8	8.5	-0.8
Other products excluded from the underlying inflation	4.1	6.0	6.8	6.2	3.9	6.3
<b>Underlying inflation*</b>	<b>2.9</b>	<b>3.0</b>	<b>3.5</b>	<b>2.9</b>	<b>2.9</b>	<b>2.0</b>

Source: HCP

(\* ) BAM calculations

On a year-to-year basis, the cost of living index recorded a rise of 2.7% in February 2007, instead of 1.9% over the same period of 2006. This increase is mainly due to the 5.1% growth of the index of fresh produce which contributed up to one percentage point in overall inflation, in particular fresh fruits.

In fact, the underlying inflation index slowed down to 2%, on a year-to-year basis, instead of the 2.9% recorded the previous year. More particularly, the cost of communications, which was up by 21.3% in 2006, rose by only 0.8% in February 2007. The slowdown also concerned the price of dried fruits, the prices of "footwear repair" heading and those of children's shoes, the increase of which was limited to 0.6%, 0.2% and 0.9% respectively in February, instead of the 1.3%, 1.6% and 1.5% over the same period in 2006.

## 6. INFLATION OUTLOOK

*This section deals with the most probable inflationary evolution in 2007 (central forecast) and examines the main associated risks (balance of risks). The central forecast is therefore dependent on the underlying hypotheses. In case the main risks discussed below do not materialize, the central forecast for the four upcoming quarters suggests an easing of pressure on prices. On this basis, inflation is expected to reach about 2% in 2007, after the 3.3% reported in 2006.*

### 6.1 Central forecast assumptions

#### 6.1.1 International environment

The international environment is mainly analyzed in the forecasting exercise using an indicator of economic activity in Morocco's four principal partner countries, the domestic price of diesel oil at the pump, indirectly through the subsidization system, import prices excluding oil, as well as interest rates in the Euro zone. In our baseline scenario, we expect a slight drop in real output in the principal partner countries, in line with the consensus between the various institutions preparing such forecasts.

With regard to the interest rate in the Euro zone, we take into account the increase of 25 basis points by the ECB (March 2007). According to the latest ECB statements, an increase to the "neutral" level of 4.25% is expected by late 2007.

The latest forecasts on oil prices for 2007 suggest a considerable rise in the price of the barrel to an average of \$65. This price level on the international market, if the indexation mechanism is fully applied, shall lead to a rise in the domestic diesel oil price<sup>(1)</sup>. The hypothesis of the continuation of the subsidization mechanism, which cost is supported by the budget, is yet retained. The baseline scenario for 2007 therefore implies stagnation in the cost of diesel oil at the pump at the current level of 7.22 dirham per litre.

With respect to import prices excluding oil, the downward trend is expected to continue; in line with their evolution in the past few years (see Chapter 3).

#### 6.1.2 National environment

In the absence of a revised forecast related to agricultural added value for 2007, the hypothesis of the HCP (January 2007) is therefore retained concerning inflationary forecasts. According to this hypothesis, the real added value of the primary sector will decline by 11.7% in the 2007 agricultural campaign with a cereal production of approximately 53 million quintals.

With regard to wages, the last change in the minimum wage occurred in July 2004 setting it at 9.66 dirhams per hour of work.

Given the negotiation process for the revision of the minimum wage, it is assumed that the current level of the wage indicator will remain unchanged in 2007.

### 6.2 Inflation outlook and balance of risks

In case the main risks discussed below do not materialize, the central forecast for the next four quarters suggests an easing of pressure on prices. Therefore, this inflation outlook suggests a rise of approximately 2.5% in prices for the first quarter of 2007, on a year-to-year basis, as compared to the same period in the previous year (see Table 6.1). For the following three quarters, inflation is expected to stand at around 2% year-on-year.

**Table 6.1 Inflation outlook for 2007**

	2007 (quarters)				2007
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
Min	2.2	1.3	1.4	1.0	1.5
Central outlook	2.5	1.8	2.2	2.0	2.1
Max	2.9	2.6	3.3	3.5	3.1

Source: HCP, (\*) BAM calculations

<> Diesel oil represents more than 50% of the national consumption of oil products



### Box 6.1. Inflation forecasting models

The consensus on inflation forecasting at Bank Al-Maghrib is based on several forecasting models, the analysis of many macroeconomic indicators and the opinions of experts. Three types of econometric models are used:

- ARIMA models for monthly and quarterly forecasts,
- P-Star models for quarterly and annual forecasts,
- VAR-X model for forecasting and simulation related to the monetary policy effects.

The ARIMA models, based on the statistical theory, generate inflation forecasts according to previous trends, without explicitly linking them to the information contained in other macroeconomic variables. The forecasting process begins by reconstituting the historical inflation variations on a given time sample by breaking down its series into an initial value, the effects of persistence, and the effects of the shocks accumulated over the past.

The P-Star model aims at explicitly demonstrating the link between inflation, economic activity and money. P-Star theoretical foundation comes from the general theoretical framework of the quantitative theory of money, the starting point of which is the similarity between activity and the amount of money in circulation, given currency units' velocity of circulation.

The VAR-X (self regressive vectorial model with restrictions) comprises 12 variables spread out in three blocks of variables directly or indirectly affecting inflation: a block of endogenous variables completely interactive on which there are no restrictions, a block of partially interactive endogenous variables subject to restrictions on the links of causality and instantaneous interdependence, and a block of strictly exogenous variables. The advantage of this type of model is that it enables imposing restrictions on the interactions between the variables on the basis of a priori rationale regarding the functioning of the economy, as opposed to models using only statistical relationships between the variables. This model makes it possible, among other elements, to draw out scenarios on inflationary trends for the different decisions on monetary policy, and also for alternative assumptions regarding certain key variables (for example, oil price evolution and/or agricultural output).

Like in other central banks, the models used will evolve in the future in line with the coming developments, the availability of certain types of data and the prolongation of the series range.

For the year as a whole, based on the hypotheses discussed in the previous section, inflation is expected to be in the region of 2%, instead of 3.3% in 2006. It should be noted that in 2006, inflation was mainly affected, early in the year, by the rise in some VAT rates. This subdued level of inflation in 2007 may be partially explained by the slowdown in the pace of domestic demand growth, the easing of imported goods prices excluding oil and the maintaining of diesel oil pump price at its current level.

These forecasts have been prepared on the basis of the most likely hypotheses. However, there are many sources of uncertainty due to the future evolution in the exogenous variables as well as to the models used for forecasting, which may have an increasing or decreasing impact on the projected level of inflation.

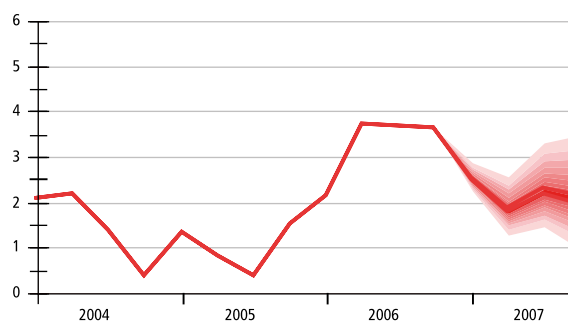
Taking into account these risks brings out an asymmetric forecasting range represented in the form of a fan chart (see Box 6.2). This is a probabilistic evaluation of the uncertainty zones surrounding the central forecast (see Chart 6.1).

The upward asymmetry of the fan chart suggests a greater probability of a rise in inflation, as compared to the central outlook. This asymmetry is attributable, on the one hand, to the risks relating to the uncertainties surrounding the evolution of the international economic situation (pressures on oil prices, a possible tightening of monetary policy in industrialized countries and a greater decline in activity in the main partner countries) and on the other hand, to the risks linked to the national environment (the size of economic agents cash holdings, the electoral period that could lead to a rise in wages<sup>2</sup> and a possible worsening of the agricultural output). The materialization of one or several of these risks could lead to a rate of inflation above the central outlook, to a level within the forecasting range (with a probability of 90%) represented on the fan chart.

<sup>2</sup>Our estimations, based on some models and on the available data, indicate that a rise in the minimum wage tends to affect prices in a gradual way. All other things being equal, we believe that the impact effect-in the first year- of a 10% rise in the minimum wage translates into a rise of the inflation rate by around 0.5%. After the agricultural output). The materialization of one or several of these risks could lead to a rate of inflation above the central outlook, to a level within the forecasting range (with a probability of 90%) represented on the fan chart.

**Chart 6.1: Inflation outlook (CLI) for 2007**

*Quarterly date on a year-to-year basis (%)*



*Note: This chart represents the confidence interval with regard to the inflation projection derived from the baseline scenario (dark red): confidence intervals ranging from 10% to 90% are also shown. Each interval addition of the same colour, on both sides of the central scenario, increases by 10% the probability that inflation would fall within the range delimited by these intervals. Therefore, if we take into consideration the range delimited by the fifth interval around the central outlook, this is equivalent to having 50% chance that inflation will fall within this range in the future.*

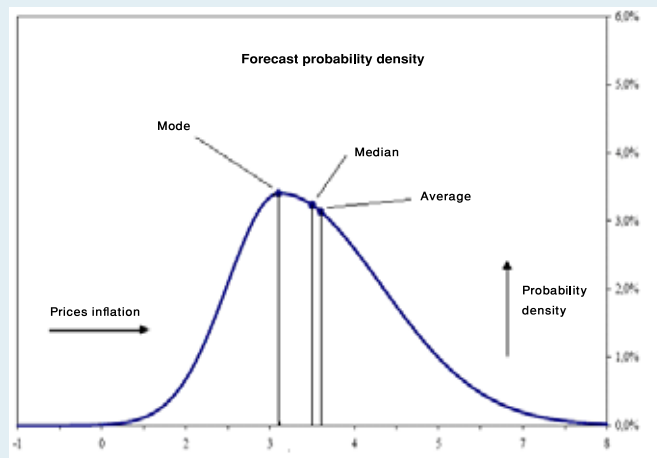
### Box 6.2. Fan chart forecast

Like other central banks, Bank Al-Maghrib has opted for presenting its inflation outlook, surrounded by uncertainty intervals, by use of a fan chart. This new presentation of inflation outlook makes it possible to reflect the balance of risks associated to it.

The publication of growth or inflation forecasts is often an economic event awaited by various economic agents, consumers, producers and other financial actors. These forecasts are considered as key information for the decision-making process. The credibility of these forecasts is often evaluated by comparing, for example, past forecasts with the values realized by the variable. All the forecasts are uncertain and decision-makers need to quantify the degree of this uncertainty. For this reason, central banks have, for many years, published their forecasts by using probability densities; in other words, a probabilistic evaluation of the uncertainty zones surrounding the best computed forecast. This uncertainty is often explained by the doubts concerning the exogenous variables influencing the one being studied, on the one hand, and the quality of the forecasting model, on the other.

Referring to the results of the scenario simulations conducted by Bank Al-Maghrib's staff on the downside and upside risks of the variables affecting inflation, we can say that the uncertainty relating to the inflation forecast is asymmetrical. One way for Bank Al-Maghrib to evaluate this asymmetrical uncertainty resides in the assumption that the possible errors in forecasting follow a two-piece normal distribution (consisting of two pieces of two normal distributions with identical averages, but with different standard deviations). This distribution's main characteristic is that it allows deriving an asymmetry of risks around the central forecast. In other words, we may think that the inflation forecast error will, more probably, be oriented in a direction rather than the other (for reasons of simplicity, we use a normal distribution in Chart A to synthesize the different associated parameters, but the shape of the curve differs from that of a normal distribution with pieces).

Chart (A)



To calculate the distribution, we use the average forecast and the most probable one, as well as an estimate of forecast uncertainty, determined on the basis of past errors. In practice, the modal forecast is the one giving the most probable result. If this is the case, the difference between the average forecast and the modal forecast gives an estimation of the relative equilibrium of risks in relation to the mode (asymmetry coefficient of the supposed distribution). If the average is above the mode, there are certainly more upside risks than downside risks, and vice versa.

To determine the distribution parameters, Bank Al-Maghrib draws on the judgment of experts, but also relies on the information provided by several other models. Once all the parameters are identified, it becomes possible to calculate the confidence intervals associated to the central forecast (mode). On both sides of the forecast, two points of equal probability are calculated in such a way that 10% of the distribution is covered. We continue in this way until 90% of the distribution is covered. A graphic representation of the central outlook surrounded by the nine calculated intervals is called a fan chart.

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