

Servicio de Estudios Económicos del Grupo BBVA

## **Mexico**

## **Economic Outlook**

First Quarter 2011

### **Economic Analysis**

- Global environment: decoupling underway
- · Mexico, better outlook in a favorable environment
- Banco de Mexico (central bank): margin for monetary pause
- Consumption: credit supply contributes to the growth of household spending



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Closing date: February 11, 2011

## 1. Summary

The Mexican economy's growth outlook has improved in line with that of the United States, with the continuation of some favorable financing conditions and their extension in the domestic market through an increase in employment. In a global scenario in which the differentiated rate of recovery depending on the area in question is increasingly clear, Mexico benefits from its high exposure to the United States, which, together with the emerging economies as a whole, represents the support of the positive cycle in the world economy. Furthermore, the Mexican economy's financing conditions continue to be very favorable, both in terms of cost as well as credit availability, both foreign and domestic, which favors the external dynamism being transmitted to the generation of household income and company revenue through employment and investment. If these factors are maintained, it is expected that after having grown close to 5.2% in 2010, it is reasonable to expect that in 2011-2012, Mexico will maintain average annual GDP growth of 4% (4.3% in 2011 and 3.8% in 2012), which, in any event, is above the average of the past decade, which was close to 2%.

The balance of risks of the growth scenario is on the upside in 2011, which should not distract attention from the problems that could hinder the improvement of Mexico's capacity for medium-term growth. These include the lack of an effective and complete rule of law, intensified economic competition, and a very reliable but vulnerable and insufficient fiscal policy. The environment described above leads to an increasingly greater degree of uncertainty in the short term given the higher possibility of positive rather than negative effects in factors such as; i) the fiscal stimulus agreed upon in December or the fewer uncertainties in the regulatory environment following the mid-term elections in the United States, which are positive elements that are coupled with an evolution of Mexico's competitiveness in the U.S. market for manufactured goods, which goes beyond the boost resulting from a more depreciated peso; ii) the still delayed cyclical recovery of the Mexican economy following the 2009 recession, which allows for greater maneuvering room given the dilemmas posed by the exchange rate in other areas. This is without forgetting that an end is now being envisioned to the period of monetary pause for 2012, but with the risk that this could occur earlier, and the long rates have now abandoned the historical lows registered last summer, and will not return in the foreseeable horizon. These factors are more or less intense, but they dissipate over time due to their cyclical nature, and could involve the risk of believing it to be less urgent to attend to the well-known long term challenges faced by the Mexican economy, challenges that will become peremptory when the cycle loses its strength and that must be continually addressed due to a situation of higher growth.

Household consumption will continue to grow, based on the support provided by a supply of bank financing with the capacity to attend to a level of demand that will evolve in accordance with households' disposable income. Domestic demand and more specifically, household consumption is recovering, due to families' spending capacity, in turn, very much dependent on their disposable income expectations. This depends, in turn, on their real disposable income, fundamentally determined in the labor market by employment and hourly wages, but also on the capacity to cushion the variations derived from the loss of job income through transfers from other agents, such as the public sector—unemployment compensation, health-care and educational expenditures—, the external sector—remittances from emigrants or the financial sector, through the availability of consumer credit. As is illustrated in publications on the issue, the weight of household consumption in Mexico is not comparatively low in relation to that of other countries, but it is indeed more volatile, surely because the mechanisms that enable income shocks to be cushioned are less important. In this sense, as can be seen in the corresponding graph, the evolution of consumer spending more resembles that of disposable income obtained in the formal labor market than that of the total Mexican labor market. This greater similarity is consistent with greater access to the mechanisms that cushion income

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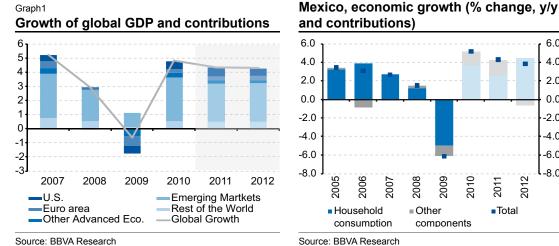
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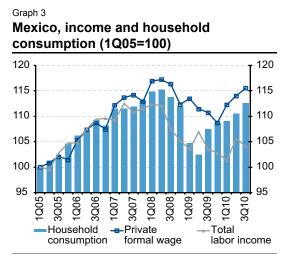
Graph 2

Source: BBVA Research

shocks, such as public expenditures in health and education or financing, preponderantly provided by the Mexican banking system based on the current outlook for income generation. Thus, as is illustrated in this issue, a significant and positive statistical relationship exists between household consumer spending and bank credit earmarked for this segment. In addition, it is also shown how available credit supply indicators, although not directly linked to consumer financing, lead to the conclusion that there is a positive relationship between consumption and the supply capacity of bank consumer credit. From this it can be inferred that except in the period of the global financial crisis, there has not been an important restriction in credit supply. In the recent period, the supply restriction was linked to a very adverse global financial environment, in which the cost and the availability of financing for banks, in addition to the credit risk in certain segments of the economy, led to an intensification of precautionary and risk criteria in granting financing.

In the environment considered, it seems reasonable to expect growing support from financing for household consumer spending. Thus, for example, the return of the supply indicator to the average level in effect between 2003 and 2008 would be consistent with an increase of between 0.4 and 1.6 percentage points in real household consumption. This scale, relatively reduced, is derived from the limited market to which the Mexican banking system can resort to for financing, given the high degree of informality that exists in the economy. A higher degree of formality in the economy would be accompanied not only by greater access to financing in terms of legal criteria, but also and above all, due to relatively higher levels of productivity. wages, and income, and therefore greater spending capacity.

Anchored inflationary expectations and a negative output gap still allows for expectations that the monetary pause will be maintained up through 2012, although with a quicker upside bias in the second half of 2011. The changes in the communication of monetary policy by the central bank consolidate the preponderant role of the inflation outlook in the center of its decisions through an appraisal of the impact that a wide range of variables can have on them, from the output gap to the exchange rate to supply shocks that alter relative prices. All this is without automatisms in decision making, with maneuvering room consistent with a preventive focus to achieve price stability. The inflationary expectations for the Mexican economy are anchored just below the upper limit of the central bank's inflation target of 3%, without there being, in our opinion, unpredictable changes that could raise the central bank's rates at least over the course of the entire current year. The pressures from demand on prices will be, if they emerge, limited in scope, given an output gap that, independently of its exact level, still appears simply to be closing. In addition, this is a necessary but insufficient condition for demand pressures to emerge on prices. The exchange rate will contribute to anchoring the inflation outlook in an environment in which the monetary policies of the developed countries, and in particular that of the United States, will continue to be accommodating this year. Furthermore, it appears that the impact of the fluctuations in the exchange rate on registered inflation will be significantly less than in the past as a result of Mexico being integrated in a larger trade zone and the anchoring of the inflationary expectations of the economic factors, with the result being that the risk of an upside impact of potential depreciations of the peso seems very limited.

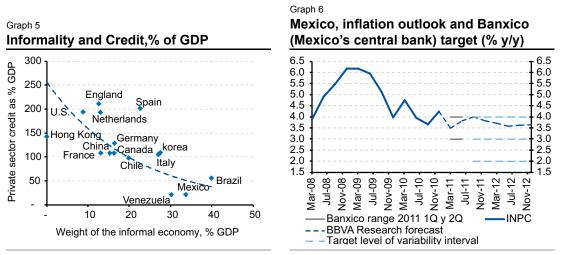


Graph 4 Mexico, bank credit supply indicator (Index from 0 to 100



Source: BBVA Research with Banxico data

The scenario outlined is consistent with an outlook of continuity in the monetary pause until well into 2012, although with a balance of risks that is biased more toward a rapid rather than a slower increase. A more rapid increase in domestic demand, which cannot be ruled out given what was mentioned above, and/or the impact of supply shocks on relative prices—for example of food inputs—could transfer to inflationary expectations, which, if this were to occur, would presuppose a rapid rise in interest rates in relation to the projected calendar.



Source: BBVA Research with World Bank and Schneider and Enste data (2004)

Source: BBVA Research with Banxico data

Source: BBVA Research with INEGI data

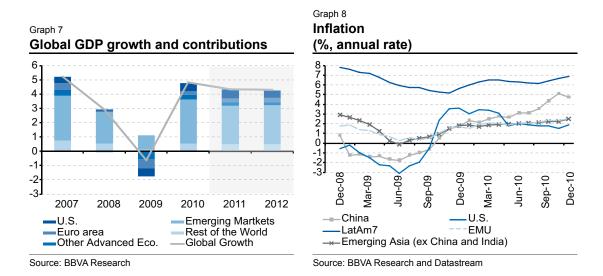
## 2. Decouplings at play

The world will continue on divergent paths, increasing growth and policy decouplings Global growth continues to be strong. After closing 2010 with a growth rate of 4.8%, the global economy is expected to decelerate slightly to 4.4% both in 2011 and 2012. The global economy has thus ended the year with a stronger growth than anticipated 12 months ago, and, in part, that is due to advanced economies decelerating less than expected back then. However, the real engine of global dynamism continues to be the emerging world, led by Asia (and China in particular, see Graph 7). This sustains a scenario where decoupling between emerging and developed economies continues unstopped. As we have also highlighted in the past, there is an increasing growth divergence between the US and the EMU, reinforced after the likelihood of a double dip in the US seems to have abated substantially. But growth decoupling is also increasingly evident within Europe, between core countries and those of the periphery, dragged by financial market tensions. In fact, even though financial market tensions in Europe worsened during the last quarter of 2010, economic activity the region as a whole has been able to accelerate, thus showing –at least temporarily– a degree of decoupling also between the financial and the real side.

All these decouplings have three important implications for the outlook. First, the divergence between growth in advanced and emerging economies will continue to promote markedly different macroeconomic policies going forward. Monetary policies will continue to be highly accommodative in the US and Europe, fuelling a search for yield elsewhere (in emerging markets and increasingly in commodities as well). At the same time, signs of overheating are starting to emerge in some countries in Asia and Latin America, pushing authorities to consider tightening policy faster than previously envisioned given incipient inflationary pressures, especially in Asia (Graph 8). The resulting incentives for capital inflows into emerging economies will contribute to increase policy dilemmas in both regions, between tightening policy to ensure a soft landing and preventing sudden and sharp exchange rate appreciations.

Second, the growth divergence between the US and EMU will continue to put downward pressure on the euro and, perhaps more significantly, will keep drawing market attention to the relative difficulty of the EMU to grow out of their high public debt levels. This is one of the elements –together with the different size of their central banks' bond-purchase programs and the turmoil around economic governance in Europe– that explains why markets have not reacted significantly to a further postponement of fiscal consolidation in the US. The difference with market punishment to the European fiscal outlook could not be starker.

Finally, the increasing decoupling within the EMU will start straining the conduct of a common monetary policy for the region, already torn between an incipient risk of inflation, especially in core countries, and the need to continue supporting financial stability, especially –but not exclusively– in peripheral economies.



Growth in the major advanced economies has picked up, but fragilities remain. As we expected, chances of a double dip scenario in the US, which we thought were very low, have faded. But interest rate risks in the long-run now become more relevant

As we expected, the US did not fall into a double dip, and the chances of that happening in the future have faded since the summer. Four main factors have contributed to the change in sentiment regarding the outlook for growth in the US. First, better macro outturns at the end of 2010 signaled that household consumption was more resilient than was feared. Second, decisive action by the Federal Reserve, implementing and additional round of asset purchases (QE2) provided support for bond prices in particular, and asset prices in general. Third, reduced uncertainty and increased business confidence is expected to benefit investment. Finally, and perhaps more important, a new fiscal stimulus package, approved at the end of 2010, will provide a significant boost to economic growth. We have thus adjusted our growth forecast for 2011 by 0.7 percentage points, to 3%.

However, weaknesses have not disappeared. Real estate markets remain feeble and still prone to negative surprises. Household income is still sluggish given that the speed of the recovery will not be sufficient to significantly reduce unemployment rates. On top of it, credit growth and securitization processes remain subdued. While none of this should derail the recovery, it continues to configure a scenario in which an additional negative shock would harm the economy. For now, this outlook of gradual economic recovery with low inflationary pressures on the demand side, will permit monetary policy to remain accommodative for an extended period.

Moreover, the lessons from the sovereign crisis in Europe should not be forgotten. Granted, the new fiscal package at the end of 2010 had the benefit of boosting growth in the short-run, at the time when doubts about a double dip were still in the air. But one should not overestimate the strength and persistence of the factors that have prevented a negative reaction from bond markets to a further delay of fiscal consolidation in the US. Central bank bond purchases and the turmoil in Europe (and thus flight to quality to US bonds) are by nature short-run factors that will disappear in the medium run, and before that happens the US will need to show a clear commitment to fiscal consolidation or risk a sudden spike in long-term interest rates. Rating agencies have already started to signal this risk. There is time, but discussions and plans should start as soon as possible to reduce long term fiscal concerns.

## Institutional and economic reforms in Europe will be crucial for solving the financial crisis

Since October 2010, financial tensions in Europe have surged again (Graph 9), especially in peripheral countries. Concerns about fiscal sustainability and financial sector losses resurfaced again, leading to widening sovereign spreads and funding pressures. However, contrary to the episode in May, financial spillovers to other countries in Europe and outside the EU were more limited.

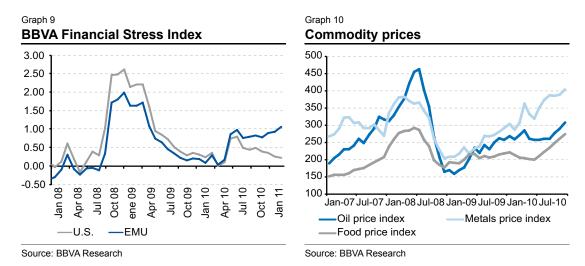
The increase in financial market tensions was triggered by two events. First, markets were uncertain about the ability of European institutions to deal with sovereign debt crises. Private investors were spooked by the proposal that they would bear losses on possible restructurings after 2013, and the likelihood that haircuts on existing debt would be needed to restore fiscal sustainability. The second trigger was increasing doubts about the credibility of stress tests, given the need to support Irish banks shortly after they were deemed adequately capitalized. These two triggers developed amid the background of concerns about the capacity of some peripheral countries like Portugal and Ireland to fulfill their fiscal deficit targets and doubts about the ability of some European economies to generate enough growth momentum to make their debt burden sustainable.

The fragility of the recovery in financial markets right after the summer highlights that markets are increasingly focusing on sovereign solvency problems in some countries, rather than just liquidity concerns. This stresses the need for a comprehensive solution, both for solving this crisis, as well as establishing a sound crisis prevention and resolution mechanism for the future. For future crisis prevention, fiscal coordination needs to be reinforced, providing for shock absorbers for idiosyncratic shocks in individual countries, but also reinforcing surveillance both in the fiscal front and in the macroeconomic dimension (including preventing the build-up of private sector imbalances). For crisis resolution, a clear and transparent mechanism that defines those who will bear losses needs to be put in place, to avoid excessive market volatility due to uncertainty, but probably at this stage is extremely important to guarantee an adequate transition mechanism.

As pointed out above, financial spillovers from this recent episode have been rather limited, including to core countries in Europe. Thus, growth in the EMU as a whole was stronger than anticipated, especially due to very positive outturns in Germany and other core European countries. However, this decoupling between financial tensions in peripheral countries and real economic activity in Europe will not last if a comprehensive governance reform is not agreed soon and countries do not continue pushing economic reforms to reduce fiscal vulnerabilities, restructure the financial system and increase potential growth. What is agreed at the next European Council in March will be key in this respect

## Commodity prices will level off, but nonetheless inflation risks are becoming more relevant in emerging economies, which will continue to grow strongly

Commodity prices have surged across the board in recent months, reaching all-time highs in the case of some metal prices (Graph 10). This is consistent with what seems to be the beginning of a long-term upward trend in commodity prices driven by surging demand from emerging economies, but there are other short-run factors that have contributed to the recent surge, at least in some commodity classes. For instance, the very fast increase in food prices in the past two months is to a great extent the effect of one-time supply-side factors (weather disturbances), which should wind down during the rest of 2011. Moreover, given ample global liquidity conditions, investors have piled into commodities as an asset class, increasing financial premia across the board.



Going forward, we expect commodity prices in general to level off around current readings. In the case of food prices this will be the result of normalizing crops in 2011. For metals, elevated inventories will start to weigh on prices. Only in the case of oil we expect a tight market to continue pushing prices slightly higher in 2011 but gradually easing afterwards. This easing will be helped by a likely reduction in financial tensions in Europe, which should shift investment flows away from commodities into other assets with more contained risk premia. Nevertheless, risks are tilted to the upside, as strong demand in Asia will continue to support an upward trend in prices in the medium run.

The increase in commodity prices has been responsible, in part, for the increase in inflation observed in emerging economies at the end of 2010 (Graph 8). In particular, the increase in food prices has had a direct and important first-round effect on higher inflation in a number of countries –especially in Asia– with the risk of feeding into overall inflation. However, going forward, the expected leveling of food prices will mean that this factor should become less important in determining headline inflation. Although the risk has also increased in developed countries, it is smaller than in emerging economies, given that food prices have a smaller weight on CPI and ample unused capacity and anchored inflation expectations will help keep inflation pressures in check.

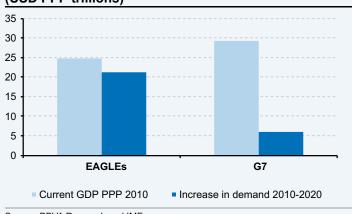
More worrying for emerging economies is the realization that rapid growth and strong capital inflows in Asia and Latin America are starting to generate overheating pressures, through inflation but also evident through rapid credit growth and increasing asset prices. Indeed, we expect Asian economies to continue growing strongly, although in our opinion authorities will be able to steer them to a soft landing and avoid overheating, although that is surely a more pronounced risk than three months ago. Driven by domestic demand and high commodity prices, Latin America is also poised to grow strongly in 2011, converging to potential growth of around 4% in the region. As mentioned before, the biggest challenge for both regions will be to manage the policy dilemmas generated by strong capital inflows. We expect policy to continue tightening in most countries, while at the same time imposing ever more stringent administrative controls to limit those inflows and prudential measures to limit credit growth, especially in Asia.

## Inset 1: EAGLEs: the key emerging markets in the next 10 years

The decoupling between the growth rates of emerging markets and the developed countries is not, in our view, a cyclical phenomenon. On the contrary, it is a structural feature of the global economy in the medium term. There are several factors behind this view. First, the impact of the crisis and the tolls imposed by its resolution are clearly much larger in the developed markets, where we expect a significant slowdown from the pre-crisis expansionary period. For emerging markets, the drag created by the crisis is much less severe and the quick recovery observed in 2010 is proof in our view of this. Looking over the longer term, BBVA Research has conducted detailed estimates of potential GDP growth based on forecasts for the likely growth rates of production factors (employment, capital and TFP). This comprehensive exercise highlights how the Emerging Markets, as a whole, can rely on a stronger basis for long term growth than the developed economies. In particular, their demographic prospects are better, implying that conservative forecasts over the long term do not require an acceleration in investment or total factor productivity.

In view of this, it is understandable that investors have shown greater interest in finding new ways to position for this rotation in world growth towards the Emerging Markets. BBVA Research has created an ongoing project to provide

Graph 11 GDP level and growth (USD PPP trillions)



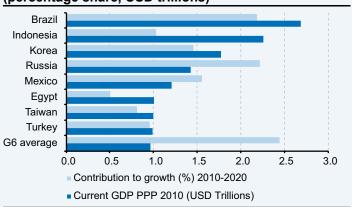
Source: BBVA Research and IMF

information about this issue. This effort is focused around the EAGLEs concept. EAGLEs stands for "Emerging and Growth-Leading Economies" and it is the group of emerging markets whose contribution to global growth over the next 10 years is expected to be higher than for the large industrial countries (which we define as the G6, ie. the G7 excluding the US). Our approach has several advantages versus alternative acronyms recently launched:

• Instead of looking at economic size and population, which may be misleading, EAGLEs focuses on the incremental GDP (IGDP) economies will generate instead, that is, their contribution to world growth. The use of IGDP is key: having a big size or a high growth rate is not enough on its own to be a key global player; it is the combination of both that really matters. This is a more relevant concept for identifying business and market opportunities with more anticipation (Graph 11 and 12)

• Dynamics: it is updated each year on the basis of economic performance and changes in economic conditions, as reflected in BBVA Research forecasts. It is not a closed group and the concept is not linked to an acronym formed by a given set of countries. This will allow identifying key markets in the EM universe and warn about potential "fallen angels" in advance.





Source: BBVA Research and IMF

• Objective: the criterion for inclusion is explicit. In order to become an EAGLE each country's expected incremental GDP in the next 10 years needs to be greater than the one anticipated for the average of the G7 economies, excluding the US.

• The results are based on a shorter horizon - 10 years - than the ones considered in other cases, ranging from 20 to 50 years, as global economy may experience huge changes in such a long period of time. This horizon is more relevant for most investment decisions.

Who are the EAGLEs? Some surprising results are highlighted by our methodology. According to BBVA Research forecasts, world GDP in the current decade will increase by 41 trillion US dollars adjusted by PPP. The EAGLEs' contribution (their IGDP) will be slightly over 50% whereas G7 share will only be 14%. It is worth highlighting China's expected role in the next ten years; its contribution to total world growth will account for almost 30% of world growth, four times more than the US and 2.4 times more

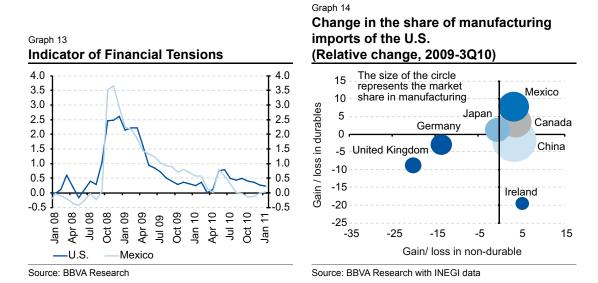
than the other three BRIC countries. India will actually match the US contribution to growth, even if it GDP will still be lower by 2020. Brazil will be the third biggest contributor, followed by Indonesia and Korea (Graph 12). Note that Indonesia and Korea will each contribute to world growth more than Russia, and, if combined, these two economies will generate 1.5 times more incremental GDP than Brazil. This is a clear case where the relevance of the BRIC concept is challenged. Next on the list is Mexico, whose IGDP contribution is expected to be greater than the one of Germany or the UK, in spite its current GDP size adjusted by PPP is only 53% and 71% of said countries, respectively. Finally it is Egypt, Turkey and Taiwan; each economy's IGDP is expected to be higher than in Canada, France and Italy. The non-EAGLE Brics will be more relevant for world growth than the G6 or other similar concepts, while using a reduced number of countries. In summary, the EAGLEs group is the group of emerging markets that are already relevant and are expected to gain even more prominence in this decade.

# 3. External environment, real and financial, favorable for the Mexican economy

In recent months, the main factors leading the course of the financial variables have remained, even though a rise in the geopolitical risks must be considered. Thus, the global economic panorama continues to be conditioned to a great extent by excess liquidity, a result of a lax monetary policy in the more developed countries. On the other hand, the uncertainty regarding the crisis of the sovereign debt in Europe, the rise in prices of raw materials and new geopolitical tensions in Africa constitute, to varying degrees, risks for the world recovery. Within this context, Mexico is maintaining a relatively better position in face of the factors to which it is most exposed, be it Europe or the rise in prices of raw materials, providing that these shocks do not have relevant effects in the U.S. economy.

#### The U.S., a better outlook with the additional boost from demand policies

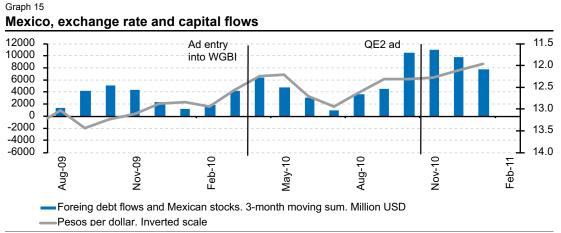
At three months from the increase in the purchase amount of U.S. Treasury bonds by the U.S. Federal Reserve (FED), the Quantitative Easing 2 (QE2), data that support the economic recovery, are not yet conclusive. On the one hand, there is lower risk of deflation, an increase in the consumer and industrial production indicators, particularly manufacturing, as well as rises in the stock markets and higher than expected corporate reports. However, the activity in the housing sector continues to be depressed, the default payment rates on mortgage loans remain "extremely high", demand for loans has remained weak, and employment continues above 9%. In brief, as was mentioned in the minutes of the FED meeting last December, even though some economic indicators reinforce confidence in the recovery, progress toward the objective of full employment and price stability is "disappointingly low". It should be pointed out that, to a great extent, the increased "optimism" regarding recovery is due to the cutback in taxes announced by President Obama last November, a reason for which the outlook for growth in the U.S. economy acquires still greater relevance once the supports are being withdrawn. Based on this information, the FED maintains its target interest rate in an interval of 0 to 0.25% and has reiterated its expectation that the economic conditions would guarantee that the rate remain at exceptionally low levels for a prolonged period. Also, it believes it is appropriate to continue with the purchase of Treasury bonds with the intent of acquiring US\$600 billion by the end of the second quarter of this year, a date that will determine to a great extent the course of the world economy. In brief, for now the FED does not seem to find the conditions to change the adaptable character of its monetary policy.



## Despite all the uncertainties noted, the improved outlook for growth in the U.S. indicates a good scenario for Mexico

The higher than expected consumption data in the U.S. bring with them an increase in the expectations for growth in the country's exports, although it is expected that these will be lower than the strong rebound they presented in 2010. It should be recalled that the growth rate of manufacturing exports.(nearly 80% of total exports) expressed in terms of real pesos, went from a monthly 1.5% on average during the second and third quarters of 2010 to -2.8% on average in the last months of last year, which was partially compensated by oil exports, both in terms of the quantity effect and of the price effect: 14% and 10% higher, respectively, relative to the amount of barrels exported daily and the price per barrel of the last quarter compared to the first nine months of the year. Also, in the case of manufacturing exports, Mexico stands out among the main exporters of goods to the U.S., for being the one that has gained most ground in the U.S. market. In particular in exports of durable goods, which represent close to 85% of Mexico's exports, the quota was growing close to 8% in 3Q10 compared to that of 2009. As to non-durable goods, the improvement was of 3% and, in comparison with other countries, Mexico's position is advantageous, reflecting improvement in competitiveness that is not totally due to the performance of the exchange rate.

In terms of foreign direct investment (FDI), the flows have not ceased. Even though there was moderation in 2009, consistent with the global environment of higher risk aversion, given the financial tensions of the moment, toward the first guarter of 2010 the recovery in these flows was evident in particular in branches like trade and manufacturing, which account for close to 70% of FDI. On the other hand, investment flows in fixed income instruments registered an unprecedented rise derived from the announcement of the entry of Mexico into the World Government Bond Index (WGBI) at the end of March and the startup of the QE2 in November. In fact, it is estimated that in 2010, more than US\$20 billion entered the fixed income market in Mexico. Other flows of resources which continue to show an important recovery are remittances and earnings from tourist services. Remittances started to recover toward the first quarter of last year, and, even though they are far from recovering the levels prior to the crisis, revenues rallied toward the last part of the year from average growth of 0.4% each month between January and September; they rose to 1.4% on average each month in the last guarter of the year. Finally, the entry of tourists and their spending continued to stabilize toward the last quarter of the year, with monthly positive variations in the last months of the year (0.23 in the two-month October--November period vs. --0.37 in the first nine months).



Source: BBVA Research

## The domestic financial variables incorporate the scenario of higher growth in Mexico and of the search for global profitability

In the financial markets, the search for profitability as a result of the abundance of liquidity at a global level has generated a strong demand for Mexican instruments. The first reflection of this entry of capital is the appreciation of the exchange rate that from November 2010 to date has registered a rise of 2.43%, to stand at levels of up to 12 pesos per dollar, a figure not seen since the last quarter of 2008. In the money market, following a drop in the yields of the fixed-rate bonds, the better growth outlook has prevailed and this has been reflected in a reduction of the aversion to risk that has led investors, except in episodes of an increase in the geopolitical risk, to get rid of the bonds in order to invest in equity funds and, thereby, increase the yield rate in accordance with interest rates in the U.S. In any case, the financing spread of Mexican corporations continues to drop, showing a decrease in the cost of capital which should facilitate the profitability of investment projects.

As risks of this incipient economic rally at a world level, the uncertainty regarding the sovereign debt crisis in the old continent is far from being resolved, even when the international financial community has taken steps to reduce the tensions, and there is an underlying possibility of a sudden increase in the global aversion to risk or some contagion via the financial sector. On the other hand, the combination of adverse climate factors, the demand of fast-growth emerging countries and the search for profitability as a result of excess global liquidity have led to price rises of raw materials which are threatening to pressure inflation in developing countries, where demand is one of the current triggers of the global economy. But the contagion channels for the Mexican economy are slim. Compared to Europe with a much narrower trade channel and direct investment that is, by far, not predominant, it remains isolated from the impact of the tensions that the sovereign risks of those countries can generate on the domestic financial variables. As regards the rise in the prices of food commodities, Banco de Mexico (Banxico) made it clear in the publication of its first minutes that as long as inflation expectations are not contaminated, this shock is far from being a concern in terms of a faster tightening of monetary policy. And, as to the drainage of household income as a result of those rises, it should be limited, given that the rallies registered in global prices are not being transmitted to domestic prices, given the limited weight of the imports of some of the products with higher increases and the existence, in some cases, of guarantee mechanisms of supply at already fixed prices.

## 4. Domestic support for growth: consumption, employment and credit

#### The cost and the availability of financing in Mexico will not restrain growth

financing for Mexican companies has been declining since June 2009. This has been observed in the cost of issues of corporations in Mexico. Also, interest rates on bank loans to companies has dropped from 10.7% in December 2008 to 8.5% in December 2010. Interest rates on financing to companies reached their high in 2008, as a result of the scarcity of liquidity on the markets and of the rise in companies' credit risk, the result of a very uncertain economic environment. Similarly, the financing conditions of the government--maturity term and interest rate--have been more benign.

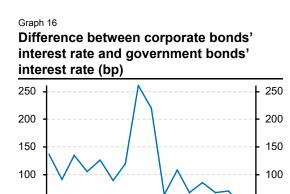
Additionally, in the case of consumer credit and housing mortgage loans, their interest rates remained quite stable, despite the crisis, at about 28% and 11%, respectively.

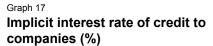
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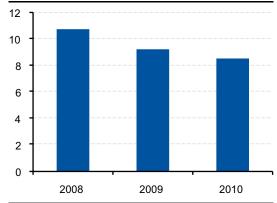
0

Dec-10

Mar-10







Source: BBVA Research with Semana Corporativa Banamex data

Sep-08

Dec-07

Jun-09

50

0

Mar-07

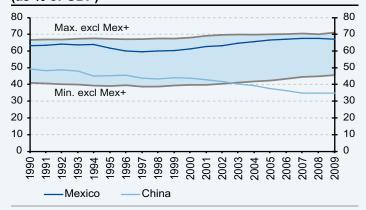
Source: National Banking and Securities Commission

## Inset 2: Household consumption, international comparison: weight, volatility, and structure

Private consumption is the demand component representing the greatest percentage share of GDP. In real terms (constant 2005 dollars) it represents on average close to 60% of GDP for the nearly 200 economies considered in the period (graph 18). In a smaller sample of countries for the most part belonging to the OECD, Mexico stands out for maintaining a relatively high weight of consumption as a percentage of GDP at close to 70%.

A high percentage of consumption is not, however, directly related to a greater degree of development (graph 19). In relatively narrow ranges of per capita income, countries can be found with very different levels of consumption as a percentage of GDP, and vice versa. The weight of consumption is also not clearly related to income distribution (ii), which suggests that there are a variety of factors such as productive specialization of the economy, its demographic structure—the rhythm of population growth and its structure

#### Graph 18 Private consumer spending (as % of GDP)



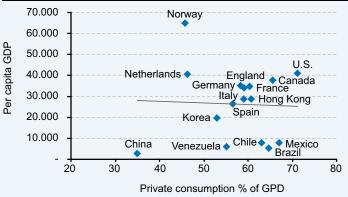
The sample includes: Brazil, Canada, Chile, China, Hong Kong, France, Germany, Italy, Netherlands, Norway, South Korea, Spain, Great Britain, United States, and Venezuela

Source: BBVA Research with data from UN National Accounts Main Aggregates

by age brackets—or its capacity to cushion income shocks that can influence the weight of consumption in GDP. In this regard, the level of development of the economies indeed seems to be more clearly related with volatility in private consumption, which makes much sense in the light of economic theory. According to the theory of permanent income, individuals' consumer spending depends on their "long term" income, that is, not on cash flows subject to sudden, short-term fluctuations in revenue, such as variations in work-related income in periods of time that are more or less favorable but fleeting, or greater or lesser profitability obtained from the financial and non-financial assets that they hold. In this sense, the agents (individuals or families) would try to earmark a relatively stable percentage of their income for a level of consumption that would also be sought to be "smooth" over time, independently of the horizon that they face<sup>1</sup>.

#### Graph 19

## Per capita GDP in US\$ and weight of consumption in GDP, 2009



Source: BBVA Research with data from UN National Accounts Main Aggregates and WEO Database, Oct. 2010

(i). UN National Account Main Aggregates Database

<sup>&</sup>lt;sup>1</sup> A finite horizon in Modigliani's life cycle model or infinite horizon as in Friedman's theory of permanent income.

<sup>(</sup>ii) Considering the same sample of countries (Brazil, Canada, Chile, China, Hong Kong, France, Germany, Italy, the Netherlands, Norway, South Korea, Spain, Great Britain, United States, and Venezuela), there is a positive correlation for the latest available data between the Gini index and consumption as a % of GDP. The higher the Gini index, that is, where there is greater inequality, the greater the weight of consumption in GDP. This correlation, however, is neither very clear nor intuitive and it tends to disappear with an increase in the sample size.

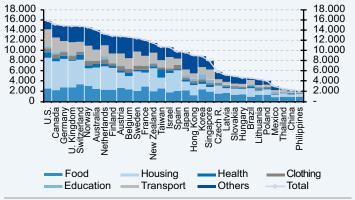
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To obtain this "smoothening", the agent resorts to savings, loans, financing or external transfers, as well as mechanisms for transferring income from the public sector, such as unemployment compensation, etc. (iii). The greater the financial restriction, less access will be available to intertemporal financing of consumption needs, and consumption will tend to be less smooth and closer to short-term income and with this, it will be more variable (Campbell and Mankiw's theory of consumption with liquidity constraints) (iv)

In the case of Mexico, the use of "external transfers" is especially important, since remittances sent by Mexicans living in the United States represent close to 3% of GDP (Mexico is in third place among the world's countries in terms of the amount of remittances received—in dollar terms behind India, China, and the Philippines). More important than the effect on total private consumption is the regional impact, since remittances represent close to 10% of state GDP in states such as Michoacán, Zacatecas, Oaxaca, Guerrero, and Hidalgo and almost 50% of total revenue in rural areas. However, it is important to keep in mind the highly cyclical nature of these flows, which involve strong contractions in crucial periods such as the 2009 recession, in which Mexican workers were the most affected by the U.S. economic crisis<sup>2</sup>.

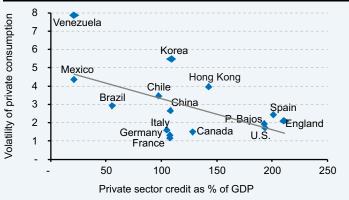
#### Graph 20

## Household expense structure (in 2005 dollars)



#### Graph 21 Credit to the private sector as a % of GDP, consumption volatility

earmark for food, housing, and transportation.



Meanwhile, in relation to public budgetary transfers to reduce

disparities in inequality, with the exception of government

programs that are successful but of a limited scope such

as Opportunities in Mexico, there are few transfer programs

that, in fact, re-distribute the wealth. It has been shown that

this contributes to explaining half of the income inequality

in the countries of Latin America, and for example, those of

The existence of liquidity restrictions that prevent smoothing

consumption is clearly shown in a comparison among

countries (graph 20). In comparable 2005 dollar terms, the

agents tend to spend similar amounts on basic necessities such as food and to some degree housing, almost

independently of their disposable income, as opposed to

proportional spending on the different consumption items.

As a result, the lower the level of comparable revenue in the

economy (in terms of net disposable income), the higher

will be the percentage of their income that households will

Another way of viewing this is with the relative development

of the financial system. Economies with high per capita

income levels and with more developed financial systems

tend to experience less volatility in private consumption.

A measure of the development of the financial system

(but not the only one) is the percentage of credit granted

the OECD<sup>3</sup>.

Source: BBVA Research with INEGI data

(iii). Evidence has been found that indicates that among developed countries (Consumption Volatility & Financial Openness, Buch and Yener 2005) those with a greater level of financial opening exhibit less variability in private consumption.

(iv). Other factors can also influence a greater volatility in consumption, such as a greater impact from income shocks due to wars or natural disasters (High Consumption Volatility, Auffret, WB 2005) although it could be argued that this is related to the absence of fiscal policy mechanisms that could help soften these shocks.
<sup>2</sup> See Mexico Migration Watch, June 2009 (Economic Research Service and Fundación BBVA Bancomer.)

<sup>3</sup> Poverty reduction and growth: virtuous and vicious circles, WB 2006.

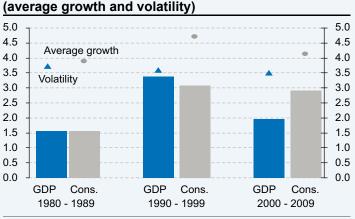
Source: BBVA Research with IMSS and INEGI data

to the private sector as a share of GDP, which correlates negatively with consumption volatility.

In the case of Mexico, consumption volatility has been greater than income volatility in the three decades for which quarterly data is available, revealing little possibility of consumption smoothing on the part of the agents. Thus, independently of whether consumption grows on average at a higher rhythm than GDP as was the case in the 2000-2009 period or if the opposite occurs, as was the case in the previous decade, variability in consumption has always been greater.

It would be advisable, however, to emphasize an important difference between the 1995 and 2008 crises, in terms of the financial system. In 1995, the economic crisis was accompanied by great uncertainty in key variables such as interest rates or inflation, which adversely influenced the credit market, due to the existence of foreign exchange risk or variable interest rates, derived from the internal origin of the crisis and the weakness of these indicators in that period. On the opposite extreme, the 2009 crisis, of external origin, and which affected Mexico via its exports, was in no comparable way accompanied by financial instability, which helps explain the greater growth in consumption in the previous decade. (graph 22)

All in all, as can be seen on an international level in a broad



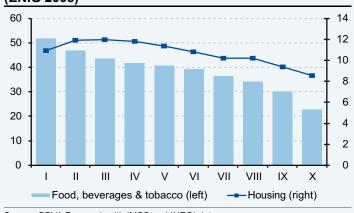
#### Graph 22 Consumption and GDP (average growth and volatility)

Source: BBVA Research with INEGI data

sample of countries, Mexicans with lower income levels have fewer possibilities of smoothing their consumption over time and they earmark a higher proportion of their income for food and for paying for the housing that they live in. Thus, for example, the bottom 20% of households, the poorest families, earmark around 50% of their income for food, while the corresponding figure for the upper 10%, that is, the wealthiest families, is only 20% (graph 23). On an accumulated level, practically 85% of private consumer spending corresponds to nondurable goods and services (v).

To summarize, even though Mexico is high on the list of countries in which private consumption represents a large percentage of GDP, an important part of the population faces liquidity restrictions that make it difficult to smooth consumption, in addition to a reduced possibility of receiving counter-cyclical income transfers, both from the public sector—unemployment compensation—as well as probably from the rest of the economic agents, as Mexican migrants' remittances from the United States are procyclical. As will be analyzed in greater detail in the following chapter, there is a significant relationship between financing channels and private consumption, with which the room for improvement in terms of development and the coverage of the financial system to achieve a more stable consumption model is very important.





Source: BBVA Research with IMSS and INEGI data

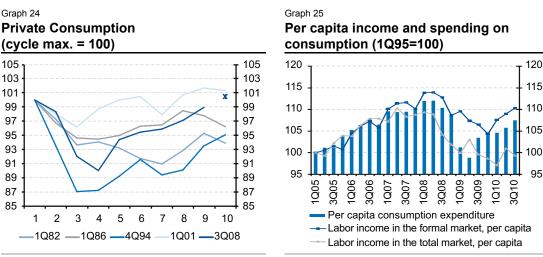
(v) Based on Mexico's National Accounts, the structure of private consumption in the last six years is as follows: 44% services, 38% nondurable goods, 12% durable goods, and 7% semi-durable goods.

## Consumption in Mexico: high in aggregate terms; low in per capita terms and volatile due to the low income level and low penetration of financing

As was mentioned in the chart relative to the international comparison of consumption, the relative size of private consumption spending as a proportion of total production of the country is high at around 70%, and is high even when compared to other economies. The evolution of this weight has fluctuated at around 60% to 70% of GDP throughout the last three decades although of note is the drop in the 1994-1996 period, derived from the greater contraction of consumption compared to GDP<sup>1</sup>. It should be recalled that since it was a crisis accompanied by marked imbalances in the financial system due to the performance of the exchange rate and high inflation levels, the negative effect on the balance of households and real wages was very important, so that consumption took almost three years to return to the levels prior to the recession. In this sense, the 2009 recession had a less drastic effect on private consumption spending, while 2009 GDP decreased (-)6.1%, private consumption dropped (-)7.1% and, for the recently concluded 2010, we expect that the growth rates were on the order of 5.2% and 5.5%, respectively.

Even though the weight of consumption in GDP and its growth turn out to be high, the panorama changes when it is considered in terms of consumption per inhabitant, where it is evident that the low revenue level and its unequal distribution are consistent with reduced and volatile spending levels per person (see previous Chart). In this sense as shown in the adjuoining graph, the per capita income derived from the labor market is in 2010 the same as in 2005, showing a relative improvement only as to what refers to the performance of revenue derived from the formal market. The fact that per capita spending on consumption behaves in a way more similar to that of income forthcoming from the formal market rather than from the total is consistent with the more positive role that other determining factors of household consumption exercise among the population group with income derived from the formal market.

All of this leads to a reflection on the determining factors of private consumption and, by this, the channels through which the agents (individuals and households) can or cannot maintain a soft course in their consumption pattern, less dependent on short-term variations. Among these determining factors of consumption there are basically three: (1) disposable income; (2) the role of expectations; and (3) the financing channels.



Source: Banxico and BBVA Research

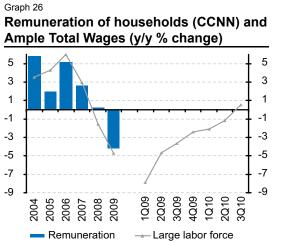
Source: Banxico and BBVA Research

<sup>&</sup>lt;sup>1</sup> In 1995, GDP contracted (-) 6.2% in real terms, while consumption decreased (-) 9.5%. In 1996, consumption had not recovered; its growth was only 2.2% compared to economic growth 5.1%.

**Households' disposable income is the main determining factor in consumer spending** According to the *Sistema de Contabilidad Nacional* (the National Accounting System), this concept corresponds to income that the agents assign either to consumption or to savings. It is obtained as the national income minus taxes paid, plus transferences (programs such as Opportunities), less payments to Social Security, less benefits, plus dividends distributed. Households participate with close to 80% of the total available income of the economy. In real terms, disposable income of the economy contracted (-) 8.8% in 2009, of which 5.1 points are explained by the contraction of disposable income of households.

Although Mexico's National Accounting System is a great source of information at a very itemized level of the agents and activities that make up the economy, it does not have the desirable degree of opportunity for frequent follow-ups to indicators such as this one<sup>2</sup>.

In this sense, with the aim of having available an indicator, current and of quarterly frequency, of households' Disposable Income and, in particular, of its income component, an index is being prepared that is obtained based on the information of income from work, understood as the monetary and/or in kind perceptions that workers obtained from the performance of their work. Based on statistics of the National Occupation and Employment Survey, only the net income is considered, that is, discounting tax payments, union fees, and/or payments that the worker contributes to Social Security. In the case of independent workers, operating expenses relative to the economic unit are also considered. Thus, for example, through 3Q10, the average income per hour of work in pesos rose to \$29.3 pesos for the average of those employed, with a maximum (average) of \$48.5 pesos for employers and a minimum of \$24.7 pesos among self-employed workers on non-qualified activities. Once the effect of inflation on the consumer has been considered, the result is that it is 0.8% lower in 3Q10 compared to 3Q09. The other variable involved in the calculation of labor income is the number of total workers in the economy, among whom are the subordinate workers and paid employees (around 65% of the employed), self-employed workers, employers and non-remunerated workers, not taking into account whether they belong to the formal or informal sector of the economy.







Source: Banxico and BBVA Research

Source: Banxico and BBVA Research

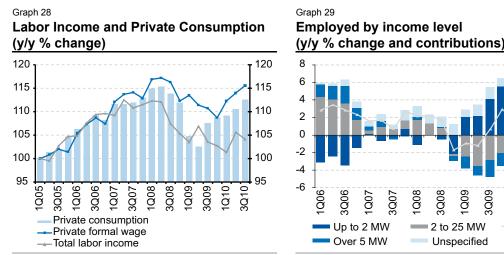
<sup>&</sup>lt;sup>2</sup> Also worth mentioning that since the new base year calculation in the System of National Accounts (2003), the variables are available only since 2003 and annually, the last observation available, 2009.

The measurement thus obtained has a very close relationship with the measurement of wages in the disposable income of households in the National Accounts and, therefore, with private consumption, with the advantage that the data of income from work and employment are published guarterly, by which it is possible to have a more timely indicator of disposable income. On the other hand, this measurement of income allows knowing the evolution of the income and employment component. Thus, as was mentioned at the beginning of this chapter, the marked growth in inflation during the 1995 and 1996 crisis (an annual 35%, on average in the period) implied a drastic loss of the purchasing power of wages, a key difference between that recession and the last one. Another important difference is in terms of the recovery of employment, where this recession was less intensive in terms of job loss and has stood out due to the speed of recovery. However, as opposed to that time, the period of negative variations in income seem to have extended longer in this period than before (10 guarters then, 12 quarters now).

One more timely measurement of families' disposable income can be based on total wages of the formal sector, which can be obtained monthly based on the data reported by the Mexican Social Security Institute (IMSS for its Spanish initials) of affiliated workers and of real wages. However, the workers registered in the IMSS represent only about one third of the total work force of the country (32.5% in 2010).

From the characteristics of employment on average in the "non-formal " sectors, where one of the characteristics is the low wage level, the Ample Labor Income has tended to recover less than the formal which undoubtedly has been a factor which has placed a brake on the recovery of private consumption. It should be recalled that during the most intensive quarter of the crisis (4Q08-3Q09) in terms of job loss were those belonging to "non-specified" income and "up to 2 minimum wages", presumably the workers who are less costly are those who perform relatively better in crisis situations in terms of attaining a job.

Although slowly, the wage groups that contribute to job generation have been climbing, and the wage ranges between two and five minimum wages are beginning to increas.



Source: Banxico and BBVA Research

Source: Banxico and BBVA Research

A second factor that has an influence on the dynamics of private consumption is the role of expectations, very much linked to the cycle and to the performance of income Taking into account that the agent divided his disposable income between savings and consumption, the decision of what percentage to assign to each of them is an inter-temporary decision where his expectation intervenes in the income that he will dispose of in each future time period. If the individual thinks that in the future he will have to face worse circumstances than now, he will tend to save more and spend less (should his disposable income allow).

8

6

4

2

0

.2

.4

-6

0

3Q1

Total

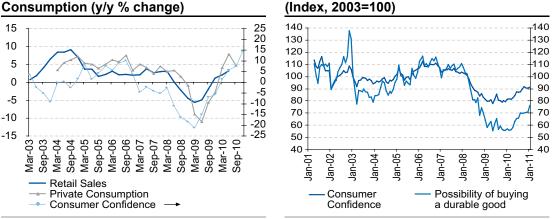
1Q10

3Q09

Even though a variable that has bearing on the conjecture regarding the future of an agent is difficult to measure, an indicator such as consumer confidence index prepared by the INEGI could be of help<sup>3</sup>. The evolution of this index is related to variables like retail sales and private consumption, although, due to its nature, it is much more variable. Of note is the slow recovery, although with the sustained trend of consumer confidence in recent months, also, and as it was expected, the sub-index relative to the acquisition of durable goods showed a marked contraction in 2009, which was reflected in the consumption of this type of goods (-29.4% its variation in 2009). The consumption of durable goods depends on the availability of financing, the result of the crossing of conditioning factors on the side of the supply, fundamentally banking, and the demand due to the expectation of the availability of disposable income to be able to face future payments of the good or service acquired, which takes us to the third determining factor of consumption: credit.



Graph 31 **Consumer Confidence, Sales and Private** Indicator of Consumer Confidence (Index, 2003=100)



Source: Banxico and BBVA Research

Source: Banxico and BBVA Research

Lastly, a third factor having a bearing on the dynamics of consumption is credit, the availability of which is not a deterrent to growth in consumption, even though there is ample margin for improvement with regard to its impact on the level and volatility of consumption, a margin derived from the high weight of informality on the economy

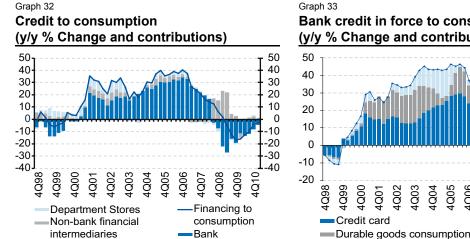
In Mexico, the current consumer credit<sup>4</sup> grew at annual average rates between 20% and 40% in real terms between 2002 and 2007. Growth in this segment was possible mainly through credit cards, credit for durable consumer goods and, as of 2003, also through automobile credit. According to Banco de Mexico data, credit cards grew from 6.4 million in the first quarter of 2002 to 26.5 million in the second guarter of 2008. The banking sector is the highest provider of consumer credit, which is why its evolution shows to a great extent the performance of the segment. In addition to the fact that it has been gaining ground by growing from around 60% of total consumer credit in 2000 to close to 80% in 2010. Non-bank consumer credit is growing at positive rates with the result of the more frequent use of promotions from inventory rotation linked to the use of credit by the commercial entities.

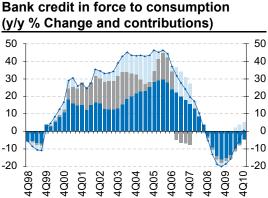
<sup>&</sup>lt;sup>3</sup> So as to construct this indicator, the responses generated by 2,336 homes in the 32 states of the country were obtained on questions relative to the opinion of the interviewee regarding his own situation and that of the country at present (compared to one year before) and on the future (12 months ahead compared to the current situation); also included is a guestion relative to the possibility of acquiring a durable good

<sup>&</sup>lt;sup>4</sup> Current credit refers to the balance of those credit operations that are not past due.

Fotal

Other





It incorporates the adjustment of the credit foreseen by the Sofoles, property of the banks, which is accounted for as a bank credit. The credit includes the portfolio in force, the pastdue, the rediscounted, the restructured in UDIS, and the one associated with programs of the FOBAPROA, accrued interest in force and past-due.

Source: BBVA Research with Banxico data

It incorporates the adjustment of the credit foreseen by the Sofoles, property of the banks, which is accounted for as a bank credit.

Source: BBVA Research with Banxico data.

As a result of the severe crisis of 2008 and 2009, credit to consumption underwent an intensive contraction both due to the deterioration of the conditions of demand and due to the tensions on the side of supply, in accordance with a financial environment particularly adverse in which the risk criteria, and, therefore, the financing concession and its price, were relevant.

Nevertheless, credit to consumption has begun to regain its dynamism by the improvement of the conditions of supply and demand.

As it is concluded in the last chart, in Mexico as in other countries, the supply of credit foreseen by the banking sector has a positive effect in the consumption of the economy, in such a way that the greater dynamism of the expected credit for this year will have a positive effect on the economy through consumption. Being that the regulations, generally due to prudential reasons, set legal requirements that induce credit to concentrate on the formal sector, a greater formalization of the economy would contribute with a greater access to credit, but additionally it would promote higher productivity levels, wages and income and, therefore, a greater capacity for access to credit and of increase and softening of spending on consumption throughout the economic cycle.

## Inset 3: Consumption and financing: relationship and causation

In this section we will evaluate, in Mexico's case, what the effect is of access to credit in household consumer spending. With this in mind, we will first evaluate the relationship between consumption and consumer credit. Subsequently, using a credit supply index that we prepared based on the public information available, we will attempt to isolate the effect that the conditions for accessing credit have on consumption.

Different studies show that consumption depends on income expectations, uncertainty in relation to its evolution, and credit conditions. It has been shown that credit is an important determining factor in consumption because households want to maintain a given level of spending during their life cycle so that in certain periods when income levels decline, families can resort to credit. At the same time, it was also shown that with more lax credit conditions, such as lower interest rates, less strict concession conditions -such as an increase in the percentage of the value of the good or product to be financed or longer credit maturitycontribute to boosting household consumption.

Given the still low penetration of consumer credit in Mexico and the cyclical expansion being experienced by the economy, it can be expected that bank credit in this segment will grow. With this panorama, it is important to consider the effect that this variable could have on household consumption, and therefore, on the economy as a whole. With this in mind, estimates were made on the

relationship between bank consumer credit and private consumer spending in the economy. The following chart illustrates the results of different estimates made through different methodologies. The data used are guarterly and correspond to the 1996-2010 period. Five different models are contemplated: i) ordinary least squares (OLS); ii) dual stage regression; iii) regression with an unobserved component that changes over time, thus minimizing the errors of a simple linear regression; iv) an OLS with the variables in differences; and v) this latter model using the same bank credit from two prior periods as an instrumental variable to try to isolate the effect of the economic environment on financing. Statistical tests were conducted to ensure that the results of all the estimates were consistent, and indeed, the slight differences in the each of their specifications only led to moderate differences in the results. With this methodology, a range of results is obtained with a moderate disparity due to the different focuses being considered, which supports its consistency. It was noted that the most important determining factor for consumption is the number of jobs, followed by wages. Bank credit was significant in all the specifications, and the results show that a 1% increase in bank consumer credit is associated with a rise in consumption of between 0.05% and 0.09%. This means that, for example, a 20% growth in bank consumer credit is associated with an increase in consumption of between 1.0% and 1.8%. Although this effect seems moderate, one of the reasons for this is the

#### Elasticity of CONSUMPTION in relation to:

Consumption	Ordinary least	Two stage regres-	Regression with unob-		OLS in differences with
	squares (OLS)	sion1 (STEPWISE)	served component	OLS in differences	instrumental variables <sup>2</sup>
Number of jobs	0.560	0.884	0.754	0.579	0.429
	(0.010)**	(0.010)**	(0.024)**	(0.285)*	(0.191)**
Wages	0.231	0.599	0.148	0.274	0.320
	(0.138)*	(0.091)**	(0.078)*	(0.152)*	(0.113)*
28-day CETES	0.004	-0.005	0.002	0.005	0.004
	(0.004)	(0.003)*	(0.002)	(0.005)	(0.005)
Bank consumer credit	0.066	0.054	0.052	0.074	0.092
	(0.013)**	(0.007)**	(0.003)**	(0.043)*	(0.050)*
Constant	4.88	2.54	1.34		
	(1.824)**	(0.998)**	(0.162)**		
R-squared	0.98	0.98	0.99	0.45	0.24

\* \* Significant at 5%; \* significant at 10%.

<sup>1</sup> The methodology indicates that the real interest rate on 28-day Cetes with a 3 period delay turns out to be a relevant variable.

<sup>2</sup> The instrument used was bank consumer credit with a 2-period delay.

The period for the estimates is 1996:4 - 2010:3. Source: BBVA Research.

still low penetration of consumer credit (3.1% of GDP), which is related, in turn, with the large size of the informal economy. To the extent that the penetration of consumer credit grows in the medium term, its effect on consumption should intensify<sup>1</sup>.

Even though a positive correlation has been observed in relation to consumer credit, it is possible that the same financing is influenced, in turn, by consumer spending and demand factors. For the purpose of analyzing this possible behavior, statistical causation tests were conducted on the relationship of consumption on bank consumer credit. The tests do not show evidence of this causation effect. Specifically, it is not noted that a delay in consumption contributes to improving the behavior of bank consumer credit.

#### Chart 2

## Causation tests of total consumption in bank consumer credit

	Granger	Sims	Geweke, Meese,
			and Dent
Statistic F	1.325	0.805	1.727
	(0.268)	(0.532)	(0.180)

Significance level in parenthesis.

Ho: delays in the causal variable are zero.

Source: BBVA Research.

Nevertheless, those supplying credit could be taking into account, among other factors, the contemporary demand for financing, demand in each period –and even more so considering that the data is quarterly– because they have to face costs associated with providing credit, such as finding funding sources, which affects their financial costs. Thus, for the purpose of analyzing the effect of credit conditions on consumption, different studies concentrate on supply factors. In the case of Mexico, the Banco de Mexico prepares an index of bank credit supply factors based on the Survey of the Conjunctural Evaluation of the Credit Market, which it applies to a sample of companies. Using that source, we have calculated a credit supply index, which behaves in very similar fashion to the index compiled by the Banco de Mexico in its latest report on the financial system, since in compiling the supply variables we have proceeded in similar fashion to the Banxico report<sup>2</sup>. Given the lack of a financial survey of households, it is the credit supply conditions that companies face that are considered as a reference point for all the credit segments.

To calculate the supply index, the average of the survey indicators associated with the characteristics of bank credit is obtained-interest rates, access conditions-and then this average is subtracted from 100. As a result, this index can be understood as the percentage of the companies that indicate that, on average, the supply variables utilized are not limiting factors for requesting or receiving new credits. The bank credit supply index experiences a behavior similar to that of bank consumer credit, and indicates that, with the exception of the period of the global financial crisis-there have been no major restrictions on credit supply. This restriction on the supply of credit was tied to a very adverse global financial environment, in which the cost and availability of financing for banks, in addition to the credit risk in specific segments of the economy, led to the strengthening of criteria for offering credit and for risk related in granting loans, particularly for those without collateral. In fact, the Banco de Mexico, in analyzing the factors of supply and demand for credit, concluded that "the lower credit levels in the economy spring from demand more than from supply factors".

Introducing estimates similar to those previously applied but substituting the variable representing loan loss provisions for the calculated supply indicator, it can be seen that credit supply has a positive effect on consumption. A 1% increase in the supply index leads to a growth in consumption of between 0.03% and 0.12%. Even though a considerable disparity exists among the elasticities of the credit supply index, most are around 0.07%. Thus, it can be estimated that if the conditions of bank credit supply were to shift from the current level to the level observed in 2006, consumption would increase a further 0.4% to 1.9%, although most of the calculations show a positive variation of about 0.9%<sup>3</sup>.

In conclusion, in Mexico as in other countries, the supply of credit provided by the banking sector has a positive

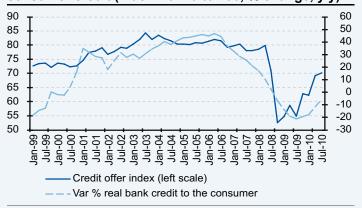
<sup>&</sup>lt;sup>1</sup> The effect of credit on consumption in Mexico has been analyzed in other studies. For example, Copelman (1996) shows that in the 1990 to 1992 period, the increase in financing led to a fall in liquidity restrictions, which translated into a considerable rise in consumption. This behavior is also observed in countries such as Chile and Israel in the periods following their respective stabilization programs.

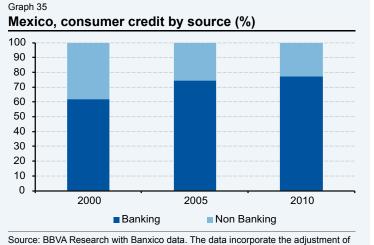
<sup>&</sup>lt;sup>2</sup> Banco de Mexico (2010), Report on the financial system through June 2010, Inset 10, page 101.

<sup>&</sup>lt;sup>3</sup> Among the studies that use an index on credit conditions to analyze the effect on consumption are Aron, Duca, Muellbauer, Murata, and Murphy, 2010. This study illustrates the importance of the availability of credit on consumer spending in the United Kingdom, the United States, and Japan. In the case of Japan, it was shown that consumption has been very stable, reflecting the lack of liberalization of household credit since the 1970s. At the same time, in the United States and the United Kingdom, the improvement in access to credit has increased consumption in both countries. In developing countries, such as the Czech Republic (see Pasalicova and Stiller, 2004) it can also be seen that credit conditions have a significant impact on household consumption.

#### Graph 34

Mexico, indicator for bank credit supply and bank consumer credit (Index from 0 to 100, % change, y/y)





Source: BBVA Research with Banxico data

## credit provided by the Sofoles owned by banks, which is considered as bank credit

## Chart 3 Elasticity of CONSUMPTION in relation to:

Consumption	Ordinary least squares (OLS)	Two-stage regression1 (STEPWISE)	Regression with unob- served component	OLS in differences <sup>2</sup>	OLS with instru- mental variables <sup>3</sup>
L. Consumption	0.765	0.776	-0.296	-0.282	0.871
	(0.207)**	(0.058)**	(0.121)**	(0.201)	(0.140)**
Number of jobs	0.337	0.750	1.314	0.756	0.276
	(0.202)*	(0.138)**	(0.112)*	(0.222)**	(0.125)**
Wages	0.028	0.105	0.313	0.544	-0.065
	(0.201)	(0.032)**	(0.083)	(0.154)**	(0.142)
28-day CETES	0.002	-0.007	0.004	0.003	0.000
	(0.005)	(0.004)*	(0.002)*	(0.004)	(0.004)
Bank credit supply index	0.089	0.073	0.028	0.072	0.120
	(0.031)**	(0.020)**	(0.012)**	(0.041)**	(0.066)*
Constant	-2.367	-1.495	1.258		-2.851
	(1.074)**	(0.763)	(0.095)**		(1.406)**
R-squared	0.91	0.98	0.98	0.45	0.96

Significant at 10%; \* \* significant at 5%.

<sup>1</sup> The methodology indicates that the real interest rate on 28-day Cetes with a 3-period delay turn out to be a relevant variable.

<sup>2</sup> The bank credit supply index with a one-period delay was used.

<sup>3</sup> The instrument used was the bank credit supply index with a one-period delay.

The period for the estimates is 1996:4 - 2010:3. Source: BBVA Research.

effect on the economy's consumption levels. Therefore, the expectation for this year of a higher level of bank credit as a result of more favorable supply conditions and a more dynamic demand environment, will have a positive effect on economic growth through consumption.

#### References

Aron, J., Duca, J., Muellbauer, J., Murata, K., and Murphy, A. (2010), "Credit, Housing Collateral and Consumption: Evidence from the UK, Japan and the US", Federal Reserve Bank of Dallas, Research Department Working Paper 1002. Banco de Mexico (2010), Reporte sobre el sistema financiero a junio de 2010 (Report on the financial system through June 2010).

Copelman, Martina (1996), "The role of credit in the poststabilization consumption booms", Board of Governors of the Federal Reserve System, International Finance Discussion Papers Number 569.

Pasalicova, Renata and Stiller, Vladimir (2004), "Credit and Household Consumption", Czech Journal of Economics and Finance, 54, 11-12.

## 5. Inflation, with a margin to maintain the monetary pause

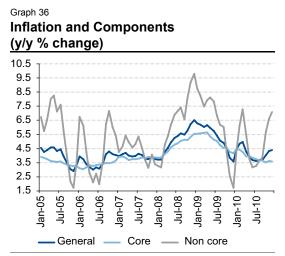
## After the drop in 2010, inflation will again descend in 2011, approaching the central bank target

The performance of inflation in 2010 should be considered satisfactory since, despite the adverse context at the beginning of the year with the increase in the VAT rate from 15% to 16%, the unfreezing of various public rates and the sharp rise in prices of agricultural products, inflation turned out to be much lower than expected by the consensus of analysts or the central bank. In fact, inflation was below the lower target range expected by Banxico in the second and third quarters, due to which the central bank revised it downward for the last quarter, a period in which the datum finally registered was exactly at the lower limit of the the inflation target range from 4.25% to 4.75%.

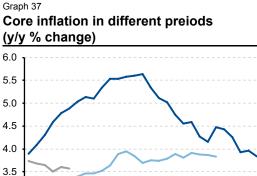
The favorable performance of inflation is due mainly to the core component, which from an annual high in January 2010 of 4.5% fell from that time to stabilize at around 3.6% in the fourth quarter of the year. The fundamental factors for this reduction are three: i) that the increase in the VAT rate did not generate inflationary expectations and was quickly diluted, ii) and related to this, the absence of demand pressures after the deep recession of 2009, and iii) the trend toward an appreciation of the peso against the dollar throughout a good part of the year, which prevented uncertainties on the cost of imported inputs.

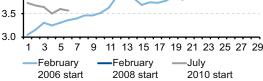
For 2011, we believe it most likely that inflation will continue within the boundaries set by the Banco de Mexico for the inflation target, 3% with a variability interval of one percentage point above and below. In a scenario in which the Mexican economy has grown since mid 2009 but without yet eliminating the negative output gap generated by the previous recession, no generalized demand pressures on prices are evident. The output gap is closing gradually and, measured as the difference between actual GDP and its trend, it is most likely that at some point during the second half of 2011, it will be positive, a necessary condition, although not sufficient for upward pressures on demand to be perceived on consumer prices or inflation expectations.

In addition, at least during the first half of the year, the exchange rate will register appreciatory pressures due to the entry of foreign capital flows seeking higher yields in the developing economies given the continuity of the monetary stimuli in the more developed economies. This favorable global panorama to maintain low inflation levels has some upward risks such as the possible impact of the rise in prices of basic commodities on the international markets.



Source: Banxico and BBVA Research





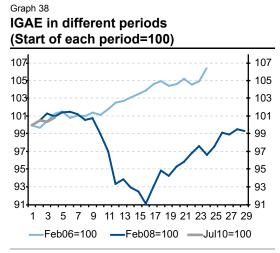
Source: Banxico and BBVA Research

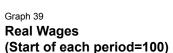
Demand pressures, wage costs and exchange rate, favorable for anchoring inflation

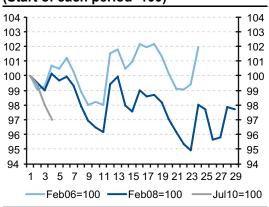
To analyze the existence of pressures by the factors noted under the current situation of inflation, we conducted a comparison between the conditions prevailing in two previous periods, one in which the performance of core inflation--a better reflection than that of total NCPI of less transitory pressures on prices--was consistently maintained below 4% (between February 2006 and January 2008), the second period analyzed is that between February 2008 and June 2010, when core inflation was not only above 4% but reached its maximum level since the year 2004, to stand at 5.6% in the month of April of 2009; and finally, the comparison of the two periods with the current one in which core inflation has been consistently below 4% from July to December of 2010. The comparison between these three periods was done through the generation of base 100 indices for the beginning of each period for the seasonally adjusted series of the IGAE and real wages of IMSS affiliated workers and the monthly series of the average nominal exchange rate.

For the first period, we see in the adjoining graphs that GDP expanded consistently in the time period studied, while real wages increased throughout the period, although with considerable volatility, with the nominal exchange rate remaining stable throughout the period. Thus, it seems that throughout this first period in which core inflation was maintained at under 4%, although activity and wages posted growth, this did not create the necessary conditions to pressure prices. Moreover, the stability of the peso versus the dollar was an important factor for maintaining prices in check. For the second period which began in February 2008, we observe that activity suffered a substantial drop and that even two and a half years later its initial level has not recovered; real wages are consistently lower than those at the initial level throughout a great part of the period and, in fact, at the close were still far from the initial level. In turn, the peso suffered an abrupt depreciation against the dollar of up to 36%.

Thus, it can be concluded that in the second period, although the demand factors to spur inflation were not present, the nominal destabilization did have negative effects. However, it is important to note that the various upward shocks throughout this period, particularly the increases in the prices of some raw materials on the international markets had some incidence on inflation, although they quickly faded. Finally, in the current period, in which core inflation has been consistently maintained below 4%, we see that activity is slowly expanding, while real wages have shown a downward trend and the peso has appreciated. All things considered, we believe that demand pressures still do not constitute a risk factor for a rise in inflation, while the appreciation of the peso and lower volatility in the exchange rate is truly a factor for anchoring prices and expectations for these. Thus, the current situation of inflation is at a point in which the opportunity of nearing the central bank variability range is viable, although with some risks tending toward increasing rather than lowering inflation.







Source INEGI and BBVA Research

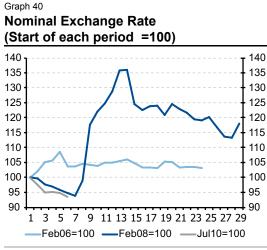
Source: STPS and BBVA Research

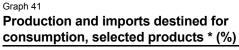
## Balance of inflation risks biased slightly upward due to the possible impact of an increase in prices of raw materials

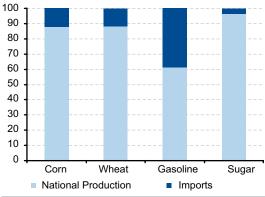
During a good part of the past decade, the prices of raw materials increased constantly, particularly since 2007, mostly due to the greater trend in demand from the emerging economies and to the expansion cycle of the developed economies and also, in a more transitory manner, to the element of financial investment.

In recent months, the prices of raw materials have again risen, although it is important to note that the demand boosted by better perspectives on the performance of the overall global economy and the greater weight of the developing countries have played an important role in this increase in prices, it is also true that other factors have also had some bearing. In the first place, it is important to identify those related with supply, since in some markets such as those of corn or wheat, climate conditions caused a lower production of these products, leading to a rise in the price of these commodities. Moreover, a not unappreciable part of the rise in input prices is due to an important speculative component. This is due to the fact that the expansive monetary policy of the developed countries has generated great liquidity in the financial markets, which coupled with the gradual improvement of growth expectations throughout the world, has created incentives for investors to take greater risks in all the financial markets, including those of basic commodities.

The question regarding how this will affect inflation in Mexico can be answered by examining the breakdown of the consumer markets of these products and their main derivatives and the dependence on imports, as well as whether the performance of prices on the NCPI will experience similar variations to those on the international markets of such products.







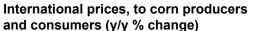
Source: Bloomberg and BBVA Research

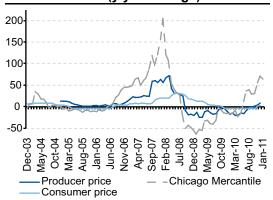
Source: INEGI, Banxico and BBVA Research

In terms of market structure, products that are highly relevant in national consumption, such as corn, wheat and sugar, we can see that the percentage of imports<sup>1</sup> destined for private consumption is quite limited in the case of the food products mentioned above, particularly sugar. This implies that even though there is no productive autonomy, the percentage that must be acquired on the international markets is small. Thus, we can highlight this as a factor that impedes a disproportionate rise in prices. Another important product is gasoline, of which we import around one third of what we consume. Although this is not a small percentage, we know that the public sector sets the price of this fuel and subsidizes its price despite the fact that there is a policy of a gradual rise in gasoline prices which establishes that these will increase around eight centavos a month during 2011, in line with the performance of international oil prices. In addition, Mexico has a surplus trade balance in oil, so the revenues received from crude oil sales abroad are greater than payments on gasoline imports to the country. The aggregate effect of those factors sets a limit to a price increase on gasoline in case crude oil prices continue to rise.

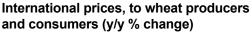
In comparison with international prices, corn and wheat prices in Mexico experience much lower variations. In the case of corn, it is possible to see a narrower correlation between price changes for the producer and the rise in international prices. Nevertheless, we see that consumer prices do not seem to be very correlated because when international prices show a considerable increase, prices to the consumer do not do so in the same proportion. In contrast, when international prices decline, consumer prices continue to rise. Therefore, in a context in which demand is still weak, the space for producers to raise the price of corn or its by-products is limited. In turn, the price of wheat, both on the international markets and to producers and consumers seems to vary in a similar manner, although the transmission from international prices to prices to the producer and the consumer are much less intense, by which the price of wheat stabilizes as the world supply is reestablished--which could be in the short term. We believe that its incidence on the NCPI will be limited.

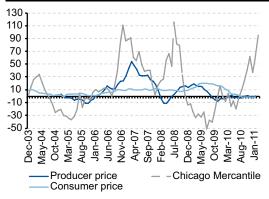
#### Graph 42











Fuente Banxico, Bloomberg y BBVA Research

Fuente Banxico, Bloomberg y BBVA Research

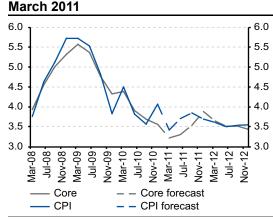
<sup>&</sup>lt;sup>1</sup> Percentages of imports destined for consumption are obtained by constructing the ratio of imports multiplied by the NCPI weight on private consumption for the products in question and their main derivatives.

There are some additional risks related to the increase of international prices on raw materials, since prices of other products and services with an important incidence on the NCPI such as domestic gas, electricity and public transportation could increase more intensely than expected if tensions on the international markets continue for a prolonged period. However, we believe that these could be gradually mitigated in the short term.

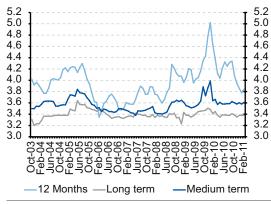
In conslusion, although there are pressures on the prices of some merchandises that are important in terms of their consumption by Mexicans, the determining fundamentals of inflation such as activity, wages and the exchange rate do not constitute a pressure factor to price increases, which opens the door for inflation to converge within the variability range set by the central bank. Moreover, there is the possibility that the upward shocks on the raw materials markets will dilute in the short term once production on the markets with a scarcity is normalized and the excess liquidity on the financial markets shows some moderation, to the extent that the expansive monetary policy adopted by the developed countries is withdrawn (first quantitavely and later qualitatively), raising the cost of opportunity of investing in risk assets. Due to this, we believe that inflation during 2011 will be maintained at under 4%.

#### Graph 44

Average quarterly headline and core inflation (y/y % change); forecast as of



Graph 45 Inflation expectations at different terms (y/y % change)



Source: Banxico and BBVA Research

## Banxico, performance margin in monetary policy and communication consistent with a prolonged pause...

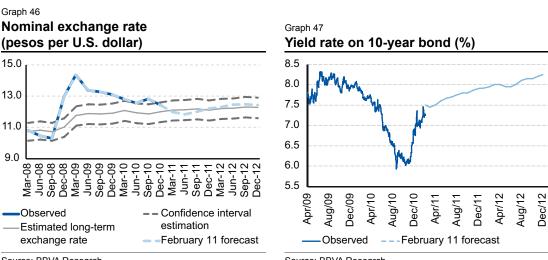
In recent months, Mexico's central bank (Banxico) has reaffirmed the perspective of a prolonged pause in light of an improvement in domestic demand and with inflation levels consistent with its forecast range. All of this within an operating framework characterized by a greater maneuvering margin and advances in the matter of communication with the public and an international environment that presents some dilemmas for the central banks of some emerging economies.

The recent inflation dynamic confirms that, in terms of prices, there are no important risks with regard to the objective of stability, while in terms of activity, the growth rate is consistent with the lack of demand pressures on prices, an element that in the event of its appearance would indicate the possibility of restricting monetary policy. Nevertheless, in the last two announcements of monetary policy, the central bank mentioned, each time more emphatically, the fact that the output gap is closing and even stressed that with some probability it could be positive in the second half of 2011, which generated uncertainty among market participants with regard to the peso due to the weight of this factor in the central bank's decisions. Moreover,

Source: Banxico and BBVA Research

in its most recent announcement, the central bank substituted the phrase "...to achieve the inflation target of 3 per cent toward the end of 2011" with ... "to achieve the convergence of inflation with its permanent target of 3 per cent ...", which was interpreted as a greater maneuvering margin in case of possible short-term inflationary shocks. This uncertainty was dissipated with what was expressed in the minutes of the January meeting on monetary policy, which clearly indicated that in view of the close of the output gap does not necessarily imply inflationary pressures and that furthermore, in view of the close of the gap, changes in interest rates should not be an automatic response, since this factor is just one more in the central bank's decision-making process. It should be noted that there is no mention in the minutes of the change in the statement regarding achieving the inflation target, which was interpreted as greater maneuvering margin.

Another factor that generated expectations of movements in the monetary policy position on the markets was the rise in prices of raw materials during the final months of 2010 and so far this year. The inflation rise in some emerging countries and the consequent hardening of their monetary policy led the market to be attentive to the tone that Banxico would use in refering to this issue in its January 21 announcement. The response was clear on the part of the central bank, disregarding that this phenomenon could generate inflationary pressures by attributing it to be of a transitory nature, which, according to the announcement, would be partly compensated by the appreciaiton of the peso versus the dollar and the favorable base effect that was seen during the early months of the year. All of this reiterated its expectation that inflation will resume a clearly descending trend in 2011. To reinforce this statement, in the minutes of the January 21 meeting, it was mentioned that "...what is really of concern would be that the increases referred to [in the prices of raw materials] would come to affect inflation expectations and in this manner would deteriorate the dynamics of other nominal variables in the economy, and consequently, that of inflation...". To summarize, Banxico adopts an accomodating tone in its statement, which confirms our outlook for a prolonged pause based on its expectations for inflation, which at the moment is anchored, and which constitute the determining variable in its decision making.



Source: BBVA Research

Source: BBVA Research

## ...but the balance of risks on inflation shows an upward bias, raising the probability of a more rapid rise

Although the central bank communication is consistent with a prolonged pause, it should be clarified that, in our opinion, the balance of risks has worsened compared to previous months. On the inflation front, it cannot be ruled out that movements in the prices of raw materials could be transmitted to inflation expectations and costs, given the greater vulnerability that a faster than expected closing of the output gap implies. On the other hand, optimism regarding U.S. economic recovery is generating an increase in long-term rates on fixed-income instruments, which could be incorporated in the formation process of inflation expectations and in this way would contribute to a more restrictive position by the central bank. It is true that this more restrictive position does not have to be directly implemented in an increase in rates, but, for example, in a communication with a less accomodating tone than that seen up to now.

#### Minutes, an improvement in the communication of monetary policy

Separate mention should be made of the recent publication of the first minutes on the decision of monetary policy. The publication of the minutes has the objective of increasing communication and rendering accounts to the public, essential elements of the Inflation Target program that frames Banxico's performance. The first minutes published is a step forward with regard to those targets, since, based on a clear structure, it transmits the most important information and above all provides information on the discussion of the viewpoints of the members of the Board of Governors regarding the topics that influence their policy decisions. Moreover, the voting on the decision is made known, although each member's vote is not disclosed. It should be mentioned that these elements are also found in the communications of the central banks of the developed countries such as the U.S. Federal Reserve and the Bank of England.

#### Mexico immune to the dilemma of monetary policy of the emerging economies

The increase of global liquidity and the consequent search for higher yields by investors has generated currency appreciations in the emerging countries, which added to the growth of aggregate demand leads to dilemmas regarding the monetary policy of the central banks. On one hand, a sustained appreciaiton of the countries' currencies versus the dollar pressures demand for exports, generating incentives to reduce rates and thus discouraging capital inflows. Nevertheless, this reduction in the rates would nourish aggregate demand and could generate inflrationary pressures. On the other hand, a rise in the reference rates could counteract the growth of aggregate demand and inflationary pressures. However, the spread between interest rates with the developed countries would increase, which would create incentives to increase capital inflows and a greater appreciation of the emerging nations' currencies. At this time, Mexico is not facing this situation, since aggregate demand is not yet at levels that generate inflationary pressures and although the exchange rate has shown an appreciation of the peso due partly to abundant capital inflows mainly in the fixed-income market, although the peso is still depreciated compared with other currencies, the peso has shown the lowest appreciation.

In terms of the perspectives and with the risks due to the current situation in mind, we believe that the rate on the 10-year government bond will continue to show a high correlation with the Treasury bond and this will be the main factor that will have a bearing on its movement. Thus, it is estimated that the nominal profitability of the 10-year bond could oscillate at around 7.5% in the first half of the year, rallying in the second half to levels close to 7.7% or 7.8%, in line with the performance of U.S. long-term rates. With regard to the exchange rate, we expect an appreciaiton of the peso to levels below 12 pesos per dollar in the first half of 2011, due to favorable capital inflows. As 2011 advances, this factor should moderate and the exchange rate would return to exchange rates between 12 and 12.50 pesos per dollar. It should be noted that the main uncertainty regarding these levels, both in terms of long-term rates and the exchange rate are derived from the perspectives that are formed as the end of the QE2 approaches, announced for June, as to its continuity or not.

## 6. Indicators and Forecasts

#### Chart 7

### **United States Indicators and Forecasts**

		2009	2010	2011	2012	1Q10	2Q10	3Q10	4Q10	1Q11	1 2Q11	I 3Q11	4Q11
Macroeconomic Indicators													
GDP (real % change)		-2.6	2.9	3.0	2.7	2.4	3.0	3.2	2.8	2.8	<b>3 3.</b> 1	I 3.2	3.2
Personal consumption (real % change	e)	-1.2	1.8	2.8	2.4	0.8	1.7	1.8	2.7	2.9	ə 3.0	) 3.0	2.5
Government consumption (real % cha	ange)	1.6	1.1	1.3	1.2	1.1	0.6	1.2	1.4	2.0	0 1.3	3 0.6	1.1
Gross fixed investment (real % chang	je)	-18.3	3.8	8.1	7.8	-2.0	5.1	5.3	6.8	8.7	7 6.2	2 8.1	9.3
Construction <sup>1</sup>		-22.9	-3.0	-0.1	4.8	-6.2	4.9	-5.6	-4.6	-0.7	7 -5.6	5 3.1	3.2
Industrial production (real annual % c	hange)	-9.2	5.7	4.3	3.0	2.7	7.4	7.0	5.8	5.3	3 4.4	4 3.6	4.0
Current account balance (% of GDP)		-2.7	-3.3	-3.4	-3.4	-3.1	-3.4	-3.5	-3.5	-4.1	1 -3.4	4 -2.9	-3.4
Final annual inflation		2.7	1.5	0.8	1.8	2.3	1.1	1.1	1.5	1.2	2 1.7	7 1.4	0.8
Average annual inflation		-0.4	1.6	1.3	1.5	2.4	1.8	1.2	1.3	1.1	1 1.6	5 1.4	1.1
Primary fiscal balance <sup>2</sup> (% of GDP)		-10.0	-10.2	-10.2	-6.7	-	-	-	-10.2				-10.2
Chart 8 Mexico Indicators and Foreca	sts												
	2009	2010	20 <sup>-</sup>	11 20 <sup>-</sup>	12 1Q	10 2Q	10 3Q1	0 4Q	10 1	Q11	2Q11	3Q11	4Q11
Economic Activity													
GDP (seasonally-adjusted series)													
Real annual % change	-6.1	5.2	4	.3 3	.8 5	5.1 7	.3 5.	3 3	3.1	4.4	3.5	4.0	5.2
Per inhabitant (US dollars)	8,170	9,691	10,53	37 10,6	02 9,0	55 9,5	52 9,85	6 10,3	02 10	,242	10,395	10,534	10,979
US\$ billions	885	1,052	1,18	87 1,22	29 99	98 1,0 <sup>,</sup>	49 1,04	5 1,1	15 1	,148	1,191	1,191	1,219
Inflation (average, %)													
Headline	5.3	4.2	3	.8 3	.6 4	.8 4	l.O 3.	7 4	1.2	3.5	3.8	4.0	3.8
Core	5.0	3.9	3	.5 3	.5 4	.4 3	3.9 3.	7 3	3.6	3.2	3.3	3.5	3.9
Financial Markets (eop, %)													
Interest rates													
Bank funding	5.4	4.5	4	.5 5	5.5 4	.5 4	.5 4.	5 4	1.5	4.5	4.5	4.5	4.5
28-day Cetes	5.4	4.5	4	.5 5	5.1 4	.5 4	.6 4.	4 4	1.2	4.1	4.3	4.6	4.8
28-day TIIE	5.9	4.9	4	.9 5	5.4 4	.9 4	.9 4.	9 4	1.9	4.8	4.9	4.9	4.9
10-year Bond (%, average)	8.0	6.8	7	.7 8	.0 7	.8 7	.2 6.	3 8	5.8	7.5	7.6	7.7	7.9
Exchange rate (average)													
Pesos per dollar	13.5	12.5	12	.0 12	.4 12	.8 12	2.4 12.	6 12	2.2	12.0	11.8	12.0	12.2
Public Finances*													
FRPS (% of GDP)	-2.7	-3.2	-2	.9 -2	.7			:	3.2				-2.9
External Sector													
Trade balance (US\$ billions)	-4.6	-3.1	-15	.9 -21	.8 0	.4 -0	).1 -2.	3 -1	1.1	-1.7	-1.8	-6.3	-6.1
Current account (US\$ billions)	-5.2	-8.2	-14	.0 -19	.0 -0	.5 -0	).6 -1.	8 -{	5.2	-3.2	-2.0	-4.8	-4.0
Current account (% of GDP)	-0.6	-0.8	-1	.2 -1	.6 -0	.2 -0	).2 -0.	7 -2	2.0	-1.1	-0.7	-1.6	-1.4
Oil (Mexican mix, dpb, eop)	57.1	72.0	77	.7 81	.3 71	.3 69	.8 69.	3 77	7.5	81.4	75.6	75.8	78.0
Employment													
Formal Private (annual % change)	-3.1	3.8	4	.5 3	.5 1	.1 3	<b>3.8 4</b> .	8 8	5.3	5.2	4.5	4.2	4.0
Open Unemployment Rate	5.5	5.4	4	.5 4	.0 5	.3 5	5.3 5.	6 (	5.2	4.9	4.6	4.4	4.3
(% active pop.)													

## **BBVA** Research

Chart 9

#### **Mexico Indicators and Forecasts**

	2009	2010	2011	2012	1Q10	2Q10	3Q10	4Q10	1Q11	2Q11	3Q11	4Q11
Aggregate Demand3 (ann. % chge., season	ally-adjusted)											
Total	-9.4	9.4	5.8	7.5	8.5	12.8	9.1	7.2	6.2	3.8	5.5	7.5
Domestic demand	-6.9	4.6	3.8	5.4	2.3	6.3	4.3	5.4	4.2	2.9	3.6	4.6
Consumption	-5.7	5.1	3.4	6.0	3.7	7.5	4.4	4.8	4.2	2.3	2.9	4.3
Private	-7.1	5.5	3.8	6.5	4.2	7.8	4.7	5.2	5.0	2.7	3.0	4.3
Public	3.5	2.7	1.3	2.8	1.1	5.3	2.6	2.1	-0.5	-0.6	2.2	4.2
Investment	-10.9	2.7	5.2	3.1	-2.6	2.3	3.7	7.8	4.0	5.2	6.2	5.5
Private	-16.8	1.0	5.0	3.0	-3.0	-0.9	1.5	6.8	0.8	5.5	7.2	6.5
Public	9.5	7.2	6.0	3.3	-1.4	10.8	9.1	10.3	12.8	4.6	3.6	3.0
External demand	-13.1	22.5	11.2	14.1	23.4	33.8	18.8	13.8	8.8	5.8	14.5	15.6
Imports	-18.3	23.9	10.1	17.8	20.5	32.4	22.2	20.6	11.8	4.7	9.9	14.1
GDP by sectors (ann. % chge., seasonally-a	djusted)											
Primary	-2.0	3.7	2.5	2.0	0.0	4.6	8.8	1.5	2.4	2.6	3.0	1.9
Secondary	-7.4	5.9	3.8	4.4	5.9	7.3	6.2	4.4	3.7	3.4	3.6	4.5
Mining	-2.4	2.8	3.3	3.3	1.8	3.3	2.9	3.1	3.8	3.1	3.2	3.2
Electricity	1.9	2.7	3.0	3.7	0.9	2.7	3.2	4.0	3.2	2.9	3.0	3.0
Construction	-6.4	0.2	4.6	6.1	-3.2	-1.6	0.5	5.3	5.8	4.1	4.4	4.2
Manufacturing	-9.9	9.5	3.7	4.2	11.5	12.8	9.7	4.5	2.9	3.3	3.5	5.2
Tertiary	-5.3	4.9	4.5	3.5	4.7	7.3	4.1	3.7	5.5	4.1	3.9	4.3
Retail	-14.2	12.5	6.6	5.2	14.3	18.3	12.1	5.9	9.7	5.7	5.5	5.5
Transportation, mail and warehouse	-6.6	6.6	3.9	4.2	7.6	10.5	5.3	3.3	4.1	3.4	3.0	4.9
Massive media information	0.8	5.2	3.7	5.7	5.4	4.3	6.1	5.1	4.5	4.7	2.9	2.8
Financial and insurance	-6.6	2.7	4.5	4.0	0.4	5.0	0.7	5.1	3.6	4.5	4.5	5.3
Real-estate and rent	-1.0	2.0	3.2	3.0	4.4	1.4	0.3	2.2	3.4	3.1	3.2	3.3
Prof., scientific and technical servs.	-4.7	-2.3	2.6	1.8	-3.6	-3.6	-2.4	0.4	2.8	2.7	2.4	2.6
Company and corporate management	-7.7	2.1	4.9	1.2	-5.2	-2.1	9.0	7.7	8.6	7.9	1.5	2.2
Business support services	-4.7	1.3	2.3	2.5	-0.4	1.9	0.8	3.0	2.0	2.6	2.1	2.4
Education	0.4	3.5	1.7	1.6	1.7	13.9	-0.9	1.1	2.3	1.6	1.6	1.6
Health and social security	0.8	-1.8	1.9	2.4	1.3	-9.8	0.7	1.3	1.6	1.9	2.0	2.2
Cultural and sport	-4.6	0.6	2.0	2.3	-1.8	1.7	2.4	0.0	3.5	2.3	0.0	2.4
Temporary stay	-7.7	3.7	2.2	2.1	-0.9	11.9	2.7	2.2	1.8	2.3	2.2	2.4
Other services exc. government	-0.5	-0.2	2.9	2.8	-0.7	-0.4	0.1	0.4	2.4	2.9	2.9	3.3
Government activities	4.6	5.7	2.3	1.3	0.7	8.0	4.8	9.2	6.9	-0.3	1.0	1.9

1: Residential investment

2: Fiscal balance (% GDP)

3: Base 1993=100; GDP by sectors base 2003=100. The observed data of the primary, secondary and tertiary sectors are seasonally-adjusted by INEGI, the rest are own seasonally-adjusted

eop: end of period

dpb: dollars per barrel \*: As of 2009 the Fiscal Balance definition changes, therefore data is not comparable FRPS: Financial Requirements of the Public Sector

Note: Bold figures are forecast

Source: BBVA Research with Federal Reserve, Bureau of Labor Statistics, Banco de Mexico, INEGI and SHCP data

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