

# EVALUATION OF THE MONETARY, FOREIGN EXCHANGE RATE AND CREDIT POLICY TO NOVEMBER 2006

## I. QUALITATIVE ASPECTS

The Monetary Board, in resolution JM-185-2005 dated December 27, 2005, determined the Monetary, Foreign Exchange Rate and Credit Policy for 2006, designed to continue with the process of adoption of a scheme of explicit inflation goals, in order to consolidate the stability in the general level of prices. The fundamental objective of the policy reference was established as an inflation goal of 6% (+/- 1 percentage point) for December 2006 and of 5% (+/- 1 percentage point) for December 2007.

The implementation of the monetary policy in 2006, as was indicated, is consistent with the efforts of advancing in the adoption of a scheme of explicit inflation goals, that are founded in the election of the inflation goal as a nominal anchor of said policy and is consolidated with a current flexible exchange type regimen, with the use of instruments of indirect monetary control (operations of monetary stabilization, privileging the market decisions), as well as the strengthening of transparency in the actions of the Central Bank.

In the described context, to November 2006 the inflationary rhythm was located at 4.40%, lower by 4.17 percentage points to the observed in December 2005 (8.57%).

***International Environment.*** In the first semester of 2006, the international price of oil showed a growing tendency, which mainly reflected the political tensions in Nigeria (country that supplies approximately an 8% of the world offer of crude oil), of the geo-political tensions associated to the nuclear program of Iran (country that supplies around 13% of the referred offer) and of the high volume of the world demand.

On the other hand, the second semester, the international price of oil registered a record historic high (US\$77.03 per barrel on July 14). Said behavior, mainly associated to the military actions in the border between Israel and Lebanon and to the launching of missiles by North Korea into the Japanese Sea. After that level, a marked tendency toward the decline in the price of crude oil was marked until it reached a price of US\$55.81 per barrel on November 17, 2006, the lowest registered in the second semester of the year.



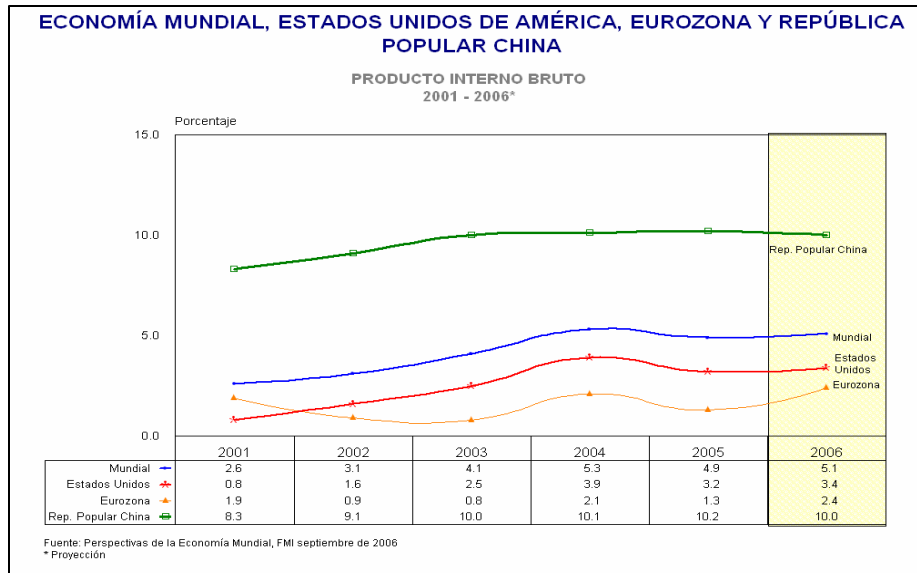
The main causes to the declining tendency in the price of oil are associated to the following factors: a) decrease of the demand of fuels in the United States of America, due to the finalization of summer season; b) increase in the level of inventories of fuel in the United States of America, as a result of the weakening of the demand; c) absence of important military action that could affect the oil countries; d) discovering the important oil reserves in the Gulf of Mexico; and, e) possible signs of deceleration of world economic deceleration.

As to the world economic growth, the International Monetary Fund -IMF- estimates that the world economy World grow 5.1% in 2006; said behavior is mainly sustained in the spike that is observed in the world industrial production from the second semester of 2005, in the capacity of adaptation to the new world market conditions that have presented the service sectors, in the greatest growth shown by world commerce, in the improvement in the world market and in the increase of trust of consumers. The world economic growth percentage for 2006 is slightly over the observed in 2005 (4.9%), reflecting the dynamism of the global economy. In this result the evolution foreseen for the economic growth of the United States of America of 3.4%<sup>1</sup> influences, (country that represents 20.1% of the world economy and is the main commercial partner of Guatemala), as well as the dynamic behavior projected from the economy from the People's Republic of China, which, notwithstanding the macroeconomic restriction measures implemented in 2005, will continue registering important growth, estimated at 10.0% for 2006.

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<sup>1</sup> For 2006, according to a recent review of the Administration Advisors Council for Bush, the economic growth for the United States of America is foreseen to be of 3.1%.

## World Economy, United States of America, Eurozone and People's Republic of China



**Internal Environment.** During 2006, the monetary policy performance has been favored by the support of the fiscal policy, through the maintenance of a level of deposits in the *Banco de Guatemala* over the programmed; the demonetizing behavior of the rest of the public sector reflects in an increase of the term deposits in the *Banco de Guatemala*; and, the formation of positive economic growth expectations on behalf of the economic agents, derived of the mentioned behavior of the global economy, as well as the levels of public and private investment foreseen.

Maintaining fiscal discipline is fundamental for consolidating macroeconomic stability, as well as for creating an environment of certainty and trust, in which the economic agents make adequate decisions in matters of investment and savings, factors that are fundamental for propitiating growth and orderly development in the national economy.

Said certainty and trust in financial-economic matters are part of the economic agents reflected in the recent suspension of operations of the Banco del Café, S.A., which was founded in what the Law of Banks and Financial Groups establishes, that constitutes a legal, agile and flexible framework that favors the administration of risks and the orderly exit of the system of those



banks that present problems and that threaten or set the operation of the financial system of the country at risk, according to the international standards, therefore the suspension of operations of the referred bank are considered an isolated case and does not represent a systematic crisis for the country<sup>2</sup>. On this particular case, it is convenient to point out that recently, the money market as well as the exchange market have evolved normally. In that sense, notwithstanding the volatility shown by the interest rate of the repurchase agreements after the suspension, currently the same has been established in the levels that have been observed before the mentioned event. Regarding the exchange market, it remained stable which was reflected in the behavior of the volume of transactions and, therefore, in the nominal exchange rate. Also, the banking credit to the private sector as well as bank fund raising kept up the dynamics it had shown during the year.

Another important aspect to highlight is the indicated in the last report of “*Doing Business 2007*” from the World Bank. In that regard, in said report it highlights that as of the year 2000 Guatemala implemented significant economic-financial reforms and that the country is within the eight countries in the world and three in Latin America that has implemented the most reforms in 2006, highlighting the three following aspects: improvement in the property registry; a more agile approval of environmental impact studies; and, the reduction of time to register a new business (includes the implementation of a “speedy window”.) The above, allowed Guatemala to go from position 128 in 2005 to 118 in 2006.

**Inflation.** To November of this year, the inflationary rhythm decelerated 4.17 percentage points, when going from 8.57% in December 2005 to 4.40% in November 2006. The referred behavior is associated, on the one hand, to the fact that the prices of derived oils in Guatemala registered an increase of lesser

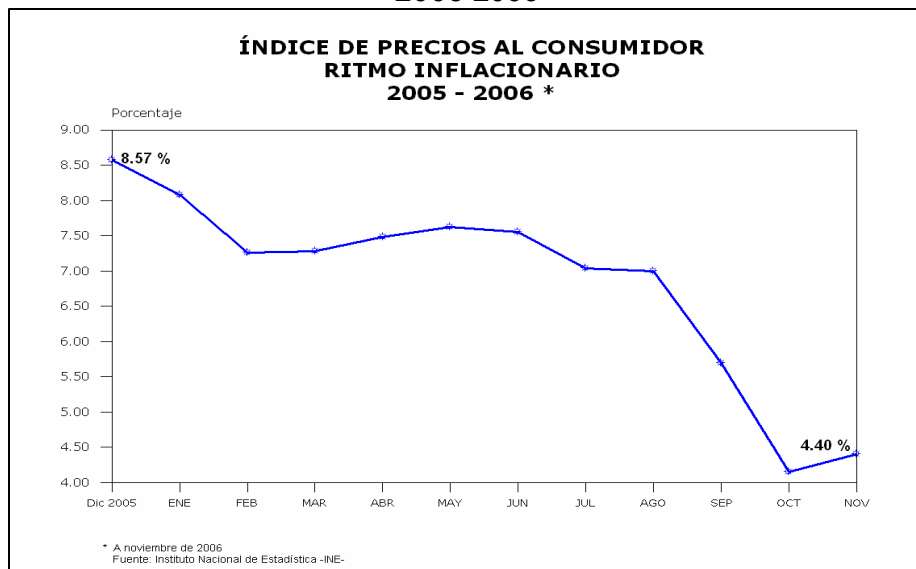
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<sup>2</sup> In this context, international risk qualifiers declared on the credibility of financial and monetary authorities in the country as to the suspension of operations of the *Banco del Café, S.A.* does not risk the economic financial stability of at risk of Guatemala. In effect, *Standard & Poor's* kept the grade of sovereign debt in the long term in foreign currency of the Republic of Guatemala at BB. Also, the referred qualifier also kept the long term internal debt at BB+. On the other hand, Moody's referred to a “positive” qualification on the foreign currency sovereign debt. On the other hand, Fitch Ratings kept a sovereign grading of BB+ on Guatemala with a stable applicable perspective on the long term debt in foreign as well as national currency. According to said entities, the referred grading of country risk, are supported, among other aspects, under the low levels of foreign external debt, by the strengthening of its external position, the long history of fiscal discipline and moderate inflation, by the solid payment record of commercial debt, by the strengthening of the banking system and the perspective of a sustained economic growth. Greater detail on the pronouncing of said qualifications is found in Annex 1 of this document.



proportion in the first semester of the year regarding the evolution of the same in the second semester of 2005, as well as the reduction in the referred prices during the second semester of 2006, particularly as of the second week of August and, on the other, to the delayed effect coming from the increases in the leading interest rate of the monetary policy made in 2005 and in 2006. An econometric analysis made recently by the *Banco de Guatemala*, took into account the registered inflationary levels in the last two years, denoting that an increase of 1% in the leading interest rate of the monetary policy would reduce the inflationary rhythm by 63%, with a six month delay<sup>3</sup>.

### Consumer Price Index Inflationary Rhythm 2005-2006

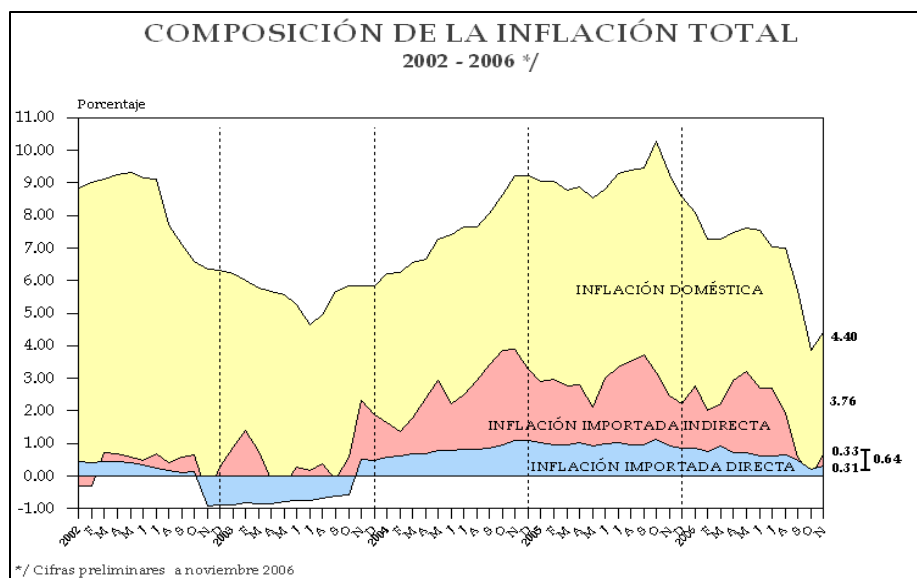


Due to the behavior of the international price of oil, the imported inflation decreased 1.57 percentage points, when going from 2.21 percentage points in December 2005 to 0.64 percentage points in November 2006, which added to a deceleration of 2.60 percentage points in domestic inflation in the same period, explains, as was indicated, the decrease of 4.17 percentage points in the inflationary period. To November 2006, the inflationary rhythm of 4.40%, 0.64

<sup>3</sup> The simple regression model used for the estimation based on a monthly series of January 2004 to November 2006 and was specified in the following manner: inflationary rhythm =  $\beta_0 + \beta_1$  (leading interest rate<sub>t-6</sub>), where  $\beta_0$  = intercepts  $\beta_1$  = pending. The error term was modeled through a mobile average process of order 12.

percentage points correspond to imported inflation and 2.76 percentage points to domestic inflation. It is worth indicating that based on the referred analysis of inflationary rhythm composition in imported and domestic inflation, we observe, on the one hand, that domestic inflation has been reduced in a sustained manner, when going from 6.36% in December 2005 to 3.76% in November 2006 and, on the other hand, that when analyzing the indirect imported inflation<sup>4</sup> a significant reduction is observed, when going from 2.21% in December 2005 to 0.64% in November 2006; both reductions, are fundamentally explained by the deceleration in the price of international oil, as by the delayed effects of the increases in the leading interest rate of the monetary policy during 2005 and 2006.

### Total inflation Composition



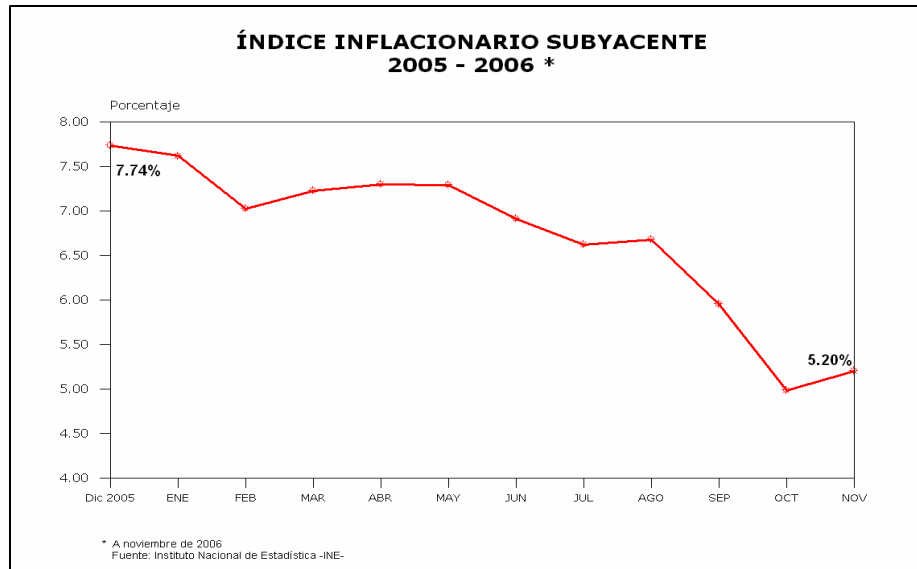
The subjacent inflationary rhythm<sup>5</sup>, also showed a tendency toward deceleration, when going from 7.74% in December 2005 to 5.20% in November 2006 (a decrease of 2.54 percentage points), which shows, as was indicated, that the adjustments in the leading interest rate of the monetary policy applied in

<sup>4</sup> Refers to the increase in prices of those goods and services that in their cost structures do not incorporate oil derivatives, but are indirectly affected by aspects such as the increase in the price of transportation, electricity and others.

<sup>5</sup> Refers to the inter-annual growth rate of a price index that in its construction eliminates some of the goods and services included in the CPI whose prices are, generally, the most volatile, from where subjacent inflation comes, excluding components that distort the behavior of the mentioned index due to joint seasonal effects or offer shocks.

2005 and in 2006, supported by fiscal discipline, have positively influenced in the behavior of said variable.

### Subjacent Inflationary Index



**Execution of the monetary policy.** The management of the monetary policy in 2006 within a scheme of explicit inflation goals helped moderate the inflationary expectations of the economic agents.

In that context, the current Monetary, Foreign Exchange Rate and Credit policy decides that the decisions in matters of the leading interest rate of the monetary policy will be adopted by the Monetary Board once a month according to the annual meeting calendar, taking as a basis the analysis that for the effect are made by the Execution Committee, in function of the Prognosis Analysis System and of the following indicative variables of said policy.

A summary of the main factors that the Monetary Board took into account in April, June and July, when it was agreed to raise the leading interest rate of the monetary policy in 25 basic points on each occasion, are as follows.

#### April:

- That the asset interest rate of the banking system, as long term includes an inflation rate, so an adjustment in the special leading



interest rate takes on special importance given that it contributes to sending the right message on the restriction in the monetary conditions, which could induce a reduction in the referred rate.

- That an increase in the long term leading interest rate remains stable.
- That the stability in the international oil price makes it foreseeable that the expectations remain regarding the price of gasoline remaining stable in the short term.
- That the Federal Reserve of the United States of America, on May 10, 2006, made a decision regarding the objective interest rate, considering it convenient to monitor the evolution of the interest rates in the international markets.

**June:**

- That even though the monetary policy can not avoid the direct effects of imported inflation that produce the rises in the price of fuels, can influence in moderating the inflationary expectations and in that manner moderate the inflationary expectations and in that way limit the second round effects that can be derived of said imported inflation.
- That the economic growth indicators continued to show robust behavior of the real activity in the country, at the same time that the majority of indicative variables pointed out that, with an adequate conduction of the fiscal and monetary policy, the achievement of the inflationary goal in the mid term was feasible.
- That the inflation projections, of the *Banco de Guatemala* as well as the private panel of analysts, pointed out that the inflationary rhythm for December 2006 and of 2007 could be located over the established goal by the Monetary Board for each one of those years.
- That an increase in the leading interest rate of the monetary policy will send a message of certainty as to the fulfillment of the commitment of the inflation goal, which would coincide positively in the price expectations in the economic agents.



## **July:**

- That the inflation prognosis, for 2006 as well as for 2007, indicated that these were still over the established goal for each one of these years, aspect that in the context of the scheme of explicit inflation goals, advise restricting the monetary policy.
- That even though the monetary policy can not avoid the direct effects of imported inflation that are produced by the rises in the fuel prices, if they can restrict the monetary conditions in order to procure the moderation of the inflationary expectations and in that way limit the second round effects that could be derived of imported inflation, particularly before a scenario in that the oil price is more volatile.
- That the indicators of economic growth continued showing robust behavior, at the same time that the majority of the indicative variables pointed out that, with an adequate conduction of monetary and fiscal policies, the achievement of inflationary goals in the mid term result feasible.
- That as in other opportunities, an increase in the leading interest rate of the monetary policy would send a message of certainty as to the fulfillment of commitment of the inflation goal, which would positively influence in the expectations of economic agent prices.

It is worth highlighting the fundamental importance that the efforts continue to be made by consolidating the macroeconomic stability, since it contributes to creating an environment of certainty and trust so the economic agents make adequate decisions in matters investment, consumption and savings, factors that are fundamental for stimulating growth and orderly economic development of the national economy.

## **II. MACROECONOMIC ENVIRONMENT**

### **A. EXTERNAL SECTOR**

#### **1. World Economy in 2006**



According to the International Monetary Fund -IMF-<sup>6</sup>, it is expected that the growth shown by the world economy in the first semester of 2006 will continue during the rest of the year. Said organism foresees that for 2006 a growth of the global economic activity of 5.1% (4.9% in 2005), fundamentally sustained in the strength of economic growth in the United States of America and of the People's Republic of China. Also, indicate that the economic activity has shown strength in the Euro zone, in Japan, in emerging economy markets and in developing countries of low per capita income. It is important to mention that global economy growth has been absorbing the greater part of the unproductive capacity, which added to the increase in the international price of oil and to the growing inflation expectations, have generated inflationary pressures, especially in the advanced economies. As to the inflation, the IMF foresees that for 2006 in the referred economies the same would be at 2.6% (2.3% in 2005). In that context, the main central banks of the world began restricting their monetary policy, with the end of abating the inflationary pressures mentioned. This monetary restriction provoked rises in interest rates, which in the future could affect global economic growth. On the other hand, the international price of oil continued rising due to the strengthening of the world demand of crude oil, as well as the political problems that have been affecting the Middle East as well as Nigeria.

Within the regional analysis of the world economy for 2006, the IMF projects that the US economy will grow 3.4% (3.2% in 2005). Said growth implies that the US economy could be operating levels close to the corresponding to its maximum productive potential. It is worth indicating that, even though there is a slowing down in the activity of the housing markets and the high price of fuels, which have lessened economic growth from the second trimester, the residential investment and private consumption, continued sustaining the growth of said economy. Also, the corporate investment has been strengthened by the high profits derived from the economic growth during 2006. The deficit in the current account of the payments balance continue to be the main lack of balance in this economy, since for 2006 it is foreseen that said deficit will be of 6.6% as a percentage, of the gross domestic product. The

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<sup>6</sup> IMF World Economic Outlook. September 2006.



inflation for 2006 is foreseen to be 3.6%, higher to the registered in 2005 (3.0%), said prognosis is associated to the high energy prices, even when the monetary authorities restricted the monetary conditions.

In the area of the Euro, the IMF estimates a growth of 2.4% for 2006 –the most in six years-, sustained in the strength of corporate profit, which have propitiated greater levels of investment, an increase in jobs and a more balanced expansion of the economy. On the other hand, inflation for 2006 is estimated at 2.3%, slightly over the goal of 2.0% established by the European Central Bank.

The Japanese economy, according to IMF, will experiment a growth of 2.7% in 2006, sustained in the solidity of internal aggregate demand, especially in private investment. On the other hand, after being affected for years by deflation, Japanese is expected to that the Japanese economy, at the end of said year, will experiment an inflation rate of 0.3%. In that context, the Japanese Bank has been cautious in the management of the interest rate within its monetary management, due to the rising increase in the general level of prices which would imply that said zero interest rate policy must be reverted; however, more pronounced increases in said rate could propitiate the return of deflation periods, therefore in July, the Japanese Bank elevated the interest rate overnight by 25 basic points.

On the other hand, Asian emerging economies will jointly experiment a growth of 8.3% in 2006. Within these economies, it is expected that the People's Republic of China exceeds the expectations with growth near 10.%. On the other hand, India also presented a robust economic growth prognosis of 8.3%. It is also worth pointing out that the rest of these economies will also continue growing significantly. It is important to highlight that the high economic dynamism of these countries has been sustained in the increase of total productivity of the production factors. In that regard, it is worth pointing out that, even though the productivity of capital has increased due to greater technological progress, the main element that has promoted total productivity is the increase of work productivity. The greater work productivity, at the same time, has helped not only expand the productive capacity of these economies and, therefore, reduce the vulnerability of the same exogenous shocks, as well



as the increase in the international price of oil, but have also contributed to keeping low unit work costs, which has allowed counteracting the inflationary pressures that these economies have been exposed to, due to their high economic dynamism. In 2006, inflation of 3.6% is foreseen for these countries.

Regarding Emerging Economies and Developing Countries, the IMF projects a growth rate of 7.3% for 2006 (7.4% in 2005). Regarding the inflation rate in 2006, said organism estimated that the same will be of 5.2% (5.3% in 2005), which is explained by the increase in the international price of oil, due to greater internal aggregate demand and the insufficient productive capacity, which has obstructed a more adequate supply response, compared to demand. However, the monetary authorities of these countries have achieved containing the inflationary pressures through the rise in the policy interest rates.

As to countries in the Western Hemisphere<sup>7</sup>, economic growth is estimated at 4.8% for 2006. It is projected that the Latin-American economies will experiment a growth of 4.75%. Although the prices of some export products from the region have cooperated in promoting this growth, the strength of internal aggregate demand is the main factor that has influenced in greater economic dynamism in the region, especially the spike in private investment. Within the economies in this group, Argentina will experiment the greatest economic growth in 2006 (8.0%), while Chile, Mexico and Brazil will grow 5.2%, 4.0% and 3.6%, respectively. For Central America, the IMF estimates economic growth for 4.8% in 2006. The inflation for countries of the Western Hemisphere is foreseen to be of 5.6%, which is the result of the implementation of monetary policies that have anchored the inflationary expectations of the economic agents, adequately. Besides, the majority of these economies have been strengthened through greater exchange flexibility, an increase in the level of international monetary reserves and the strengthening of fiscal discipline.

As to Middle Eastern countries, the increase in production and in oil prices continue supporting the growth of the GDP, supported by the notable improvement in current and fiscal account positions, aspect that is coherent with

<sup>7</sup> According to the International Monetary Fund (IMF), within the concept of "Western Hemisphere" the following countries are included: Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Granada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Dutch Antilles, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, Santa Lucia, San Vicente and the Grenadines, Surinam, Trinidad and Tobago, Uruguay and Venezuela.





the 5.8% growth for 2006. The inflation for this group of countries is projected to be 7.1%.

For the Community of Independent States<sup>8</sup>, the IMF projects an economic growth rate of 6.8% in 2006. This dynamism is the result of favorable prices of some of the main export goods. In those countries the internal aggregate demand has been strengthened by the greater income of foreign capital, private as well as official. Private investment has also recovered notably, especially in Russia. Regarding the inflation rate, the same is expected to be at 9.6%.

In African economies of the Sub-Sahara, the IMF foresees an economic growth of 5.2% in 2006, supported by the solid performance of oil exporting countries, as well as improvements of the exchange terms that have translated an increase in internal income, which at the same time has strengthened aggregate demand in these economies. For this group of countries, inflation in 2006 is estimated at 11.7%.

Regarding world commerce of goods and services an 8.9% growth is estimated, which is a direct result of global economic growth.

Regarding the international price of oil, since political problems have continued in the Middle East, as well as the fact that the demand of crude oil has remained robust, it is estimated that the referred price will remain high for the rest of 2006. In effect, according to the IMF the oil quotes in the futures market, indicate that the price will surpass US\$72.00 per barrel at the end of 2006.

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<sup>8</sup> According to the International Monetary Fund, IMF, within the area of the Community of Independent States –CEI (for its acronym in Spanish) the following are included: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Republic of Kirgizia, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.



**ECONOMIC AND INFLATION GROWTH  
PER REGIONS and SELECT COUNTRIES  
ESTIMATIONS FOR 2006  
(Percentual Variation)**

<b>ECONOMIC GROWTH</b>	<b>2005a/</b>	<b>2006</b>
World Economy	4.9	5.1
Advanced Economies	2.6	3.1
United States of America	3.2	3.4
Euro Area	1.3	2.4
Japan	2.6	2.7
Emerging economies in Asia*	8.5	8.3
People's Republic of China	10.2	10.0
India	8.5	8.3
Emerging economies and developing countries	7.4	7.3
Western Hemisphere (Latin America and the Caribbean)	4.3	4.8
Argentina	9.2	8.0
Chile	6.3	5.2
Mexico	3.0	4.0
Brazil	2.3	3.6
Central America	4.3	4.8
Middle East	5.7	5.8
Community of Independent States	6.5	6.8
Russia	6.4	6.5
Central and Eastern Europe	5.4	5.3
Africa	5.4	5.4
Sub-Sahara	5.8	5.2
Volume of Commerce	7.4	8.9
<b>INFLATION</b>		
Advanced Economies	2.3	2.6
United States of America	3.4	3.6
Euro Area	2.2	2.3
Japan	-0.6	0.3
Emerging Economies of Asia*	3.4	3.6
People's Republic of China	1.8	1.5
India	4.0	5.6
Emerging economies and developing countries	5.3	5.2
Western Hemisphere (Latin America and the Caribbean)	6.3	5.6
Argentina	9.6	12.3
Chile	3.1	3.5
Mexico	4.0	3.5
Brazil	6.9	4.5
Central America	8.4	7.4
Middle East	7.7	7.1
Community of Independent States	12.3	9.6
Russia	12.6	9.7
Central and Eastern Europe	4.8	5.3
Africa	8.5	9.9
Sub-Sahara	10.7	11.7

\* Includes Asia in developing economies that are recently industrialized and Mongolia.

a/ Observed Data.

Source: IMF. World Economic Outlook, September 2006.

## 2. Behavior of the International Price of Oil

The evolution of the international price of oil is a determining factor that positively or negatively influences in the inflationary risk for countries that, like Guatemala, are net oil importers. In 2006, the behavior of the oil prices will continue to be the main inflationary risk factors.



In effect, during the first semester of the year the international price of oil showed a growing tendency, until April 21 when it reached a record price of US\$75.17 per barrel; among the main factors that influenced said behavior is found in the following: the international crisis derived from the Iranian nuclear program; the lack of political stability and attacks on Nigerian oil installations; the sustained increase in world demand, mainly in the People's Republic of China and in the United States of America; the poor capacity production to increase supply volume; the decrease in domestic inventory volume in the United States of America; and, the market rigidity of the market and expectations from possible production interruptions.

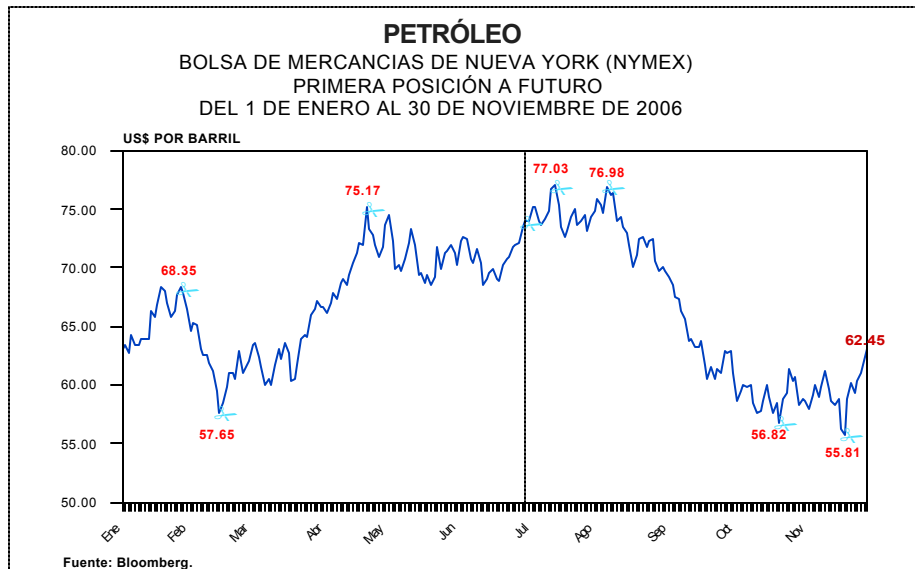
In the second semester of 2006, until July 14, a rising tendency of oil prices was observed, when a new record was registered in the price per barrel, located at US\$77.03<sup>9</sup>. The main causes that motivate these increases are summed up as follows: military actions between Israel and Lebanon, presented the possibility of involving some oil producing countries from the Middle East; the continuity of the geo-political conflict caused by the negative of Iran in interrupting their nuclear investigation program; low inventory levels of gasoline in the United States of America; the decrease of the production of Nigeria due to internal political conflicts; the temporary suspension of crude shipments through the oil ducts to Russia; the temporary suspension of the greatest oil well in North America (*Prudhoe Bay*, Alaska); the seasonal summer increase of internal demand in the United States of America; the intentions of the Organization of Oil Producing Countries –OPEC- of reducing production; and, the launching of trial missiles made by North Korea in the Japanese Sea.

As of July 14, when a new record price on the international oil barrel was reached, a declining tendency until reaching a price of US\$55.81 on November 17 was registered, the lowest reported in 2006, which means a 27.55% reduction (US\$21.22 per barrel). The main causes of declining behavior in the international price of oil are: the decrease in demand of fuel in the United States of America, due to the end of summer; the increase in the level of oil inventories in the United States of America; the absence of important military action that could affect the producing countries; the discovery of important reserves in the

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<sup>9</sup> According to information from Global Petroleum Monthly (Global Insight).

Gulf of Mexico; the possible signs of a world economic deceleration; and, the absence of refinery production interruptions in the United States of America and Mexico, derived from natural phenomena.



In the period of January to November, 2006, the average price per oil barrel in the international market was at US\$66.59, higher to the average observed in the same period of 2005 (US\$56.29) which represents an increase of 18.30% (36.56% to November 2005). It is important to indicate that to November, the lesser percentual variation of the average price per oil barrel, allowed decreasing inflationary pressures in 2006.

In a base scenario estimated for December 2006 for *Global Insight*, internationally recognized company in the oil market analysis, that supposes that the international price per oil barrel will remain at levels near US\$59.00 per barrel and according to the econometric projections of the technical departments of the *Banco de Guatemala*, would expect that the inflationary rhythm for December 2006 will be located at 4.93%<sup>10</sup>.

It is worth mentioning that the international price of oil continues to register volatility, due to the sensibility before any change in supply and demand of the same. On this, the International Monetary Fund<sup>11</sup> has pointed out that

<sup>10</sup> Passive scenario, based on the arithmetic average of the two econometric methods used, that do not include corrective measures of monetary policy.

<sup>11</sup> FMI. Oil Market Developments and Issues. Marzo de 2005.

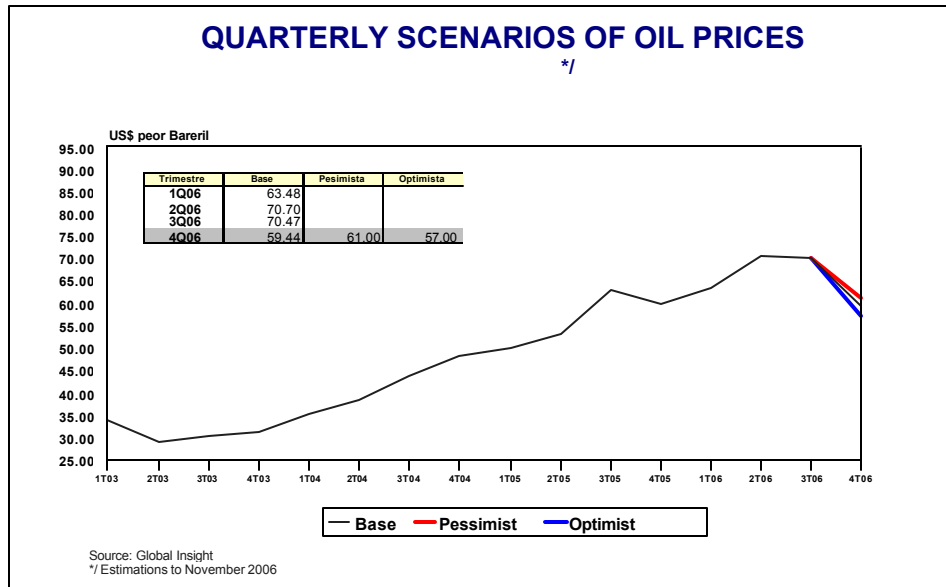


said situation is due to a much reduced breach, of around 1.5 million barrels daily, between supply and demand, and indicate that until the volatile behavior of the international price of oil stabilizes, said breach should be between 3 and 4 million barrels daily. On the other hand, *Global Insight*, points out that in 2006, the world supply of crude oil was at 85.29 million barrels daily, and demand was at 84.48 million barrels daily, which gives as a result a breach of 0.81 million barrels daily, as is shown in the following chart:

<b>PETRÓLEO</b>			
<b>OFERTA Y DEMANDA MUNDIAL DE PETRÓLEO</b>			
Millones de barriles diarios			
		<b>2005</b>	<b>2006 /py</b>
OFERTA	MIEMBROS OPEP 1/	34.22	34.38
	NO MIEMBROS OPEP	50.28	50.91
	<b>TOTAL OFERTA</b>	<b>84.50</b>	<b>85.29</b>
DEMANDA	OECD 2/	49.60	49.39
	RESTO DEL MUNDO	33.99	35.09
	<b>TOTAL DEMANDA</b>	<b>83.59</b>	<b>84.48</b>
<b>BALANCE GLOBAL</b>		<b>0.91</b>	<b>0.81</b>

py/ cifras proyectadas  
1/ Organización de Países Exportadores de Petróleo (11 países productores)  
2/ Organization of Economic Cooperation and Development (30 países industrializados)  
Fuente: Global Insight (Noviembre 2006)

Taking into account the above, the occurrence of exogenous events should not be discarded since they could change the base scenario mentioned. For example, Global Insight considers that if the program production cuts by the Organization of Oil Exporting Countries –OPEC- are not made; if there is an economic recession in the short term in the United States of America and in the People’s Republic of China; and, if the crisis for the Iranian nuclear program is solved, the price per oil barrel could be reduced on average in the fourth trimester of 2006 to US\$57.00. In contrast, if there were a shock of supply of crude oil barrels it could reach US\$61.00 in the last semester of 2006. Said scenario, would be fundamentally explained by the increase in the demand caused by the winter in the northern hemisphere; due to internal political instability in Nigeria; due to greater growth in the demand on behalf of the People’s Republic of China; due to increased political tension in the Mid-East; and, due to new geo-political events that affect the world oil market.



t

## SCENARIOS OF THE OIL MARKET <sup>1/</sup>

### BASE SCENARIO

For the fourth trimester of 2006, the base scenario for the international oil market, is influenced by the high prices that were registered in the first three quarters of the year, which were constituted in the lack of stimulus toward consumption and to the world economic growth, factors that are recently reflected in an increase of the crude oil inventories in the industrialized countries. However, it is foreseen that before the permanence of the factors that provoke raises in the course of 2006 (rigidity of supply and growth of demand) the oil prices could remain in a range of between US\$ 57.00 and US\$ 61.00 per barrel in the fourth trimester of 2006.

In the case prices would not be found at an acceptable level by the member countries of OPEC, to meet on December 13 of this year, we could also foresee them agreeing to new cuts in production, which added to greater demand of the refineries could raise the price of the basket of the referred OPEC levels close to US\$ 60.00 per barrel.

The recovery to the rise in the price of crude oil could happen even though there is skepticism on the capacity of OPEC of making the reduction of the production recently agreed; derived on the one hand, of the expectations that OPEC will try to defend a price for the basket reference between US\$50.00 and US\$55.00 per barrel and, on the other hand, that one reduction agreed in production of crude oil will be reinforced by the seasonal increase in consumption.

### PESSIMIST SCENARIO

The international market continues to be vulnerable to the volatility in the price of crude oil; therefore it could register significant rises at any moment. It is estimated that a high price scenario could be presented as a result of at least one of the following events:



- ✓ The recent fall in the international price of oil could be reverted in the measure that the activities of the refineries will begin that have suspended their operations by maintenance and due to growth of the demand because of the winter in the northern hemisphere. .
- ✓ A more intense winter than normal could consume the inventory adding rigidity to the market, especially if it is confirmed that the inventories are constituted in important proportion to heavily difficult processing crude oils.
- ✓ Iran could again become cause of concern, due to the possibility of international sanctions and because it has shown that keeping the level of oil production is difficult even in normal conditions.
- ✓ It is foreseen that there may be greater internal political instability in Nigeria in the measure that the presidential elections come closer, situation that could provoke important interruptions in oil production.
- ✓ OPEC could have greater success than the expected when trying to make cut productions effective agreed to.

Independent to the mentioned events, are others to consider:

- ✓ Problems in the supply of gasoline or diesel to the United States of America;
- ✓ Greater growth of demand on behalf of the People's Republic of China;
- ✓ Terrorist attacks or increase in political tension in the Mid-east;
- ✓ Lack of answers of member countries of OPEC before increases to the production agreed by these;
- ✓ Interruptions and delays in program production increases by countries that are not members of OPEC; and,
- ✓ New pressures toward raises on behalf of financial agents that invest in the crude oil market, especially in short term contracts.

For December of this year it is estimated that, a scenario of high prices could be precipitated by a geo-political shock, in said case the average price of crude oil could surpass US\$70.00 per barrel. On the other hand, if there were important losses in Nigeria or if there was military action in the Mideast, a freeing of inventory is foreseen for the strategic reserves of OPEC, to contain price hikes.

### **OPTIMIST SCENARIO**

A low price scenario could present itself as a result of the following events:

- ✓ That OPEC would not agree to programmed production cuts (situation that would be reviewed in the meeting of said programmed organization for December);
- ✓ If winter does not present excessively low temperatures, it could weaken the demand of fuels for heating and therefore the price would lose support.
- ✓ Weakening of demand and increased expectations in production, in this regard, it is worth mentioning that it is unlikely that an economic recession in the short term in the United States of America or in the People's Republic of China, therefore the expectations of a recession could provoke a transitory reduction in prices, but only until the growth in demand shows that said expectations lack an adequate foundation.
- ✓ The solution of a crisis caused by the Iranian nuclear program and the reestablishment of the production of light crude oil in Nigeria (unlikely situation since the internal political instability given in Nigeria make it very likely that there will be a high production loss); and,
- ✓ A significant increase in ethanol and ultra low sulphur diesel production<sup>2/</sup>.
- ✓



In case any of the mentioned events would occur or if there were a greater than expected increase in oil producing countries that are not members of OPEC could program greater cuts in their production (even though for said organization it could be difficult to agree in that sense). In this scenario it is estimated that the price per barrel of crude oil could be close to US\$57.00 per oil barrel of WTI<sup>3/</sup> type.

<sup>1/</sup> Source: Global Insight

<sup>2/</sup> Said fuel contains 50 parts per million of sulphur, which could result in less contaminating emissions compared to normal diesel (which contains 500 parts per million of sulphur).

<sup>3/</sup> West Texas Intermediate that are quoted in the New York Stock Exchange.

### **3. Payment Balance estimated for December 2006**

#### **a) Current account**

For 2006 it is estimated that the current account of the payment balance will show a deficit balance of US\$1,533.4 million, greater by US\$146.1 million (10.5%) to the registered the year before, equivalent to 4.4% of the GDP. Said deficit would be financed by a surplus of the capital and financial account of US\$1,833.4 million, therefore registering an increase in the net international monetary reserves for US\$300.0 million.

The balance of the current account would result from the commercial balance deficit of US\$6,200.2 million and from the surplus, of services balance for US\$563.7 million, as well as net current transfers, for US\$4,103.1 million.

The balance of commercial equivalents, regarding December 2005, would be determined by an increase in the FOB balance of exportations for US\$332.4 million (9.8%) and an increase in the CIF value of importations of US\$1,098.8 million (12.5%).

The FOB value of exportations would be of US\$3,710.9 million, greater by 9.8% to the registered in 2005. In said result the exportation value of sugar will be determinant, which is expected to reach US\$284.4 million, greater by US\$47.8 million (20.2%) to the registered in 2005, situation that is explained, by the increase of US\$1.18 (13.9%) in the median exportation price, as well as by the increase of 5.5% in the exported volume. In effect, the median exportation price per quintal would be increased from US\$8.46 in 2005 to US\$9.64 in 2006, while the export volume, in quintals, would increase from 27,977.0 thousand in 2005 to 29,512.4 thousand in 2006. According to the International Sugar





Association (*Organización Internacional del Azúcar -OIA-*), the behavior of the price hikes in the international markets, obeys the increase in demand of sugar cane for the ethanol production, factor that has positively influenced in the placement of Guatemalan production in the world market.

The exportation values for coffee in 2006 would be at US\$443.1 million, lower by US\$20.9 million (4.5%) to that of 2005, which would fundamentally explain a reduction of the exported volume, since the median price would register a similar level to that of 2005. In effect, the median exportation price per quintal in 2006 would be of US\$105.78, level similar to that registered the previous year (US\$105.83); while the, exported volume in quintals would decrease, going from 4,384.2 thousand in 2005 to 4,189.0 thousand in 2006. According to the International Coffee Organization (*Organización Internacional del Café -OIC-*), the persistent high prices of the grain are explained by the continuous deficit of world offer of the same originated by the decrease of world coffee production, especially from Vietnam. Due to the fact that the poor climate of said country affected the coffee harvest due to excess rainfall in the main coffee producing states.

The value of banana exportations in 2006 would be of US\$240.3 million, greater by US\$4.1 million (1.7%) to the registered the year before, which is explained by the increase of 93.3 thousand quintals (0.4%) in the exported volume, and of the increase in the median exportation price per quintal, when going from US\$10.39 in 2005 from US\$10.53 in 2006.

The cardamom exportations value in 2006 is projected at US\$76.6 million, higher by US\$6.3 million (9.0%) when registered in 2005. This result would be explained by the increase in the median exportation price per quintal, going from US\$102.21 in 2005 to US\$108.53 in 2006; as well as in the exported volume in quintals, which would increase from 687.8 thousand in 2005 to 705.8 thousand in 2006 (2.6%). The behavior in the international price of the aromatic spice is associated to the recovery of the demand, especially that coming from Syria, Pakistan and Singapore, main importing countries.

The value of the oil exportations would be of US\$254.6 million, higher by US\$29.5 million (13.1%) to the registered the year before. This increase would be sustained by the increase in the median exportation price per barrel,



which would go from US\$36.26 in 2005 to US\$45.26 in 2006, since the exported volume for 2006 would decrease by 582.0 thousand barrels (9.4%) as a result of lesser performance of oil wells. Regarding the increase in the international price of oil, this has been influenced by the geo-political instability, mainly in the Middle East.

The value of exportations of other products would be of US\$2,411.9 million, higher by US\$265.6 million (12.4%) to the registered in 2005. This result is due to the foreseen increase of exportations, for Central America as well as the rest of the world for 14.9% and 7.6%, respectively. The above is attributed to greater demand, associated to the recovery of the world economic activity.

The CIF value of importations in 2006 would be of US\$9,911.1 million, greater by US\$1,098.8 million (12.5%) to the registered the year before. In this growth we can highlight the titles of machinery, equipment and tools (19.1%); fuels and lubricants (18.9%); construction material (13.5%); consumption goods (9.9%); and, raw material and intermediate products (6.7%). It is worth highlighting the considerable increase in fuel importations and lubricants; explained, as indicated, by the increase in international oil prices and their derivatives.

On the other hand, the services balance in 2006 would register a surplus balance of US\$563.7 million, higher by US\$74.7 million (15.3%) to the registered the year before. Said result would be determined by the surplus of US\$934.9 million in non-factorial services and by the deficit of US\$371.2 million to factorial services. The surplus of non-factorial services would obey the income of foreign currency due to tourism and traveling. On the other hand, the deficit of factorial services would be mainly explained by the increase in the service of foreign debt of the non-financial public sector.

Regarding the net current transfers, this would register a surplus balance of US\$4,103.1 million; particularly derived of the continuous growth of net income from family remittances, which would reach an amount of around US\$3,581.0 million, higher by 21% to the registered in 2005.



### **b) Capital and financial account**

The capital and financial accounts of the payment balance would register a surplus balance of US\$1,833.4 million to December 2006, greater by US\$191.7 million (11.7%), to the registered the year before.

The balance in the capital and financial account would be the result of the surplus balances of capital transfers; of the official and banking account; and, of private capital account. In effect, the capital transfers would register a surplus balance of US\$272.2 million in 2006, greater by US\$146.9 million (117.2%) to the registered the year before. Said increase is mainly due to the negotiated agreement that allowed the cancellation of the debt by *Corporación Financiera Nacional -CORFINA-* with the *Banco Bilbao Vizcaya Argentaria -BBVA-* and with *Compañía Española de Seguros de Crédito a la Exportación, S.A. Compañía de Seguros y Reaseguros -CESCE-* for the credit granted in 1980 for the financing of the purchase of a plant for the manufacturing of paper and cellulose and a sawmill on behalf of *Celulosas de Guatemala, S.A. -CELGUSA-*.

The official and banking capital account would register a surplus balance of US\$197.6 million in 2006, contrary to the deficit of US\$83.9 million registered in 2005. Said result would be fundamentally explained, as income, due to loans given in the public non-financial sector for US\$593.5 million; and as expenses due to amortizations of external debt of the public non-financial sector for US\$365.5 million, due to the foreign debt payment of the Banco de Guatemala for US\$0.3 million and a net amortization of the Treasury Bonds of the Republic of Guatemala for non-residents for US\$30.1 million.

Regarding private capital account, this would register a surplus balance of US\$1,363.6 million, less by US\$236.7 million (14.8%) to the registered in 2005. Said surplus would be explained by the income in concept of direct foreign investment for US\$325.0 million, associated mainly by the improvement of business climate due to the coming into effect of the Free Trade Agreement with the United States of America; due to net capital income in mid and long terms for US\$651.2 million; and, due to net capital income in the short term for



US\$387.4 million, associated to the dynamics of external financial demand of the private sector.

Derived of the operations in current account and in the capital and financial account of the payment balance, it is estimated for 2006, an increase of net international reserves for an amount of US\$300.0 million.

**PAYMENTS BALANCE**  
YEAR 2005 - 2006  
-In millions of US dollars-

CONCEPT	2005 <sup>p/</sup>	2006 <sup>e/</sup>	Variations	
			Absolutes	Relatives
<b>I. CURRENT ACCOUNT (A+B+C) <sup>1/</sup></b>	<b>-1,387.3</b>	<b>-1,533.4</b>	<b>-146.1</b>	<b>10.5</b>
A. COMMERCIAL BALANCE	-5,433.8	-6,200.2	-766.4	14.1
1. Exportations FOB	3,378.5	3,710.9	332.4	9.8
Main Products	1,232.2	1,299.0	66.8	5.4
Other Products	2,146.3	2,411.9	265.6	12.4
2. Importations CIF	8,812.3	9,911.1	1,098.8	12.5
B. SERVICES	489.0	563.7	74.7	15.3
1. Net Factorials	-375.8	-371.2	4.6	-1.2
2. Net non-factorials <sup>2/</sup>	864.8	934.9	70.1	8.1
C. CURRENT TRANSFERS (Net)	3,557.5	4,103.1	545.6	15.3
<b>II. CAPITAL AND FINANCIAL ACCOUNT (A+B+C)</b>	<b>1,641.7</b>	<b>1,833.4</b>	<b>191.7</b>	<b>11.7</b>
A. CAPITAL TRANSFERS	125.3	272.2	146.9	117.2
B. OFFICIAL AND BANKING CAPITAL ACCOUNT	-83.9	197.6	281.5	-335.5
C. PRIVATE CAPITAL ACCOUNT <sup>3/</sup>	1,600.3	1,363.6	-236.7	-14.8
<b>III. PAYMENT BALANCE</b>	<b>254.4</b>	<b>300.0</b>		
Net International Monetary Reserves (-increase)	<b>-254.4</b>	<b>-300.0</b>		

<sup>1/</sup> Balance of current account / GDP = -4.4% en 2005 y -4.4% for 2006

<sup>2/</sup> Include multures for US\$335.0 million in 2005 and US\$322.1 million for 2006

<sup>3/</sup> Include errors and omissions

<sup>p/</sup> Preliminary numbers

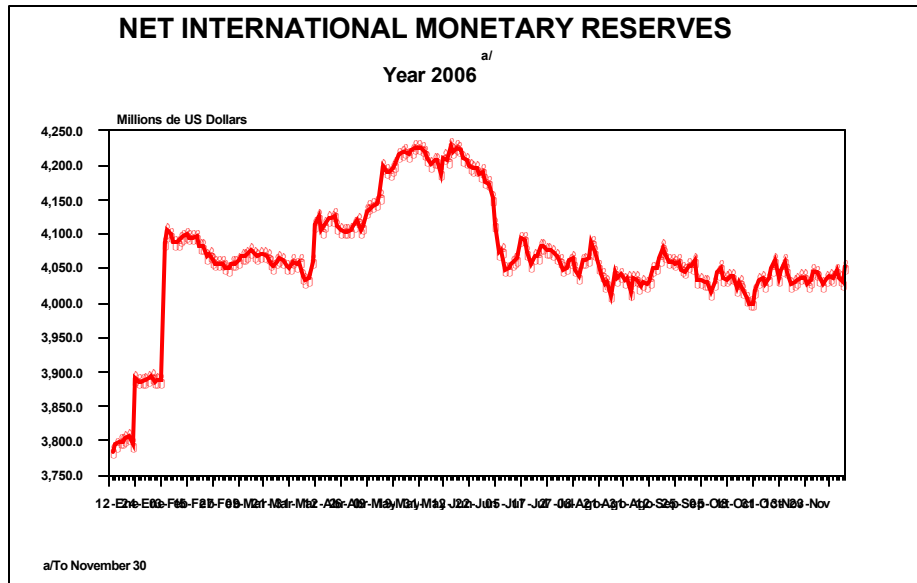
<sup>e/</sup> Ordinary numbers



#### 4. Net International Monetary Reserves

To November 30, 2006, the net international monetary reserves were at US\$4,053.0 million, which means an increase of US\$270.6 million regarding the observed level to December 31, 2005. Said increase is the result of foreign currency income for US\$617.2 million, expenditure of foreign currency for US\$686.9 million and other net income for US\$340.3 million. The income is mainly originated for disbursements of public external debt for the non-financial public sector for US\$486.7 million and for purchase of foreign currency on behalf of the *Banco de Guatemala* through the Electronic Foreign Currency Negotiation System –SINEDI (for its acronym in Spanish)- for US\$130.5 million, made with the purpose of moderating the volatility of the nominal exchange rate. Within the disbursements of public debt received highlight that of the loan for the Multi-sector Strengthening Program of Investment for US\$199.0 million granted by the Central American Economic Integration Bank –BCIE (for its acronym in Spanish); of the First Loan for Politics, Growth and Development of ample base for US\$99.8 million, granted by the *Banco Internacional de Reconstrucción y Fomento* -BIRF-; and, the loan for the Social Quality Improvement Program for US\$60.0 million, granted by the Inter-American Development Bank –IDB-. Regarding the expenditures, these were, on the one hand, capital and interest payments corresponding to Treasury Bonds expressed in US dollars for US\$378.3 million and, on the other hand, payments relative to service of external public debt for US\$308.6 million, of which US\$306.3 million correspond to the non-financial public sector. As to other net income, this title is integrated by the interest perceived on investments of the NIR (US\$145.1 million); due to income of royalties for oil exploitation (US\$91.0 million); for the increase in the balance of the legal banking reserve accounts in foreign currency (US\$14.6 million); and, other concepts (US\$89.6 million) <sup>12</sup>.

<sup>12</sup> Mainly include: variation of the international price of oil; checks, Money orders and draft; consular remittances and settlement of credit letters.



It is considered that the mentioned level of the net international monetary reserves is adequate, since the same will cover 4.4 months of goods importations. Additionally, if short term obligations from the central government expressed in US dollars are reduced (proof of sensibility), they would still be over the suggested upper limit for international standards, as to the level of net international monetary reserves should be sufficient to finance at least 3.0 months of goods imports, since it would be around 3.5 months.

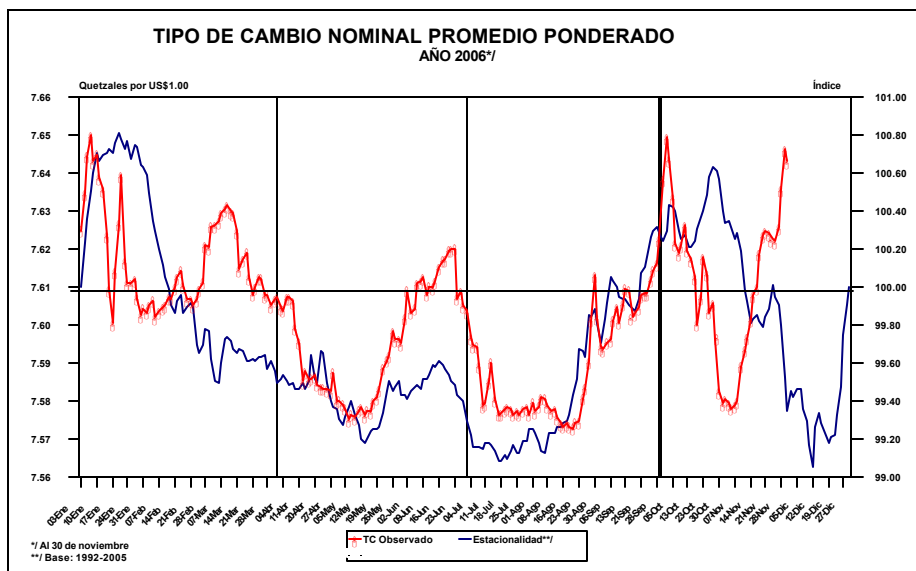
Also, the solidity of the external position of the country can also be measured through its coverage of external public debt. In that sense, to November 30, 2006, the level of net international monetary reserves are equivalent to 7.6 times the amount of service of the external public debt of the country to a year (8.6 times to November of 2005).

On the other hand, if the level of net international monetary reserves regarding the sum of the deficit in current account of payments balance and the service of the external public debt in a year, the result would indicate that with the current level of the mentioned reserves 2.3 times the referred obligations could be covered (2.2 times in 2005).

## 5. Type of nominal exchange rate

Regarding the weighted average nominal exchange rate, the evolution of the same during the greater part of the year was congruent with the seasonal behavior, located on November 30, 2006 at Q7.64 per US\$1.00, which implies a depreciation of 0.4% regarding the level registered to December 31, 2005 (Q7.61 per US\$1.00). However, several episodes of volatility were observed therefore according to the guidelines of current monetary, foreign exchange rate and, credit policy, in the sense of reducing the volatility of the nominal Exchange rate, the *Banco de Guatemala* made foreign currency purchases, which to November 30, 2006 went up to US\$130.5 million through the participation rule established for the effect.

In that context, the nominal exchange rate showed certain volatility between January 12 and 17, so in order to moderate certain behavior, on January 16, 2006 the *Banco de Guatemala* bought US\$6.5 million (foreign currency) in the exchange market. On April 18 and May 15 the nominal exchange rate showed volatility, making it necessary for the *Banco de Guatemala* in the exchange market purchasing amounts of US\$42.0 million during April and US\$58.0 million in May. However, during the periods of July 7 to 18 and August 11 to 23, observing volatility again in the nominal exchange rate, which caused, the *Banco de Guatemala* to participate again, purchasing US\$14.0 million and US\$10.0 million in July and August.





### **a) Participation in the Exchange Market**

The current exchange regimen is flexible and, therefore, the exchange rate is determined by the interaction between supply and demand of foreign currency in the market and the participation of the *Banco de Guatemala* is oriented to moderating the volatility of the exchange rate, without affecting its tendency.

In that context, the Central Bank, during 2006 has participated in the exchange market according to the participation rule approved by the Execution Committee, which establishes decision only for the purchase of foreign currency, in the following terms:

#### **i) First threshold**

When the reference exchange rate is greater to Q7.70 per US\$1.00, the *Banco de Guatemala* keeps a purchase position in the Electronic Foreign Currency Negotiation System -SINEDI- of US\$10.0 million, whose price is equal to the mobile average of the last five days of the reference exchange rate, minus a 0.5% fluctuation margin. In case an initial bid is exhausted, a new bid is placed of US\$10.0 million at a price of Q0.0025 under the price of the first bid and so on until satisfying the market requirements.

#### **ii) Second threshold**

When the reference exchange rate is equal or lesser than Q7.70 per US\$1.00 and greater to the price of the last purchase made by the *Banco de Guatemala*, this keeps a purchase bid for US\$10.0 million in the SINEDI, at a price equal to the mobile average of the last five days of the reference exchange rate, minus a fluctuation margin of 0.5%; if the initial bid is exhausted before the operations of the day end, a new bid for US\$10.0 million at a price of Q0.001 below the price of the previous bid and so on until it satisfies the requirements of the market.

The next day, the price of the initial bid is equal to the mobile average exchange rate of the last five days of the reference exchange rate, minus a fluctuation margin of 0.5%, or to the last bid of the previous day, whichever is





less, as long as said price is less than the price of the last purchase made by the *Banco de Guatemala*.

### iii) Third threshold

Is activated when the reference exchange rate is equal to or less than the price of the last purchase made by the *Banco de Guatemala*, in which case the Central Bank will enter the SINEDI with a purchase bid of US\$10.0 million to the price of the last purchase is made by the *Banco de Guatemala*; when exhausting said bid will place a new amount of US\$10.0 million at a price of Q0.001 below the first bid and so on, until the market requirements are satisfied.

The next day, the participation of the *Banco de Guatemala* begins in the following manner: a) if the bid of the previous day is exhausted, the initial bid is the same as the balance and the price of the bid; b) in case it were exhausted, the initial bid is of US\$10.0 million at a price of Q0.001 below the price of the last bid of the previous day.

The *Banco de Guatemala* keeps a purchase bid of US\$10.0 million at the last purchase price made by the Central Bank until the mobile average of the last five days of the reference exchange rate, minus a fluctuation margin of 0.5% is equal to said price; as of which the *Banco de Guatemala* keeps a purchase bid of US\$10.0 million at a price of equal value resulting from said calculation.

### b) Complement of the exchange rule when high volatility is observed in the nominal exchange rate

Based on the information obtained through the proper channel, the *Banco de Guatemala* participates in the exchange market when the exchange rate experiments excessive volatility and its bid in the market exceeds the values of the mobile average of the last five working days of the reference exchange rate minus a fluctuation margin of 0.5%, placing an initial purchase bid in the SINEDI of US\$10.0 million at the lowest price between the reference exchange rate current for that day; the mobile average of the last five days of the reference exchange rate minus a fluctuation margin of 0.5%; and, the



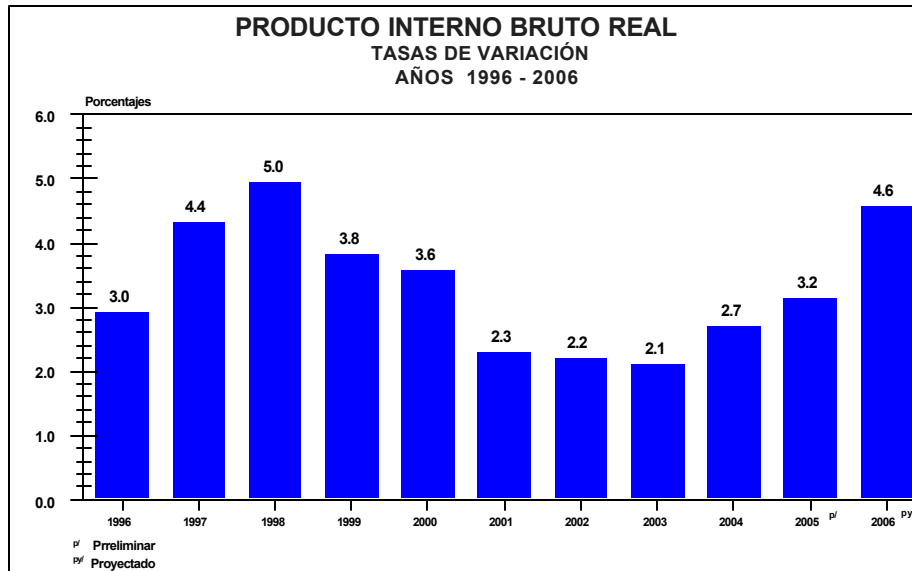
average of the closing exchange rates of the previous day, reported by the institutions that constitute the Institutional Foreign Currency Market, in operations greater than US\$50.0 thousand, as long as the price is not less than the price of the last purchase made in the *Banco de Guatemala* in the SINEDI; in case the initial bid is exhausted, placing a new bid of US\$10.0 million at a price of Q0.001 below the price of the first bid and so on until the markets requirements are satisfied. When counting on the information of the average of the opening exchange rates for that day greater than US\$50.0 thousand, reported by the institutions that constitute the Institutional Foreign Currency Market, the Central Bank verifies if said average is less than the current bid price, in which case said average is the new price of the purchase bid, as long as the average of the new price of the purchase bid, as long as the price is less than the price of the purchase bid made by the *Banco de Guatemala* in the SINEDI.

It is important to mention that in 2006 the participation of the *Banco de Guatemala* in the exchange market purchased US\$130.5 million (US\$466.6 million in 2005).

In that sense, the described rule has allowed the participation of the *Banco de Guatemala* in the exchange market oriented toward moderating the volatility of the exchange rate, mainly in the months of April and May, it is estimated that the same is susceptible to improvement, in order to overcome the following aspects: a) it is oriented toward the Central Bank participates in the exchange market only when the exchange rate shows behavior toward appreciation; b) does not establish limits as to the amounts and number of participations; and, c) the Central Bank keeps permanent presence in the exchange market, even in periods of stability of the nominal exchange rate. Last, it is worth pointing out that said statements are congruent with the recommendations made by the IMF mission in its most recent visit to Guatemala.

## **B. REAL SECTOR**

### **1. General Aspects**



The national economic activity has presented deceleration since 1999, which reverted in 2004, when showing a rising tendency that continued until 2005 and is foreseen to consolidate in 2006, year in which the GDP is estimated will grow 4.6% (3.2% in 2005) in real terms. It is worth indicating that the growth rate, for the first time in seven years<sup>13</sup>, is higher than the average registered in the nineties (4.1%); for the third consecutive year, it is also greater than the population growth rate (2.5%)<sup>14</sup>.

Externally, the foreseen behavior in the national economic activity is supported, on the one hand, in the expected economic growth expected in the United States of America and in the rest of the main commercial partners of Guatemala<sup>15</sup> and, on the other hand, in the enforcing of the Free Trade Agreement between the United States of America and Central America and the Dominican Republic (DR-CAFTA).

The IMF<sup>16</sup> estimates that the FTA represents economic growth of 0.7 additional annual percentual points in Central America to the growth without the

<sup>13</sup> In annex 2 a theoretical and empiric exportation on the determinants of economic growth.

<sup>14</sup> Projection made by the National Statistics Institute -INE- (for its acronym in Spanish), based on the XI National Population and VI Home Census in 2002.

<sup>15</sup> According to the International Monetary Fund IMF, the United States of America will grow 3.4% (3.2% in 2005). Regarding the Central American countries, the referred organism estimates their economies will grow: Costa Rica 6.5% (5.9% in 2005); Honduras 4.5% (4.2% in 2005); Nicaragua 3.7% (4.0% in 2005); and, El Salvador 3.5% (2.8% in 2005).

<sup>16</sup> IMF. Central America: World integration and regional cooperation, Washington, DC, 2005.



FTA, until it reaches 1.5 additional percentage points in the long term. On the other hand, the World Bank<sup>17</sup> estimates that it is possible the FTA will have positive effects on economic growth in Central America, of between 0.6 and 0.8 additional percentage points to those that would be registered in a scenario without the FTA.

As to the impact that the treaty could have on the real growth rate of the country, the technical departments of the *Banco de Guatemala*, based on an econometric analysis, estimate that if the treaty had been enforced as of July 1, 2006, said impact could be between 0.24 and 0.42 additional percentage points for this year (See Annex 3).

It is worth adding that if the international price of oil for the third year was constituted as an adverse factor to national productive activity, the impulse that continues showing the world economy fundamentally sustained in the economic growth of the United States of America and of the People's Republic of China, gives support to the expected growth of the Guatemalan economy.

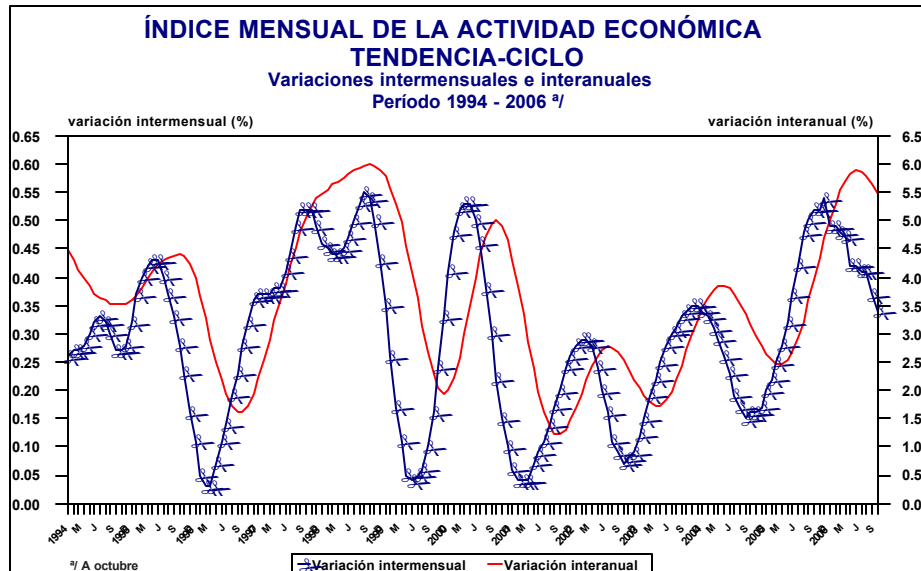
Internally, the expected growth is based on maintaining macroeconomic stability, as a result of the application of disciplined monetary and fiscal policies; in improving the expectations of economic agents, founded in greater aggregate demand, in a better business climate; and, in the impulse coming to the realization of reconstruction work in the areas that were affected by tropical storm Stan, as well as the greater levels of public and private investment, associated to said efforts and other infrastructure works<sup>18</sup>.

As to the Monthly Economic Activity Index -IMAE (for its acronym in Spanish)- its cyclical tendency, with numbers to October 2006 (last information available, after showing growing behavior from May 2005 (2.53%) to June 2006 (5.88%), which is congruent with the results expected in the economic activity for the present year, in July began to decelerate, reaching an inter-annual

<sup>17</sup> WB. CAFTA-DR: Challenges and Opportunities for Central America page 186, 2005.

<sup>18</sup> The Congress of the Republic, through decrees 88-2005 and 89-2005 approved the execution of the highway projects of the "*Franja Transversal del Norte*" (North Transversal Fringe) and the "*Anillo Periférico Metropolitano*" (Peripheral Metropolitan Ring). Additionally, the *Ministerio de Comunicaciones, Infraestructura y Vivienda* (Roughly equivalent to the Department of Transportation and Housing) began the Works to remodel the International Airport of La Aurora and the Municipality of Guatemala City is working on the infrastructure for the TRANSMETRO.

variation of 5.47%; notwithstanding, the same is higher to the observed in the same month of 2005 (3.96%).



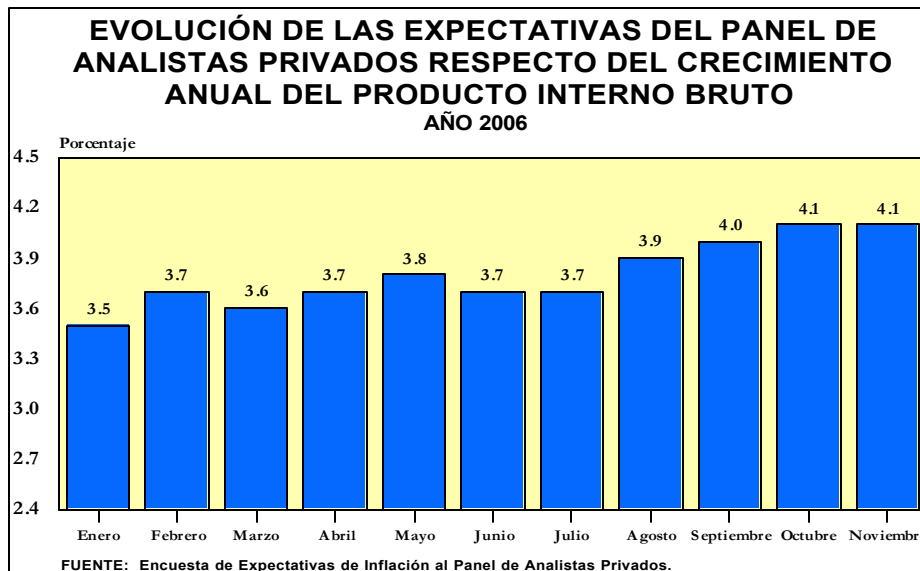
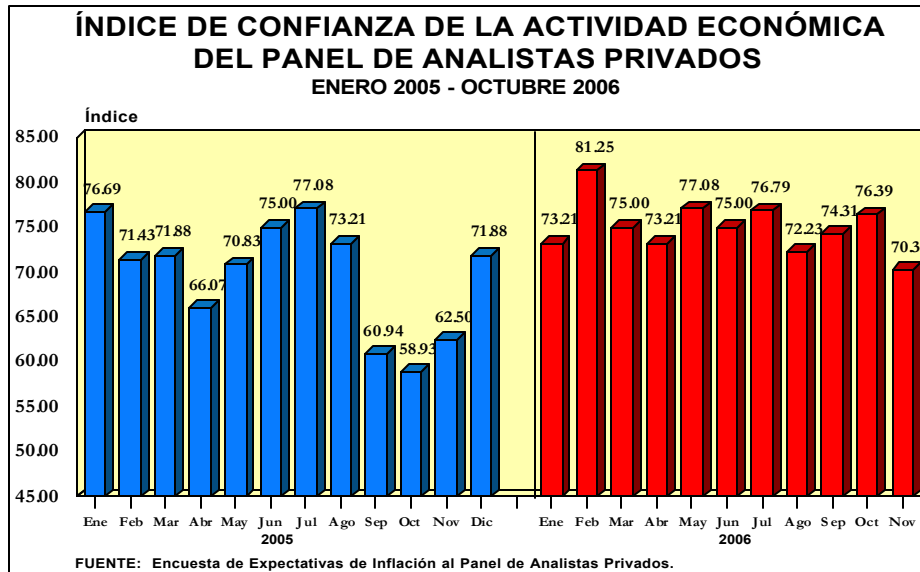
According to the expected behavior of the economic activity for 2006, according to the results of the Business Opinion Surveys<sup>19</sup> made in March-April and August-September 2006, on average 89.5% of the interviewed businessmen declared that the production volume of industrial products will increase or will be equal for the present year, percentage higher on average of the two surveys made in 2005 (85.3%).

On the other hand, according to the tendency of the Economic Activity Index for the Panel of Private Analysts –EEI (for its acronym in Spanish)-<sup>20</sup>, the performance expectations of the economic activity will continue improving during the present year, since the trust level remained over the registered level at the end of the previous year. In effect, after having reached a level of 71.88 in December 2005, the referred index went from 70.31 in November, reaching its maximum value in February (81.25). It is worth mentioning that the average of

<sup>19</sup> Survey made twice a year directed toward manufacturing industry businessmen, whose sample includes 434 industrial establishments, of which 60% are big (more than 50 employees), 22% are medium (between 20 and 49 employees) and 18% are small (between 5 and 19 employees).

<sup>20</sup> The Trust Index of the Economic Activity of the Panel of Private Analysts purpose is to measure the perception of the economic agents, on the current economic situation and the business environment, as well as on the economic evolution of the country in the immediate future. It is worth indicating that the expectations of the national and international experts are recognized through the EEI, that since December 2003 is made monthly by the *Banco de Guatemala* and whose results are published on the Web page.

the index from January to November 2006 was of 74.98, higher by 6.3% to the registered average in the same period the year before (70.51).



Another indicator obtained from the Survey of Inflation Expectations is that relating to the estimation of the GDP growth. Regarding that, in the survey to November, the analysts mentioned foresaw that the national economic activity for 2006 will increase by 4.1%, expectation of growth higher to that of December 2005 (3.1%).



## 2. Gross Domestic Product according to product origin

According to the origin of production, for 2006 positive behavior is foreseen for all productive sectors, estimating that the majority register more dynamic growth rates than the observed the year before, with the exception of sectors like agriculture, forestry, hunting and fishing and housing property, whose growth rates will be less dynamic.

As to production in agriculture, forestry, hunting and fishing (with a participation of 22.2% of the GDP), according to the appreciations provided by the associations of producers, trade unions and public and private entities, it is estimated that they will experiment a lesser dynamism regarding the year before, when showing a growth rate of 1.8%, less than the 2.2% registered in 2005. Said behavior is explained by the positive growth rates in the production components of the agricultural sub-sector (0.4%) mainly, in the case of exportation products, whose growth (0.9%) is estimated will be less dynamic than the previous year (2.7%); also, a fall of 6.7% is expected in industrial consumption products mainly due to the decrease in the production of sugar cane. In the case of exportation products, a deceleration of banana production of 0.9% is foreseen, which will be counteracted by the increase in the production of coffee and cardamom. Regarding the products of internal consumption, it is expected they will have a more dynamic behavior than the registered the previous year, mainly corn, whose production will recover after having been affected by the effects of tropical storm *Stan*.

In the case of coffee, based on the information provided by the *Asociación Nacional del Café -ANACAFÉ-* (National Coffee Association), a production of 4,900.0 thousand quintals of production, higher to the registered in 2005 (4,800.0 thousand quintals), behavior that is explained by the expectations of better prices in the international market of the grain, which translated to producers will have greater cultural work and, therefore, will provide an increase in the yield per cultivated land.

The production of cardamom, on the other hand, is expected to grow 2.5% in 2006 (0.3% en 2005). According to the *Asociación de Cardamomeros de Guatemala -CARDEGUA-*(Cardamom Association of Guatemala), its greater dynamism is explained by the improvement foreseen in the exportations of the



aromatic spice. In effect, the volume of exportations is foreseen to grow by 2.6% in 2006, before an expected improvement in the median price of exportation, of US\$102.21 per quintal in 2005, estimated to be at US\$108.53 per quintal in 2006.

Regarding the banana production, a negative variation is estimated at 3.6% for 2006 (11.4% in 2005). According to appreciations by the *Compañía de Desarrollo Bananero, S.A.*, -BANDEGUA (Banana Development Company)- and of *Compañía Bananera Guatemalteca Independiente, S.A.*, -COBIGUA (Independent Banana Company of Guatemala)-, the expected contraction expected is explained because Guatemala quit exporting to the European market, derived from the fact that the European Union abandoned the quota modality, establishing a new tariff on the banana imports as of January 2006 (176 Euros per metric ton).

Regarding sugar cane production, a 7.9% fall was foreseen, behavior that contrasts with the 0.2% growth observed in 2005. In effect, according to the *Asociación de Azucareros de Guatemala –ASAZGUA* (Sugar Association of Guatemala) and the *Centro Guatemalteco de Investigación y Capacitación de la Caña de Azúcar–CENGICAÑA* (Guatemalan Center for Investigation and Training of Sugar Cane)-, during the harvest of 2005/2006 a production of 360.9 million quintals of sugar cane are expected, number lower by 31.1 million quintals to the registered in the harvest of 2004/2005 (392.0 million quintals). It is worth indicating that in 2006 the cultivated area decreased due to climate factors that coincided with the performance per parcel harvested.

In the case of internal consumption products, a more dynamic growth is registered than that of 2005, when going from 4.0% in that year to 6.1% in 2006, mainly as a result of an increase of 10.0% in the corn production and of 5.0% in the bean production (-4.1% and 3.0% in 2005, respectively). In effect, according to the information of the *Coordinadora Nacional de Productores de Granos Básicos –CONAGRAB–* (National Coordinator of Basic Grains Producers), it is estimated that the corn production will be 24.7 million quintals (22.5 million quintals in 2005), as a result of the normalization of the production of the areas affected by tropical storm *Stan*. In the case of beans a greater production in thousands of quintals is also foreseen, when going from 2,058.9





thousand in 2005 to 2,161.8 thousand in 2006. As to the production of other consumption products like fruit and orchards, it is estimated that these will register a deceleration in their production, when reaching growth rates of 5.8% and 5.7%, respectively (in 2005 grew 6.3% and 8.1%, in that order).

In the case of the manufacturing industry (with a participation of 12.5% in the GDP), for 2006 a growth of 3.6% is estimated, higher to the observed in 2005 (2.7%), the highest registered in the last eight years. Said behavior is associated, among other factors, to the growth of the demand of Guatemalan industrial products in the world markets (4.3%) and, mainly in the Central American markets (12.2%), derived from positive performance of its economies. The value of food product exportations, fruit and conserves, and sugar for the rest of the world, in US dollars registered a growth of 16.6% to September of this year (12.5% en 2005), 21.5% (30.3% in 2005) and 54.6% (4.9% in 2005), respectively. As to sales in Central America, the growth rates of food product exports are highlighted with 18.4% (11.7% in 2005); construction material with 17.4% (12.5% in 2005); and, plastic articles, with 14.8% (21.4% in 2005).

It is worth adding that, to September 2006, the importation of raw material and intermediate products (without including importations made under the protection of decree 29-89 of the Congress of the Republic “Law of Development and Promotion of the Exporting and Multure Activity”), destined to the manufacturing industry, registered an increase of 9.8% (8.5% to September 2005) in US dollars, and the capital goods importations for the industry grew 24.6% (13.2% to September 2005).

The wholesale and retail sale commercial activity (with a 24.3% participation in the GDP), is estimated that for 2006 will register a growth rate of 3.1% (2.4% in 2005), mainly explained by the greater dynamism foreseen in the growth rhythm of the manufacturing industry sector, as well as goods imports.

The mines and quarries sector foresees a registered growth of 9.5% (2.1% fall in 2005). This behavior, according to the information of the *Ministerio de Energía y Minas* (Roughly equivalent to the Department of Energy), this is fundamentally determined by a greater demand of lime, gravel and sand for public and private construction. On the other hand, a fall of 12.8% is foreseen in oil production (8.3% fall in 2005), due to the fact the well exploitation in



closed wells has just normalized, due to the finalization of contract number 1-85<sup>21</sup>, which was newly awarded as contract number 1-2006<sup>22</sup> and due to the reconditioning process of three wells, begun in 2005, from contract number 2-85<sup>23</sup>.

Regarding the electricity and water sector, a growth of 2.4% is estimated (1.7% in 2005). According to the information of the Wholesale Market Administrator –AMM (for its acronym in Spanish), to September, 2006 a gross total generation of electric energy was registered of 5,497.5 thousand MWH, volume that implies a 0.4% increase regarding the same period the previous year (2.7% en 2005). Gross hydraulic generation has influenced on the behavior, that to September 2006 registered a growth of 15.3% (12.4% to September 2005), while the gross thermal generation, to said month, presented a fall of 8.7% (-2.5% in 2005) associated to the evolution in the price of oil. It is worth adding that, the lower dynamism of electricity generation has been due in some measure to the decline in sales to El Salvador, which to September had registered a decrease of 85.2%, when going from 316.6 thousand MWH in 2005 to 46.8 thousand MWH in 2006.

The construction sector, with a 1.9% participation of the GDP, is expected to register a growth of 29.6% in 2006 (16.0% in 2005), as a result of the increase of 47.1% in private construction (27.0% in 2005) and of 7.6% (4.6% in 2005) in public construction. In public construction the result is associated to the fact that the budgetary execution for the present year is directed to reconstruction work on the infrastructure of affected by Tropical Storm Stan and to maintenance, rehabilitation of highways; reconstruction of the International Airport *La Aurora*; and the beginning of work on the Northern Transversal Highway, the Metropolitan Peripheral Ring and the *Transmetro* activities (the latter is on behalf of the City Hall of Guatemala). In the case of private construction, the positive behavior is associated to the expected increase in the volume of the surface construction authorized by the

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<sup>21</sup> Expired in August 2005.

<sup>22</sup> The Perod Energy Company -PERENCO- is named as administrator of the business and the operator is the Ministerio de Energía y Minas (Department of Energy).

<sup>23</sup> This contract was awarded to PERENCO and expires in 2010.



municipalities of the main municipalities surveyed in the country<sup>24</sup>, as well as the culmination of authorized constructions and constructions begun in 2005.

The transportation, storage and communications sector (with a participation of 13.0% in the GDP), is expected to register a growth of 12.9% in 2006 (9.3% in 2005), behavior explained by greater dynamism expected in the communications sub sector, representing 46.6% of the sector, which is estimated will register a growth rate of 17.6%, greater by 5.6 percentage points to that of 2005, derived of the surge maintained in the activity of new telephone lines throughout the country; and by the growth of 9.1% in the transportation sub sector (7.3% in 2005), associated to the increase registered in the urban transportation and extra-urban cargo transportation.

As to the banking, insurance and real estate sector, a 5.6% growth is foreseen for 2006 (3.1% in 2005), associated to the behavior of the financial intermediation activity.

For the housing property and private services sector, a growth rate of 2.0% and 3.8%, respectively (2.5% and 3.6%, in the same order in 2005). In the case of the public administration and defense sector, a spike is estimated of 3.6% (1.8% fall in 2005).

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<sup>24</sup> Includes the municipalities of the metropolitan area: Guatemala, Mixco, Villa Nueva, Santa Catarina Pinula, San José Pinula, Villa Canales and San Miguel Petapa and to 36 municipalities of the interior of the Republic.



**ORIGIN PER BRANCH OF GROSS DOMESTIC INTERNAL PRODUCT**  
**MARKET PRICES**  
**YEAR 2005 - 2006**  
(millions of quetzales from 1958)

C O N C E P T O	2005 p/	2006 py/	Variation Rates	
			2005	2006
<b>GROSS DOMESTIC PRODUCT</b>	<b>5,747.0</b>	<b>6,009.8</b>	<b>3.2</b>	<b>4.6</b>
Agriculture, forestry, hunting and fishing	1,308.0	1,331.3	2.2	1.8
Mine and quarry exploration	27.5	30.2	-2.1	9.5
Manufacturing Industry	722.8	748.9	2.7	3.6
Construction	86.0	111.4	16.0	29.6
Electricity and water	251.3	257.3	1.7	2.4
Transportation, storage and communications	693.0	782.1	9.3	12.9
Wholesale and retail sale	1,418.3	1,461.5	2.4	3.1
Banking, insurance and real estate	283.7	299.6	3.1	5.6
Housing property	266.3	271.8	2.5	2.0
Public administration and Defense	344.4	356.9	-1.8	3.6
Private services	345.7	358.8	3.6	3.8

p/ Preliminary numbers

py/ Projected numbers

### 3. Gross domestic product as to expense

For 2006 it is estimated that the variables that make up the GDP as to expense, in real terms, will register positive and more dynamic growth rates than the observed in 2005, with the exception of investment by the central government.



The internal demand, constituted by consumption, investment and variation of supply, are expected to register a growth of 4.4%, greater to the 3.4% observed in 2005.

Private consumption is estimated to register a growth rate of 4.6%, greater by 0.3 percentage points to the observed the year before, associated to the macroeconomic stability and to the increase foreseen in family remittances coming from abroad.

The expense in government consumption, that includes remuneration and the purchase of goods and services, is foreseen to have a growth of 7.9% this year (-1.4% in 2005), associated to greater budgetary execution in operation expenses on behalf of the central government.

In matter of investment, the gross geographical formation of fixed capital is estimated to register a growth of 18.0% (12.5% in 2005), as a result of an increase of 19.7% in private investment (11.7% in 2005) and a deceleration of 9.5% in public investment (16.4% growth in 2005). The growth of private investment, in real terms, is mainly due to an increase of 47.3% expected in private construction (26.9% in 2005) and of 17.1% in capital imported goods (10.9% in 2005). As to public investment behavior, this is explained by a 34.8% reduction in the purchase of machinery and equipment (210.1% in 2005).

The external demand, constituted by goods and services exportations, are estimated to register a growth of 6.5% in real terms (-1.0% in 2005). It is worth indicating that the external demand would be promoted by the performance improvement foreseen for the economic activity of the United States of America and of the main commercial partners of the country, as well as the greater dynamics expected due to the enforcing of the FTA.

As to external offer, the importations of goods and services in real terms will register a growth of 5.2%, greater to the observed the year before (1.4%). As to the structure of importations (without including the importations made under the protection of Decree number 29-89 of the Congress of the Republic "Law of Promotion and Development of Exporting and Multures Activities"), in US dollars to September 2006 the capital goods grew 21.7% (11.3% in 2005);



consumer goods 10.3% (7.1% in 2005); raw material and intermediate products 9.0% (8.0% in 2005); fuel and lubricants 31.5% (44.2% in 2005); and, construction material 12.3% (21.7% in 2005).

**EXPENSES DEDICATED TO THE INTERNAL GROSS PRODUCT AT MARKET PRICES  
YEARS 2005 - 2006  
(millions of quetzales from 1958)**

CONCEPT	2005 p/	2006 py/	Variation rates	
			2005	2006
1. Expenses in consumption for individuals, Private non-lucrative institutions	4,706.6	4,922.0	4.3	4.6
2. Expenses in consumption for the general government	435.0	469.5	-1.4	7.9
3. Gross geographical formation of fixed capital	<b>690.4</b>	<b>814.5</b>	<b>12.5</b>	<b>18.0</b>
Private	571.6	684.5	11.7	19.7
Public	118.8	130.0	16.4	9.5
4. Variation of supplies	211.9	104.5		
<b>GROSS EXPENSES FOR THE NATION</b>	<b>6,043.9</b>	<b>6,310.5</b>	<b>3.4</b>	<b>4.4</b>
5. Exportation of goods and services	853.7	909.5	-1.0	6.5
6. Minus: Importation and goods and services	1,150.6	1,210.2	1.4	5.2
<b>GROSS DOMESTIC PRODUCT</b>	<b>5,747.0</b>	<b>6,009.8</b>	<b>3.2</b>	<b>4.6</b>

p/ Preliminary numbers

py/ Projected numbers

## C. FISCAL SECTOR

### 1. Analysis of the budgetary execution

According to preliminary numbers of the *Ministerio de Finanzas Públicas* –MFP (Equivalent to the Department of the Treasury)-, the financial situation of the central government to October (last information available) registered a fiscal deficit of Q875.7 million, amount lower by Q84.8 million (8.8%) to the registered in October 2005 (Q960.5 million). As a proportion of the GDP the fiscal deficit was at 0.3%, slightly lower to the registered in 2005 (0.4%). On the other hand, it is worth indicating that the level of tributary income to October of this year has allowed the tributary load to be at 8.4%, greater by 0.5 percentage points to the registered in 2005. In that sense, the evolution registered by said indicator is



consistent with the estimated for the closing of the fiscal year (10.4%). It is also worth indicating that to October of this year a primary surplus<sup>25</sup> was registered of 0.7% of the GDP, higher by 0.1 percentage points to the registered in 2005, as a result that when deducted from interest payment of the public debt for Q2,718.7 million of total expense, generates a surplus for Q1,843.0 million. Another important indicator of public finance is constituted by the tributary elasticity, which to October 2006 was of 1.5, which indicates a greater dynamism in the growth registered the tributary income regarding the estimated growth for the end of economic activity.

The fiscal income to October went up to Q23,994.1 million, higher by Q3,414.7 million (16.6%) to the observed in equal period to the year before, which represents a collection of 84.8% regarding the budget for 2006 (82.3% in 2005). From tributary income Q22,711.3 million were perceived, amount higher by Q3,373.0 million (17.4%) to the observed in the same period the year before, registering a 87.9% of the programmed tributary collection in the budget for 2006 (83.1% in 2005)<sup>26</sup>. Said increase is explained by the greater collection of direct taxes (Q1,454.7 million) and indirect (Q1,918.3 million). The increase in collection of indirect taxes is fundamentally explained by the increase in income coming from the Added Value Tax –IVA (for its acronym in Spanish)-. The income due to IVA reached Q9,950.7 million, amount higher by Q1,400.1 million (16.4%) to the perceived in the same period in 2005. It is worth indicating that said result is mainly associated to the greater collection of IVA on importations, which was higher by Q918.1 million (16.7%) regarding October 2005.

Concerning the increase in direct taxes (26.4%), this is mainly explained by the greater income collections from the Income Tax (*Impuesto Sobre la Renta* –ISR)- and the Extraordinary and Temporary Support for the Peace Agreements Tax (*Impuesto Extraordinario y Temporal de Apoyo a los Acuerdos de Paz* –IETAAP)-, whose amounts increased by Q907.1 million (23.4%) and Q556.3 million (34.6%), respectively, regarding the observed to October 2005.

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<sup>25</sup> The primary deficit or surplus is obtained excluding the total expense of interest payments of the public debt of the conventional measurement of the deficit.

<sup>26</sup> It is worth indicating that according to the information of the Tributary Superintendence Administration –SAT (for its acronym in Spanish) the tributary income collected, were greater by Q563.8 million (2.4%) regarding the programmed to October.



The expenses executed to October 2006 registered Q24,869.8 million, higher by Q3,329.9 million (15.5%) to the observed in the same period of 2'005, which represents an execution of 71.6% regarding the budget for 2006 (in October 2005 the execution registered was of 72.1%). Regarding the structure of total expense to October 2006, the operational expense (that does not include maturity or amortizations of debt) registered 69.9% of the total (71.2% to October 2005), while the capital expense represented 30.1% of the total (28.8% to October 2005). According to the *Ministerio de Finanzas Públicas* (Roughly equivalent to the Department of the Treasury), the greater dynamism in public expense was the product of the increase in the social expense for Q1,208.7 million (12.5% regarding the registered amount in the same period the year before) destined to all expenditures assigned to the sectors considered priority in the Peace Agreements, such is the case of Education, Health, Housing, Internal Security and Justice and the execution of the expense assigned by the named "Rehabilitation Program and Reconstruction originated by Tropical Storm Stan".

The operation expenses were at Q17,377.4 million, amount higher by Q2,051.6 million (13.4%) to the observed in the same period the year before. This result was basically determined by the increase of Q1,041.5 million (14.3%) in operation expenses and by the increase of Q767.5 million (13.7%) in current transfers. According to the *Ministerio de Finanzas Públicas* (Roughly equivalent to the Department of the Treasury), the increase in expenses obeys the granting of an only bond to the national school teachers union on behalf of the *Ministerio de Educación* (Roughly equivalent to the Department of Education) for Q1,000.00 per teacher; to the amount destined to the hiring of personnel for the "Special Reserves Body for Citizen Security" on behalf of the Ministry of Defense; and, to the increase in the employers contribution made by the Central Government to the Guatemalan Social Security Institute –IGSS-. On the other hand, the increase registered in current transfers mainly obeys those made by the Central Government to the Judicial Branch; to the University of San Carlos of Guatemala; to the Ministry of Culture and Sports; to the Ministry of Health; to the Ministry of Communication, Infrastructure and Housing; and to the Ministry of Education.





The capital expenses went up to Q7,492.4 million, amount greater by Q1,278.3 million (20.6%) to the registered in a similar period in 2005, registering an execution of 65.7% regarding the budgetary expenses for 2006 (61.6% in 2005). Said result was determined for an increase in direct and indirect investment expenses, which registered an increase of Q393.4 million (24.0%) and of Q884.9 million (19.3%), respectively. In effect, the increase of the direct expense investment is due to greater execution of infrastructure works (increasing, rehabilitation and road reconstruction) made by the *Ministerio de Comunicaciones, Infraestructura y Vivienda* (Roughly equivalent to the Department of Housing and the Department of Public Works). The increase of indirect expense investment is due to greater capital transfers made to city halls, urban and rural development councils, the Social Investment Fund and the Guatemalan Housing Fund.

As a proportion of the GDP the total expenses to October represented 9.3%, operational 6.5% and capital 2.8%, higher to the registered in the same period of 2005 (8.9%, 6.3% and 2.6%, respectively).

As a result of current income and current expense described to October, a savings in current account was registered of Q6,396.8 million, amount greater by Q1,456.0 million (29.5%) to the registered in the same period of 2005. The savings in current account registered in the period analyzed allowed financing 85.4% of the investment expense (79.5% in 2005). In GDP terms, this variable represented 2.4% (2.0% to October 2005).

Regarding the financing sources of the deficit registered to October, the net external financing was at Q2,365.6 million, product of loan disbursements for Q3,695.2 million and amortizations for Q1,329.6 million. The loan disbursements mainly came from the loan granted by the Central American Economic Integration Bank for Q1,513.5 million to partially finance the "Multi-sector Program of Investment Strengthening"; of the loan granted by the International Reconstruction and Promotion Bank for Q761.5 million named "First Loan for Development and Ample Base Growth Policies"; and, the loan granted by the Inter-American Development Bank for Q455.8 million to finance the program named "Social Expense Quality Improvement Program."



On the other hand, net internal financing rose to Q1,945.6 million, as a result of negotiations of public headings for Q6,478.9 million, maturity for Q3,373.8 million and the amortization for Q1,159.5 million to cover the net deficiency of the *Banco de Guatemala* corresponding to the 2004 fiscal year. Therefore, the fiscal till registered an increase of Q3,435.5 million.

**CENTRAL GOVERNMENT  
EXECUTION OF THE BUDGET TO OCTOBER  
YEARS 2005 - 2006**  
-in millions of quetzales-

CONCEPT	2005	2006	VARIATIONS	
			ABSOLUTE	RELATIVE
<b>I. Income and Donations</b>	<b>20,579.4</b>	<b>23,994.1</b>	<b>3,414.7</b>	<b>16.6</b>
A. Income	20,285.7	23,796.8	3,511.1	17.3
1. Current Income	20,266.6	23,774.2	3,507.6	17.3
a. Tributary	19,338.3	22,711.3	3,373.0	17.4
i. Direct taxes	5,509.8	6,964.5	1,454.7	26.4
ii. Indirect taxes	13,828.5	15,746.8	1,918.3	13.9
b. Non Tributary	928.3	1,062.9	134.6	14.5
2. Capital Income	19.1	22.6	3.5	0.0
B. Donations	293.7	197.3	-96.4	-32.8
<b>II. Total Expenses</b>	<b>21,539.9</b>	<b>24,869.8</b>	<b>3,329.9</b>	<b>15.5</b>
A. Operation	15,325.8	17,377.4	2,051.6	13.4
1. Of the operation	7,261.5	8,303.0	1,041.5	14.3
2. Transfers	5,588.2	6,355.7	767.5	13.7
3. Interests due to debt	2,476.1	2,718.7	242.6	9.8
B. Capital	6,214.1	7,492.4	1,278.3	20.6
1. Direct investment	1,639.5	2,032.9	393.4	24.0
2. Indirect investment	4,574.6	5,459.5	884.9	19.3
<b>III. Fiscal Deficit or Surplus</b>	<b>-960.5</b>	<b>-875.7</b>	<b>84.8</b>	<b>-8.8</b>
<b>IV. Savings in Current Account</b>	<b>4,940.8</b>	<b>6,396.8</b>	<b>1,456.0</b>	<b>29.5</b>
<b>V. Financing (A+B+C)</b>	<b>960.5</b>	<b>875.7</b>	<b>-84.8</b>	<b>-8.8</b>
A. Net External Financing	-373.8	2,365.6	2,739.4	732.9
B. Net Internal Financing	2,933.0	1,945.6	-987.4	-33.7
1. Bonds Negotiation	4,316.0	6,478.9	2,162.9	50.1
2. Bonds Maturity	1,383.0	3,373.8	1,990.8	143.9
3. Amortization of Policy Cost <sup>1/</sup>	0.0	1,159.5	1,159.5	100.0
C. Till Variation	-1,598.7	-3,435.5	-1,836.8	114.9
(-Increase +Decrease)				

SOURCE: Ministerio de Finanzas Públicas.

1/ On 31 de agosto de 2005 el Ministerio de Finanzas Públicas entregó al Banco de Guatemala Bonos del Tesoro por Q963.7 millones para cubrir la deficiencia neta del Banco Central correspondiente al ejercicio contable 2003; sin embargo, la amortización del costo de política no fue operada en la ejecución presupuestaria a octubre de ese año, debido a que el Ministerio de Finanzas Públicas registró la operación en diciembre, por motivos de programación presupuestaria.



## 2. Public Debt

### a) Internal

The balance of internal public debt to October, was at Q19,530.8 million, higher by Q3,105.1 million (18.9%), to the amount observed in December 2005. This increase mainly obeys the increase in the Treasury Bonds had by the *Banco de Guatemala*, of the private banking sector and the non-private banking sector, which is increased by Q1,634.1 million, Q1,660.8 million and Q183.0 million, respectively. On the other hand, the public sector and the non-resident sector reduced their property to values in Q145.8 million and Q227.0 million. It is important to indicate that to October 2006 the *Banco de Guatemala* registers Treasury Bonds, which is due to the declared in the Organic Law of the *Banco de Guatemala*, to the State of Guatemala, through the *Ministerio de Finanzas Públicas* (Roughly equivalent to the Department of the Treasury) covers the net deficiencies that the *Banco de Guatemala* registers each fiscal year, so on August 28, 2006, the *Ministerio de Finanzas Públicas* (Roughly equivalent to the Department of the Treasury), for the second opportunity, fulfilled said legal mandate, transferring the Treasury Bonds of the *Banco de Guatemala* for Q1,159.5 million to cover the net deficiency corresponding to the 2004 fiscal year. Also, the *Banco de Guatemala*, according to resolution JM-123-2006 was authorized by the Monetary Board to directly acquire the Fund for Savings Protection –FOPA (for its acronym in Spanish)- Treasury Bonds of the Republic of Guatemala –Peace Bonds- for the equivalent to Q474.7 million, whose resources were transferred, as the administrator of FOPA, to the Administration Trust, and made the exclusion of assets of the *Banco del Café, Sociedad Anónima*.

Regarding balance structure of internal debt by the holder, the same varied due to greater negotiations made with the private banking sector and the holding of values by the *Banco de Guatemala*. On December 31, 2005, the participation of said sectors regarding the total was of 21.1% and 5.9%, while to October of the present year, said participation was at 26.2% and 13.3%, in the mentioned order. In contrast, the private non-banking, public and non-resident sectors decreased their participation relative from December, 2005 to October

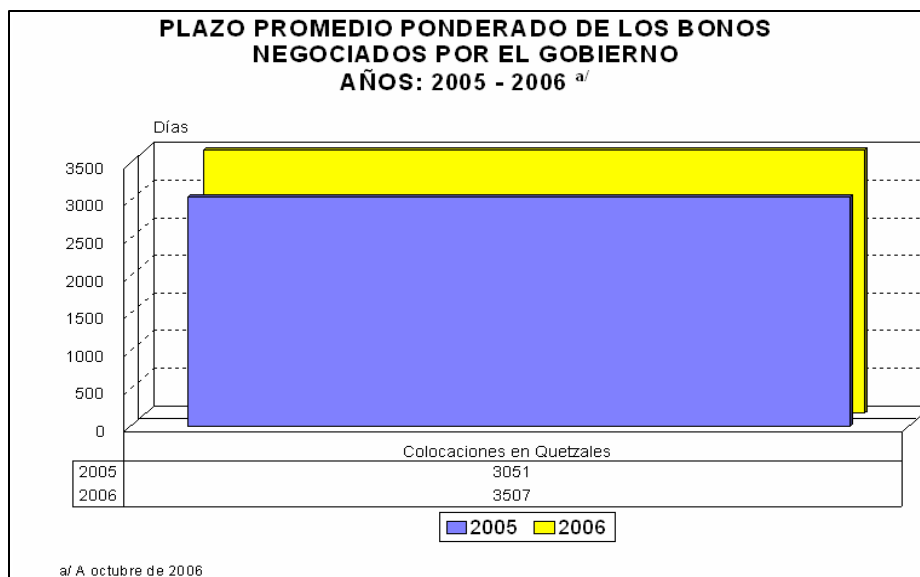
2006, when going from 46.3%, 23.7% and 3.1% to 39.8%, 19.2% and , respectively.

**Gobierno Central**  
**Saldo de la Deuda Pública Interna**  
**Años 2005 - 2006**  
**- En millones de quetzales y en porcentajes -**

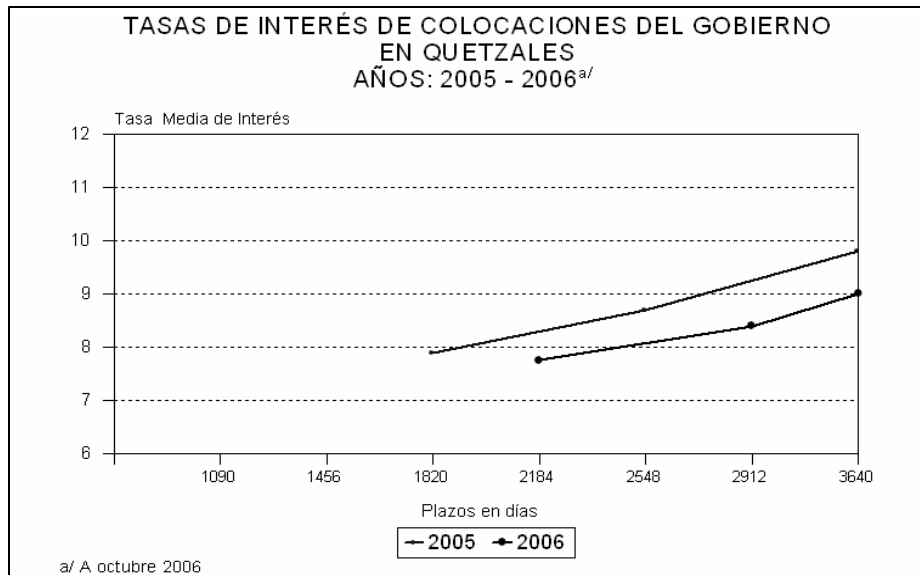
Tenedor	Al 31/12/2005	Estructura	Al 31/10/2006	Estructura	Variación	
					Absoluta	Relativa
<b>Total</b>	<b>16,425.7</b>	<b>100.0</b>	<b>19,530.8</b>	<b>100.0</b>	<b>3,105.1</b>	<b>18.9</b>
Banco de Guatemala	963.7	5.9	2,597.8	13.3	1,634.1	169.6
Sector Privado Bancario	3,464.0	21.1	5,124.8	26.2	1,660.8	47.9
Sector Público	3,886.4	23.7	3,740.6	19.2	-145.8	-3.8
Sector No Residente	513.9	3.1	286.9	1.5	-227.0	-44.2
Sector Privado no Bancario	7,597.7	46.3	7,780.7	39.8	183.0	2.4

FUENTE: Sección de Liquidación de Valores, Banco de Guatemala.

As to term debt placement, it is important to point out that in 2005 the weighted average of placements in quetzales was of 3,051 days, while to October 2006 it was 3,507 days. It is important to indicate that in both years there were no Treasury Bond placements in US dollars.



In 2005, the weighted average interest rate of Government placements in *quetzales* was at 9.22%, while to October of this year they were 8.89%.



### b) External

According to preliminary numbers to October 2006, the balance of the external public debt was at US\$3,899.1 million, amount higher by US\$176.2 million to the balance registered to December 31, 2005. Said increase is the result of disbursements for US\$487.6 million, amortizations for US\$301.9 million<sup>27</sup> and a reduction of accountable balance for US\$9.5 million derived of US dollar appreciation regarding other currencies that integrate the account units in which some loans are established. Therefore, the net transfer of resources, understood as the result of the difference between the disbursed resources and the capital amortization (without including the negotiated arrangement of the CORFINA debt, abovementioned), was positive by US\$306.2 million.

As to loan disbursements to the central government to October 2006, as creditor, those coming from the Central American Economic Integration Bank for US\$239.7 million<sup>28</sup>, US\$131.8 million<sup>29</sup> from the International Reconstruction

<sup>27</sup>The amortizations include US\$131.0 million, of which US\$10.5 million correspond to the payment of the Corporación Financiera Nacional -CORFINA- made by the Bilbao Vizcaya Argentaria Bank on behalf of the Celulosas de Guatemala, S.A. -CELGUSA- debt; also, the amortizations include US\$120.5 million corresponding to the arrangement negotiated that allowed the cancellation of the CORFINA debt with the Bilbao Vizcaya Argentaria Bank and the Compañía Española de Seguros de Crédito a la Exportación S.A. Compañía de Seguros y Reaseguros -CESCE-. It is worth highlighting, that once the payment was made the mentioned debt was considered without effect, the payment of the debt and capitalized interest for US\$361.0 million, and interest due to default for US\$74.0 million.

<sup>28</sup> Within the disbursements of the loans by the BCIE, that for the "Multi-sector Strengthening Investment Program" for US\$199.0 million was highlighted.

<sup>29</sup> Within the disbursements of loans by the BIRF, that destined to finance "First Loan for Development and Ample Base Growth Policies is highlighted for US\$99.8 million.



and Promotion Bank and US\$104.7 million<sup>30</sup> from the Inter-American Development Bank.

Regarding capital amortizations those made by the Inter-American Development Bank for S\$51.6 million are highlighted and that of the Central American Economic Integration Bank for US\$45.7 million. Regarding interest payment of external debt those corresponding to bonds negotiated abroad are highlighted by EURO BONDS- for US\$84.0 million.

### **3. Estimation for December 2006 closing**

According to the estimations of the *Ministerio de Finanzas Públicas* (Roughly equivalent to the Department of the Treasury), the budget closing for 2006 contemplates that the fiscal deficit will reach a level around 1.5% of the GDP, similar to that registered in 2005, while the tributary load is located around 10.4%, higher to the registered in 2005 (9.6%).

### **4. Legal declarations in 2006 for the strengthening of tributary administration**

The Congress of the Republic, through Decree Number 20-2006, issued the “Legal declarations for the Tributary Administration”, with the purpose of strengthening the legal norms that deter evasion practices and tributary avoidance and allow the State to count on the necessary tributary resources to assist in social programs. In effect, the measures that contemplate said decree norm that regarding retaining agents, the creation of fiscal registry of printing shops and that concerning banking in tributary matters. This law modifies the Tributary Code; the Law of Added Value Tax; the Law Against Defrauding and Customs Contraband; constitutes the customs control in ports, border and airport locations; and, create the Inter-institutional Council for the Prevention, Combat of Fiscal Defrauding and Customs Contraband.

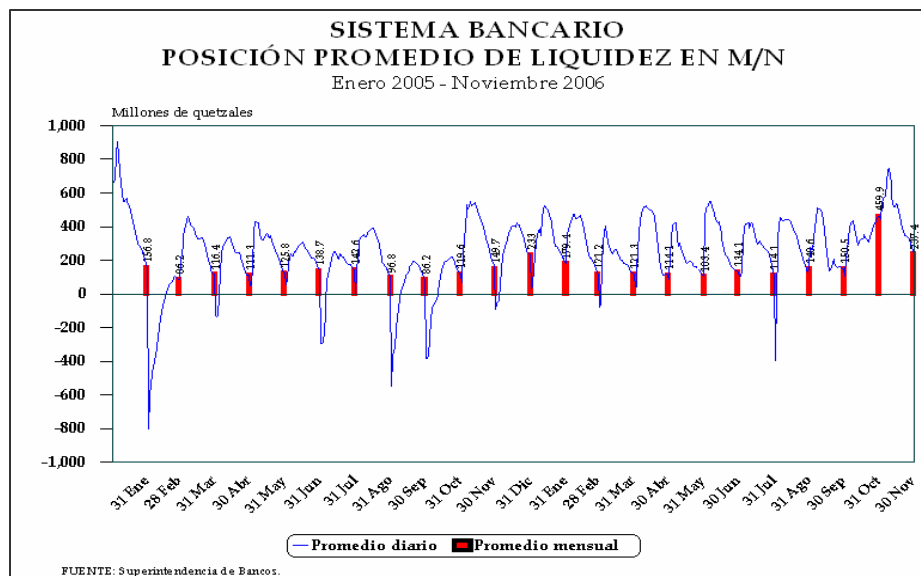
## **D. FINANCIAL SECTOR**

### **1. Banking Liquidity**

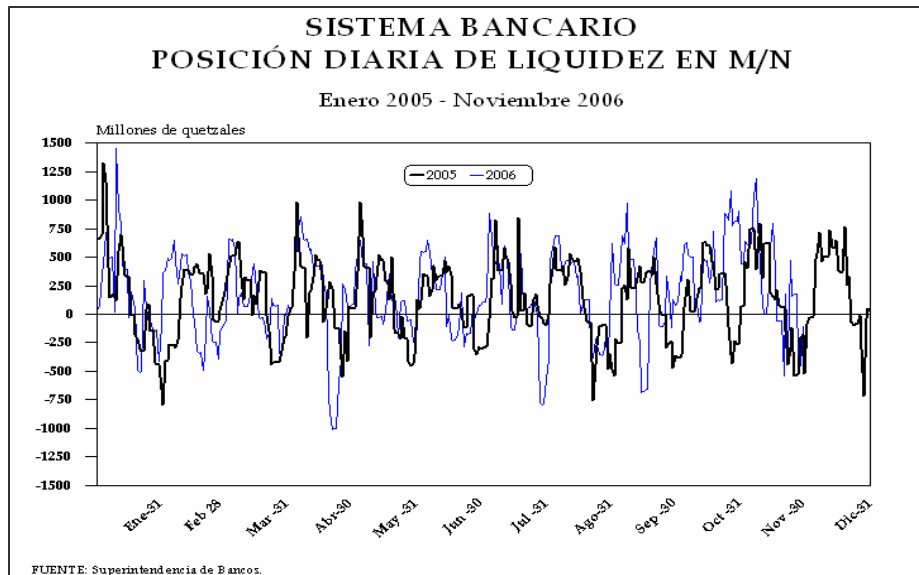
<sup>30</sup> Within the disbursements of IDB loans, the destined to financing the “Improvement of Quality for Social expense Program” was highlighted, for US\$60.0 million.

### a) In national currency

The banking liquidity, measure for the excess or deficiencies in legal banking reserve, reflects the immediate availability of financial resources in the banking system. During the period of January-November 2006, the banking system showed positive levels and moderate liquidity on average, with the exception of October where it was higher to the observed levels the rest of the year. The average liquidity of the banking system in January was Q179.4 million, in February Q121.2 million, in March Q121.3 million, in April Q114.1 million, in May Q103.4 million, in June Q134.1 million, in July Q114.1 million, in August Q148.6 million, in September Q150.5 million, in October Q459.9 million, and in November Q237.4 million.



Daily liquidity, on the other hand, that banks register during the January to November period of 2006, show a similar stability regarding the same period the previous year, with a tendency toward the rise in October. In said period the daily liquidity registered a maximum point to January 10 (Q1,456.6 million) and its lowest level on April 21 (-Q1,010.0 million). To November 30, the daily balance of banking liquidity was at a negative position of Q438.6 million.

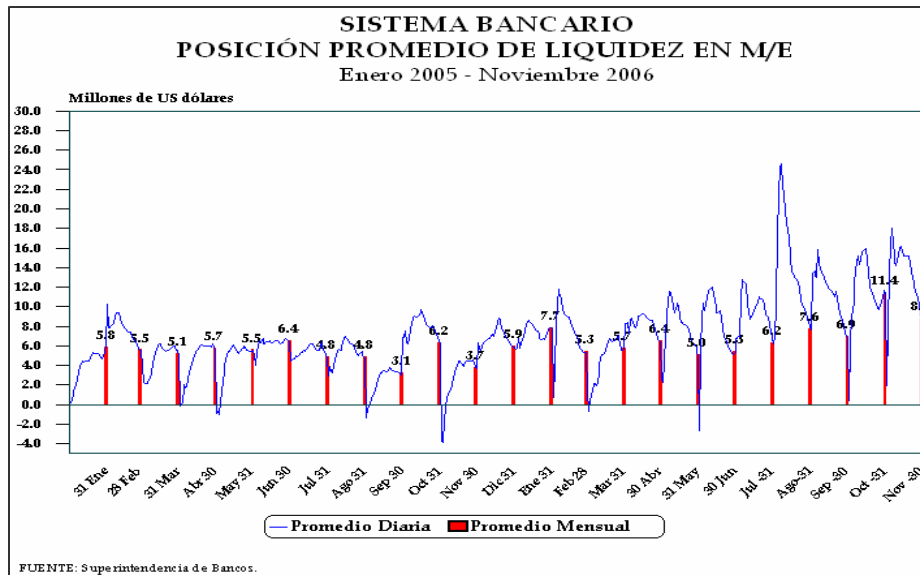


The moderate and stable behavior of the liquidity in 2006 can be analyzed in two periods. The first, from January-August, said behavior is associated to greater volume of resources channeled to banking credit, since this variable, particularly in the first months of the year showing important dynamism; and the second from August to November, when the banking liquidity showed significant increases, which are associated to less dynamism from the banking credit, to the resources coming from net investment maturity of banks in LTDs, as well as the transfer of funds to the Savings Protection Fund for the coverage of bank customers derived from the suspension of operations of the *Banco del Café, S. A.*

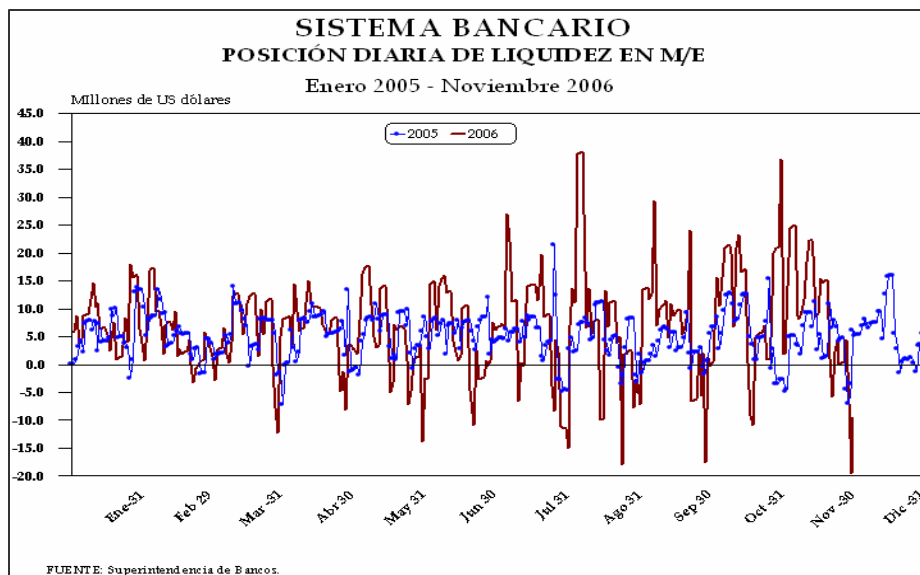
#### **b) In foreign currency**

During the January-November 2006 period, the average banking liquidity in foreign currency, measured by the sum of excess and deficiencies of banking legal reserve, showed stable behavior, with a tendency toward the rise as of July, between US\$5.3 million (in February) and US\$11.4 million (in October). To November 30, the average liquidity in foreign currency was at US\$8.7 million.





During 2006, the behavior of daily liquidity in foreign currency can be analyzed in two stages. In the first, from January to June, said variable showed relatively stable behavior, similar to the observed in the same period the previous year, registering a maximum level on January 26 (US\$17.9 million) and its lowest level on May 30 (US\$13.9 million); while in the second stage, from July to November, the banking liquidity experimented the highest amounts, at its highest point on August 6 (US\$38.1 million), which is associated with the availability of resources that are derived from lesser dynamism of credit in foreign currency and, in lesser quantity, the flow of resources coming from a lack of investment in foreign currency titles.





## 2. Strengthening of the national financial system

### a) Strengthening of the banking system

In resolution JM-12-2006 dated January 18, 2006, the Monetary Board decided that the general deposit storage, insurance businesses, financing businesses, foreign currency exchange houses, the Insured mortgage Promotion Institution, the banks and financial stock companies, continue to observe and apply, the accounting instruction manuals for the 2006 fiscal year, referred to in JM-194-95 and JM-48-2002, so that the accounting registries and what is derived from them is operated based on said manuals. It is worth indicating that in resolution JM-41-2006 dated March 22, 2006, the Monetary Board approved Agreement No. 3-2006 of the Superintendence of Banks, through which the Instruction Accounting Manual for Banks and Financial Societies was modified, in the sense that it includes an account and divisions to register the operations made with foreign banks, referring to national currency deposits and term deposits in foreign currency, with the objective of offering better control and greater clarity of accounting registries and that these are related with the nature of the operations that give them origin.

In resolution JM-27-2006 dated March 1, 2006, the Monetary Board issued the Regulation on Withdrawing Branches of Foreign Banks in the Country, whose objective was to establish requirements and paperwork that must be fulfilled for the orderly withdrawal of branches of foreign banks, as well as the paid capital of said branches.

In resolution JM-32-2006 dated March 9, 2006, the Monetary Board resolved authorizing the *Banco Industrial, S. A.*, the acquisition of 2,151,114 shares of the *Banco de Occidente, S. A.*, for US\$136.8 million. In report No. 318-2006, dated March 3, 2006, the Superintendence of Banks, on the one hand, points out that according to the analysis of the financial report from December 31, 2005, the financial liquidity indexes, solvency and profitability of the *Banco de Occidente, S. A.*, reflect that said entity presents a reasonable financial situation and that on said date, said bank occupied the sixth place in the level of classification of net assets of the national banking system and, on



the other hand, that the fusion by absorption will allow Banco Industrial, S. A., to take advantage of scale economies<sup>31</sup>.

In resolution JM-62-2006 dated June 1, 2006, the Monetary Board modified Article 6 of the Regulation in order to determine the minimal amount of patrimony required to expose risks, applicable to Banks and Financial Stock Companies, issued in resolution JM-46-2004, regarding assets and contingencies with fifty percent (50%) weighting, added to numeral 5, referring to credits granted to the private sector, guaranteed by the guarantee trust funds constituted by the State of Guatemala, that count on the favorable opinion of the Superintendence of Banks, whose trust committed patrimony is constituted exclusively by cash; and its resources are only invested in titles values issued or guaranteed by the State of Guatemala or entities supervised by the Superintendence of Banks, as long as said entities are not under a patrimony regularization plan in terms indicated by the Law of Banks and Financial Groups, up to the amount of coverage stated in the respective guarantee. Article 34, numeral 3 was modified, referring to other guarantees, from Regulation for the Administration of Credit Risk, issued in resolution JM-93-2005, added to clauses j) referring to the same funds of the modification of the previous regulation; and, k) that refer to the amounts received in cash coming from guarantee trust funds, whose final destination are the settlement of all credit activity.

In resolution JM-69-2006 dated July 5, 2006, the Monetary Board authorized the fusion by absorption of the *Banco de Occidente, S. A.* by *Banco Industrial, S. A.*, conditioned so that, no later than after the moment of registration in the Mercantile Registry of the public deed where the operation is formalized, the capital is paid by *Banco Industrial, S. A.* should increase to Q1,175,262,700.00.

In resolution JM-111-2006 dated October 11, 2006, the Monetary Board authorized the constitution of *Banco Azteca de Guatemala, S. A.* and declared that in Sentence number 2-2006 of the Superintendence of Banks, Q105.0 million is the minimum amount of initial paid capital with which the entity will

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<sup>31</sup> It is worth pointing out that in the framework of consolidation of the financing system, it is particularly important toward the initiative of exonerating the Added Value Tax –IVA- to the transactions that are entailed in purchase sale of the credit portfolio between banking institutions, because said measure could promote new bank fusions.



begin operations, which must be completely covered in cash and deposited in the *Banco de Guatemala*, prior to beginning operations; in the referred Sentence it declares that the study of feasibility shows the viability of the project in the horizon of planning evaluated and reflects social and economic benefits for the country, when generating employment sources, allow the entry of foreign investment and consolidate the channeling of resources toward consumer credit.

In resolution JM-124-2006 dated October 23, 2006, the Monetary Board modified article 6, Category IV, of Regulation for the determination of the minimal amount of patrimony required for risk exposure, applicable to Banks and Financial Stock Companies, issued in resolution JM-46-2004, modified by resolution JM-62-2006, referring to assets and contingencies with fifty (50%) percent weighting, adding numeral 6, referring to participation certificates issued by trusts that are constituted according to the declared in article 79 of the Law of Banks and Financial Groups, given that for liquidity and solvency reasons, these have risk characteristics that can be compared to the assets and contingencies contemplated in this category. Transitory Article 15 of said article was also modified, in the sense that until June 30, 2007, the investments corresponding to participation certificates will be classified in category III, with a twenty (20%) percent weighting.

#### **b) Complementary Reform**

In 2006, the Monetary Board issued favorable opinion, on the one hand, to law Project of Law of Insuring Activity, through resolution JM-42-2006 dated March 22, 2006 and, on the other hand, to the Project of Law of Real Estate Guarantees, in point three of Act number 19-2006, approved in session number 21-2006 dated May 17, 2006, with the suggestion that the observations made in Title VI, rules of Precedence and Persecution be considered, that were made known to the Inter-Institutional Commission named to make the referred law project.

In the presentation of the motives of the law project of Law of Insuring Activity, the basic structure of the legislation of insuring activity current in Guatemala since the nineteen fifties and sixties, of the past century is pointed out and is oriented toward a specialized activity model, with a limited



opportunity to widen operations and to scarce direct international participation. On that account, many new practices have security measures that are not explicitly foreseen in the prudential regulation environment and of supervision by the national insuring system, which has propitiated that the current financing legislation is applicable to this sector no longer responds adequately to the dynamics and intensity with the development of the financial market, characterized by a greater volatility, competence and risk.

It is worth highlighting that in the making of the law Project they analyzed and took into account the Principles on the Supervision of Insurance issued in September 1997 and updated in October 2003 by the International Association of Insurance Supervisors (IAIS)<sup>32</sup>, which represents a significant advance for the Guatemalan insurance system, according to the world tendencies that are experienced by the financial markets. In that sense, the project is oriented to providing a legal, modern and flexible framework that offers juristic certainty and contributes to the efficiency, transparency and competitiveness of the participants and to the insuring market activities. For said effect, promote a solid risk management, sustained in the regulation of the responsibilities, restrictions and duties of administrators of said entities. Said framework is complemented with a preventive and auto regulation focus foreseen in the implementation of a solid prudential normative, this in the context of a good corporative government and on the consolidated basis of risk supervision.

On the other hand, in the presentation of motives for the law Project of Real Estate Guarantees points out that facilitating or allowing access to credit for micro, small and medium businesses will increase real production and work capital. It will also obligate sectors to find the efficiency and effectiveness in order to reduce production costs and be more competitive. Consequently, the productive capacity and generation of employment sources will increase considerably. So that in order to contribute to the democratization of credit, not only the simplification of current procedures is necessary for the constitution of real estate guarantees, but also the widening of the bracket of properties that

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<sup>32</sup> The IAIS was established in 1992. Its membership includes more than 100 insurance supervisors from different countries. Its purpose is to improve the supervision of the insurance activity for the benefit and protection of those insured as well as the joining of forces that are trustworthy, stable and efficient, for the benefit and protection of those insured, as well as the joining of forces to develop standard practices that can be applied to its members on a voluntary basis.



can be the object of pignus or security; making it necessary to create a special legal framework for the constitution, modification, prolongation, extinction and execution of said guarantees and, consequently, the publicity of the same, in order that they be used to support the financing granted to productive sectors that integrate the informal economy of the country.

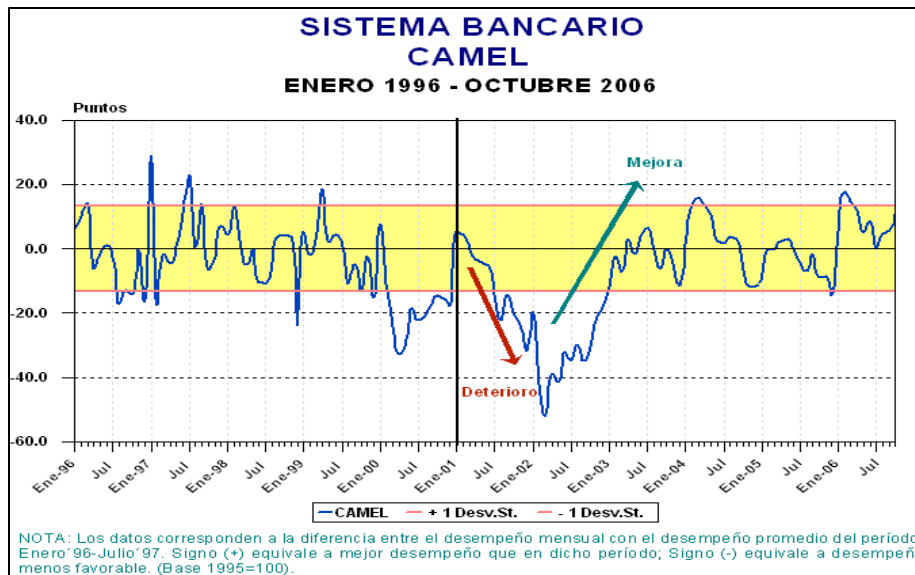
If this law project is approved, it would be given a unitary character and, therefore, uniform treatment to the guarantees on movable goods are lightly regulated to now by Guatemalan Legislation; and an important innovation will be introduced as to the guarantee, since if there is breach of obligation, this could be executed voluntarily, in other words, in the manner and conditions that the parties freely agree.

### 3. Early alert system

To October 31, 2006, the performance of the national banking system, measured through the CAMEL<sup>33</sup> indicator, evidencing better behavior of the system regarding December 2005. In effect, on said date this indicator was at 10.52, number significantly higher to the observed in December 2005 (-14.52). It is worth indicating that the values pointed out previously have the aggregate observed for the banking system during the January 1996 to July 1997 period as a basis of comparison, in which the banking system registered normal performance. To obtain a better appreciation of the content of the indicator, an evaluation of each one of the components is presented as follows:

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<sup>33</sup> Among early alert systems used by central banks for macroeconomic analysis of the financial system the CAMEL model is included (that means *Capital, Assets, Management, Earnings y Liquidity*). The model allows evaluating the performance of the financial institutions, as indicators that measure the capitalization (C), the quality of the most important asset which is the credit letter (A), the administrative operation (M), the real profitability (E) and liquidity (L). The interpretation of this indicator is, that as the aggregate is greater, the better the performance of the system.



The capitalization indicator, that measures the financial solvency, shows the adequacy of capital of entities to cover the exposition to risk with proper resources derived of the active operations made. Said indicator is built based on the assets and contingencies subject by law to minimal requirements of computable capital. In that regard, during the period under study, the value of the indicator increased by 13.41% in December 2005 to 14.02% in October 2006. In that case, the computable capital had greater dynamism in its growth during the year. In effect, as computable capital grew 18.28%, the weighted assets and contingencies due to risk grew 13.14%. It is necessary to point out that the indicator of capitalization continues to be over what the prudential norm demands in that regard, which fixed the minimum capital requirement at 10% regarding assets and contingencies subject to requirement.

The quality of the asset measured through the coefficient that relates to the addition of the expired and default portfolio (contaminated portfolio) regarding the total of the gross credit portfolio (including provisions), registers an increase when going from 4.95% in December 2005 to 6.21% in October 2006. When de-aggregating the components of the indicator can be established as the behavior observed fundamentally explained by an important increase in the default portfolio.



To measure the administrative management an approximation between the administrative annualized expenses is measured regarding the net average total assets (exclude provisions, depreciations and amortizations). In this indicator an improvement is evidenced when going from 4.36% in December 2005 to 3.82% in October 2006. Said behavior is mainly explained because the administrative expenses have grown less than proportionally regarding the average assets.

The real profitability indicator expresses the yield of the patrimony of the entities during the period. For the effect, the reason between the annualized net utility (after taxes) regarding the accountable average minus the inflationary rhythm is considered. This measure allows evaluating the sustainability in the long term of the patrimony of the entities. During the period of December 2005 to October 2006, the real profitability increased considerable when going from 6.59% to 12.72%, respectively. Said behavior is fundamentally explained by the income coming from placements (financial and of foreign currency operations), which represent 88.3% of total income to October 31, 2006.

An adequate management of banking liquidity allows the entities to face their obligations in the short term without incurring in unnecessary costs. A measure of this indicator is obtained through the average between availabilities and total deposits. During the period, the indicator shows an increase when going from 20.14% in December 2005 to 21.01% in October 2006. Said behavior is the product of growth of availabilities (17.2%), which was more than proportional regarding the increase of total deposits(12.4%).

In synthesis, the global improvement observed in the CAMEL indicator fundamentally obeys the favorable behavior shown by the capitalization, administrative management, real profitability and banking liquidity, which reflects the advances of the banking system, in the context of structural reform of the financial sector of the country. This result was not greater due to the lack of performance by the asset quality indicator.

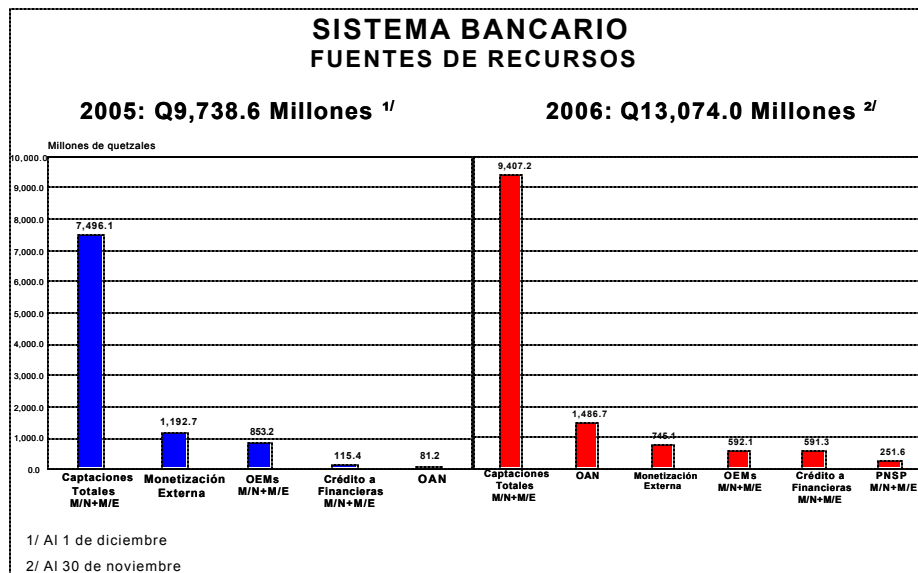
#### **4. Sources and uses of banking system funds**

To November 30, 2006 the banking system had obtained resources from other sectors to perform their function as financial intermediaries for an amount



of Q13,074.0 million, whereas in a similar period the year before these rose to Q9,738.6 million.

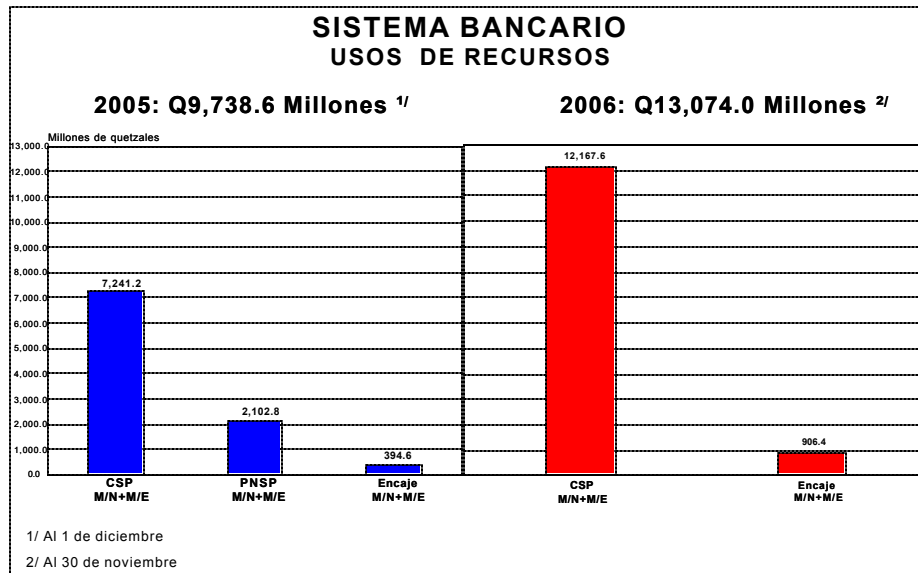
On the date indicated, the main resources of the banking system of total fund-raising deposits came from the public (in national and foreign currency) for Q9,407.2 million; due to the increase of other net assets for Q1,486.7 million (associated to the increase in accounting capital of the banking system); from credit obtaining abroad for Q745.1 million; from disinvestment in Term Certificate Deposits of the *Banco de Guatemala* for Q592.1 million; from credit amortization granted to financial institutions for Q591.3 million; and due to reduction of net financing granted to the public sector (investments minus deposits) for Q251.6 million. In comparison to a similar date in 2005, the main resources came from the total fund raising of public deposits for Q7,496.1 million; from foreign credit for Q1,192.7 million; from disinvestment in Term Certificate Deposits of the *Banco de Guatemala* for Q853.2 million; from credit



amortization granted to financial institutions for Q115.4 million.

As for the main uses that the banking system gave the referred resources (Q13,074.0 million), as is appreciated in the graph, in 2006 Q12,167.6 million were destined to the granting of credit to the private sector in national or foreign currency and Q906.4 million to increase its total legal banking reserve position. On the other hand, on a similar date in 2005, the use

of resources rose to Q9,738.6 million, which is destined to the granting of credit to the private sector in national and foreign currency for Q7,241.2 million; to the net financing granted to the public sector (investments minus deposits) for Q2,102.8 million; and, the improvement of its total legal banking reserve for Q394.6 million.



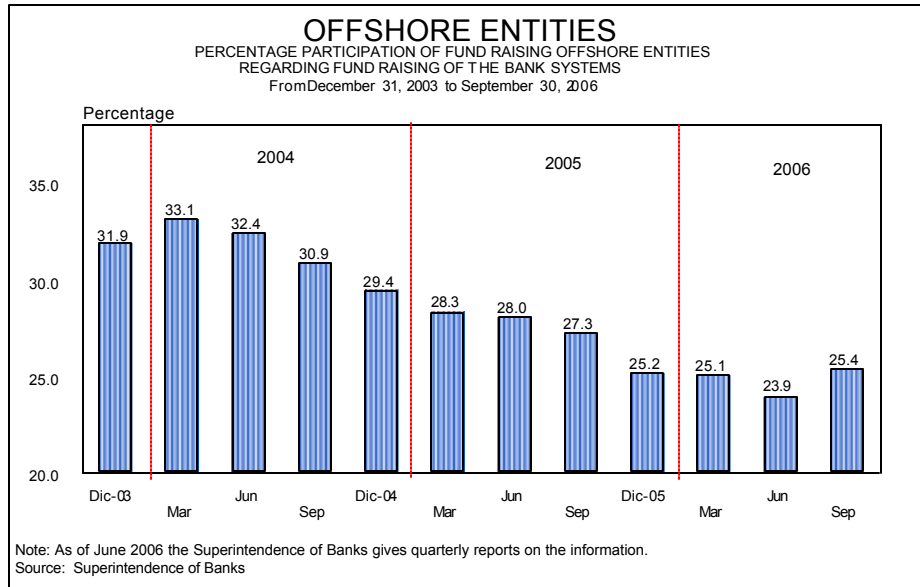
## 5. Offshore entities

Although the availability of information of the offshore entities are still limited, the available data to September 2006 generally allow making an analysis of its operations in disaggregate manner.

### a) Fund-raising

The total fund-raising (including bonds) of offshore entities, to September 30, 2006, registered a balance for Q18,235.3 million, greater by Q650.3 million (3.7%) greater to the registered on December 31, 2005. Toward the end of 2005, the total fund-raising of the offshore entities represented 25.2% of total fund raising by the national bank system, whereas on September 30, 2006, said proportion increased to 25.4%<sup>34</sup>.

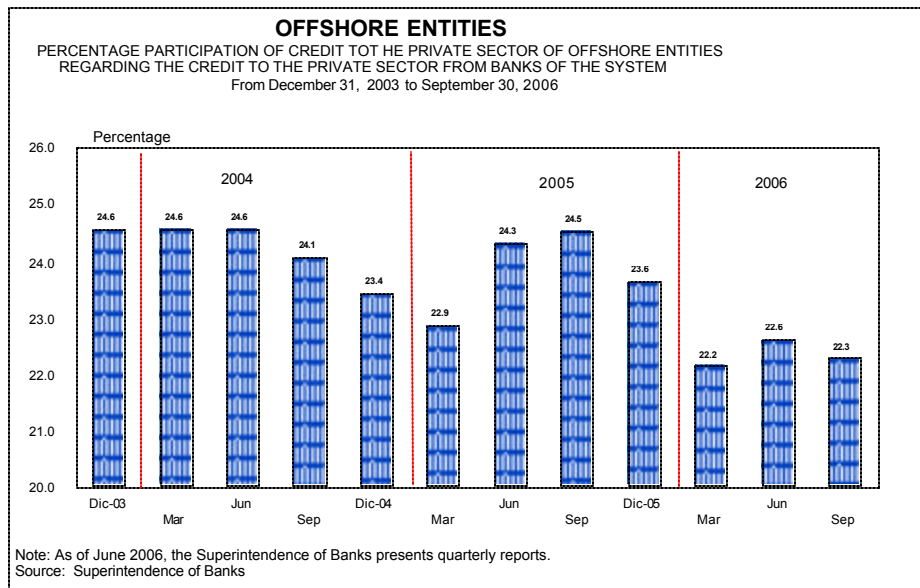
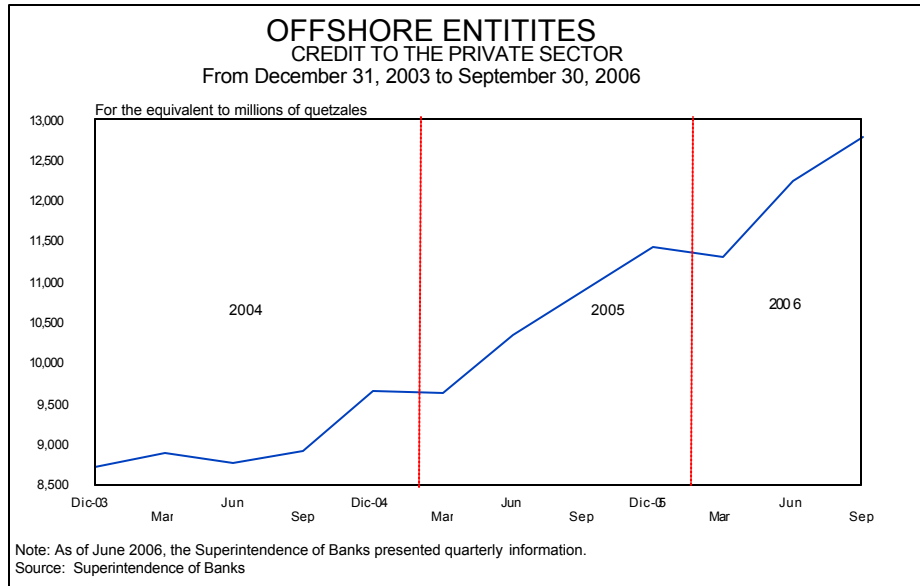
<sup>34</sup> It is worth indicating that the sum of fund raising entities outside the circle of the national banking system to December 31, 2005, the fund raising made by said entities represented 22.1% of the total, while to September 30, 2006 said relation was at 20.5%.



### b) Credit to the Private Sector

The credit granted by offshore entities to the private sector, to September 30, 2006, showed a balance equivalent to Q12,762.7 million, higher by Q1,348.3 million (11.8%) to the registered on December 31, 2005. At the end of 2005 the credit granted by offshore entities to the private sector represented 23.6% of the total granted by the national banking system, whereas to September 30, 2006, said proportion was at 22.3%<sup>35</sup>.

<sup>35</sup> It is worth mentioning that if credit to the private sector of offshore entities to the national banking system to December 31, 2005, the credit to the private sector of said entities represented 19.1% of the total, while to September 30, 2006 said relation was 18.2%.



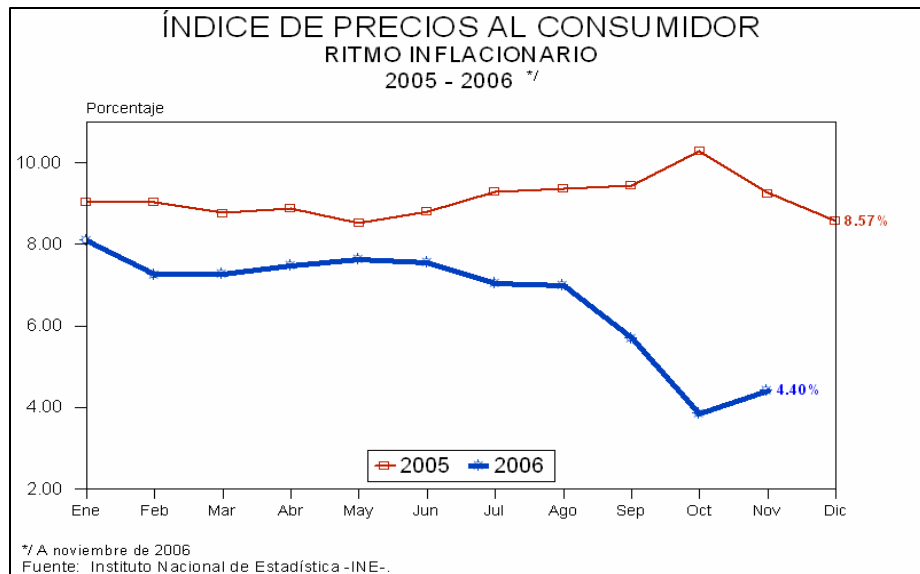
### III. EVOLUTION OF MONETARY POLICY VARIABLES

#### A. INFLATION GOAL

##### 1. Consumer Price Index –IPC (For its acronym in Spanish)-

According to the IPC made by the National Statistics Institute –INE for its acronym in Spanish) to November 30, 2006 in the entire state, registered an inflationary rhythm of 4.40%, percentage that is below the lower limit of the tolerance margin of the inflation goal established for the end of 2006 (6.0% +/- 1

percentage point). To the referred percentage is lower by 4.85 percentage points to the observed in November 2005 (9.25%).



The behavior observed in the inter-annual inflation to November 2006 mainly reflects the increase that within the IPC registered the expense division of **Food, non-alcoholic drinks and take-out food** (weighting 38.75%), with an inter-annual variation of 4.00%, that explains 39.71% of the inter-annual variation of the IPC. Due to their participation, the following are highlighted: the inter-annual variations of the index of expense groups of *Fresh, dried and conserved fruit* (12.46%); *Bread and cereals* (7.89%); *Prepared foods outside the home* (3.82%); and, *meats* (3.53%). At the Basic expense level, those that registered greater hikes at the inter-annual level were bread (15.77%); beef (5.74%); and, breakfasts or dinners (5.29%), that together represent 27.68% the total inflation to November 2006. On the other hand, *Vegetables, legume and tubercles* registered a reduction of 6.11%.

The expense division of **Transportation and communications** (weighting 10.92%), registered an inter-annual variation to November of 3.45% and explained 7.82% of the inflationary rhythm. In said behavior the increases of median prices of *aerial transportation* (41.53%); *international mail service*



(11.01%); and, *extra-urban transportation* (1.65%), coincided, the increase is associated to the behavior of the international price of oil.

The expense division of **Housing, water, electricity, gas and other fuels** (weighting 10.00%), registered an inter-annual variation of 5.35% and explained the 11.08% inflationary rhythm total. The highlights in this division are the rises in electricity service (8.43%); *real housing rent* (5.49%); and, *propane gas* (3.28%).

On the other hand, the expense division of **Recreation and Culture** (weighting 6.83%), registered an inter-annual variation of 6.61% and explains 9.66% of the total inflationary rhythm, highlighting the rise in *leisure travel within the country* (27.57%) and the *leisure travel outside the country* (14.14%).

The behavior of the four expense divisions mentioned, together explain, the 68.27% of the inflationary rhythm observed to November 2006.

ÍNDICE DE PRECIOS AL CONSUMIDOR  
RITMO INFLACIONARIO  
NIVEL REPÚBLICA  
(Base: Diciembre 2000 = 100.0)  
Noviembre 2006

DIVISIÓN DE GASTO	PONDERACIÓN DE GASTO	Noviembre 2005	Noviembre 2006	RITMO INFLACIONARIO /1	PARTICIPACIÓN EN EL RITMO INFLACIONARIO /2	PARTICIPACIÓN EN EL RITMO INFLACIONARIO COMO PORCENTAJE /3
ÍNDICE GENERAL	100.00	145.42	151.82	4.40	4.40	100.00
1. Alimentos bebidas no alcohólicas y comidas fuera del hogar	38.75	164.04	170.60	4.00	1.75	39.71
2. Vestuario y calzado	7.94	124.68	128.30	2.90	0.20	4.49
3. Vivienda, agua, electricidad, gas y otros	10.00	132.71	139.81	5.35	0.49	11.08
4. Mobiliario, equipo de la vivienda y mant. de rutina de la casa	7.95	132.45	139.07	5.00	0.36	8.22
5. Salud	5.48	134.90	143.91	6.68	0.34	7.72
6. Transporte y comunicaciones	10.92	132.95	137.53	3.45	0.34	7.82
7. Recreación y cultura	6.83	137.12	146.18	6.61	0.43	9.66
8. Educación	5.60	143.94	149.86	4.11	0.23	5.18
9. Bienes y servicios diversos	6.53	135.00	141.01	4.46	0.27	6.12

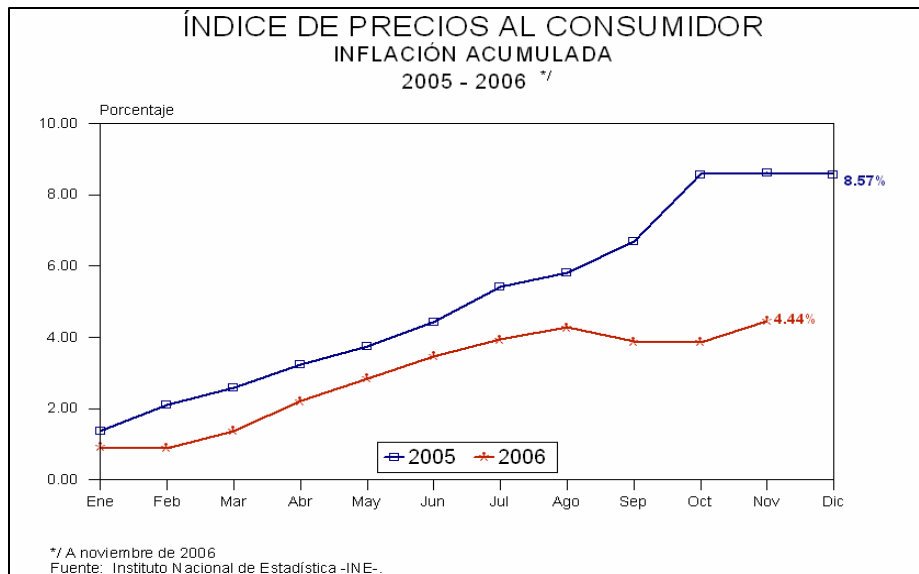
Fuente: Instituto Nacional de Estadística -INE-

1/Tasa de variación del mes en examen con respecto al mismo mes del año anterior.

2/Incidencia en la variación.

3/Participación en la variación: (Incidencia / Variación total) \* 100.

The accumulated inflation to November of this year, in the entire state, was at 4.44%, lower by 4.17 percentage points to the registered in the same month the year before (8.61%).



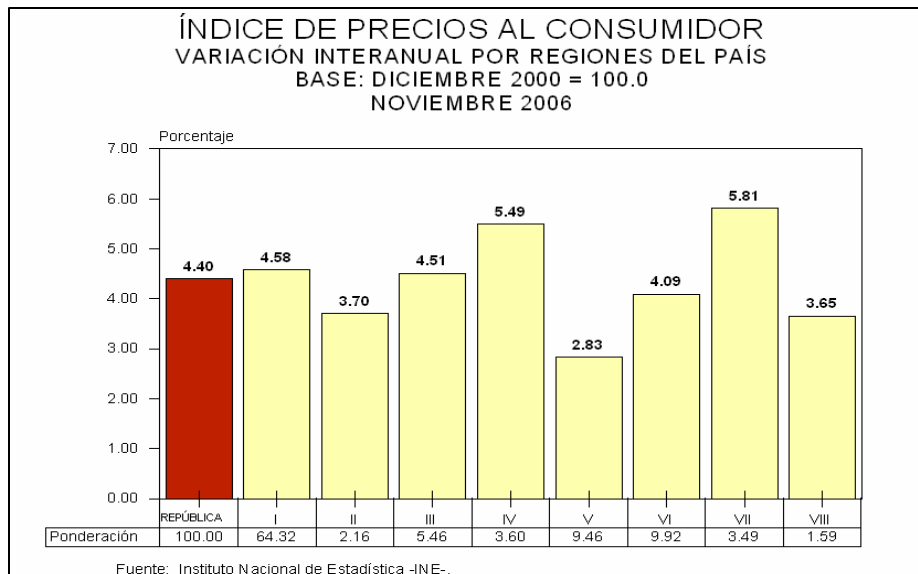
At regional level, Region VII (North-west) registered the highest inflationary rhythm, 5.81%; and, Region IV (South-east) experimented an inter-annual variation 5.49%. On the other hand, Region I (Metropolitan), has a weighting of 64.32% in the total IPC, observed an inflationary rhythm of 4.58%, higher by 0.18 percentage points to the average at state level (4.40%).

In Region VII (North-west), with a weighting of 3.49% within the structure of regions, the observed behavior is mainly explained by the rise in median price of bread (19.49%); corn (16.08%); beef (11.46%); spices, dressings and aromatic products (28.25%); poultry meats (7.44%); breakfast (4.70%); and tortilla products (4.70%). It is worth pointing out that the all increases together represent more than 45.00% of the inter-annual variation of said region.

The increase observed in Region IV (South-east), with a weighting of 3.60% mainly obeys the registered rise in the median price of tomato (31.70%); electricity service (21.20%); bread (16.26%); tortilla products (13.54%); basic hospital services (16.24%); and, bread (16.26%); titles that together represent 65.02% of the variation of said region.

The inter-annual variation registered in Region I (Metropolitan), with a weighting of 64.32%, is mainly explained by the increase observed in median bread prices (21.57%); aerial transportation (41.53%); travel within the country (40.91%); repairs and vehicle maintenance (11.66%); and of housing rent

(4.53%), products that together explain 51.09% of the total inter-annual variation observed.



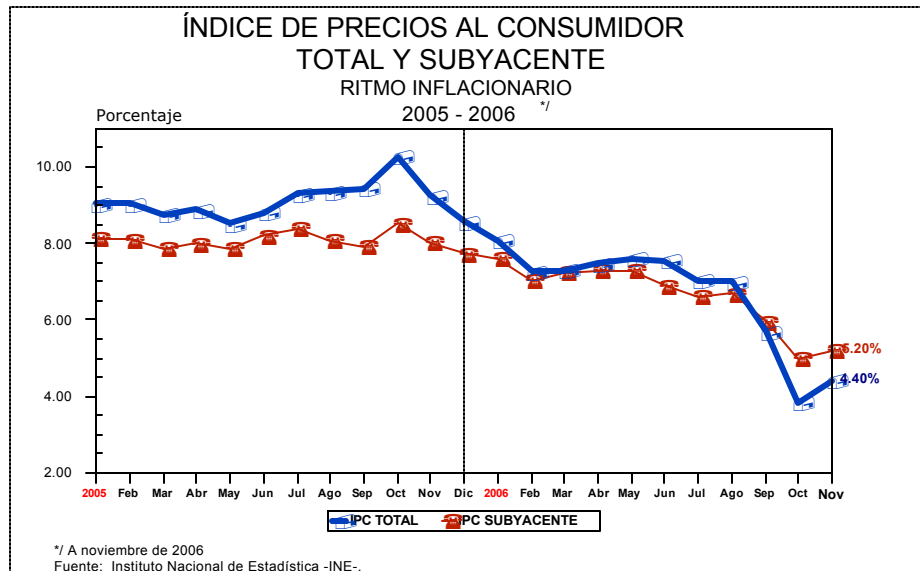
## 2. Subjacent Inflation

The subjacent inflation is the growth rate of a price index, with the purpose of eliminating distortions in its calculation, excludes some goods and services whose prices are highly volatile. In that regard, for Guatemala, the indexes of expense groups like fresh, dried and conserved fruit; vegetables, legumes, tubercles; manufactured and natural gas and liquid oil gases; and gasoline, whose weightings within the IPC are 1.28%, 3.77%, 1.09% and 2.04%, respectively, for a total of 8.18%.

In said sense, the subjacent inflation, at state level, registered an inter-annual variation of 5.20% to November 2006 (8.03% to November 2005), higher by 0.80 percentage points regarding total inflation (4.40%).

In the subjacent inflationary rhythm the evolution of bread; aerial transportation; travel within the country; electricity service; and housing rent were determinant, and which together explain 38.50% of the subjacent inflation to November 2006. .





### 3. Imported Inflation

Since 2004 the behavior of the inflationary rhythm has been significantly influenced by the imported inflation, which at the same time mainly responds to the rise in international oil prices.

For analysis effects, the imported inflation is divided in direct and indirect. The direct refers to the effect that international oil has on the prices of 32 goods and services from the basic food basket, which in its cost structure makes intense use of products derived from crude oil. The calculation of the same is possible given that the statistical information of national accounts, under the focus of a National Account System 1993 –SCN93 (for its acronym in Spanish)- fourth revision, allows counting on the cost structure of production of said goods and services.

Indirect imported inflation, refers to the increase in price of those goods and services that in their cost structure do not incorporate the petroleum derivatives, but that are affected indirectly by such aspects as increase in the price of electricity and others.



### METHODOLOGY OF CALCULATION FOR DIRECT IMPORTED INFLATION

To make the calculation of direct imported inflation the structure of intermediate consumption for base year 2001 of the National Account System 1993 –SCN93- fourth revision, is used, which establishes the percentages that the oil products represent withing the production costs of 32 goods and services.

Following: the calculation begins considering the cost of the referred goods and services that are not affected by oil derivatives, in the following manner:

$$VINDP = V_o \left( \frac{INDP}{100} \right) \quad VINDP = \text{Variation of the index for each good or service excluded from oil derived products}$$

$V_o$  = Variation index (original)

$INDP$  = % of non-oil derived products

A new index is obtained for the 32 basic goods.

$$Ia = Ia_{-1} \left[ 1 + \left( \frac{VINDP}{100} \right) \right] \quad VINDP = \text{Variation of the index of each good or service excluded from oil derived products}$$

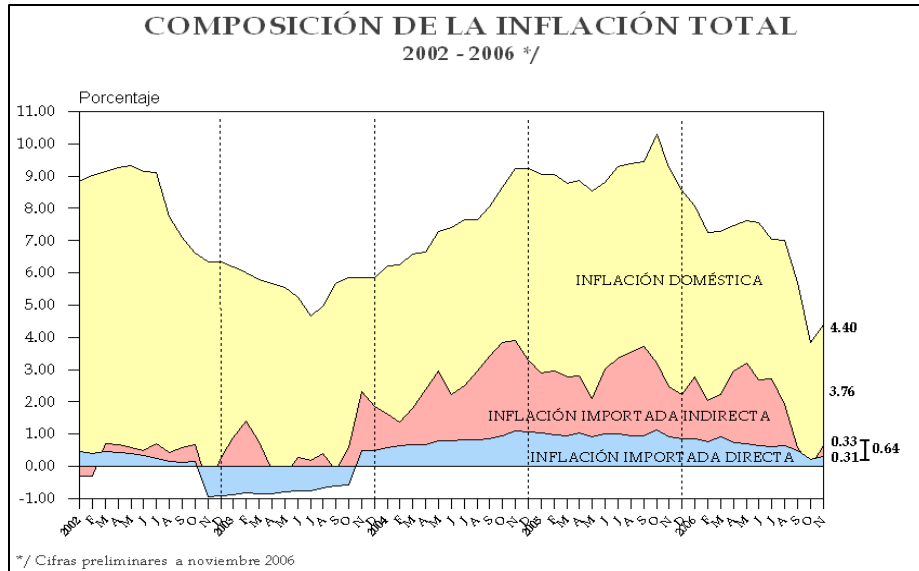
$Ia$  = Current adjusted index

$Ia_{-1}$  = Previous current adjusted index

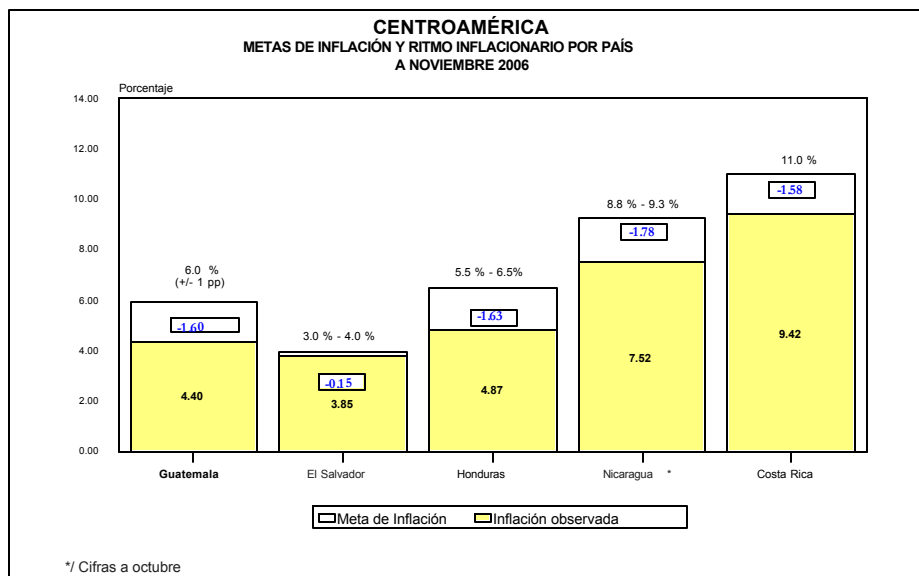
Later, a new price index is formed, which is derived from the consolidation of new indexes of 32 goods and services (that do not include the effect of the variation of prices derived from oil) with the indexes of 186 goods and services remaining that make up the IPC.

Last, to the new index obtained, an inflationary rhythm is calculated, which is subtracted from the inflationary rhythm of the total IPC, in that manner obtaining the direct imported inflation.

To November 2006, mainly due to deceleration in the international price of oil and of inflation of the main commercial partners, as well as the appreciation of the nominal exchange rate, the imported inflation explains the 0.64 percentage points of the total inflationary rhythm (4.40%), of which 0.33 percentage points correspond to direct imported inflation and 0.31 percentage points to indirect imported inflation.



Last, it is worth indicating that in all Central American countries, the inflationary rhythm was within the respective goals of inflation for 2006.



#### 4. Econometric Prognosis of Inflation for December 2006 and 2007

##### a) Method 1

The methodology employed by the Department of Economic Investigations of the *Banco de Guatemala* to make a monthly prognosis of



inflation consist of time series models that are uni-varied, whose prognosis depend only on the historic behavior of the variable to foresee.

Said methodology consists of three stages. In the first, the monthly inflation information is separated into a tendency component and in a cyclical component through a *Hodrick-Prescott* filter. In the second stage, each element is estimated and foreseen separately through an Autoregressive Integrated Mobile Average Model (ARIMA). It is worth indicating that the model used to estimate and foresee the tendency component is Autoregressive four AR(4); in other words, said component is the function of four immediate delays.

On the other hand, the model used to estimate and foresee the cyclical component is an Autoregressive Mobile Averages model (ARIMA) of order two-three; in other words, that said component is a function of two immediate delays and three delays of the error term (et).

In the third stage, a tendency component is foreseen as well as the cyclical and the total inflation is foreseen, which is calculated through the sum of the prognosis of both components.

According to the inflation prognosis obtained by this method, the inter-annual inflation would be of 4.86% for December 2006; while for December 2007 would be 4.98%.

## **b) Method 2**

According to the methodology used by the Department of Economical Statistics of the *Banco de Guatemala*, the projection of the IPC is made in three stages. In the first stage, eight of the nine divisions that make up the IPC are foreseen in uni-varied form, using the multiplicative softened exponential model of *Holt Winters*, which is appropriate for series that contain a lineal tendency and multiplicative seasonal factors, as is the case with each component of the IPC.

In the second stage the remainder of the division is foreseen, Transportation and communication. To make said prognosis the normal coefficients of average variation between 2003 and 2004 are applied, corresponding to international oil prices and, later, to said coefficients the



proportional part of the variation of futures oil prices is added, using the weight percentage that gasoline has on the IPC (2.05%).

Finally, in the third stage the prognosis of nine titles that make up the IPC are added, through the application of weight that each heading has on said index.

With this method, for December 2006 it is estimated that the IPC will reach an inter-annual variation of 4.99%. Said estimation is fundamentally explained, by the behavior of the international price of oil that according to estimations by *Global Insight*, would be expected to remain on average at US\$61.00 per barrel.

For December 2007, it is estimated that the IPC will reach an inter-annual variation of 5.07% regarding 2006.

#### **5. Mid-Term Prognosis, Semi-structural Macroeconomic Model -MMS- (fourth running)**

In this title we illustrate, through fan diagrams, the prognosis foreseen in the mid-term by the Semi-structural Macroeconomic Model -MMS- generated by the running corresponding to the fourth trimester of 2006 and present the implied risk balance of said prognosis.

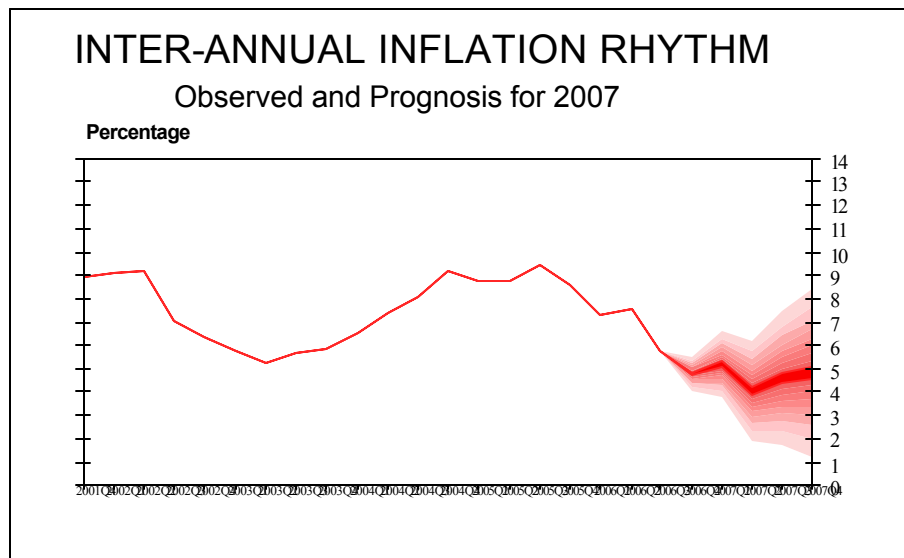
##### **a) Fan Diagram**

The inflation prognosis can be illustrated with a “fan diagram”, which represents the function of probabilities (or of density) of the futures values of a variable, conditional to the information known currently. From this density function the conditional probability can be known that the variable assumes values in particular intervals in any period of the horizon prognosis. Said probabilities are interpreted as “the risk” that the variable assumes certain values in a determined horizon. The fan diagram is built using products from the MMS, as well as subjective information regarding the prognosis. The information coming from the MMS is the following: i) historic values of inflation; ii) quarterly prognosis of the same for 2006 and 2007; iii) historic standard deviation of inflation prognosis error; iv) list of exogenous variables that could affect the inflation during the next two years; v) historic standard deviation of

each exogenous variable; and, vi) effect each exogenous variable has on inflation. According to the subjective information that is required for the construction of a fan diagram is the following: i) the probability that each exogenous variable is found over the prognosis modal in the future<sup>36</sup>; and, ii) the biased distribution of prognosis during the whole year.

The darkest area of the diagram indicates the path that inflation will run with greater probability. It is interpreted with the modal prognosis, given that it is the value that maximizes density function in each period of the prognosis horizon.

The following fan diagram illustrates the inflation prognosis for the 2006-2007 period, generated in the fourth running of the MMS in 2006. It is important to highlight that the dispersion in the density function of the inflation prognosis is increased as the prognosis horizon is widened. The modal inflation prognosis for the fourth trimester of 2006 is of 4.80%: while in the fourth trimester of 2007 it will be 4.83%.



As was indicated, there are certain subjective necessary elements for the construction of a fan diagram and that are mainly related with the prognosis of exogenous model variables. In the present prognosis exercise, the subjective probability assigned to the event of the future value of each exogenous variable

<sup>36</sup> The modal prognosis is a variable that refers to the prognosis with greater probability of occurrence.

for 2006 and for 2007 be greater than the punctual prognosis is of 50%. This implies that the density distribution of inflation prognosis is symmetric, as is indicated in the fan diagram illustrated above.

The main exogenous variables in the MMS are the following: i) the prime country risk; ii) the external inflation; iii) the external interest rate; iv) the external gross domestic product; and, v) the international price of diesel. For MMS effects, all external variables correspond to the United States of America. IN the case of prognosis of the external interest rate variable the source is *The Financial Forecast Center* and the prognosis of the international price of diesel is obtained from *Global Insight*. The source of information on prognosis of the rest of external variables is *Consensus Forecast*. Said businesses are specialized in the making of prognosis of economic and financial variables.

### b) Risks Balance

In the following graphs the risks balance is shown for the inflation prognosis; in other words, the probability that the futures inflator is found over the modal prognosis, as well as the probability that futures inflation is found within certain ranges.

Balance de Riesgo para el Cuarto Trimestre de 2006				Balance de Riesgo para el Cuarto Trimestre de 2007			
Meta		%		Meta		%	
Margen de Holgura		%		Margen de Holgura		%	
Proyección en				Proyección en			
2006Q3		2006Q4		2006Q3		2006Q4	
(A)	(B)	(C)	(D)	(A)	(B)	(C)	(D)
		Diferencia				Diferencia	
		(C) = (B) - (A)				(C) = (B) - (A)	
Proyección Modal	5,23%	4,80%	-0,43%	Proyección Modal	4,93%	4,80%	-0,13%
Pto > Proyección Modal	54%	50%	-4,03%	Pto > Proyección Modal	56%	50%	-6,03%
Probabilidad de que la inflación futura se encuentre dentro de un rango de valores:				Probabilidad de que la inflación futura se encuentre dentro de un rango de valores:			
Proyección en				Proyección en			
2006Q3		2006Q4		2006Q3		2006Q4	
(A)	(B)	(C)	(D)	(A)	(B)	(C)	(D)
		Diferencia				Diferencia	
		(C) = (B) - (A)				(C) = (B) - (A)	
Pto > (5%, 7%)	58,8%	55,32%	-3,48%	Pto > (4%, 6%)	57,0%	55,32%	-1,68%
Pto > 7%	1,2%	0,0%	-1,2%	Pto > 6%	50,0%	50,02%	-0,02%
Pto < 5%	5%	87,67%	82,67%	Pto < 4%	19,0%	53,17%	34,17%



As is observed in the left graph, the inter-annual inflation goal for the fourth trimester of 2006 is of  $6\% \pm 1$  percentage point. According to the prognosis generated in the fourth running of 2006, there is a 32.32% probability that the inter-annual inflation rate is found within the monetary policy goal, the probability that the rate in question is found over the goal is zero and there is a 67.67% probability that the inflation rate is found below the referred monetary policy goal.

On the other hand, the graph on the right shows a risk balance of inter-annual inflation prognosis for the fourth trimester of 2007. As is observed in said graph, the inter-annual inflation goal for the fourth trimester of 2007 is of  $5\% \pm 1$  percentage point. According to the prognosis generated in the fourth running of 2006, there is a 35.26% probability that the inter-annual inflation rate is found within the monetary policy goal, a 29.62% probability that the rate in question is found over the goal and a 35.17% probability that the inflation rate is located below the referred monetary policy goal.

It is pertinent to mention that the MMS is found in a fine-tuning process, identifying the following pending tasks<sup>37</sup>:

- i) Review the calibration;
- ii) Generate consensus on the model properties; and,
- iii) Elaborate a report on the model properties.

As to the review of model calibration, it is foreseen to be made in the first trimester of 2007. The elaboration of the report on the properties of MMS is to be completed in the first semester of 2007; the later presentation of said document will take us to a generation of the consensus on the model properties.

Additionally, Doctor Sebastian Edwards identified some aspects of MMS specification, to his judgment, are convenient to modify<sup>38</sup>. Said aspects are the following:

<sup>37</sup> For the identification of pending tasks as to the MMS, it was very valuable to count on the points of view of Consulter Jan Vicek, who visited the *Banco de Guatemala* during May 8-12, 2006, as a part of the technical assistance that the IMF is providing the *Banco de Guatemala* in matters of explicit inflation goals.

<sup>38</sup> Edwards, Sebastián (2006). *Monetary Policy in Guatemala 2004-2006: Futures Evaluation and Perspectives*. November 4. Pages 69 to 73.





- i) Incorporate a direct *pass-through* mechanism of the nominal exchange rate;
- ii) Incorporate the external prices more explicitly and the exchange terms;
- iii) Develop a more flexible version of yield curves;
- iv) Increase the level of the neutral interest rate of the policy in the seasonal stage;
- v) Fine-tune the relation between the leading interest rate and the nominal exchange rate; and,
- vi) Review the methodology to determine the tendency components of some key variables in the model.

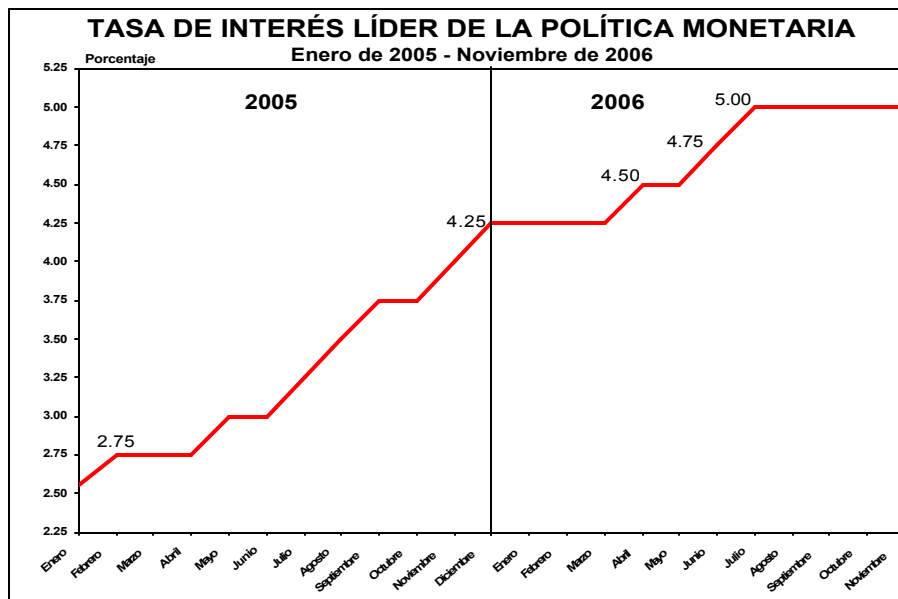
Regarding the mentioned observations, at the end of the second trimester of 2007 the evaluation of each one of the mentioned aspects should be concluded and, if that were the case, the modifications to the model that are deemed convenient can be incorporated.

## **B. INTEREST RATES**

### **1. Of Monetary Stabilization Operations –OEMs (for its acronym in Spanish)-**

#### **a) In national currency**

During the understood period from January to November 2006, in short term OEMs made in the Electronic Money Banking Table –MEBD (for its acronym in Spanish)- and in the stock exchanges, the interest rate of Certified Term Deposits –CDPs (for its acronym in Spanish)- for 7 days (leading interest rate of the monetary policy) registered three nominal hikes of 25 basic points, when going from 4.25% to 4.50% on April 27, from 4.50% to 4.75% on June 22 and from 4.75% to 5.00% on July 27, as a result of the decisions adopted by the Monetary Board on April 26, June 21 and July 26 with the purpose of abating the inflationary expectations.



On the other hand, the interest rates of the OEMs in the bidding mechanism were determined by the market conditions, reflected in the bids received. The Execution Committee continued applying maximum limits (quotas) for each one of the terms of up to a year, which were fixed, taking into account the information that is provided from the daily estimated monetization flow and based on the rule established for said effect, which, at the same time, propitiates a term structure according to the recent historic behavior and in gradually reducing the balance of the OEMs in the short term.

The Execution Committee, taking into account the agree in matters of coordination with the fiscal policy for the participation in the money market, determined that, as of January, the *Banco de Guatemala* will convene biddings each Monday in 91 and 364 day terms and each Friday in 182 and 728 day terms. Later, it was established that as of January 20 the bidding on Fridays will be limited to 182 day terms.

Also, determined that as of March 27, with the purpose of promoting the competence of the bidding mechanism, the frequency of the bids should be reduced to once weekly (on Mondays) and that the terms should be bid alternately; in other words, 91 and 364 day terms in one week and 182 and 364 day terms the following week. The purpose of this last measure is related with



the fact that the monetary scheme of explicit inflation goals requires an operational frame based on the realization of OEMs in market conditions that not only motivate the efficiency of the primary market of public titles, but, at the same time, promotes the development and deepening of a secondary market for said titles, so that the Central Bank sends clear signals to the money market on the orientation of its policy, as well as receiving from it that information which allows it to decide the additional elements for decision-making. Later, the Execution Comité taking into consideration, on the one hand, the favorable conditions in the money market and, on the other hand, the strategy of transferring liquidity in the mid-term, agreed that as of July 31 would not convene biddings in 91 day terms, which were substituted for 182 day terms.

In that context, it is estimated that the measures adopted during the present year, regarding the reduction of bid frequency, will contribute jointly with the best operative procedures regarding the issuing of term deposit certificates due to maturity date and the transfer of title holding of the term deposits in custody in the Central Bank, to stimulate the market of CDPs of the *Banco de Guatemala*.

Later, the Execution Committee, taking into account that the *Ministerio de Finanzas Públicas* [Roughly equivalent to the Department of the Treasury] exhausted its placement quota of Treasury Bonds corresponding to 2006, which generates a space in the market for the placement of CDPs in the long term that allows issuing a profile of maturities for said operations, propitiating the transfer of liquidity in the short term to longer terms in that manner, determined that the *Banco de Guatemala* will convene as of November 21, 2006, a bidding of LTDs in terms of 1092 days (3 years), of 1820 days (5 years) and of 2548 days (7 years), without pre-established quotas, so that the maturities of placements made coincide with the maturities of placements made during November and December of 2005 (in 2009, 2011 and 2013), which will allow comparing in the CDPs in secondary markets, long terms expired during 2005 with those that issued in 2006 and in that manner deepening said market. For the effect, the Execution Committee took into account: given that the *Banco de Guatemala* has a structural position as debtor



before the financial system and the Guatemalan Institute of Social Security – IGGS (for its acronym in Spanish), the placement of CDPs in long terms allows the Central Bank to adopt a less debting position before said system in the daily execution of the monetary policy; that a prudent administration of monetary liabilities of the *Banco de Guatemala* implies diversifying the terms of the same; and, that with the placements of CDPs in the long term looks to reduce the vulnerability of the monetary policy in the short term, given that amounts higher to the normal management of joint liquidity declared, especially in the 7 day term maturity, subtracts effectiveness to the monetary policy, therefore considers it necessary to transfer that part of the balance of greater terms, to moderate the pressures of short term liquidity.

In the following graph we observe that the weighted average interest rates have shown stability for the 91 and 182 day terms and a slight tendency toward the behavior in the 364 day term. On the other hand, the awarding of long terms is made in the 2548 day terms (8 years).

**TASAS DE INTERÉS PROMEDIO PONDERADO  
DE OPERACIONES DE ESTABILIZACIÓN MONETARIA  
EN LICITACIÓN  
DE ENERO A NOVIEMBRE 2006 <sup>a/</sup>**  
- En Porcentajes -

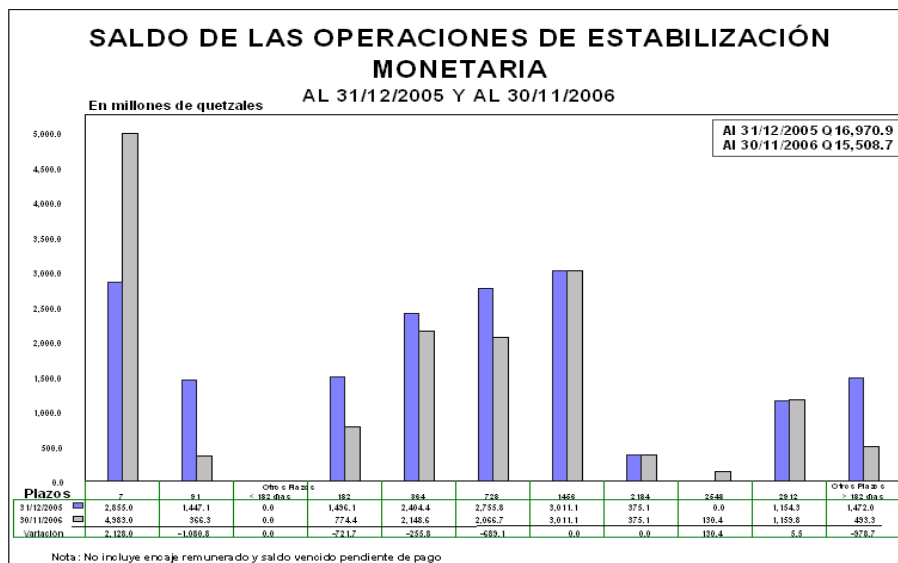
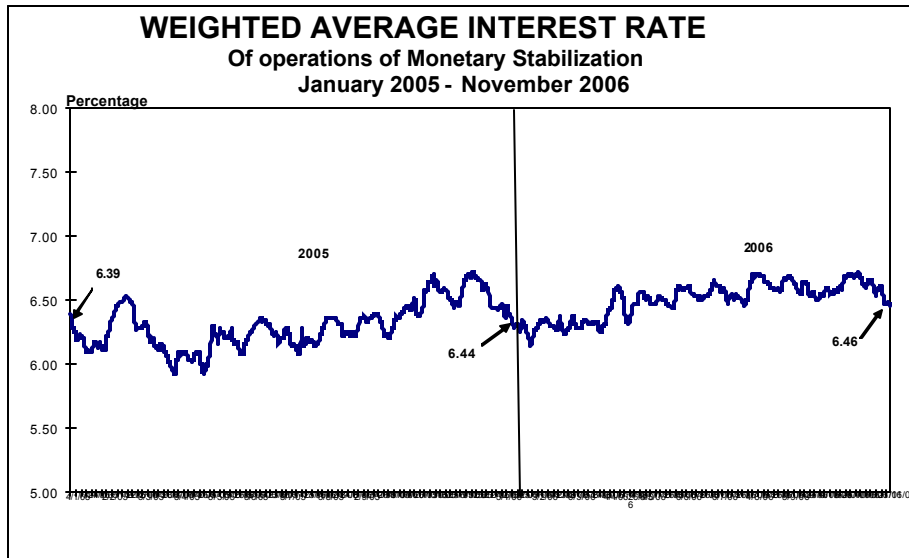
PLAZO EN DÍAS	ENERO	FEBRERO	MARZO	ABRIL	MAYO	JUNIO	JULIO	AGOSTO	SEPTIEMBRE	OCTUBRE	NOVIEMBRE
91 <sup>b/</sup>	5.00	5.00	5.00	5.00	5.00	5.00	5.00	-	-	-	-
182	5.50	5.50	5.50	5.47	5.50	-	5.50	5.50	5.50	5.50	5.50
364	6.25	6.25	6.25	6.25	6.25	6.21	6.22	6.21	6.19	6.18	6.16
728 <sup>c/</sup>	7.00	-	-	-	-	-	-	-	-	-	-
2,548	-	-	-	-	-	-	-	-	-	-	8.00

<sup>a/</sup> Datos al 27/11/2006

<sup>b/</sup> Para el plazo de 91 días se dejó de convocar a licitación a partir del 31 de julio

<sup>c/</sup> Para el plazo de 728 días se dejó de convocar a licitación a partir del 16 de enero

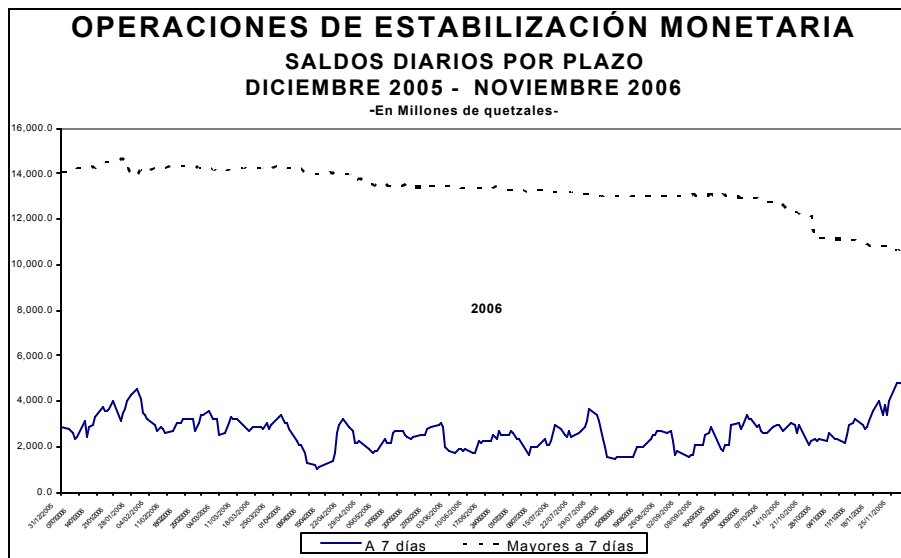
The weighted average interest rate of the balance of OEMs during the December 31, 2005 to November 30, 2006 period showed a slight tendency toward the rise, when going from 6.44% to 6.46%, as a consequence of the increase in the leading interest rate of the monetary policy as well as the decrease in balance of the OEMs in the 91, 182, 364 and 728 day terms. In the following graphs we show the behavior of the weighted average interest rate in January 2005 to November 2006 and also the comparison of balance of OEMs between December 31, 2005 and November 30, 2006.



When analyzing the OEMs per fund-raising term, these can be divided in 7 day operations (associated to the leading interest rate of the monetary policy) and greater terms. As we observe in the following graph, during the analyzed period said operations have mainly concentrated in terms greater than 7 days,

reaching a maximum of Q14,672.0 million to January 24, 2006 and a minimum of Q10,525.7 million to November 30, 2006.

The balance of operations to 7 days, to November 30, 2006, registered a maximum level of Q4,983.0 million and to April 11, 2006 a minimum level of Q1,064.1 million. The total balance of OEMs registered to November 30, 2006 rose to Q15,508.7 million, of which Q4,983.0 million (32.1%) corresponding to 7 day terms.



As to liquidity giving operations, the Execution Committee agreed to keep the offer of liquidity bids to 7 day terms, at an interest rate of 7.65%. It is worth mentioning the during 2006 the breach between the asset leading interest rate (liquidity giving) and the liable (fund-raising) was reduced, from 3.40 percentage points to 2.65 percentage points, derived from the three increases of 25 basic points to the leading interest rate of the monetary policy approved by the Monetary Board on April 26, June 21 and July 26, 2006.

### b) In foreign currency

The Execution Committee, taking into account the significant amount of Treasury Bond maturities in US dollars negotiated with residents, decided that the *Banco de Guatemala* would convene term deposit biddings expressed in US dollars once a week. In that sense, on January 18 and 25, February 1, April



5, May 10, June 7, 14 and 28, July 5, 12 and 19, August 2, 9 convened bidding of term deposits for 91 and 364 days; while on June 21 and 23 convened 91, 182 and 364 days. It is worth mentioning that of the demands presented (US\$18.0 million), were not awarded in the referred biddings.

## 2. Parameter Interest Rate

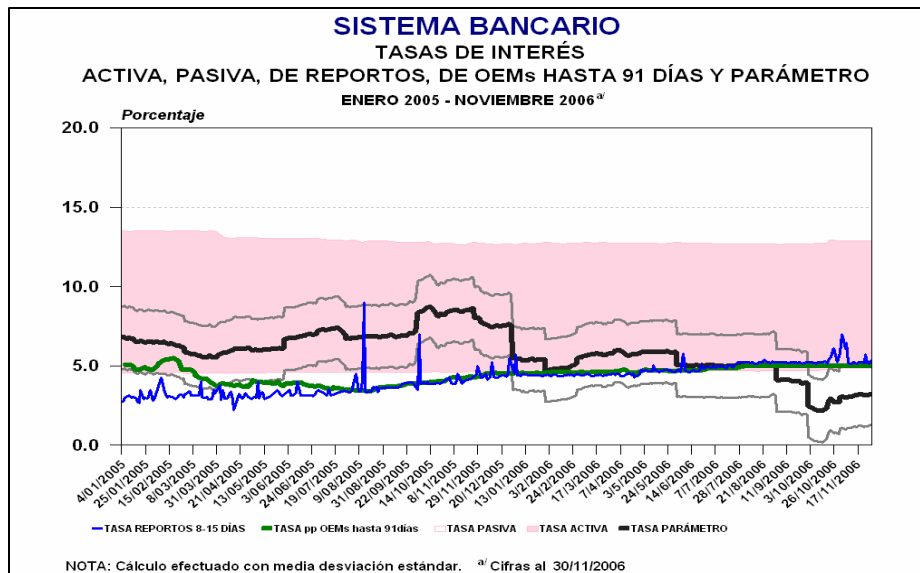
The parameter interest rate is an indicator based on the Taylor Rule<sup>39</sup>, that incorporates adjustments on the base rate (or neutral) in function of inflation differentials, of aggregate demand and of nominal exchange rate, so that the interest rate resulting indicates the levels of interest rates that must be on the market to be compatible with the existing inflation level. The Monetary, Foreign Exchange Rate and Credit Policy for 2006 establishes that the parameter rate will be compared with the weighted average interest rate of repurchase agreement between 8 and 15 days, as well as with the weighted average interest rate of monetary stabilization operations up to 91 day terms.

To November 30, 2006, the parameter interest rate is located at 3.21% and its upper and lower limits, calculated with a median standard deviation, is located at 5.19% and 1.24%, respectively. It is worth indicating that from January to September the repurchase agreement interest rate for the 8 and 15 day terms as well as with the interest rate for the monetary stabilization operations for terms up to 91 days were kept within the tolerance margins of the parameter rates; however, as of October the repurchase agreements for 8 and 15 day terms were over the upper limit of the tolerance margin of said parameter rate, whereas the interest rate of the monetary stabilization operations for terms up to 91 days was located around the upper limit. In effect, on November 30 the interest rate of repurchase agreements for 8 and 15 day terms was at 5.33% while the weighted average interest rate for the monetary stabilization operations of up to 91 day terms was at 5.00%, the above-mentioned indicates that the monetary policy to the referred date, should be invariable.

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<sup>39</sup> The Taylor Rule is an indicator that is used by many central banks to orient participation decisions in the monetary market, since the same reflects the adjustments in the interest rate due to inflation and due to excess demand that are compatible with the fundamental objective of the monetary policy. In the case of Guatemala it has been considered convenient to add an adjustment of exchange movements; therefore it has been named "Parameter Rate."

It is pertinent to comment that the interest rate of repurchase agreements for terms between 8 and 15 days in the last week of October, 2006 showed behavior toward the rise, fundamentally associated to the change in the expectations of depositors, especially after the suspension of operations of the *Banco del Café*, S.A. that generated temporary positions of illiquidity in some banking institutions.



It is worth mentioning that as of June 2006, in order to monitor the monetary policy orientation, the parameter interest rate has been compared with the interest rate of repurchase agreements for 8 and 15 day terms and with the weighted average interest rate of the monetary stabilization operations up to 91 days, using for said effect a tolerance margin of the parameter interest rate of standard median deviation, value that was shown to be an appropriate measure regarding the first semester of the year, when the tolerance margin was a standard deviation.

In addition to the tolerance margin, it is worth indicating that even though there is space to fine-tune the calculation of the parameter interest rate. In the opinion of international experts, like Dr. Sebastian Edwards, and according to the experience of countries that apply the explicit inflation goals scheme and use the Taylor Rule as a monetary policy tool, the component of inflation deviations observed regarding the goal must have a greater weighting





to the unit (generally 1.5), while the component of the product gap (difference between the observed gross domestic product and the potential), a weighting considerably less than a unit, in that way reflecting a greater preference of the central banks to fulfill the inflation goal. In the case of Guatemala, the weighting of the inflation deviation regarding the goal in the parameter interest rate is of 1.33, which is considered low if it is compared, as was indicated, with the parameters of other central banks that operate small open economies.

### **3. External Competitiveness of the Internal Liable Interest Rate**

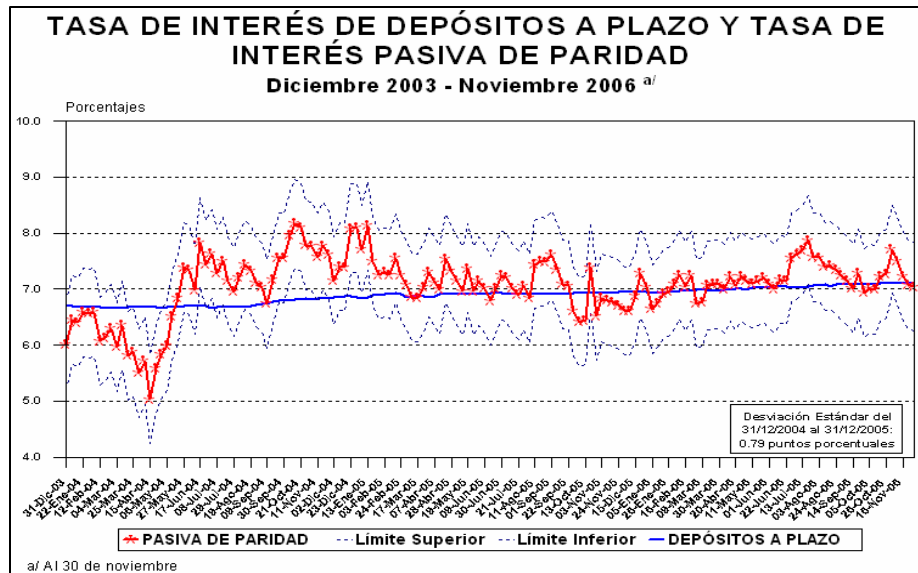
The external competitiveness of the internal liable interest rate in national currency can be evaluated if it is compared with the parity interest rate. The latter is defined as the sum of three elements: i) an internationally comparable interest rate; ii) a risk exchange premium; and, iii) a country risk premium.

For measurement effects, in the present analysis an interest rate for the six month term deposits in the United States of America is used, with an external liable interest rate comparable to the domestic liable interest rate in national currency (weighted average interest rate of the national banking system for term deposits). Also, in order to estimate the exchange risk premium, the difference between the exchange rate type (purchase and sale) observed in the Institutional Foreign Currency Market and the average exchange rate (purchase and sale) negotiated in the futures market of Guatemala. At the same time, to estimate the country risk premium, the difference between the Treasury Bond return rate placed in the international financial market (weighted average for the 1997, 2001, 2003 and 2004 issues) and the return rate of the US Treasury Bonds for 10 year terms is calculated.

To November 2006, the weighted average interest rate of term deposits (internal liable rate) is observed, with the exception of the first three weeks of January; the first two weeks of March; the last week of September; the first two weeks of October; and, the last two weeks of November, were lower to the parity liable rate. To November 30, 2006, the weighted average interest rate of term deposits reached 7.11%, whereas the parity liable rate was of 7.04%. Without taking into account transaction costs, said situation would

advise the economic agents that to November 2006 it would have been more favorable to save internally.

As to monetary policy orientation that offers the mentioned variable, it was observed that comparing the interest rate for term deposits with the tolerance margin of the parity liable rate<sup>40</sup>, the same was within said margin in November 2006, therefore the orientation of the same indicated that the monetary policy remain invariable.



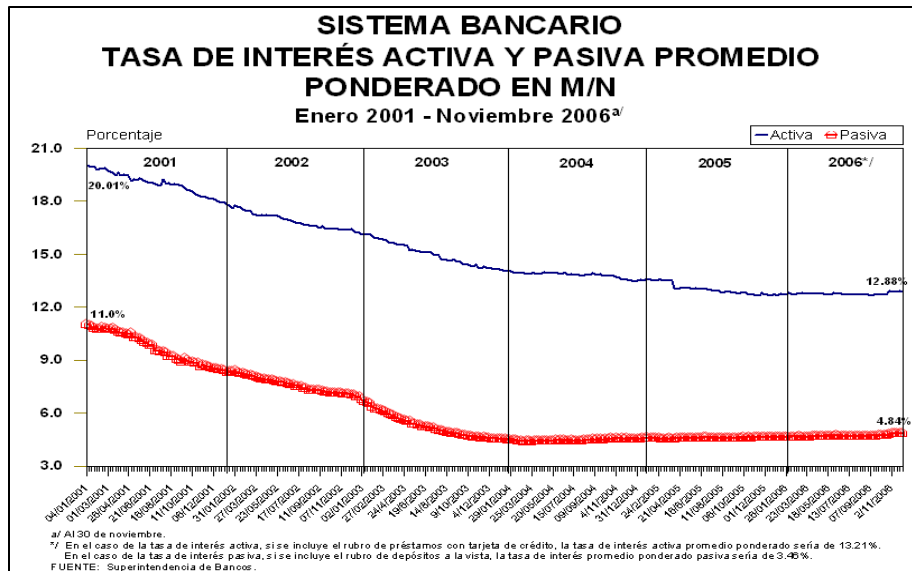
It is worth pointing out that when evaluating the orientation of the monetary policy that has offered the parity liable rate in 2006, it is observed that when comparing the interest rate for the term deposits with the tolerance margin of +/- a standard deviation (equivalent to 0.79 percentage points) of the parity liable interest rate, the same has been located, almost during the whole year within the referred margin, therefore the monetary policy orientation of said interest rate has been kept said policy invariable. In that sense, it is considered that said orientation could have been influenced by an ample tolerance margin, given the stability that has been observed in the interest rate for term deposits, situation that would advise reducing said tolerance margin.

<sup>40</sup> The Monetary Board in resolution JM-185-2005 dated December 27, 2005, through which, among other aspects, determined the Monetary, Foreign Exchange Rate and Credit Policy for 2006, and agreed that the parity liable rate would be included in the tolerance margin +/- a standard deviation. With weekly information from December 31, 2004 and December 31, 2005, was established with a standard deviation of 0.79 percentage points.

#### 4. Asset and Liabe Weighted Average Interest Rates of the Banking System<sup>41</sup>

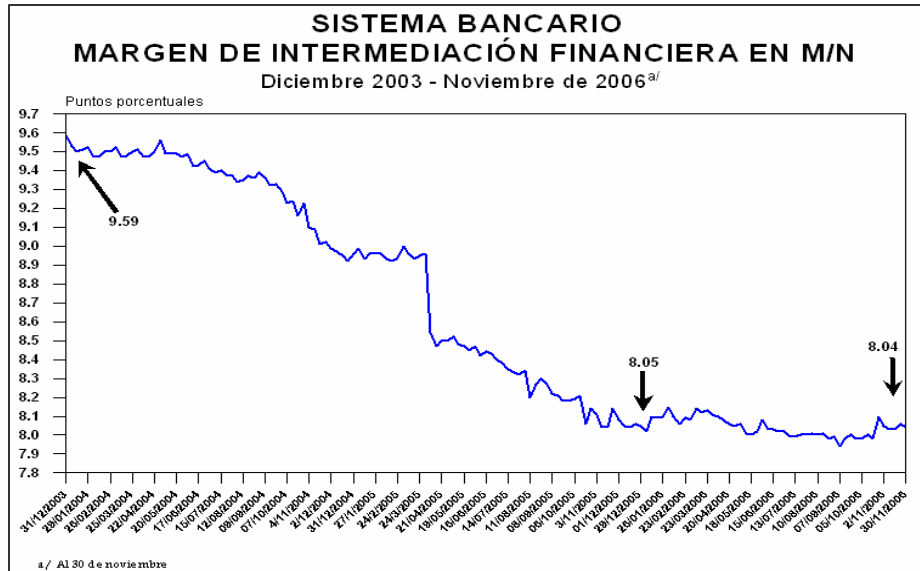
##### a) In national currency

From January to November 2006, the weighted average interest rates registered stable behavior with a slight tendency toward the rise. The weighted average asset interest rate to November 20 was at 12.88%, higher by 0.21 percentage points to the observed at the end of December 2005 (12.67%); while the weighted average liabe interest rate was at 4.84%, higher by 0.22 percentage points regarding that registered to December 31, 2005 (4.62%).



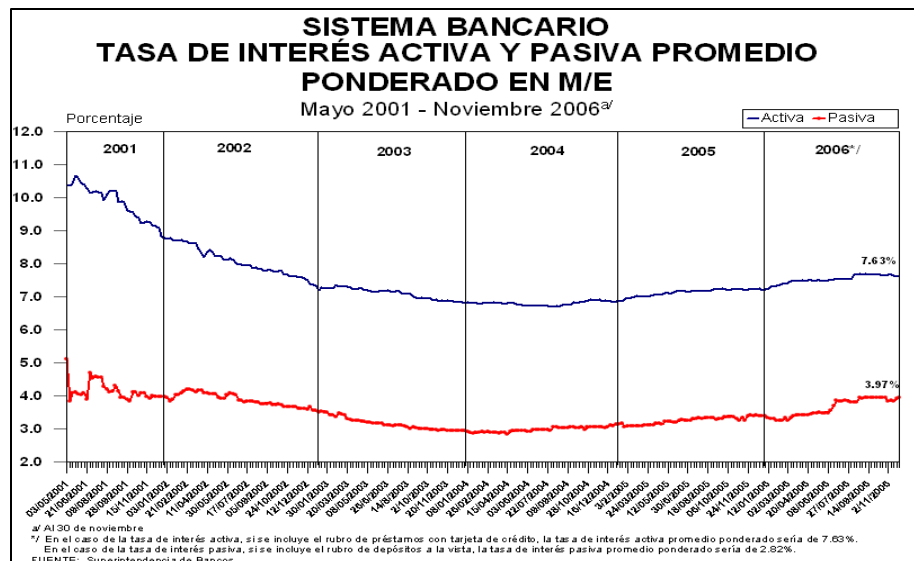
To November 30, 2006, the financial intermediation margin in national currency was at 8.04 percentage points, slightly lower by 0.01 percentage points to the observed at the end of December 2005 (8.05 percentage points).

<sup>41</sup> Corresponds to the methodology used by the *Banco de Guatemala*, which differs regarding that used by the Superintendence of Banks. In the calculation of the weighted average asset interest rate the *Banco de Guatemala* does not include the data corresponding to the heading of financing with credit cards, while the Superintendence of Banks does not incorporate the corresponding data of loans with zero interest rate. In the calculation of the weighted average liabe interest rate, the *Banco de Guatemala* does not include data corresponding to the deposits at sight.

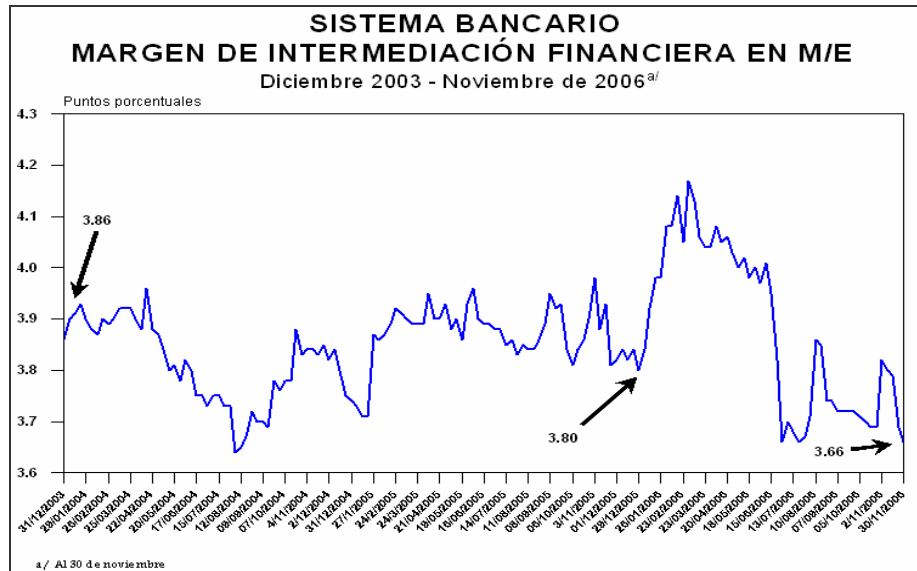


### b) In foreign currency

The asset and liable weighted average interest rates, during the January to November 2006 period, have shown stable behavior, with a slight tendency toward the rise. The weighted average of the asset interest rate to November 30 was at 7.63%, higher by 0.42 percentage points to the observed on December 31, 2005 (7.21%); while the weighted average for the liable interest rate showed a greater variation at 3.97% (3.41% to December 2005). It is worth indicating that the increase of the weighted average liable interest rate is associated with an increase in the last weeks of June 2006 of placements of financial obligation in circulation in foreign currency to higher interest rates.



To November 30, the financial intermediation margin in foreign currency was reduced by 0.14 percentage points, when going from 3.80 percentage points in December 2005 to 3.66 percentage points to November 30, 2006.



### C. ANALYSIS OF THE ACCOUNTS BALANCE OF THE BANCO DE GUATEMALA

The Monetary, Foreign Exchange Rate and Credit Policy for 2006 determined, among other aspects, the quarterly monetary program that contains the estimated behavior of the main accounts balance of the Central Bank, in which they estimated that the demand of monetary issue would grow around 9.9% regarding the level observed at the end of 2005.

Following is the monetary program of the third quarter of 2006.



**MONETARY PROGRAM OF THE BANCO DE GUATEMALA**  
**FLWS FROM DECEMBER 31, 2005 TO SEPTEMBER 30, 2006**  
 - Millions of quetzales -

CONCEPT	ACCUMULATED		
	PROGRAMMED	OBSERVED	DEVIATION
I. NET INTERNATIONAL MONETARY RESERVES	1610	1991	381
US\$	201	249	48
II. NET INTERNAL ASSETS	-2173	-1819	354
1. Position with the consolidated public sector	-645	-2957	-2311
1.1. Central government	71	-1990	-2061
1.2. Rest of the public sector	-716	-968	-252
2. Position with banks and financial institutions	276	-955	-1231
2.1. Credit to banks and financial institutions	0	-1	-1
2.2. Remunerated and non-remunerated Legal Reserve	276	-954	-1230
3. Other net assets	85	377	292
3.1. Expenses and products	240	329	89
3.2. Non-classified net assets	-155	48	203
4. Monetary stabilization operations	0	1716	1716
5. SURPLUS (-) ÓR LACKING (+) LIQUIDITY	-1888	0	1887
III. DEMAND OF MONETARY ISSUE	-562	172	735
Note			
OEMs total	-2604	703	3307

The behavior of each one of the factors that intervened in the generation of monetary issue is commented in the following.

### 1. External monetization

The monetary program foresaw that to September 30, 2006 the level of Net International Monetary Reserves increased by Q1,610.0 million (US\$201.0 million); however, when ending the referred month said reserves exhibited an increase of Q1,991.0 million (US\$249.0 million) regarding the observed level at the end of the previous year, amount higher by Q381.0 million (US\$48.0 million) to the programmed. Said result is mainly associated to the income from purchases made by the *Banco de Guatemala* in the exchange market for US\$130.5 million to moderate the volatility in the nominal exchange rate, as well as disbursements due to maturity of Treasury Bonds in US dollars that, according to the monetary program would be placed again, situation that did not occur.



## 2. Net Internal Assets

### a) Position with the public sector

From January to September of this year the Central Government increased its deposits in the *Banco de Guatemala* by Q1,990.0 million, amount higher by around Q2,061.0 million, regarding the foreseen in the monetary program for said period, which largely explains the lesser use of deposits by the Central Government, associated to a lesser execution of public expense regarding the programmed.

The position of the rest of the public sector observed demonetization for Q968.0 million, higher by around Q252.0 million regarding the programmed for September 30. This result is explained by the increase in its investments in LTDs for Q298.0 million, partially counteracted by the decrease in its deposits in the *Banco de Guatemala* for Q46.0 million.

### b) Position of Banks and Financial Institutions

According to the monetary program, to September 30, the banks in the system registered a monetizing flow for Q276.0 million, derived from the decrease foreseen of the banking legal reserve account in the *Banco de Guatemala*. However, the observed behavior of the referred banking legal reserve up to the third trimester was demonetizing by Q955.0 million, which represented a deviation of Q1,231.0 million over the programmed. Said deviation is mainly associated to the increase of the deposits of the banking system in the Central Bank (linked to a greater dynamism of the banking fund-raising observed the third quarter.)

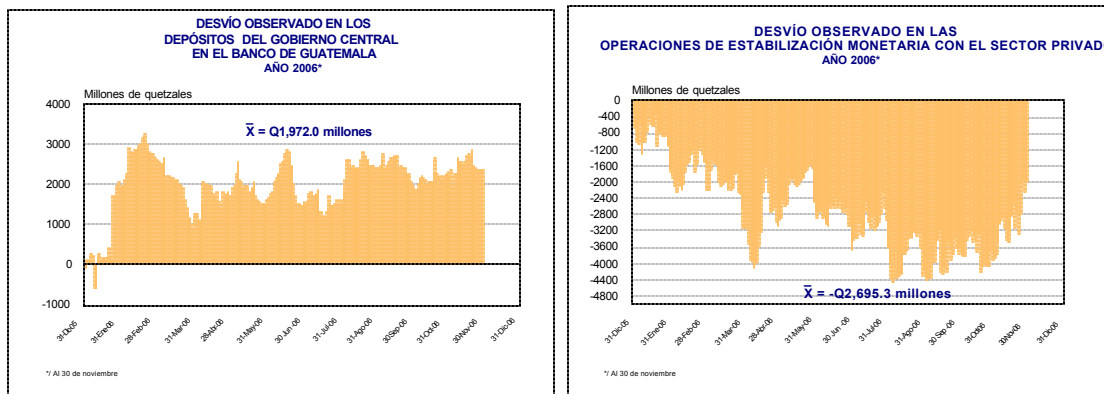
### c) Operative Result of Expenses and Products

the net result of expenses and products of the *Banco de Guatemala* at the end of the third quarter was monetizing by Q329.0 million, amount higher by Q89.0 million regarding the programmed. Said deviation is mainly due to the fact that less income was perceived regarding the programmed for investment yield of net international monetary reserves.

## d) Monetary Stabilization Operations

The monetary program had foreseen that to September 30, 2006 would have to make OEMs for Q2,604.0 million to neutralize the excess of primary liquidity in the economy. At the end of said month, the total balance of OEMs registered a decrease of Q703.0 million regarding the observed level to December 31, 2005, which generated a deviation in said variable for Q3,307.0 million. Said deviation is explained by the lesser operation of OEMs in national currency with the private sector and banks of the system for Q3,605.0 million, which was moderated by the larger investments in CDPs of public entities for Q298.0 million.

To November 2006 the efforts to neutralize the liquidity have rested in the support of the fiscal policy to the monetary policy, through the increase of deposits of the Central Government in the *Banco de Guatemala* over the programmed (Q1,972.0 million, on average), which has compensated the deviation that has been observed in the lesser amount of operations of monetary neutralization regarding the programmed (Q2,695.3 million on average). Said support has allowed that when, not counting on the effect around Q700.0 million had on the increase numerary in circulation due to the contribution of the Fund for Savings Protection –FOPA (for its acronym in Spanish)- derived of the suspension of operations of the *Banco del Café, S.A.*, the deviation of the monetary issue will not increase any more.



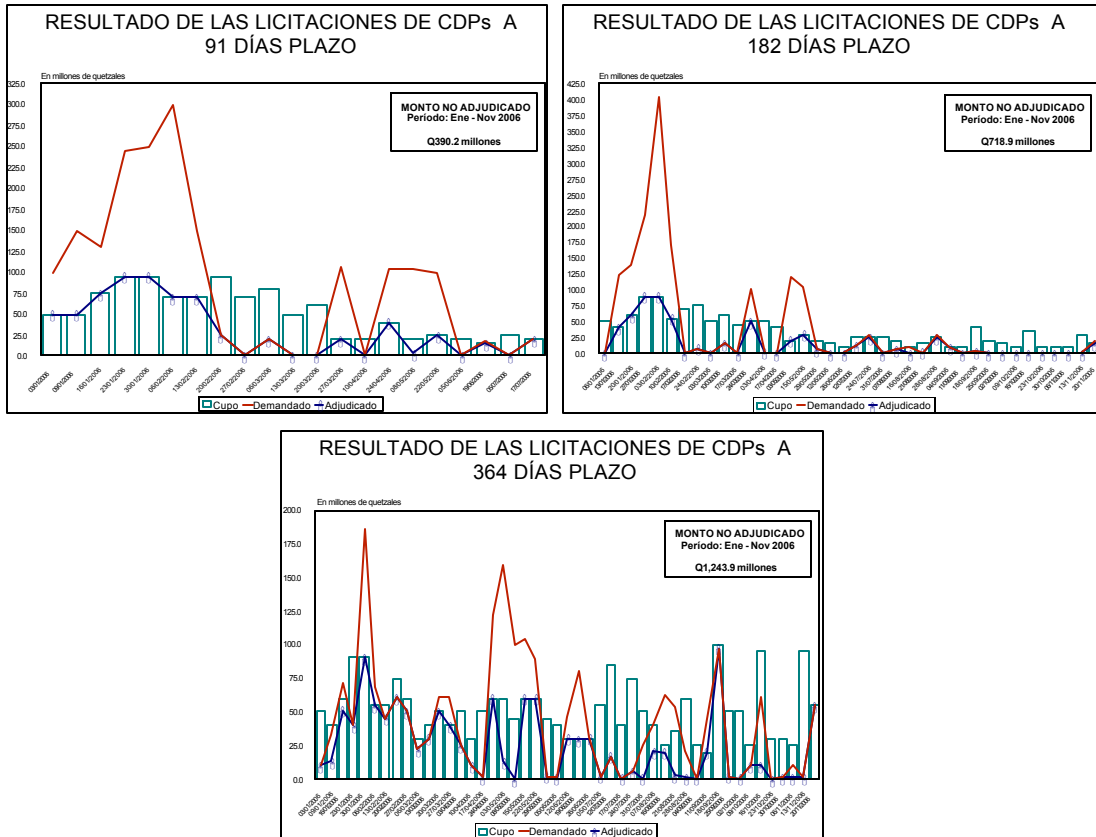




### i) Effectiveness of OEMs

The effectiveness of OEMs can be measured through the capacity that this instrument has on the monetary policy to raise resources of the money market according to the needs of liquidity neutralization estimated in the monetary program. Since January 4, 2005, the *Banco de Guatemala* has made CDP placements through the bidding mechanism for the terms greater than 7 days and up to a year, using the predetermined quotas for said effect, which fix a function of determined monetary spaces according to the estimated flow of monetization. The interest rates for said operations have been determined according to the prevalent conditions in the market, reflected in the received bids. Said focus is derived of the decision of the Execution Committee of the *Banco de Guatemala* that as of the indicated date, will eliminate the previous relative practice that the Central Bank will fix all the interest rates of the CDPs. Also, said measure looks to gradually transfer the excess of liquidity in the short term to longer terms, which cooperates in the achievement of the objective in reducing the debtor position of the *Banco de Guatemala*, before the money market. It is mentioning that the previous measures are congruent with the recommendations of the IMF missions that have offered technical assistance to the Central Bank, regarding the analytical and operative framework of the monetary stabilization operations, congruent with the scheme of explicit inflation goals.

Notwithstanding, the effectiveness of the OEMs made under the mechanism indicated has been reduced, particularly in 2006, given that the amounts awarded have been less than the established by the fund-raising quotas, which is associated, on the one hand, to a lesser demand of titles on behalf of investors and, on the other hand, that the interest rates required by some of the same have been greater than those prevailing in the money market, as is illustrated in the following graphs.



In the above graphs it is observed that, for the term of 91 days did not award CDPs for a total amount of Q390.2 million; for the 182 day terms, Q718.9 million; and, for the 364 day term, Q1,243.9 million.

In any of the mentioned cases, it is evident that the transfer of excess liquidity is not achieved in short terms to longer terms, which, at the same time, provokes said excess to concentrate in 7 day terms (or are transferred to the economy as numerary in circulation) and that the Central Bank has to be constantly neutralizing said liquidity.

In the described context, the analysis made in the heart of the Execution Committee have converged to the fact that the search for two objectives that are incompatible can be occurring; the first is try to place all fund-raising quotas offered with the purpose of neutralizing the excess liquidity (particularly in periods as the observed in the last quarter of 2006, in which it deviated the monetary issue was duplicated regarding what had been observed until mid-October) and, the second, that the interest rate does not exceed the level it



considers adequate, based on the reference rate calculated through lineal interpolations and logarithms of yield curves.

On this particular, the recommendations of Dr. Sebastian Edwards and of IMF experts, indicate that as a part of the process of perfection of the explicit inflation goal scheme, on the one hand, the determination of quotas must be made based on the monetary program and the strategy of liables management of the Banco de Guatemala and, on the other hand, that the monetary policy changes implemented through the adjustments of the leading interest rate should be reflected effectively in the rest of the terms in which the Central Bank operates; in other words, that they be transferred to the market interest rates and that through this channel they send adequate signals regarding the monetary policy bid.

Additionally, when analyzing the maturity of the monetary stabilization operations and the needs of primary liquidity of the economy, it is evident that the primary offer generated by said maturities has been consistently greater to the demand of money, which has propitiated that the Central Bank is constantly neutralizing these excesses of structural nature. This situation makes evident that the Central Bank, when the monetary spaces allow it, can make monetary stabilization operations to terms greater than year (as was done in the second semester of 2005 and since it has done since the second half of november of this year), so that gradually the Banco de Guatemala gets closer to having less of a debtor position or neutral before the money market.

**IMPORTANCE THAT THE CENTRAL BANK, IN THE MID-TERM, EXHIBITS A POSITION OF LESS OR NEUTRAL DEBT BEFORE THE MONEY MARKET, IN A SCHEME OF EXPLICIT INFLATION GOALS**

The *Banco de Guatemala* has a debtor position before the money market (especially with the financial system and the Guatemalan Social Security Institute), which implies that it must permanently neutralize excess of primary liquidity. A strategy that the Central Bank has adopted in order to have a less debtor position in the short term has placed CDPs in long terms, taking advantage of the cooperation in which the *Ministerio de Finanzas Públicas* [Roughly equivalent to the Department of the Treasury.], after having exhausted the placement quota, does not place Treasury Bonds in said market (which, due to their nature as a source of financing, are long term). The referred strategy allows reducing the pressure on the monetary policy, when not having to frequently replace the maturity of papers in the short term.

It is worth highlighting that improving the position of the central bank before the money market has the kindness of cooperating with the adoption process of a scheme of explicit inflation goals, and with that,



abating the inflationary expectations and, consequently, strengthen the credibility of the monetary policy making it more effective.

The effectiveness of the monetary policy is strengthened when the central bank has a neutral position or a less debting position before the Money market, due to the fact that it facilitates the execution of the referred policy, since the central bank coincides more effectively on the interest rate of the short term market.

The experience of some Latin American countries (Chile, Mexico and Brazil) that have adopted the explicit inflation goals scheme, confirms that a better position of the central bank, for example, allows increasing the effectiveness of the monetary policy and ensuring the good qualities of the referred scheme.

### **e) Estimation of the closing of the monetary program for December 2006**

The Monetary, Foreign Exchange Rate and Credit Policy for 2006, as was indicated, contemplated that the demand of monetary issue would grow by around 9.9% regarding the level observed at the end of 2005 compatible with a growth rate of economic activity of 4.4% and with an inflation goal of 6.0% +/- 1 percentage point, however, derived that the growth rate of the economic activity was reviewed toward the rise (4.6%) in June 2006, it was necessary to review the estimation of the demand of monetary issue for the end of 2006; in that context, the new estimation of the demand of monetary issue foresees an inter-annual growth rate of said variable for around 11.7%. Also, taking into account the behavior of the monetary variables to November, the estimation of lack of involvement of the real sector, external sector, as well as the estimation of closing of fiscal variables, in the following the estimation of the monetary program for the last trimester of 2006 and year closing are presented, considering that the first three trimesters correspond to the observed numbers.



**MONETARY PROGRAM 2006  
FLOW IN MILLIONS OF QUE TZALES**

CONCEPT	TRIMESTERS 2006				Total 2006
	I	II	III	IV	
<b>I. NET INTERNATIONAL MONETARY RESERVES</b>	2665	-425	-249	409	2400
<b>US\$</b>	333	-53	-31	51	300
<b>II. NET INTERNAL ASSETS</b>	-2783	593	371	1091	-728
<b>1. Position with the Pub. Consolidated sector</b>	-2800	-518	361	1061	-1896
1.1. Central government	-2196	-537	743	353	-1636
1.2. Rest of the public sector	-604	18	-382	708	-260
<b>2. Position with banks and financial institutions</b>	-407	-242	-306	-172	-1127
2.1. Credit to banks and financial institutions	0	-1	0	0	-1
2.2. Remunerated and non -remunerated legal reserves	-406	-241	-306	-172	-1126
<b>3. Other net assets</b>	88	-49	338	1386	1763
3.1. Expenses and products	196	75	58	17	346
3.2. Net non-classified assets	-108	-123	280	1369	1417
<b>4. Operations of monetary stabilization</b>	336	1402	-22	-810	907
<b>5. Excess (-) or lack (+) of liquidity</b>	0	0	0	-374	-374
<b>III. DEMAND OF MONETARY ISSUE</b>	-118	168	122	1500	1672

As can be observed in the previous graph, it would be expected that in the fourth trimester, the net international monetary reserves show an increase for US\$51.0 million, mainly derived from the credit disbursements hired abroad. Given the numbers observed to November, when ending the year an increase of net international reserves for US\$300.0 million would be estimated, amount that would allow consolidating the position of the external sector of the country.

Consistent with the behavior of net international monetary reserves and of monetary issue demand, in the fourth trimester of AIN of the Banco de Guatemala would monetize in Q1,091.0 million, while it would be expected that these when closing the year would demonetize in Q728.0 million.

Considering the balance of deposits of the central government to November 2006, as well as the estimation of closing of the treasury, it would be expected that in the fourth trimester the central government would decrease by Q353.0 million its deposits in the Banco de Guatemala. On that account, when ending the year, the demonetization generated by the central government would be Q1,636.0 million. On the other hand, it is expected that in the fourth trimester the rest of the public entities will reduce their deposits and investments in LTDs for Q708.0 million, therefore at the end of the year said entities



demonetize by Q260.0 million, with which the demonetization generated by the non-financial consolidated public sector would be for Q1,896.0 million.

As to the position with banks and financial institutions, it would be expected that at the end of the fourth trimester said entities would increase their deposits in the central bank for Q172.0 million, that as a consequence, of the expected trajectory of banking fund-raising during the last trimester, during the last trimester. Derived of the above, it is expected that at the end of the year the banks would have generated a demonetization for Q1,127.0 million. It is important to highlight that the present estimation considers that, the increase observed in the legal reserve of financial institutions to November of the present year, derived of the transfer of funds that the Banco de Guatemala in its quality of the FOPA resources administrator made by the *Fideicomiso de Administración y Realización de Activos Excluidos del Banco del Café, S.A.*, (Administration and Realization of Assets Excluded from the *Banco del Café, S.A. Trust*), due to the operations suspension of said banking entity, would slowly disappear in the rest of the fourth trimester of 2006, therefore not expecting an additional demonetization through this channel.

Taking into consideration the amount and the interest rate of monetary stabilization operations and of the investments of the RMIN, during the fourth trimester the cost of the monetary, exchange rate and credit policy would reach Q17.0 million, which would add an accumulated cost of Q345.0 million at the end of the year.

Consistent with the demand of monetary issue for Q1,500.0 million, with the monetization of external origin for the equivalent of Q409.0 million and with the monetizing effect that the other headings would have that integrate the AIN<sup>42</sup> of the *Banco de Guatemala*, in the fourth trimester a neutralization of liquidity would be for Q1,184.0 million, which would mean that the OEMs balance would have to increase for this amount.

In that sense, at the end of the year, the balance of OEMs it would be at Q15,952.0 million, of which Q10,878.0 million would correspond to the private sector operations.

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<sup>42</sup> Include the disinvestment in LTDs of the *Banco de Guatemala* on behalf of FOPA.



## **D. PRIMARY LIQUIDITY**

The Monetary Board in resolution JM-64-2006 agreed, among other aspects, to complement the follow-up of primary liquidity, made through monetary issue, with an indicator that incorporates the behavior of banking legal reserve and the OEMs that coincide in banking liquidity, as that of the ample monetary base. In said context, the following behavior for each one of the components of primary liquidity to November 30, 2006 is presented.

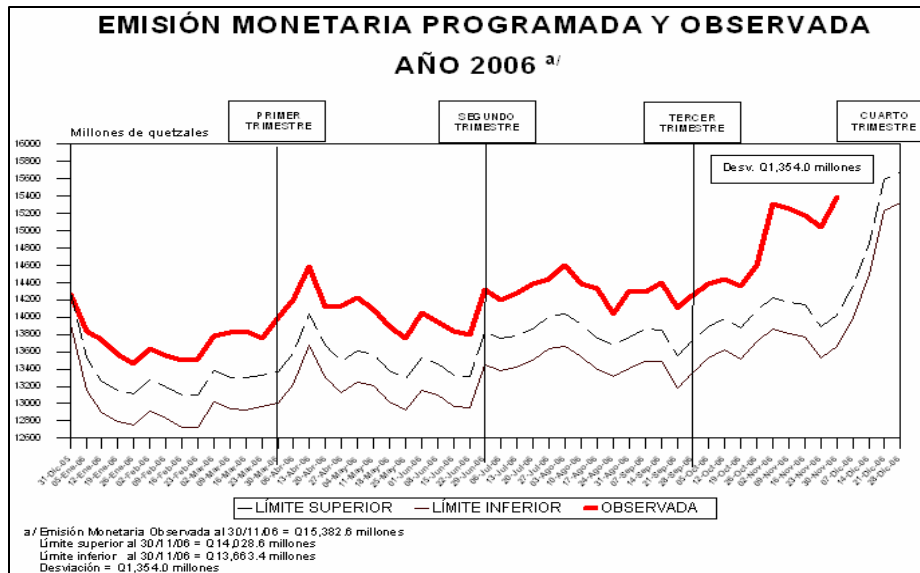
### **1. Monetary Issue**

According to the monetary program approved by the Monetary Board for 2006, it is estimated that the monetary issue demand in inter-annual terms would grow by around 9.9%<sup>43</sup>, compatible increase with an expected growth rate of economic activity of 4.4% and with an inflation goal (6% +/- 1 percentage point).

One of the characteristics of monetary issue demand is that its seasonality and tendency allow reasonably predicting, which facilitates programming its behavior according to a runner that incorporates possible transitory fluctuation of liquidity.

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<sup>43</sup>It is important to highlight that according to the estimation of monetary program closing for 2006, monetary issue is foreseen registering an inter-annual increase of around 11.7%, congruent with a new growth estimation of the GDP of 4.6% for 2006.



To November 30, 2006, the trajectory of the monetary issue has remained over the upper limit of the programmed runner, to date registering a deviation of Q1,354.0 million. Said excess of issue is explained, due to offer, mainly because in the period mentioned the balance of OEMs was less by approximately Q1,519.0 million regarding the foreseen in the current monetary program.

## 2. Ample Monetary Base

The monetary base is a fundamental concept in the macroeconomic and monetary theory and corresponds to the amount of Money in public power (numeraire) plus the banking reserves. Its importance is in that it represents basic monetary aggregate that can be directly controlled by the monetary authority, resides possessing the multiplying effect of monetary offer. Because of this last reason, in the monetary theory is also known as high power money.

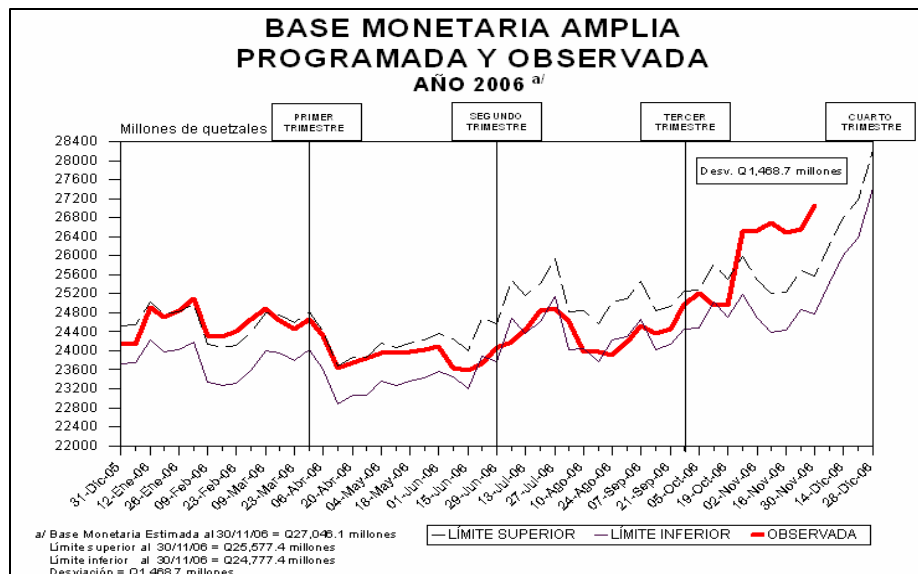
In that sense, the ample monetary base is calculated through the sum of numeraire in circulation, the banking legal reserve and the balance of short term OEMs with the banking sector (with maturity at a term of up to 91 days).

Just as in the case of monetary issue, the follow-up of the monetary base, given that the inflation goal has a tolerance margin, that can be established through a runner that is consistent with said range and that incorporates



possible transitory fluctuations of liquidity. The tolerance margin was established in a standard deviation.

In the described context, it is estimated that at the end of the year, the ample monetary base would grow around 15.0% regarding the observed level to December 31, 2005, which represents an increase of Q3,696.2 million.



During the first five months of the year, the trajectory of the ample monetary base showed, with the exception of the period between January 26 and March 9, a behavior that was within the programmed runner and close to the upper limit of said runner. It is worth indicating that during the period that the monetary base was over the upper limit, showed an average deviation of Q172.3 million, mainly derived of the increase observed in the holding of short term LTDs on behalf of the banks of the system. In the period understood between June 15 and September 14, it was observed that the levels of the monetary base were kept close to the lower limit of the programmed runner that, on average, was Q220.1 million. Later, between September 15 and October 19, the level of the monetary base was generally maintained within the programmed runner. However, as of October 25, the monetary base began registering an increase in the level, which made the same be at Q1,468.7 million over the upper limit of the programmed runner for November 30. The



previous behavior is mainly explained by the increase of the deposits in banks and financial entities in the *Banco de Guatemala*, as a result of the transfer of resources from FOPA to the administration and realization of assets excluded from the bank suspended by the Monetary Board were made.

The orientation that offers primary liquidity, as an indicative variable of the monetary policy, is obtained through the weighting of deviation as well as the monetary issue as the ample monetary base, considering 50% for the effect of deviation for each one of the variables<sup>44</sup>. In that sense, to November 30, 2006, the monetary issue, as was indicated, was at Q1,354.0 million over the upper limit of the programmed runner, whereas the monetary base was at Q1,468.7 million over the upper limit of the programmed runner. In weighted terms the deviation would be of Q1,411.4 million, which would advise a restrictive monetary policy.

When evaluating the performance of primary liquidity, as an indicative variable, we observe that the monetary issue and the ample monetary base could have correlated behavior, due to the fact that the same have a common component (numeraire in circulation) that brings changes in the same direction in both variables. In that sense, it is recommendable to leave only one as a concept of primary liquidity, with the purpose of avoiding a possible over reaction in the monetary orientation.

## **E. TOTAL PAYMENT MEANS**

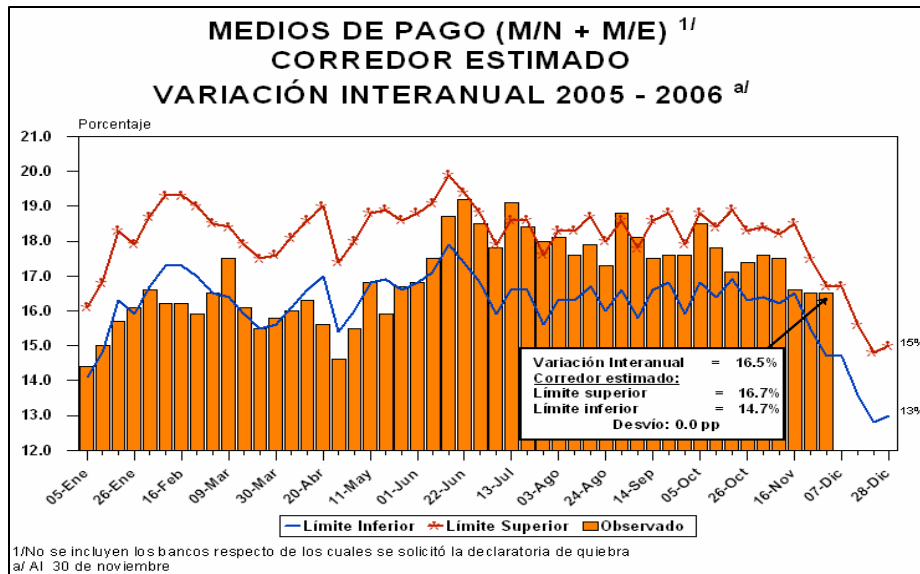
In the Monetary, Foreign Exchange Rate and Credit Policy for 2006 is estimated that, in congruent with the growth of the economic activity, with the inflation goal and with the circulation speed of Money, the payment means –M2– would grow between 13% and 15%, in inter-annual terms. To November 30, 2006, the inter-annual variation of payment means was 16.5%, which is located within the runner estimated for this date (14.7% - 16.7%).

The projected runner is also considered, in the interpretation of this variable is taken into account an econometric estimation of the inter-annual

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<sup>44</sup> A value over the upper limit of the programmed runner for each one of said variables suggest a restrictive monetary policy, a deviation under lower limit that advises a relaxed monetary policy, while a value within the runner indicating an invariable monetary policy.

growth rate for December 2006<sup>45</sup>, whose calculation incorporates the seasonal behavior of payment means for the 1998-2005 period, as well as the information observed periodically.



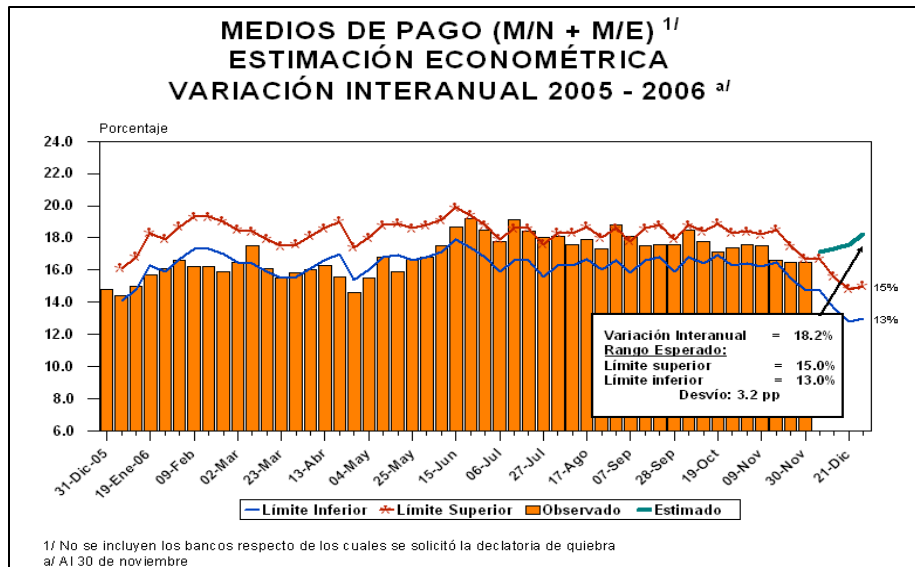
To November 30, 2006, the econometric estimation of the payment means for the end of the year was 18.2%, which is over the upper limit of the estimated range for December 2006 (13.0% - 15.0%).

The orientation that offers the total payment means, as an indicative variable of the monetary policy, is obtained by averaging<sup>46</sup> the deviation of the estimated runner and the econometric estimation. To November 30, 2006, the weighted orientation presented a positive value of 1.60 percentage points, which suggest a restrictive monetary policy<sup>47</sup>.

<sup>45</sup> Derived of the presentation of the Monetary Policy report to March 2006, said licensed body decided that, added to the follow up of the estimated runner for the payment means, this would be complemented with an estimation that incorporates the dynamics of the referred variable in the course of the year, consistent with an econometric estimation that includes the seasonal behavior for several years and that is periodically adjusted with new information each week.

<sup>46</sup> In the Monetary Policy Report to March 2006, for follow up on payment means was proposed as taking into account a weighting that includes 5% of deviation based on the estimated runner; in other words, the difference between the relative inter-annual variation observed on the date of analysis, regarding the estimated value for the referred runner on the same date. In the same way, 50% of the econometric estimation would be considered, which would be calculated with the same difference between the inter-annual variation of the payment means for 2006, estimated econometrically and the range foreseen in the monetary policy for December 2006 (13%-15%).

<sup>47</sup> A deviation over the upper limit of each one of the estimations suggest a restrictive monetary policy; on the contrary, a deviation below the lower limit advises a relaxed monetary policy, while a value within the tolerance margin indicates an invariable monetary policy.



It is pertinent to indicate that the follow-up of the total payment means as an indicative variable where it may not be necessary given that, just as it was in the case of the ample monetary base, these also include numerary in circulation as one of its components, therefore said follow up, as an indicative variable, could be eliminated.

## F. BANKING CREDIT TO THE PRIVATE SECTOR

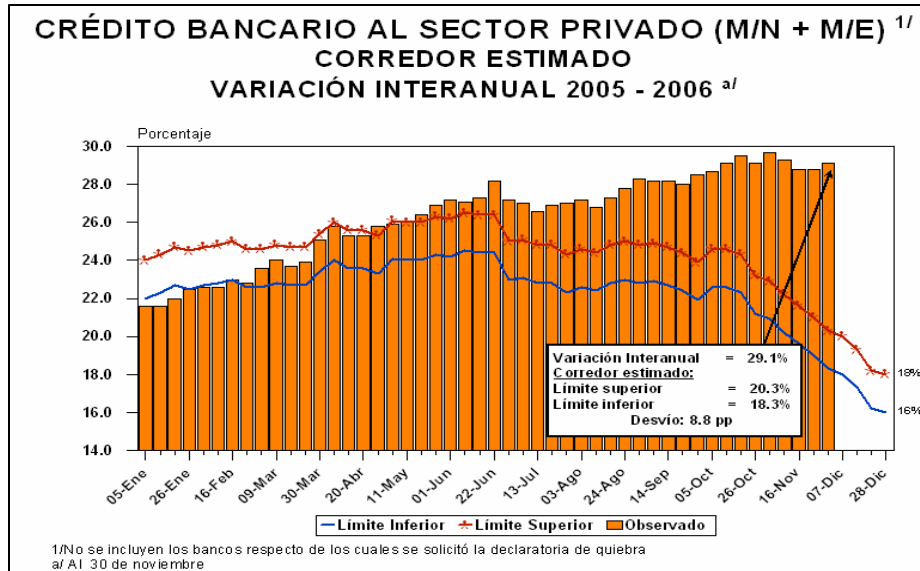
### 1. Growth Rate

In the Monetary, Foreign Exchange Rate and Credit Policy for 2006 it is estimated that the banking credit to the private sector would reach an inter-annual growth rate between 16.0% and 18.0%, and consistent with the growth of the payment means, the inflation goal and the expected economic growth.

To November 30, 2006, the inter-annual variation of the total banking credit to the private sector was at 29.1%<sup>48</sup>, 8.8 percentage points, over the upper limit of the estimated runner for said date (18.3%-20.3%)<sup>49</sup>.

<sup>48</sup> If it is considered that the credit granted to the private sector by the banks of the system, the financial societies and the *off shore entities* the inter-annual variation would be 24.6%, higher to the registered in the same period in 2005 (19.8%).

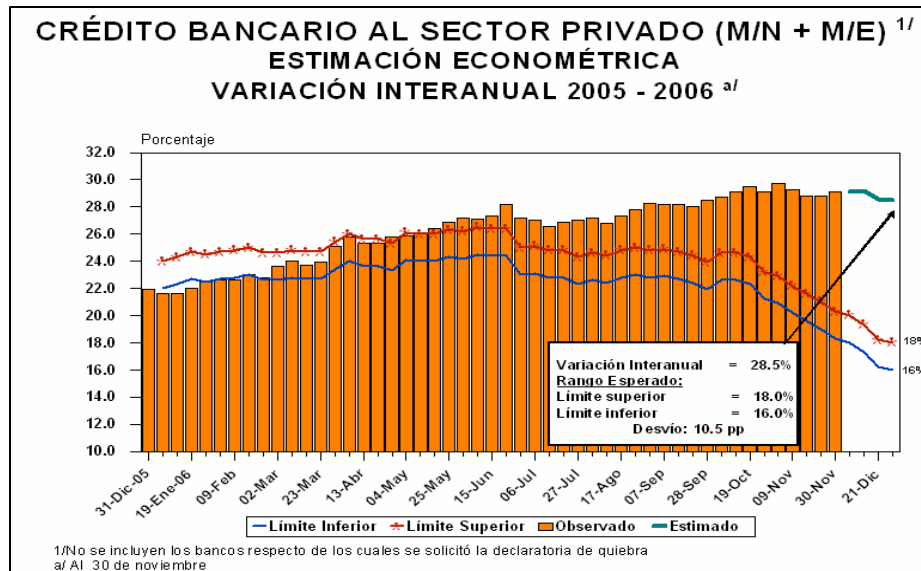
<sup>49</sup> In Annex 4, the macroeconomic and microeconomic effects were described in acceleration in the banking credit to the private sector.



Just as in the case of payment means, the interpretation of this variable also incorporates an econometric estimation of the inter-annual growth rate of the banking credit to the private sector for December 2006<sup>50</sup>, whose calculation includes the seasonal behavior of the banking credit to the private sector in the 1998-2005 period, with the information observed periodically.

To November 30, 2006, the econometric estimation of the banking credit to the private sector at the end of the year was 28.5%, which is over the upper limit of the estimated range for December 2006 (16.0%-18.0%).

<sup>50</sup> Derived from the presentation of the Monetary Policy Report to March 2006 by the Monetary Board, said body decided that in addition to the follow up of the estimated runner for the banking credit to the private sector, this is to be complemented with an estimation that incorporates the dynamics of the referred variable in the course of the year, consistent with an econometric estimation that includes the seasonal behavior for several years and that is periodically adjusted with new information each week.



Analogously the payment means, the orientation of the banking credit to the private sector, as an indicative variable of the monetary policy, is obtained through the weighting of the deviation for the estimated runner as well as the econometric estimation, considered for a 50% deviation of each one of said estimations. In that sense, to November 30, 2006, the weighted orientation presented a positive value of 9.65 percentage points, which would be suggesting a restrictive monetary policy<sup>51</sup>.

## 2. Credit Portfolio for Economic Activity

The credit portfolio of the banking system, to October 31, 2006 (last information available provided for the Superintendence of Banks), was at Q49,409.8 million, amount higher by Q7,529.5 million (18.0%) to the registered in the same period the year before. It is worth indicating that, when evaluating the preliminary information of the banking credit portfolio per economic activity, 84.3% was concentrated in the branches of: consumption, transfers and others (27.6%); commerce (21.6%); construction (13.3%); manufacturing industry (12.0%); and financial establishments<sup>52</sup> (9.8%).

<sup>51</sup> A deviation over the upper limit of each one of the estimations suggest a restrictive monetary policy; on the contrary, a deviation below the lower limit advises a relaxed monetary policy, while a value within the tolerance margin indicates an invariable monetary policy.

<sup>52</sup> This classification includes financing for the acquisition of real estate and services rendered to businesses.



As to the corresponding credit portfolio per economic activity, during the October 2005 to October 2006 period, this has been distributed in the following manner:

**BANKING SYSTEM**  
**CREDIT PORTFOLIO PER ECONOMIC ACTIVITY**  
**YEARS 2005 - 2006**  
- Millions of quetzales and percentages

DESTINY	To October	To October	ESTRUCTURE		INTER-ANNUAL VARIATION	
	2005 <sup>a/</sup> (A)	2006 <sup>a/</sup> (B)	2005	2006	ABSOLUTA B - A	RELATIVA B/A
TOTAL PORTFOLIO ACCORDING TO GENERAL CONSOLIDATED BALANCE	41,880.4	49,409.8			7,529.5	18.0
Sub-Total	39,829.7	46,239.0	100.0	100.0	6,409.3	16.1
Agriculture, cattle, forestry, hunting and fishing	2,830.1	2,926.4	7.1	6.3	96.3	3.4
Exploitation of mines and quarries	13.4	105.3	0.0	0.2	91.9	...
Manufacturing Industry	4,970.1	5,563.0	12.5	12.0	592.9	11.9
Electricity, gas and water	1,471.7	1,684.0	3.7	3.6	212.3	14.4
Construction	4,801.0	6,166.4	12.1	13.3	1,365.4	28.4
Commerce	7,177.2	10,007.0	18.0	21.6	2,829.8	39.4
Transport and storage	591.3	647.7	1.5	1.4	56.4	9.5
Financial establishments, real estate and professional Services rendered to businesses	3,766.0	4,521.0	9.5	9.8	755.0	20.0
Community, social and personal services	1,715.5	1,933.6	4.3	4.2	218.1	12.7
Consumption, transfers and others	12,493.4	12,684.6	31.3	27.6	191.2	1.5
Balance of the portfolio according to the report presented with Disaggregate information	2,050.7	3,170.8			1,120.2	54.6

<sup>a/</sup> Partial information due to institutions not presenting information of portfolios that for 2005 said institutions were excluded for comparison effects

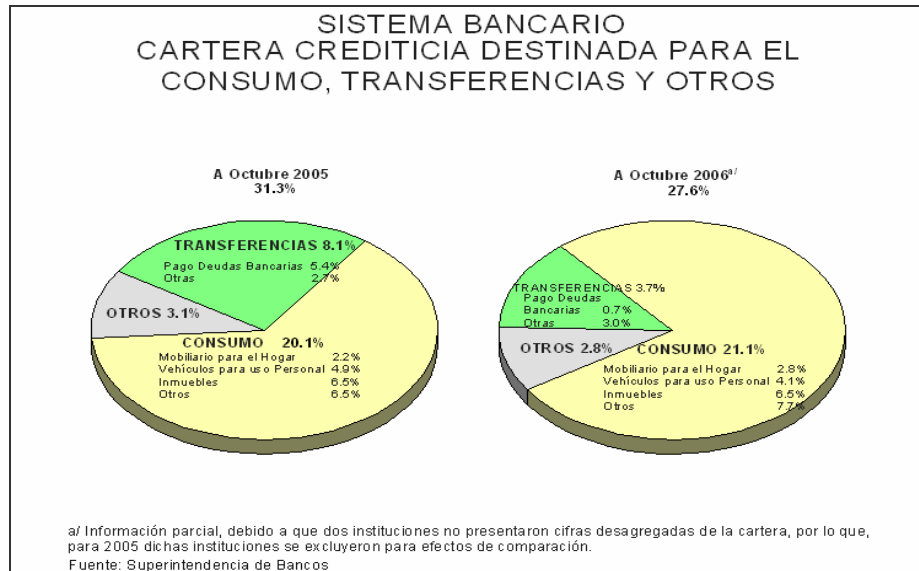
SPIRCE: Superintendencia of Banks

Given the importance of the *consumption, transfers and others* accounts; *commerce; construction and manufacturing industry*, a disaggregating was made taking into account the main components.

**a) Credit granted by the Consumption, Transfers and others**

The credit portfolio destined toward this branch, to October 31, 2006, represented 27.6% of the financing granted by the banking system (31.3% to October 2005).

It is worth mentioning that of the total credit portfolio, to October 31, 2006, the granted to consumption represented 21.1%, of the transfers 3.7% and others 2.8%. Taking into account the relative importance granted to this branch of economic activity, the more relevant components of the same were disaggregated, which is illustrated in the following graph:



In consumption the financincin for the acquisition of real estate with 6.5%; personal use vehicles 4.1%; and, of home furniture with 2.8%, are highlighted, structure that does not vary significantly regarding the observed in October 2005. On the other hand, transfers reduced their participation in an important manner regarding the total, at 3.7% at the end of October 2006 (8.1% to October 2005), which is associated with the reduction in the banking debt payment which was at 0.7% (5.4% in October 2005).

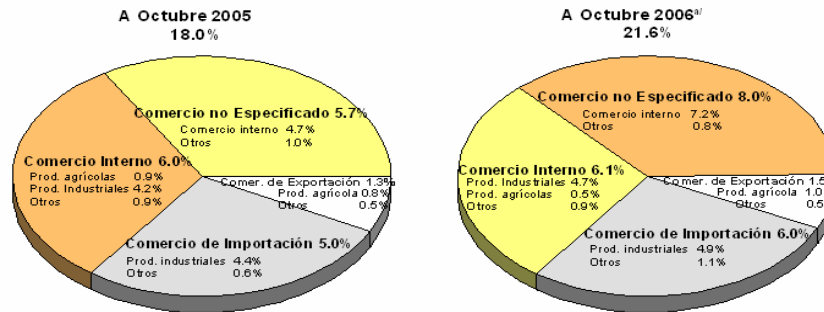
### b) Credit granted for commerce

The credit portfolio destined to the commerce branch, to October 31, 2006, represented 21.6% total portfolio granted by the banking system (18.0% to October 2005).

In the following we present the desegregation of the most significant components in this branch.



SISTEMA BANCARIO  
CARTERA CREDITICIA DESTINADA PARA EL COMERCIO



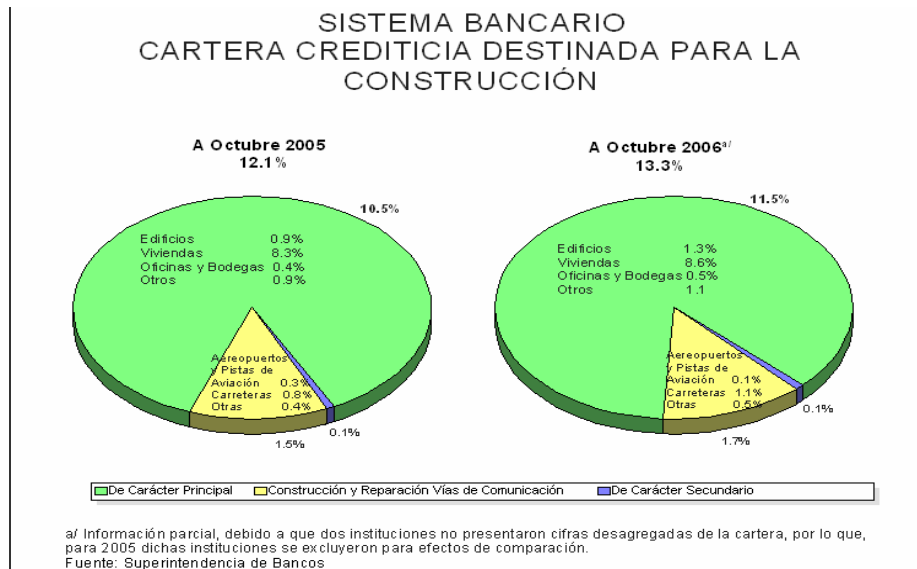
a/ Información parcial, debido a que dos instituciones no presentaron cifras desagregadas de la cartera, por lo que, para 2005 dichas instituciones se excluyeron para efectos de comparación.  
Fuente: Superintendencia de Bancos

To October 31, 2006, regarding the total portfolio, the financing granted to non-specific commerce with 8.0% was highlighted; those that follow are, internal commerce financing with 6.1% (that includes the commerce headings of industrial, agricultural and other products); financing of import commerce with 6.0% (includes the industrial product headings and others); and, last, the export commerce with 1.5% (integrated by agricultural products commerce and others). The structure of said headings that integrate the commerce sector are higher to the observed in October 2005.

**c) Credit granted for Construction**

To October 31, 2006, the credit portfolio destined for construction represented 13.3% of the total portfolio of the banking system (12.1% to October 2005).

In the following we present the desegregation of the most significant components in this branch.

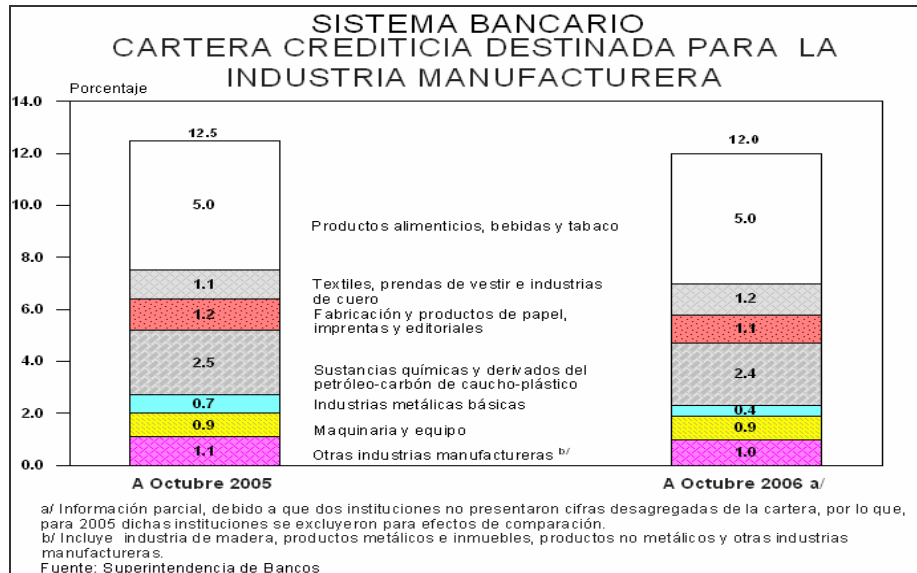


To October 31, 2006, the financing of the main portfolio with 11.5% (include the headings for buildings, housing, warehouses and others) were highlighted, higher by 1.0 percentage points regarding the observed the same month in 2005 (10.5%). As to the structure of their headings, in all cases the majority of the observed in October 2005, particularly financing for housing went from 8.3% in 2005 to 8.6% in 2006, which in good part explains the dynamism of the construction sector in the economic activity of the country.

#### d) Credit granted to the manufacturing industry

To October 31, 2006, the credit portfolio destined to the manufacturing industry represented 12.0% of the financing granted by the banking system (12.5% to October 2005).

In the following we present the desegregation of the most significant components in this branch.

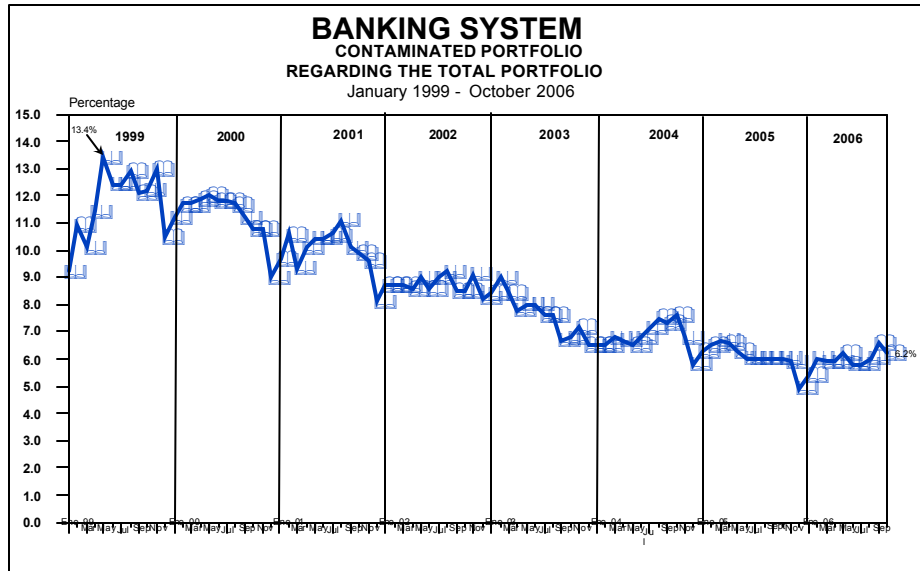


When analyzing each one of the components in the manufacturing industry, we have that on October 31, 2006, we have that financing granted in the following headings stands out food products, beverages, and tobacco with 5.0%; chemical substances and oil derived products with 2.4%; textiles, clothing and leather industry with 1.2%; and, manufacturing and paper products and printing shops and editorial with 1.1%. The referred structure is similar to that observed to October 2005.

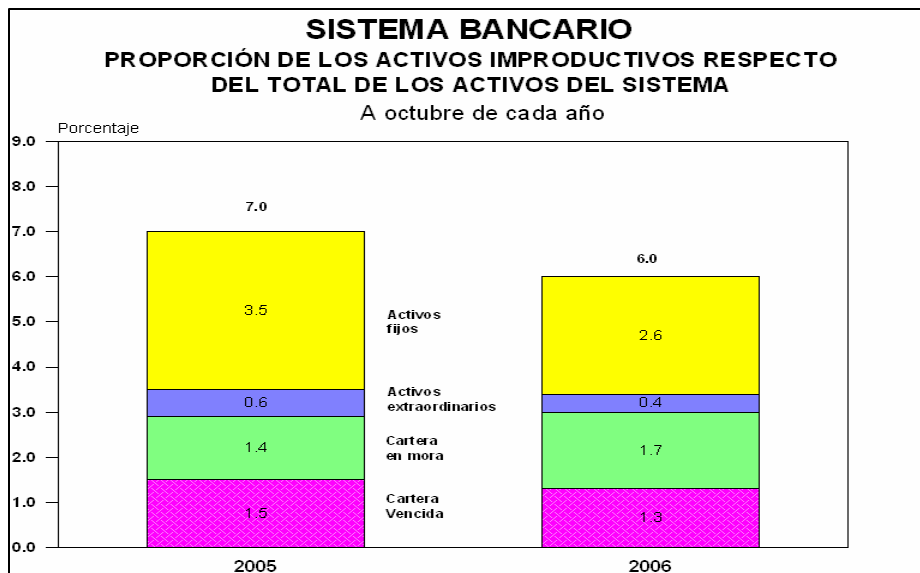
### 3. Quality of the Credit Portfolio

Regarding the quality of the credit portfolio, we observe that the proportion of contaminated portfolio (default portfolio added to expired portfolio) regarding total credit portfolio of the banking system, has been showing important improvement, especially if we take into account that in May 1999 said indicator is at 13.4% (higher percentage registered during the 1999-2006 period); while to October 2006 it was at 6.2%.

To October 31, 2006, the amount of contaminated portfolio was at Q3,069.1 million, in which the default portfolio represented 2.7% of total portfolio (3.1% to October 2005) and default portfolio 3.5% (2.9% to October 2005).



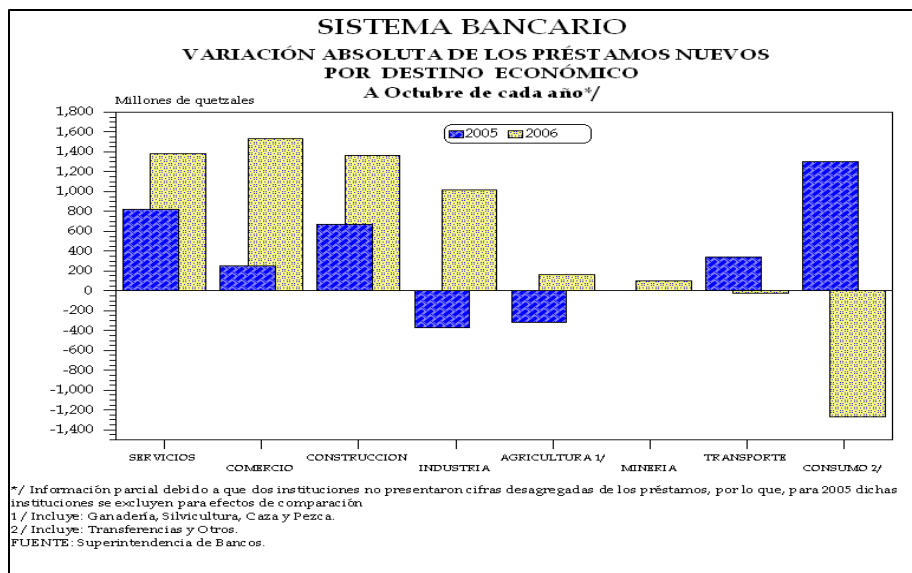
The unproductive asset indicator of the banking system (integrated by the contaminated portfolio, the extraordinary assets and the fixed assets) as a proportion of total assets, reflected an improvement, since it continued showing a tendency toward the decline locating itself at 6.0% to October 2006, percentage lower to the registered to October 2005 (7.0%).



#### 4. New loans, extensions and renewals

To October 31, 2006, the amount of new loans, that includes extensions and renewals, grew to Q28,719.7 million, amount greater by Q4,266.1 million (17.4%) to the registered in equal period the year before.

The increase of the new loans is mainly explained by the financial increase channeled toward commerce by Q1,536.4 million; to services by Q1,378.3 million; to construction by Q1,367.5 million; to industry by Q1,019.6 million; to agriculture by Q159.1 million; and to mining by Q102.0 million. Said increase was counteracted by the reduction in the financing for consumption by Q1,271.2 million and to transportation by Q25.6 million.



#### 5. Updating of the econometric model regarding the determinants of banking credit to the private sector

##### a) Model of demand of banking credit to the private sector

Modern economic literature<sup>53</sup> indicates that the demand of banking credit to the private sector has certain fundamental determinants that explain it, among

<sup>53</sup> INTERAMERICAN DEVELOPMENT (2005). 'UNCHAIN THE CREDIT: How to widen and stabilize the bank', REPORT 2005 of Economic and social progress in Latin America, Washington, D.C. For more details see Levine, Ross and Sara Zervos. (1998). Stock Markets, Banks, and Economic Growth. American Economic Review y Rajan, Raghuram G. and Luigi Zingales, 1998. Financial Dependence and Growth. American Economic Review.



them, the economic activity and the price of banking credit to the private sector (asset interest rate). In that regard, based on the econometric method the Ordinary Squared Minimums –MCO- the function of demand of banking credit to the private sector was estimated, taking into account the statistical information that covers the January 2000 to October 2006 period.

The econometric results obtained confirm that the degree of dependence of demand from banking credit to the private sector in the country regarding the economic activity and some macroeconomic prices (interest rates and nominal exchange rates), measured by the coefficient of determination ( $R^2$ ), is of 81.7%. It is also worth mentioning that the explicative variables resulted statistically significant at the trust level of 95% and satisfactorily fulfill the expected sign, operated as is illustrated:

$$CSP_t = 88.69 + 0.71 IMAE_t - 0.58 INTERESTRATE_t - 8.85 EXCHANGE RATE_t + e_t$$

(10.0)
(4.78)
(-10.45)
(-7.98)

Note: The value between parenthesis is the statistic  $t$  that measures the level of individual significance for each parameter of the model at critical level (table value equal to 1.980), with a trust level of 95%.

Where:

$CSP_t =$  Inter-annual growth rhythm of banking credit to the private sector in the  $t$  period (dependent variable.)

$IMAE_t =$  Inter-annual Growth rhythm of the Monthly Economic Activity Index in the  $t$  period (independent variable.)

$INTERESTRATE_t =$  Asset interest rate, weighted average of the banking system in the  $t$  period (independent variable.)

$EXCHANGE RATE_t =$  Reference exchange rate for the purchase of the last day of each month in the  $t$  period (independent variable.)

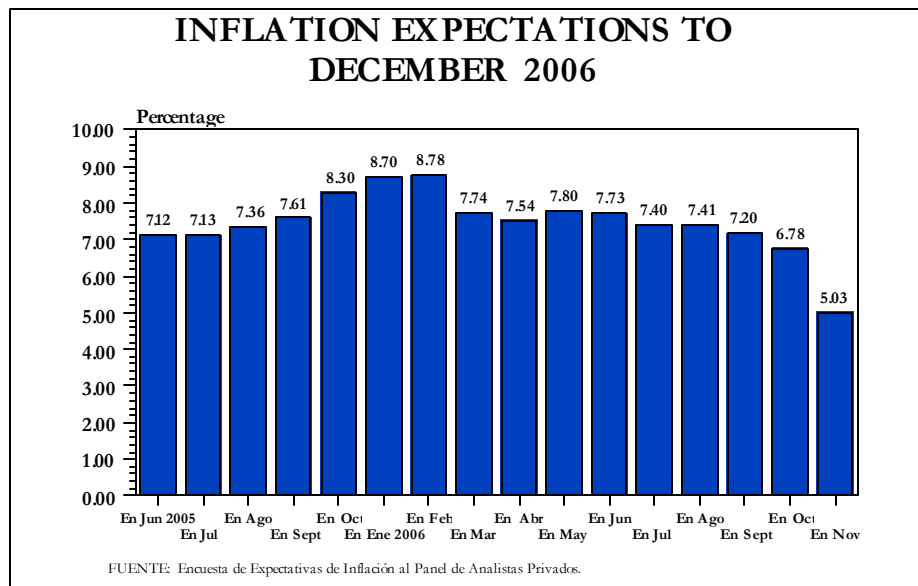
The results suggest that when the inter-annual growth rhythm of the economic activity increases by 1.0%, the banking credit to the private sector is by approximately 0.71%, the other variables remain constant.

A decrease of 1.0% in the weighted average asset interest rate of the banking system, the other variables remaining constant, increase the demand of resources in the system, by approximately 0.58%. Finally, an appreciation of 1.0% in the nominal exchange rate, *ceteris paribus*, increases the demand of banking credit to the private sector by around 8.85%.

## G. SURVEY OF INFLATION EXPECTATIONS OF THE PANEL OF PRIVATE ANALYSTS

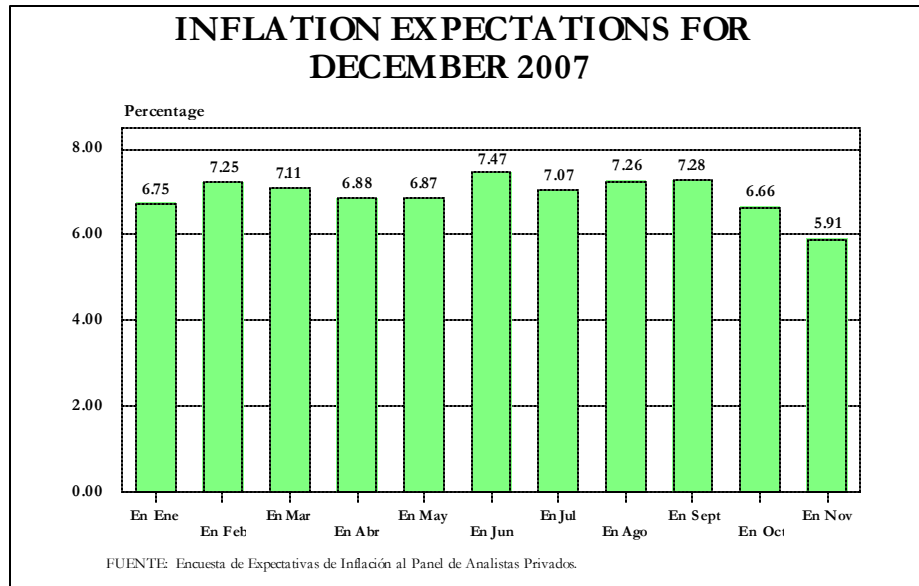
The inflation expectations are defined as the perception of the economic agents on the future behavior of the price in the economy. The inflationary expectations that for a certain period form the economic agents, in some economic agents, in some circumstances can influence substantially (and independently of the behavior of the economic fundamentals) in the determination of the inflation rate that was finally observed in this period.

According to the Inflation Expectations Survey of the Panel of Private Analysts -EEI-<sup>54</sup> made in November 2006, the surveyed foresee that to December of this year the inflationary rhythm is located at 5.03%, percentage located slightly over the lower limit of the tolerance margin of the inflation goal.



<sup>54</sup> Monthly survey directed toward national and international analysts of the private sector, knowledgeable of the operative procedures of the monetary policy, which allows measuring the impression of these regarding the future evolution of the inflationary rhythm in Guatemala.

On the other hand, said economic analysts, estimate that the inflation for December 2007 would be at 5.91%, percentage located within the tolerance margin of the inflation goal determined for this year (5% +/- 1 percentage point,)



## H. IMPLIED INFLATION EXPECTATIONS

This indicator constitutes an indirect form of obtaining the perception on the inflation expectations of economic agents, through the calculation of the gap between the long term interest rates<sup>55</sup> and the short term interest rates<sup>56</sup>. The idea that said calculation is sustained in the fact that the long term interest rates, generally, are greater to the short term interest rates due to the fact that, those include premiums that compensate the expected inflation as well as the country risk. Due to the above, in order to obtain the referred perception, the interest rates in long as well as short terms a country risk premium<sup>57</sup> is subtracted, giving as the result, the corresponding gap of the premium due to inflation.

<sup>55</sup> For this purpose the long term interest rates are defined, the total asset interest rate and the new loans interest rates of the banking system.

<sup>56</sup> For this purpose the interest rates are defined in the short term, repurchase agreement interest rate for terms between 1 and 7 days and the weighted average interest rate of OEMs (weighting of terms from 7 to 182 days).

<sup>57</sup> The Premium per country risk is calculated as the difference between the repurchase agreement interest rate of the Treasury Bonds from Guatemala, placed in the international financial market (weighted average interest rate of issues for 1997, 2001, 2003 and 2004) and the return rate of the Treasury Bonds of the United States of America in a 10 year term.



According to the numbers observed to November 2006, the implied inflation expectations indicated a breach of 6.23 percentage points, which are over the punctual value of the inflation goal (6%) but within the tolerance margin of the same (+/- 1 percentage point), suggesting a moderately restrictive monetary policy. When comparing the result obtained in November 2006, regarding the observed in November 2005 (6.92 percentage points), a decrease of 0.69 percentage points in the referred expectations is observed, which would be indicating that the economic agents foreseen that the inflation could be maintained, in the mid term, within the established goal.

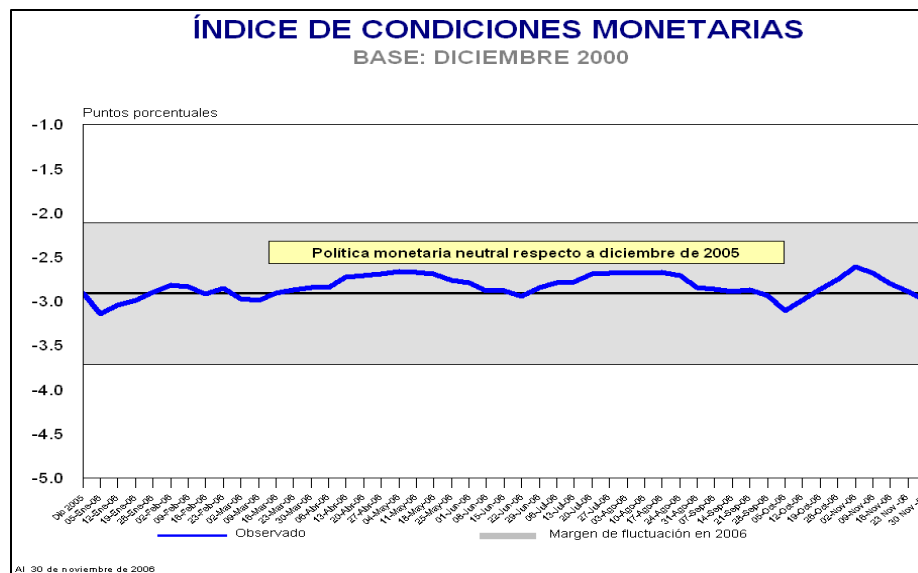


## I. ÍNDEX OF MONETARY CONDITIONS –ICM (for its acronym in Spanish)-

The ICM is an indicator that is calculated taking into consideration the exchanges that experiment the interest rate and the exchange rate, regarding a determined base year. The interpretation of ICM is based on the concept that the relation between the exchange rate and the interest rate could indicate if the monetary policy has been more or less restrictive. In the Monetary, Foreign Exchange Rate and Credit Policy for 2006, for the follow up of said indicator a runner was established whose central point corresponds to the ICM observed at the end of 2005 and its upper and lower values would be at (+/-) 0.8 percentage

points<sup>58</sup> regarding the central value indicated; an ICM value higher to the indicated runner is interpreted as a result of a restrictive monetary policy; whereas that a lower value to the runner is interpreted as a result of the expansive monetary policy.

When observing the ICM between December 31, 2005 and to November 30, 2006, has a behavior around the central point, which would be indicating that the monetary policy has been invariable up to date in 2006.



## ● SYNTHETIC INDEX OF INDICATIVE VARIABLES

As of June, 2006 a follow up of the indicative variables was made through an index that allows jointly evaluating the orientation of the referred variables, taking into consideration the relative importance that each one of them has in the process of monetary policy decisions<sup>59</sup>.

For the effect, a survey was designed in which each member of the Monetary Board externalized their opinion as to the importance that each indicative variables has in the referred process.

<sup>58</sup> The 0.8 percentage points correspond to a standard deviation in the ICM registered on average in January, 2003 to November 2005.

<sup>59</sup> The Monetary Board, after reading the report of the Monetary Policy to March 2006, decided it would give follow up to the indicative variables of the monetary policy through the referred index.



The advantage of fine-tuning the synthetic index is in the fact that previously the same weighting was assigned to each one of the indicative variables, notwithstanding, as could be seen in the referred survey, the appreciation of each one of those surveyed was that not all variables should have the same relative weighted to define the orientation of the monetary policy. In that sense, the new methodology allows incorporating each orientation<sup>60</sup> category in one indicator only, the different weightings assigned to each variable, which facilitates making comparisons between the results of a week and another, since the referred index provides a percentage for each category of orientation that is easily comparable with other dates.

As to the following graph, with numbers observed to November 30, 2006, presents the results of the synthetic index obtained based on the relative weight assigned of each indicative variable.

<b>VARIABLES INDICATIVAS</b>						
Información al 30 de noviembre de 2006						
VARIABLES INDICATIVAS	Peso relativo de la variable	ORIENTACION Y PESO RELATIVO				
	(%)	Relajada	Moderadamente relajada	Invariable	Moderadamente restrictiva	Restrictiva
1. Ritmo Inflacionario Total Esperado						
Proyección para Diciembre de 2006 (0.00%)	0.00	0.00				
Proyección para Diciembre de 2007 (100.00%)	11.22				11.22	
2. Ritmo Inflacionario Subyacente Esperado						
Proyección para Diciembre de 2006 (0.00%)	0.00		0.00			
Proyección para Diciembre de 2007 (100.00%)	11.48				11.48	
3. Tasa de Interés Parámetro	8.67	8.67				
4. Tasa de Interés Pasiva de Paridad	8.42			8.42		
5. Liquidez Primaria (Emisión Monetaria y Base Monetaria Amplia)	10.46					10.46
6. Medios de Pago	8.16					8.16
7. Crédito Bancario al Sector Privado	8.42					8.42
8. Expectativas de Inflación del Panel de Analistas Privados						
Proyección para Diciembre de 2006 (0.00%)	0.00		0.00			
Proyección para Diciembre de 2007 (100.00%)	7.14				7.14	
9. Expectativas Implícitas de Inflación	8.67				8.67	
10. Índice de Condiciones Monetarias -ICM-	7.14			7.14		
11. Modelo Macroeconómico Semiestructural -MMS-						
Proyección para Diciembre de 2006 (0.00%)	0.00	0.00				
Proyección para Diciembre de 2007 (100.00%)	10.20	10.20				
	100.00	18.88	0.00	15.56	38.52	27.04

<sup>60</sup> In this methodology five indexes were calculated, one for each orientation (relaxed, moderately relaxed, invariable, moderately restrictive and restrictive.) whose sum is of 100%. It is worth mentioning that the moderately relaxed orientation is referred to the location under the punctual value of the inflation goal, but is found within the tolerance margin of +/- 1 percentage point. Analogously, the moderately restrictive orientation is referred to the location over the punctual value of the inflation goal, but is found within the tolerance margin of +/- 1 percentage point.



As is observed in the previous graph, according to the relative weight to the indicative variables, 27.04% of the same advise a restrictive monetary policy orientation; 38.52% suggest a moderately restrictive monetary policy orientation; 15.56% suggest an invariable monetary policy; and 18.88% advise a relaxed monetary policy orientation.

With the objective of making a retrospective analysis of the monetary policy suggested for indicative variables based on the synthetic index, taking into account the orientation that said variables suggested with numbers of June 29 of the same year, date that incorporates the approved modifications for the Monetary Board on June 21, 2006, in regards to the calculation and interpretation of some mentioned variables, including the use on new variable.

<b>VARIABLES INDICATIVAS</b>						
Información al 29 de junio de 2006						
VARIABLES INDICATIVAS	Peso relativo de la variable (%)	ORIENTACION Y PESO RELATIVO				
		Relajada	Moderadamente relajada	Invariable	Moderadamente restrictiva	Restrictiva
1. Ritmo Inflacionario Total Esperado						
Proyección para Diciembre de 2006 (29.41%)	3.30					3.30
Proyección para Diciembre de 2007 (70.59%)	7.92					7.92
2. Ritmo Inflacionario Subyacente Esperado						
Proyección para Diciembre de 2006 (29.41%)	3.38				3.38	
Proyección para Diciembre de 2007 (70.59%)	8.10					8.10
3. Tasa de Interés Parámetro	8.67			8.67		
4. Tasa de Interés Pasiva de Paridad	8.42			8.42		
5. Liquidez Primaria (Emisión Monetaria y Base Monetaria Amplia)	10.46	10.46				
6. Medios de Pago	8.16					8.16
7. Crédito Bancario al Sector Privado	8.42					8.42
8. Expectativas de Inflación del Panel de Analistas Privados						
Proyección para Diciembre de 2006 (29.41%)	2.10					2.10
Proyección para Diciembre de 2007 (70.59%)	5.04					5.04
9. Expectativas Implícitas de Inflación	8.67				8.67	
10. Índice de Condiciones Monetarias -ICM-	7.14			7.14		
11. Modelo Macroeconómico Semiestructural -MMS-						
Proyección para Diciembre de 2006 (29.41%)	3.00					3.00
Proyección para Diciembre de 2007 (70.59%)	7.20					7.20
	100.00	10.46	0.00	24.23	12.05	53.26

When comparing the results between both dates, we can see that in June of this year the projection of the total inflationary rhythm variables expected for December 2006 and for December 2007 and the expected inflationary rhythm for December 2007, suggest that the monetary policy were restrictive, so much so that the expected subjacent inflationary rhythm for December 2006 advise a moderately restrictive monetary policy. On the other



hand, to November 30 the projection of the total expected inflationary rhythm variable for December 2006, suggested relaxed monetary conditions and total and subjacent inflationary rhythm variables expected for December 2007 advise a moderately restrictive monetary policy, whereas the expected subjacent inflationary rhythm variable for December 2006 suggest that the monetary policy was moderately relaxed. As to the parameter interest rate variable, the same went from suggesting an invariable monetary policy to advise that the monetary policy advise the conditions relax; the primary liquidity variable that advises a relaxed monetary policy went from suggested that the monetary conditions be restrictive; the inflation expectations from the panel of private analysts variable for December 2006 and for December 2007 went from indicating a restrictive monetary policy to suggesting a moderately relaxed monetary policy for December 2006 and for December 2007 suggest a moderately restrictive monetary policy; and the Semi-structural macroeconomic model –MMS-, went from advising a restrictive monetary policy for December 2006 and for December 2007, to suggesting a relaxed monetary policy for December of the referred years. It is worth indicating that the parity liable rate variables, payment means, banking credit to the private sector, implied inflation expectation and the monetary conditions index keep the same orientation for both dates.

According to the above, in the following graph we observe the variable with greatest relative weight in June 2006 indicated restricting the monetary conditions, whereas the orientation with greater relative weight in November 2006 suggested a moderately restrictive monetary policy.



<b>COMPARISON OF THE RESULTS OBTAINED</b>		
<b>On the indicated dates</b>		
<b>ORIENTATION</b>	<b>29/06/2006</b> %	<b>30/11/2006</b> %
<b>Relaxed</b>	<b>10.46</b>	<b>18.88</b>
<b>Moderately relaxed</b>	<b>0.00</b>	<b>0.00</b>
<b>Invariable</b>	<b>24.23</b>	<b>15.56</b>
<b>Moderately restrictive</b>	<b>12.05</b>	<b>38.52</b>
<b>Restrictive</b>	<b>53.26</b>	<b>27.04</b>
<b>TOTAL</b>	<b>100.00</b>	<b>100.00</b>

It is important to point out that in 2006 the synthetic index constituted an adequate guide for the global orientation of the indicative variables. Notwithstanding, the same is susceptible to fine-tuning, fundamentally in three aspects:

- i) Eliminate its composition in the ample monetary base and the payment means, due to reasons given;
- ii) Adopt a mechanism that shows the intensity changes that occur in indicative variables; in other words, that when the deviations of the same increase regarding the programmed values, said change is reflected in the referred index; and,
- iii) Modify. The weightings of variables included in the synthetic index, according to the quantity evaluation of its relation with inflation.

#### **IV. ADVANCES IN THE OPERATIVE FRAMEWORK FOR THE MONETARY POLICY**

##### **A. ISSUING OF DEPOSIT CERTIFICATES TO TERM -CDPs- FOR THE MATURITY DATE**

With the purpose of continuing improvements to the operational schemes to make the monetary stabilization operations consistently with a scheme of explicit inflation goals, the Monetary Board in the Monetary, Foreign Exchange Rate and Credit Policy for 2006, authorized the *Banco de Guatemala*



so it can issue LTDs concentrated in determined maturity dates. It is considered that giving LTDs of equal maturity date, as well as other complementary characteristics, such as same interest payment date and same nominal value, will contribute to deepening and developing the secondary market of said certificates.

In order to advance in the process of expedition of LTDs per maturity date, the *Banco de Guatemala* proceeded to prepare the normative project quality to be approved by the Monetary Board to regulate the indicated aspect, which is found in the diffusion process and consults with the participants of the money market. We also began the modification process of information systems, with the purpose that the same allow the issue of the LTDs with the mentioned characteristics.

#### **B. TRANSFERS OF TITLEHOLDERS OF TERM DEPOSIT CERTIFICATES -CDPs- IN CUSTODY IN THE *BANCO DE GUATEMALA***

The issue of LTDs are made, at the request of the depositors, in one or various physical certificates that are given to the titleholders of the same or remain in custody of the *Banco de Guatemala*. In the case of physical LTDs, are considered the same, notwithstanding its security characteristics, when negotiated in the primary and secondary markets, as well as the repurchase agreement operations, are exposed to related risks with the mobilization and transfer, each time that they are the object of destruction, loss, robbery, alteration or falsification. As to LTDs in custody it is necessary to ask the *Banco de Guatemala* to issue it physically, which has the indicated risks. In that sense, and with the purpose of continuing the improvements to the operational scheme to make the OEMs that allow the development of a secondary market of LTDs agile and secure, consistent with a scheme of explicit inflation goals, the Monetary Board instructed the *Banco de Guatemala* to perform the necessary actions for the following: a) that the certificates of Term Deposit can be registered in custody in the Central Bank; b) That the of term deposit certificates registered or that are registered in the future in custody in the *Banco de Guatemala* can change titleholder name; and, c) That the Term



Deposit Certificates issued physically, that are in circulation, can be registered in custody in the *Banco de Guatemala*.

In the described context, the *Banco de Guatemala* took the following action:

- i) A regulation project was made for the reception of Term Deposits in quetzales to be constituted in the Banco de Guatemala, which is in the process of consultation with the market actors, prior to being submitted to approval of the Monetary Board;
- ii) A proposal of Norms for the Constitution of Term Deposits in the *Banco de Guatemala* was made, through biddings in the Commerce Stock Exchanges Authorized to Operate in the Country, which is in the process of consultation with market participants, prior to being submitted for approval from the General Management; and,
- iii) Presentations were made on the transfer of titleholders of LTDs in custody in the *Banco de Guatemala* to representatives of banks of the system, financial systems, commerce stocks and public entities.

## C. SECONDARY MEASURE

### 1. General Aspects<sup>61</sup>

*In the secondary market basic transactions consist of the cash negotiation of values previously negotiated in the primary market. Another common form of negotiation in the secondary market consists of repurchase agreement operations, that consist of a sale and repurchase agreement, in which one party agrees to sell bonds or other financial instruments to the second party, with a repurchase agreement of titles equivalent in the future, according to a formal, legal agreement. Other negotiation practices that are Developer in this market through time, are short sales, swaps, futures, interest rate on options and other derived in struments.*

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<sup>61</sup> World Bank and International Monetary Fund. Developing Government Bond Markets, -A Handbook. July 2001.





In the initial development stages of the secondary market the emphasis must be directed toward construction of a safe negotiation and settlement system of cash and repurchase agreement operations, which should include facilities to make transfers of high value funds, in real time, as well as facilities from the registry of values in the depositor. Also, it is an important sum counting on an adequate regulatory and supervision framework. For the successful development in the secondary market the active participation of different actors is necessary, such as: the issuers, the investors, the providers of infrastructure and settlement negotiation, as well as regulatory entities.

Added to that, it corresponds to the state to promote the development market with the purpose of achieving an efficient revelation of prices and secondary settled markets. In effect, the Central Bank is interested in an efficient determination of interest rates; the government as debt administrator obtains low financing costs and the regulator of the values market is interested in the infrastructure that promotes efficient and transparent negotiations, as well as it provides opportunities for the market surveillance and an adequate level of investor protection.

It is important to mention that can present obstacles for the development of efficient secondary and liquid markets, among which the fragmenting of values is found, that come from the existence of different value types, multiple interest and maturity rates, diverse issues and placement frequencies. In that context, from the political manager, the fragmentation constitutes a serious impediment for the creation of liquidity and development of benchmark<sup>62</sup> values.

## **2. Term Deposit Certificates**

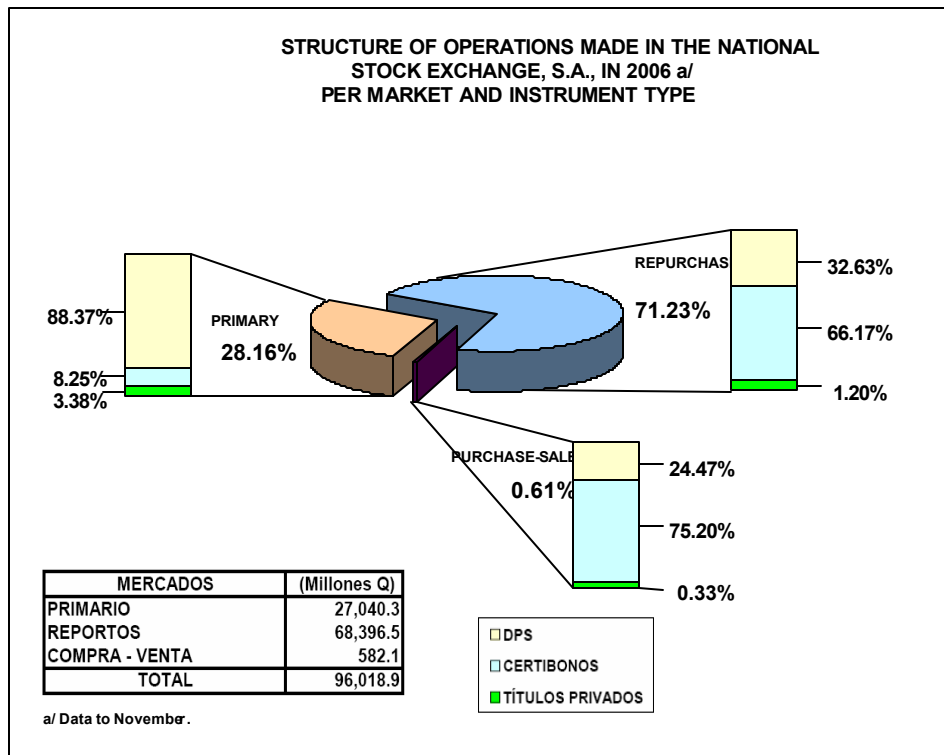
In the Guatemalan secondary markets transactions for the stock market and outside the stock market are made. In the first, among others they make purchase and sale agreements of values definitely and repurchase agreements, through the stock exchange authorized for operating in the country; while in the second, operations in the inter-banking market operations are made. The negotiated instruments in the bursile market include Certibonds

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<sup>62</sup>Issue of values that are big enough and actively transacted so that the price can serve as a point of reference for other issues of similar maturity.

issued by the *Ministerio de Finanzas Públicas* [Roughly equivalent to the Department of the Treasury.] LTDs of the Central Bank and financial instruments issued by the private sector. It is worth indicating that information of negotiated financial instruments outside the stock market is unknown.

In order to illustrate, in the following we show a structure per market and instrument type of negotiations in the stock exchange that shows a greater volume transacted in the market.



As is observed, within the operations made in the referred stock Exchange in the secondary market, the repurchase operations are the most representative of reaching 71.23%; while the purchase-sale operations values represent 0.61%. It is important to note that notwithstanding the LTDs in the primary market constitute 88.37%, in the secondary market they only reached 32.56%. In that sense, it is estimated that the participation of LTDs in the secondary market could increase if the fragmentation of said financial instruments is eliminated, which would constitute an important contribution of the Central Bank for development and deepening of the secondary market, and



allow knowing the market interest rates corresponding to different terms in order to constitute a yield curve.

#### **D. ADVANCES IN THE IMPROVEMENT OF ECONOMIC AND FINANCIAL STATISTICS**

##### **1. Process of improvement of national accounts and change the base year of 2001**

In resolution JM-103-2006, dated October 13, 2006, the Monetary Board approved the Communicating Strategy of Results of the Process of Implementation of the National Accounts System 1993 -SCN93- and the change of the 2001 base year and instructed the *Banco de Guatemala* so that as of January 2007 they should internally use said system for the measure of national accounts of the country and in order to coordinate with the public sector, so that said results of said process officially use in the course of the first trimester of 2007. With this, the country adopted an internationally standardized methodology, according to the most current technical recommendations.

It is worth mentioning that the SCN93 measures the economic transactions of different sectors of the economy, particularly of generation, distribution and income redistribution accounts, capital accounts, financial accounts and balances, giving emphasis in the compiling of Institutional Sectors Accounts, constituted by the non-financial stock companies and General Government Financial Stock Companies, Homes and Non-profit Institutions that function as homes; with which we go beyond the calculation of the Gross Domestic Product that was made in the national accounts with a 1958 base year. This enriching information results from the utility sum for the analysis, planning and decision making in the public and private sectors, due to the fact that it allows measuring and identifying the relationships between the different economic agents.

The economic and financial information available corresponds to the 2001-2005 period and counts on the measures of the GDP with different focuses (production, expense and income), which is obtained as of the balance of offer and use for 226 products and of the measure of production accounts and generation of income for 143 economic activities that are consolidated in



the Offer and Use Graph –COU (for its acronym in Spanish). We also count on the Institutional and Industry Sectors Cross Classification –CCIS (for its acronym in Spanish)-, the Integrated Economic Accounts –CEI (for its acronym in Spanish), Flow Funds Graph –CFF (for its acronym in Spanish)-, that together conform the central frame for SCN93.

In the described context, as of October 10, 2006 the *Banco de Guatemala* began the referred program of communication, performing a series of presentations and workshops which objective is to present the public and private economic agents, as well as international organisms, in the first place, the methodological aspects of the implementation process of the SCN93 and of the 2001 base year change and, in second place the obtained results.

## 2. Quarterly National Accounts

As a part of the process of improvement of national economic statistics and within the conceptual frame of the SCN93, in October, 2005 the *Banco de Guatemala* began the Quarterly National Accounts Implementation Project, whose objective is to develop an accounts system that allows availability of quarterly national accounts, consistent with a 2001 annual base series, in order to contribute to the follow up of behavior of the economic activity in the short term and have trustworthy and opportune information available for decision making of the economic policy and financial programming, especially in the context of the application of a scheme of explicit inflation goals.

The system contains estimations of the GDP on behalf of production and expense, current and constant prices, using annual national account data as a reference framework. As a part of the project, the surveys begun were quarterly economic surveys for the industrial activity, commerce and services, which will be complemented with select indicators for different economic activities and in some cases will replicate the methodology of annual calculation, given the opportunity of information.

In order to improve the opportunity of basic information, it is foreseen that a series of informative presentations directed to information providers for quarterly surveys will be given, as well as public and private institutions that have short term information available, this to inform on the project objective and



improve the type of answer on quarterly surveys, and propitiate an approach with the information sources.

### **3. Advances in the implementation of the Fifth Manual of Payment Balance**

The *Banco de Guatemala*, regarding the statistical treatment of the external sector is found in the implementation phase of the V Manual of Payment Balance. In that sense, during 2006 concrete action was continued; in the first place, between June 12 and September 30, 2006 the central bank continued with the program of business and institutional programs (Second External Sector survey – ENCSE2-), with the objective of gathering the economic and financial information corresponding to 2005 of the following entities: a) direct foreign investment businesses; b) foreign and national businesses of international transportation; c) donations to institution received from aboard; d) international organisms in Guatemala; and e) businesses of other services. Second, in the context of the adequacy of the registry of changing statistics, a project of new relative formulas to the statistic registry income and disbursement of foreign currency and of the Daily Movement of Foreign Currency, which will be submitted for approval of the Monetary Board in 2007, was prepared.

### **4. Advances in the implementation of the Monetary and Financial Statistics**

In 2006 advances were made in the implementation of the Manual for Monetary and Financial Statistics -MEMF-, 2000 edition, of the International Monetary Fund -IMF-, whose methodological framework incorporates the better international practices in matters of gathering and communicating monetary statistics on behalf of the diverse central banks. In that context, it is worth mentioning that in September 2006 the IMF included Guatemala within the group of around 60 countries that have standardized information according to MEMF and that, therefore, are in the capacity of forming part of the Monetary and Financial Statistics Supplement, together with the gathered by the International Financial Statistics -EFI (for its acronym in Spanish)-.



It is convenient to indicate that the referred manual contemplates, among other aspects: that the monetary statistics of a country must fulfill two basic requirements. The first, relative to them identifying the sectors that act in the financial intermediation (funds offers and demanders), aspect that in the referred environment manual is named: “sectorization.” The second requirement is related to the fact that monetary statistics must include all agents in the gathering of all agents that directly or indirectly participate in the process of financial intermediation, which in terms of the manual are named “coverage.”

As to the coverage of monetary and financial statistics, it is worth indicating that the same is made up of two big groups; the first, integrated by the deposit societies, understanding as such all financial institutions that have the faculty of creating Money, such as the central bank, the banks, the financial societies, the offshore entities and savings and credit cooperatives; and the second group is made up by other financial societies, such as insurance and trust companies, general deposit warehouses, stock exchanges, credit card issuing entities, among others. In that context, it is convenient to indicate that compiled statistics information s available according to MEMF for the totality of institutions that integrate the sector of deposit societies. Also, we are analyzing the accounting information received from other financial supervised societies by the Superintendence of Banks, with the purpose of gathering standardized information that allows the construction of the most ample liquidity aggregates.

#### **5. Strengthening of the quality of banking information and improvement of the communication mechanisms**

One of the fundamental elements that cooperate in better decision making in monetary, foreign exchange and credit policy, is the quality and opportunity of banking information. In that sense, it is important to strengthen the quality of the referred information, as well as improve the communications mechanisms of the surveillance and inspection entity.

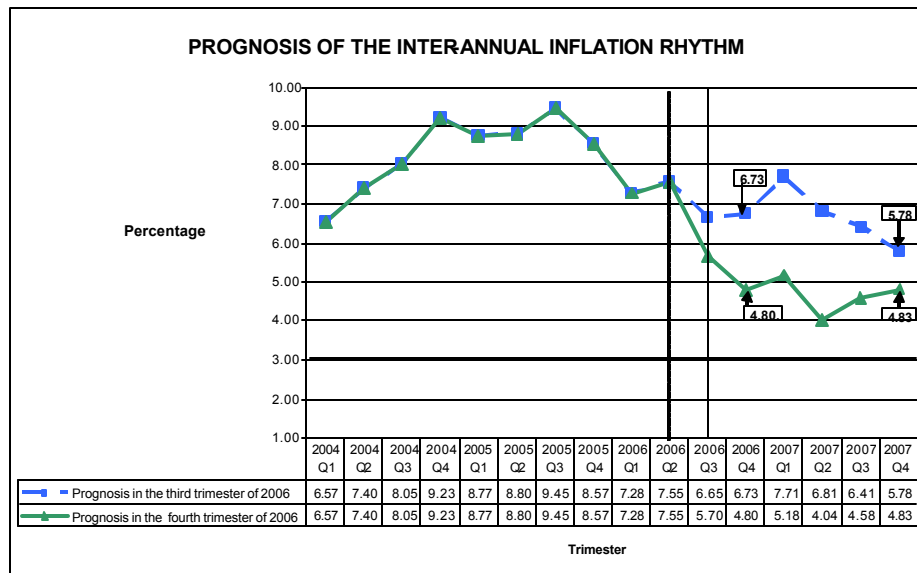
### **V. ANALYSIS OF EMPIRIC NATURE TOPICS**

#### **A. RESULTS OF THE FOURTH RUNNING OF THE SEMISTRUCTURAL MACROECONOMIC MODEL**

## 1. Prognosis of mid-term inflation

In November, 2006 the fourth running of the Semi-structural Macroeconomic Model -MMS-, which will allow obtaining the prognosis of mid-term inflation consistent with the inter-relations of the main macroeconomic variables that affect inflation.

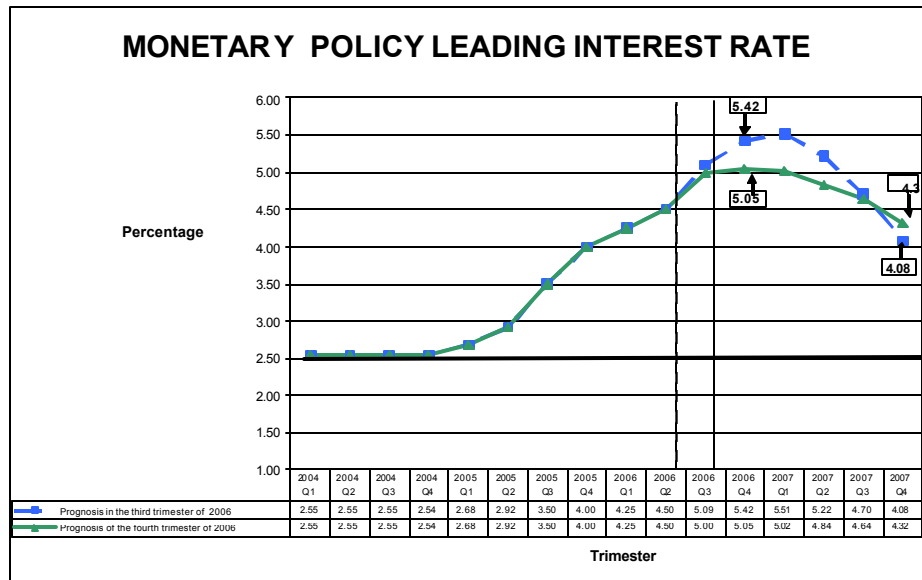
In that sense, in the following graph the referred mid-term inflation prognosis is drawn, obtained by through the MMS.



As can be appreciated in the previous graph, according to the fourth prognosis running (continuous line of triangles), for the fourth trimester of 2006 it is expected the inter-annual inflation will be at 4.80%, while for the fourth trimester of 2007 said variable is expected to be at 4.83%. Said prognosis are conditioned that the Central Bank make the asset monetary policy that takes inflation toward is balanced values in the mid and long terms<sup>63</sup>.

In other words, it is supposed that the Central Bank will implement actions to determine the trajectory of the leading interest rate of the monetary policy; in other words, the monetary stabilizations operations interest rate to 7 days. In the following graph we see the trajectory for said rate drawn (continuous triangles line) that would be compatible, according to the MMS, with the inflation prognosis presented.

<sup>63</sup> The model is calibrated so that, in the long term, the inflation converges at an annual rate of 3%.



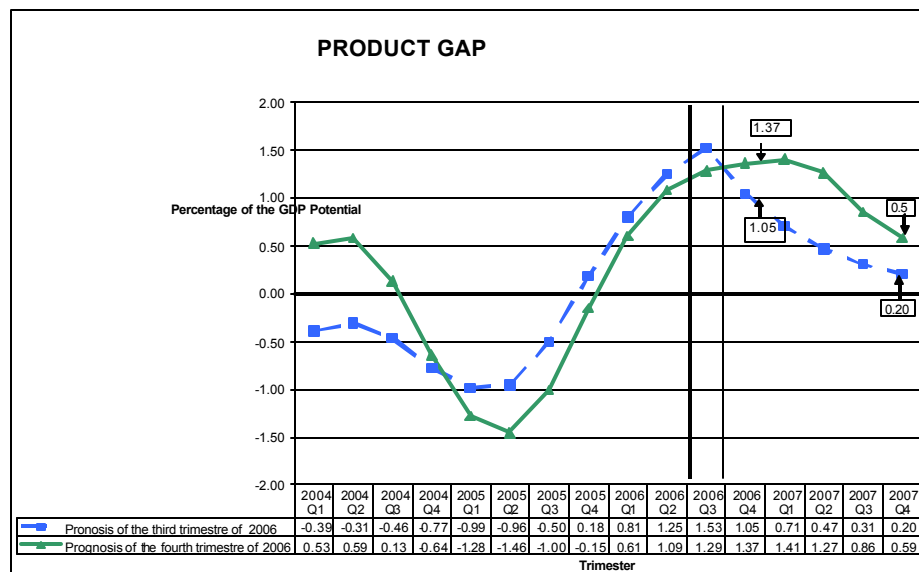
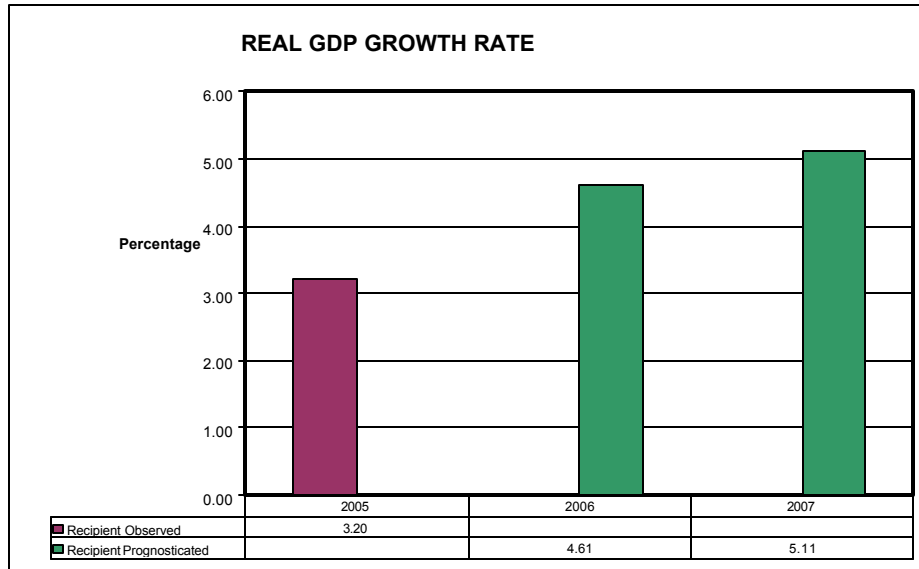
The average value observed of the monetary policy leading interest rate registered in the third trimester of 2006 was of 5.0%, while for the fourth trimester of 2006, according to the fourth running of the MMS, said interest rate is located at a quarterly average of 5.05%. As of the first trimester of 2007 would begin a declining the rate, located at 5.02%, 4.84%, 4.64% and 4.32% in the first, second, third and fourth quarters of 2007, respectively.

Regarding the real economic activity, in the following graph the growth rates of the GDP are shown that, according to the fourth running of the MMS, would be compatible with the inflation prognosis of the interest rates presented. As is observed in said graph, the corresponding annual growth rates of the real GDP would be 4.61% in 2006 and 5.11% in 2007.

The previous growth rates of the real GDP are derived of the gap prognosis of the product<sup>64</sup> that generate the MMS. According to the graph, the product breach has been positive and growing from the first trimester fo 2006 until the third trimester of 2006; as of this last quarter a breach is expected to continue increasing declining rates until the first quarter of 2007 and later begin declining until converging at its seasonal level.

<sup>64</sup> The product gap is defined as the difference between the gross domestic product observed and the potential gross domestic product. On the other hand, the potential gross domestic product is defined as the level of the gross domestic product that does not provoke inflationary pressure nor deflationary in the economy.

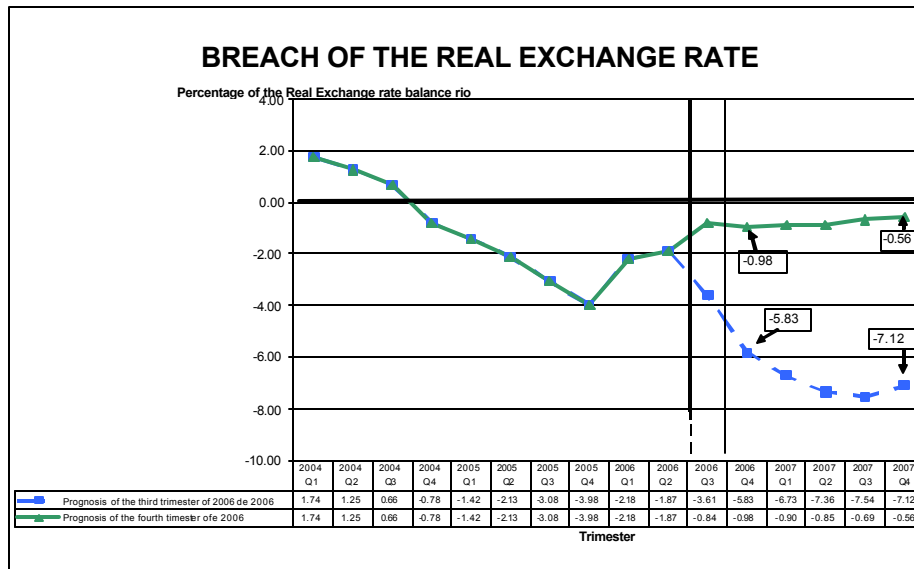




The breach trajectory of the real exchange rate<sup>65</sup> consists of the prognosis reported can be appreciated in the following graph (continuous line). According to said graph, the breach in the real exchange rate was negative in the third trimester of 2006 (-0.84%), which would indicate that the quetzal would appreciate in real terms, in comparison to the value of long term balance. Later,

<sup>65</sup> The gap of the real exchange rate is defined as the difference between the real exchange rate observed and the tendency value (or balance value) of said variable, measured as a percentage of the real Exchange real tendency or value.

according to the prognosis, the absolute value of the negative gap increased slightly in the first trimester of 2007 (-0.98%), to later reduce and tend to converge at zero (seasonal value) in the rest of 2007.



Finally, in the following graph a summary of the mid-term prognosis is presented of the inter-annual inflationary rhythm, the monetary policy interest rate, of the product gap, of the growth rate of the GDP and the gap of the real exchange rate, provided by the MMS in the fourth running of 2006.

<b>PRONÓSTICOS DE MEDIANO PLAZO</b>					
Fecha	Ritmo Inflacionario Interanual	Tasa de Interés Líder	Brecha de Producto	Tasa de Crecimiento del PIB	Brecha Tipo Cambio
2005Q1	8.77	2.68	-1.28		-1.41
2005Q2	8.80	2.92	-1.46		-2.11
2005Q3	9.45	3.50	-1.00		-3.01
2005Q4	8.57	4.00	-0.15	3.20	-3.91
2006Q1	7.28	4.25	0.61		-2.11
2006Q2	7.55	4.50	1.09		-1.81
2006Q3	5.70	5.00	1.29		-0.81
2006Q4	4.80	5.05	1.37	4.61	-0.91
2007Q1	5.18	5.02	1.41		-0.91
2007Q2	4.04	4.84	1.27		-0.81
2007Q3	4.58	4.64	0.86		-0.61
2007Q4	4.83	4.32	0.59	5.11	-0.51

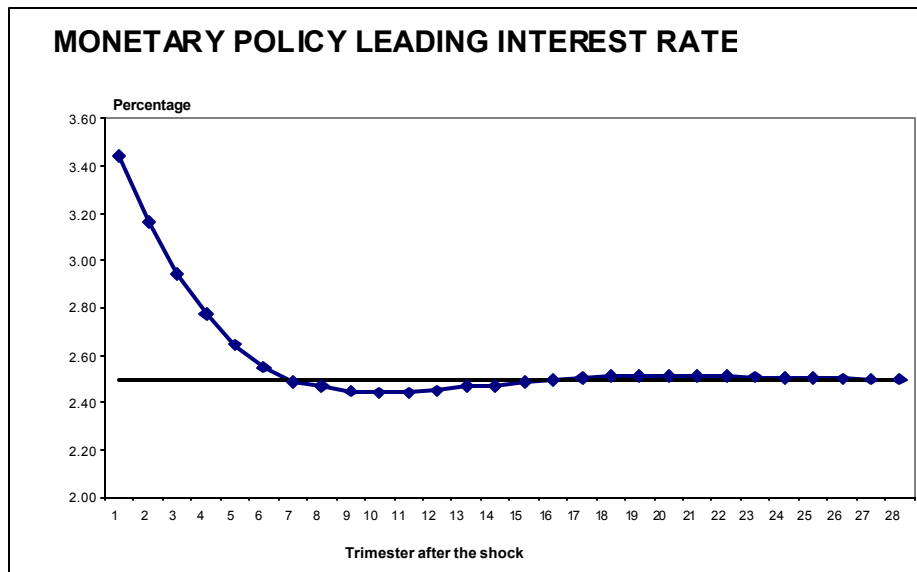
## 2. Effect of inflation and in the economic growth rate of an increase in the leading interest rate of the monetary policy

The macroeconomic effect generated by the increase of a percentage point in the leading interest rate of the monetary policy on the endogenous variables of the MMS is measured through the analysis of impulse-answer. For the effect, the model variables are supposed to be initially found in the seasonal state; in other words, in the long-term balance levels. Later, an increase (shock) is simulated in the interest variable and the model quantifies the effect that said increase has on the other variables, during a determined period. The mentioned simulation is illustrated in impulse-answer graphs. It is also worth mentioning that due to the convergence properties imposed on the MMS, the variables of the model converge to its seasonal state value. Therefore, it is possible to continue quantifying the total effect of the shock on each variable, making an abstraction of the effects that could derive of shocks on other model variables.

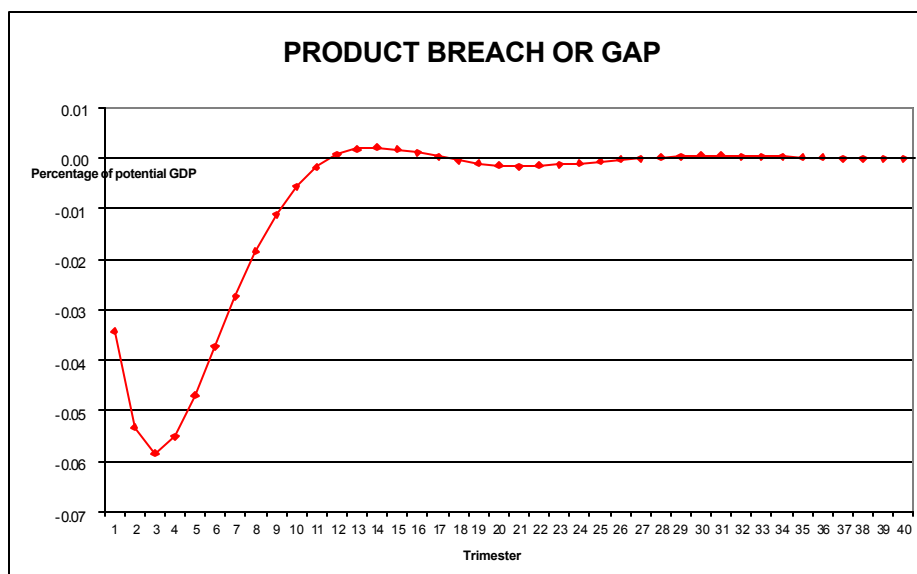
The following graph illustrates the growth impact of an increase of a percentage point in the leading interest rate of the monetary policy and the dynamics of said variable after the impact. The value of the seasonal state<sup>66</sup> of this variable is of 2.5% and is represented by a horizontal line. The total duration of impact is of sixteen trimesters after the increase of a percentage point. However, the interest rate returns around its balance value in the long term seven semetser after the impact. Later, as of the eighth quarter, the interest rate falls slightly from said level, and converges gradually to its balance value of 2.5%.

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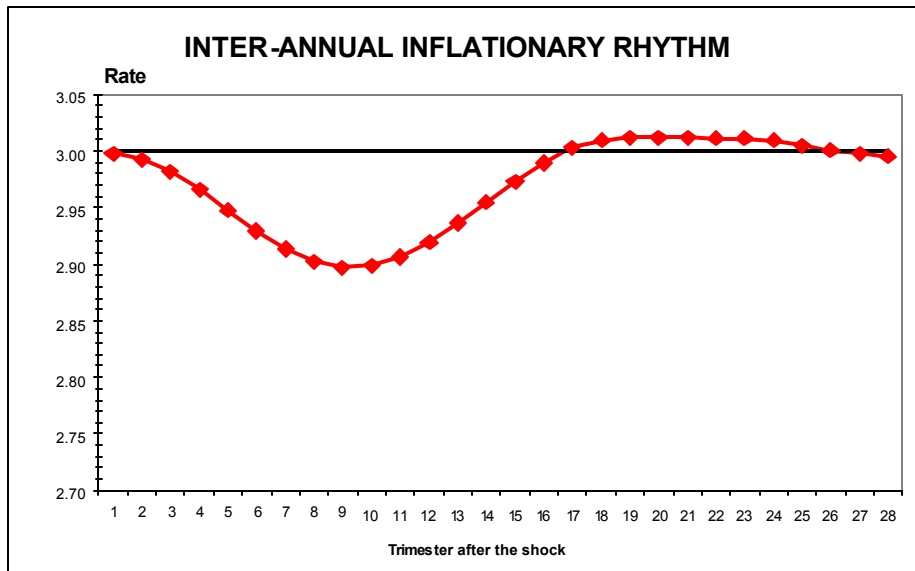
<sup>66</sup> The seasonal state of variables that make up the MMS is defined as the state of the economy in the long term in which the variables grew at constant rates, previously specified.



The following graph illustrates the effect of the increase of a percentage point in the leading interest rate of the monetary policy on the product gap. As is observed, the increase in the interest rate reduces the product breach, in other words, that the product observed reduces up to 0.06%, in the third trimester, regarding the potential product. However, the shock mentioned tends to die down and the observed product converges toward its potential level, so the product breach tends to be zero.



As is illustrated in the following graph, the balance inflation rate in the long term is of 3%. An increase of a percentage point in the policy interest rate generates a growing decrease of the inflation rate, which reaches 2.9% in the ninth quarter; following, said rate converges toward a state of balance in the long term 16 quarters after the shock. It is worth mentioning that an increase of 25 basic points in the policy interest rate, leads to an accumulated decrease in 16 quarters of 0.02 percentage points .

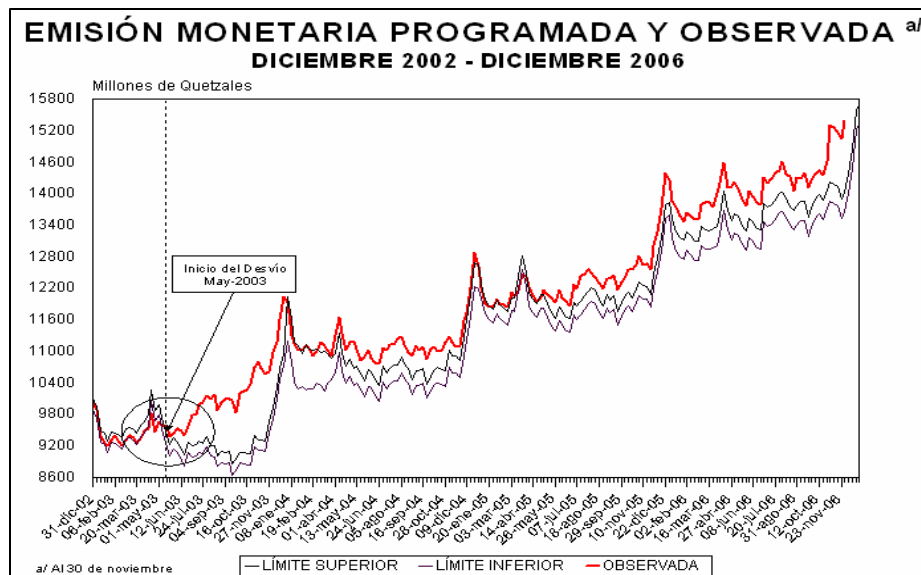


## B. EFFECT OF THE DEVIATION OF MONETARY ISSUE IN THE CONSUMER PRICE INDEX

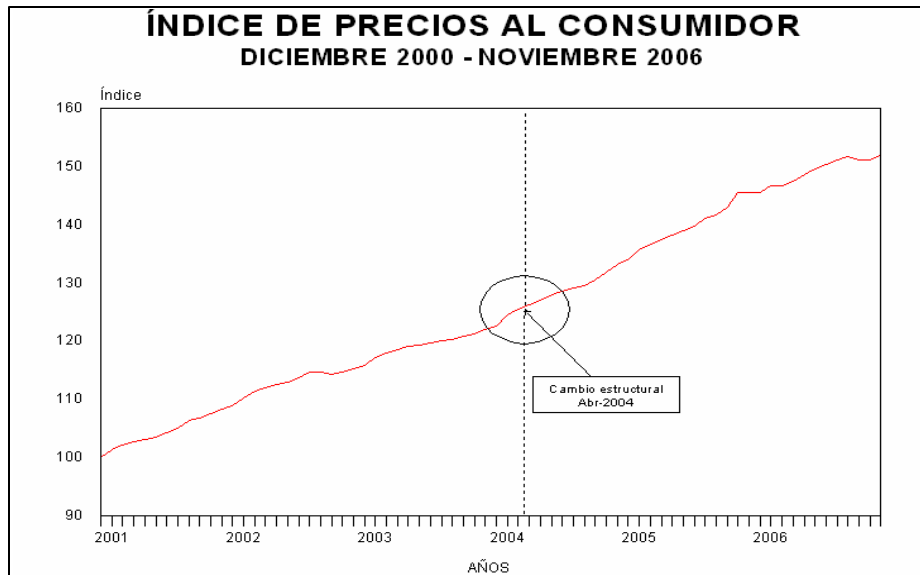
The present clause has as its purpose to determine the effect that can have the deviation of the monetary issue on behavior of Consumer Price Index (CPI). For said purpose, an econometric model has been built to establish the degree of sensibility of the CPI before variations on monetary issue deviation.

The model includes monthly observations understood between December 2000 and November 2006. Also incorporate a dummy variable regarding the objective of differentiating the periods in which there has been a deviation of monetary issue regarding the upper limit of the programmed runner for said variable.

According to the mentioned, the evaluation of the effect of deviation of monetary issue in the CPI requires making an econometric analysis of structural change, which was considered convenient to begin with a graph analysis that could evidence if the dependent variable effectively show a change of behavior as of the existence of referred deviation. In that sense, in the following graph the behavior of the observed monetary issue shown regarding the programmed runner in the period understood between December 2002 and December 2006. In said graph it is evidenced that the monetary issue has had deviations, generally, over the upper limit of the mentioned runner, which began in May, 2003.



On the other hand, in the following graph a series of the CPI from between December 2000 and November 2006 is shown, in which we observe that there is an apparent structural change (that could be level or tendency) twelve months after the date when the deviations in the monetary issue were started to be registered.



Due to the indicated, to determine if the change is given effectively on the structural change in the monetary issue and if the change is for level or tendency, the *Chow*<sup>67</sup> trial is used. The result of said trial indicates 95% trust that the referred series presents a structural change that coincides with the detected in the graphic analysis (April 2004), but said trial does not allow establishing if the structural change is for level or tendency. In that sense, two econometric regressions<sup>68</sup> were made which divide the period in two parts: the first, before the effect of the deviation of the monetary issue (December 2000 to March 2004) and, the second, after having begun the mentioned effect (April 2004 to November 2006.) The result of both regressions indicates that statistically there exists a change in the inclination of the regression, which would confirm that the structural change is of tendency.

Considering the above, an analysis was made of the elasticity of the issue-CPI using the following model:

$$\ln(IPC_t) = b_0 + b_1 \ln(EM_{t-12}) + b_2 \ln(EM_{t-11} * dummy) + residues$$

<sup>67</sup> The Chow trial consists of estimating an original econometric model dividing the sample in two sub-periods in the point in which -periods which give a behavior change, evaluating if there are significant differences between both sub-periods; if this were the case, then there would be a structural change.

<sup>68</sup> The model used has the following functional form: the  $CPI_t = \beta_0 + \beta_1 \cdot dummy + \beta_2 \cdot monetary\_issue_{t-12} + \beta_3 \cdot monetary\_issue_{t-12} * dummy + residues$ . If the associated coefficients of the dichotomy value are statistically significant, the structural change would be level and inclined. In our case, only  $\beta_3$  resulted significant, therefore the structural change is pending (tendency.)

Where:

$Ln$  = natural logarithm

$IPC$  = Consumer Price Index of base year 2000

$EM$  = monetary issue in millions of quetzales  
(Unseasonable)

$dummy$  = dichotomy variable (0 per periods without deviation and 1 for periods with deviation)

The econometric results are consistent<sup>69</sup> and statistically significant at 5%, and indicate little relevant effect of the deviations of the monetary issue in the behavior of the CPI; also established that it is the most significant delay of 12 months.

Estimation of the elasticity issue-CPI coefficient  
(Minimum Ordinary Squared)

Dependent variable:  $Ln(CPI)_t$

Variable	Coefficient	T statistic	Probability
$Ln(EM)_{t-12}$	0.55844	17.400	0.0000
$dummy_{t-11}$	0.00374	3.021	0.0035
C	-0.30052	-1.038	0.3032
MA(1)	0.78549	11.417	0.0000
$R^2$	0.982	F statistic	1213.476
$R^2$ adjusted	0.981	Probability	0.0000

Period: December 2000 - November 2006

Of the results obtained we can conclude that, in the absence of deviations of monetary issue, the elasticity of CPI-issue is of 0.55844, which means that before variations of 1.0% in the level of monetary issue, the CPI varies by approximately 0.6%, with a delay of 12 months. On the other hand, if the effect of the deviations is considered in the monetary issue, said coefficient goes up to 0.56218 (0.55844 + 0.00374) and the delay goes down 11 months.

<sup>69</sup> The model presented a problem of serial correlation of residues (auto-correlation), which was corrected through a process of mobile averages in First Order MA(1).





## **VI. CONCLUSIONS**

### **A. PERSISTENCE OF INTERNATIONAL MACROECONOMIC UNBALANCE**

The performance of the monetary policy in Guatemala is exposed to external factors, particularly those coming from the main commercial partner (United States of America.) One of the main risks that characterize the world economic panorama is the persistence of macroeconomic unbalance of the economy of the referred country, reflected in the high fiscal deficit and current account of payment balance. In the case of the correction of the deficit in the current account, this could be achieved, on the one hand, if the US dollar continues to depreciate regarding some currencies and, on the other hand, if we containing the fiscal deficit, as it has been announced.

The described situation has backfired in that there is a relevant over-liquidity of US dollars in the international financial markets that have manifested flows of private capital toward countries with emerging economic markets.

As to that concerning the monetary policy of this country, it is worth indicating that the Federal Reserve in 2006 increased the objective interest rate by 100 basic points, this is, from 4.25% to 5.25%. This increase should, on the one hand, contain the outflow of capital of the US economy and, on the other hand, give incentive the flow of financial resources toward that economy.

The measures of macroeconomic policy mentioned could reduce the flow of dollars from the US economy toward the rest of the world and, on the other hand, cooperate in eliminating the excess of offer that has propitiated the appreciation of local currency. However, it is foreseen that the reduction of said flow will continue at a very slow rhythm.

### **B. BEHAVIOR OF HTE INTERNATIONAL PRICE OF OIL**

During the first semester of 2006 the price of oil remained at high levels, at the end of June were located around US\$75.00 per barrel; however, as of the first week of August, the international price of crude oil began to observe a



tendency toward the decline. In that regard, the base scenario (in other words, the more likely due to the market conditions of said product) estimated for December 2006 by *Global Insight*, of recognized prestige in the world oil market analysis, supposes that the international oil barrel price remains at levels near US\$61.00 per barrel, considering that the econometric projections of the Central Bank constitute a reasonable guide of what, in absence of exogenous factors, could be expected at the end of the year. In that sense, with inflation data observed to November and considering that the price of international oil remains in the indicated level for the rest of 2006, would be expected, based on the econometric estimations mentioned, that the inflationary rhythm is at 4.93% for December 2006, within the tolerance margin of the inflation goal (6% +/- 1 percentage point.)

Notwithstanding the above, the international price of oil continues to register volatility, due to its sensibility before any change in the supply and demand of the same. On this particular, the IMF has pointed out that said situation is due to the existence of a very reduced gap, of around 1.5 million barrels daily, between supply and demand of crude world oil, and indicate that for the volatile behavior of the international price of oil is established, said gap must be between 3 and 4 million barrels daily. On the other hand, Global Insight points out that in 2006 the world supply offer was at 85.29 million barrels daily, and the demand would be at 84.48 million barrels daily, which gives a breach or gap of 0.81 million barrels daily as a result.

In the described context, the fall in price of international oil in the second half of the year, has contributed in part to deceleration of the inflationary rhythm, which to November 2006 was at 4.40%. Also, it is foreseen that no relevant changes occur in the supply and demand of oil at the end of 2006 that indicate a significant increase in the international price of oil and that risk the inflation goal established by the Monetary Board for this year.

### **C. EXECUTION OF MONETARY POLICY**

Before the current international and national cooperation and, in order to propitiate a greater effectiveness of the monetary policy, the Monetary Board in the framework of a scheme of explicit inflation goals, has been orienting the



monetary policy measures in order to minimize the adverse effects of internal and external factors in the generation of inflationary expectations; all this, understood that the action of the monetary authority should be made with due gradualness and prudence. In that context, the Monetary Board with the purpose of placating the inflationary expectations of the economic agents and of sending a commitment certainty message to the Central Bank of continuing to watch over the stability in the general level of prices, in 2006, increased the monetary policy leading interest rate on three occasions: in April from 4.25% to 4.50%; in June from 4.50% to 4.75%; and in July from 4.75% to 5.00%.

The increases in the leading interest rate and reduction of the international price of oil, will allow, according to the econometric projections available, fulfill the inflation goal determined by the monetary authority for 2006. Notwithstanding, it is precise to point out that there is still room to improve the performance of monetary policy, particularly adopting measures that tend, on the one hand, to elevate the effectiveness of the monetary stabilization operations and, on the other hand, flexibilization of participation of the *Banco de Guatemala* in the exchange market.



Atentamente,

Johny R. Gramajo Marroquín  
Director  
Depto. Estudios Económicos

Sergio Javier López Toledo  
Subdirector  
Depto. Investigaciones  
Económicas

Sergio R. González R.  
Subdirector  
Depto. Análisis Bancario y  
Financiero

F. Danilo Estada P.  
Subdirector  
Depto. Estadísticas Económicas

Rómulo O. Divas M.  
Director  
Depto. Operaciones de  
Estabilización Monetaria

Jorge A. del Cid Aguilar  
Subdirector  
Depto. Internacional

Gerardo Noel Orozco Godínez  
Asesor III  
Asesoría Jurídica

Sergio F. Recinos Rivera  
Gerente Financiero

F. Estuardo García Alburez  
Secretario

Oscar Roberto Monterroso Sazo  
Gerente Económico  
Coordinador

El presente dictamen fue aprobado por el Consejo Técnico del Banco de Guatemala en sesión celebrada el 13 de diciembre de 2006.

Mca/whm



# ANNEX



## ANNEX 1

### **ANALYSIS OF THE INTERNATIONAL RISK QUALIFIERS, REGARDING THE MACROECONOMIC IMPACT, DERIVED OF THE RECENT SUSPENSION OF OPERATIONS OF THE BANCO DEL CAFÉ, S.A.**

Derived of the suspension on behalf of the monetary authorities of Guatemala for the operations of the *Banco del Café, S.A.*, two international qualifying agencies: Fitch Ratings and Standard and Poor's make a statement regarding the macroeconomic impact that the referred suspension could have.

In effect, Fitch Ratings in its report titled "Intervention of the *Banco del Café, S.A. (Bancafé)*" analyzed the key factors that could affect the credit quality of the Republic of Guatemala. On this, said qualifier indicated that it is not expected that the recent intervention and settlement planned for the entity, the fourth bank of importance in Guatemala, will place the sovereign risk rating in danger for the moment, given the promptness of the adopted actions adopted by the authorities and that the referred banking suspension will not result in a systematic crisis. It was also highlighted that the rapid and efficient implementation of the strategy before the regulating entity of the financial system to liquidate the institution will allow the economic agents to keep the trust in the Guatemalan financial system.

It was also pointed out that notwithstanding the economic cost for the suspension of the *Banco del Café, S.A.*, in terms of the contribution to a potential macroeconomic instability and growth loss, difficult to estimate, the net cost for the public sector must be relatively below GDP terms, given that the government will not recapitalize the bank nor does it assume any obligation of the trust created for settling assets of the referred entity. Additionally, to date highlighted that there have not been any disbursements for liquidity and guarantee payment support on deposits. However, if the authorities would change their strategy and assume obligations of trust, the final fiscal cost will be determined by the level of recovery reached and the degree in which the authorities support private commercial banks to recapitalize the Fund for the Protection of Savings –FOPA (for its acronym in Spanish)-.

In the above context, Fitch highlighted the perspective of the rating for Guatemala have been stable, since the economic and financial pressure that



could arise due to the recent operations suspension of the *Banco del Café, S.A.*, seem to be contained as a result of the prompt action taken by the Superintendence of Banks, the favorable public finance situation and the improvement sustained in the fundamentals of economy.

The international rater Standard & Poor's ratified the rating for the sovereign debt of Guatemala, at 'BB' for the long term debt in foreign currency and of BB+ for the long term debt in national currency. For the short term debt the rating remains at B; in other words, that the perspectives on the evaluations remain stable, even with the operations suspension of the *Banco del Café, S.A.*

According to the indicated by Standard & Poor's, the systemic impact for the operation suspension of the referred banking institution would be limited, notwithstanding the high dependence on the financial system in the external financing. Said rater also affirmed that the suspension strengthened the credibility of the monetary authority as well as the authorities in charge of the financial supervision, due to the fact that that shows the effectiveness of the reforms to Guatemalan financial legislation made in 2002.

Last, Standard & Poor's considers that given the opportune intervention of the regulating entity, the fiscal cost of suspension would be small and that, any additional cost charged to FOPA could be restituted to this, at a reasonable time. On the other hand, consider that, if the monetary authorities had not affected the prudential norms, not only would it have committed the quality of the assets of the *Banco del Café, S.A.*, but also would have threatened the external position for the bank, on the banking system as a whole.



## ANNEX 2

### ECONOMIC GROWTH: THEORETIC AND EMPIRIC EVIDENCE ASPECTS

#### EMPIRIC

##### I. INTRODUCTION

The importance of growth has to do with its direct effect on the welfare of people. The greater the difference between the economic growth rate and the population growth rate, the greater the increase in the general welfare of the country. Recent studies<sup>70</sup> have shown that there is a positive relation between economic growth and poverty reduction. Having specifically found that an increase of one percentage point in the average income of society is translated into an increase of the same proportion in the average income of 20% of the poorest population.

For years economic growth and its determinants have captured the attention and macroeconomic literature. The determinants of growth are important because they allow characterizing the economy, inferring on growth sustainability and detect possible growth sources that accelerate the economic activity of a country. This annex has as its objective identifying the different factors that influence the growth and its relation with politics and, present evidence on economic development in Guatemalan economy. The annex is organized in the following manner: in the first part we present a brief introduction; in the second part we present factors of direct production (work, capital and investment and development) and indirect that affect growth. In the third part, the main policies are described that literature identifies as influencing in growth and present two strategies for growth: short term for the acceleration of growth and in the mid and long terms for making it sustainable in time.

In the fourth part we also present an analysis for the Guatemalan economy, that includes a brief characterization of the national economy, econometric estimations for identification of growth sources and their

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<sup>70</sup> Barro, Robert. "Inequality, Growth, and Investment". Washington, DC 1999 and Dollar and Kraay. "Growth and Poverty". Washington, DC. 2001.





contribution for the 1960-2006 period and the growth and investment relation. Last, some reflections are presented.

## II. EMPIRIC EVIDENCE ON ECONOMIC GROWTH

In this chapter a general analysis is presented of the determinants of economic growth and of the main inter-relations that literature<sup>71</sup> on growth allows identifying.

### A. Close or direct factors linked to economic growth<sup>72</sup>

The theory and empiric studies show that economic growth in the long term of economies is associated to the quantitative and qualitative factors of production and to the degree of efficiency in its use. Among productive factors are: physical capital and the labor factor (human capital) that includes qualified and unqualified labor. On the other hand, the efficiency of the use of productive factors is important, that in literature are identified as total productivity of the factors (PTF). Added, of these factors some authors point out the importance of expense for countries in investigation and development, which is associated to the constant search of technological improvements and the discovery of new products that will increase the productivity of capital and work.

Literature on economic growth has found that there is a robust correlation between investment and growth rates, and also, in developing countries the relation between investment in equipment and growth is also robust. Regarding human capital, there is a positive relation between human capital and economic growth. This relation although it is not completely valid for macroeconomic evidence, the microeconomic evidence is strong in its results. We can also declare that there is an ample consensus in that the accumulation of human capital is necessary but insufficient for growth. In that sense, a key challenge is the introduction of conditions under which expanding education is more beneficial for countries. This is related with an adequate institutional

<sup>71</sup> Temple, Jonathan. "The New Growth Evidence". 1999. Easterly, W. "National Policies and Economic Growth: A reappraisal", New York University, Mimeo 2003. Ahn, S. y P. Hemmings. "Policy Influences on Economic Growth in OECD Countries: An Evaluation of the Evidence", Washington 2000.

<sup>72</sup> Temple, Jonathan "The New Growth Evidence". 1999. Ahn, S. y P. Hemmings. "Policy Influences on Economic Growth in OECD Countries: An Evaluation of the Evidence". Washington 2000.



framework, investment in physical capital and creation of job positions that favor efficiency.

The amount a quality of social expense (public and private) in education and health directly affect the accumulation of human capital and, therefore, economic growth. Regarding education, we can state that the development of an education policy and training requires a deep understanding of the nature of the institutional structure, their weaknesses and feasible areas for policy actions. On the other hand, the microeconomic evidence distinguishes between different stages of education, finding a higher return in the elementary education compared with the secondary and university education.

Regarding health, there is evidence on the casual effect on health on the salaries and productivity for the population of low level income, where the health return is higher. Also the health expense return is higher for persons with low level health and work activities that require greater physical force<sup>73</sup>. The actions in this area also imply a deep knowledge of the institutional structure and the health level of the population for prioritizing actions.

## **B. Indirect factors for economic growth**

Resides the close sources to economic growth pointed out, there are factors linked to growth, which affect it indirectly. Among these factors the following are found:

### **1. Economic opening**

Evidence illustrates that more open economies tend to grow more rapidly as a result of the specialization induced, scale economies, greater competence in the tradable goods sector and access to better products, consumer goods and ideas.

The external opening is mainly linked to the removal of tax and non tax barriers for the promotion of commerce. The reduction of barriers to commerce and their relation to growth can be focused in two ways: the first through bilateral and multilateral commercial agreements and; the second, through a

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<sup>73</sup> Strauss, J. y D. Thomas. "Health, Nutrition and Economic Development", Journal of Economic Literature, Vol. XXXVI. June 1998.



unilateral opening. In general, it is considered that the opening has positive effects on growth. However, some economists consider that the unilateral and gradual opening has greater effects in small economies.

From the theoretic point of view, the commercial gains in the short and mid terms are originated by the absorption of comparative advantages (specialization between countries), scale economies (opening of markets) and exposition to competence of domestic firms. On the other hand, the endogenous growth models suggest that the commerce in the long term can increase the generation and diffusion of knowledge through three mechanisms: the first, learning-by-doing, which implied dynamic scale economies; second, invention, since the existence of greater markets generates incentives for investigation and development and new discoveries; and third, the diffusion of knowledge; which, according to international experience, countries that are more open to the rest of the world have more opportunity of adsorbing the technical advantages generated by the more advanced countries.

## **2. Financial Market**

In general the evidence has suggested a positive relation between financial and economic growth development. However, problems of measure and casualty are serious in this type of studies, this because there is no robust causality direction between growth and financial development. The relation between the financial sector and economic growth can be analyzed in three directions: first, the effect on the efficiency in the transformation of savings, which is related with the differential between the asset and liable rates (financial intermediation costs) of the financial market, non-competitive market structures, inappropriate regulation and high operational costs. Second, the effect on the savings rate; on the one hand, a solid financial system can decrease preventive savings and, on the other, can increase the savings return in terms of present consumption. Therefore, the effect on savings in the financial market is ambiguous. Third, the financial market has effects on the efficiency in the assignation of capital: the efficiency and the risk profile of projects where funds are assigned can have effects on growth. The evidence suggests that more “conservative” financial systems support economic growth less.

### **3. Macroeconomic Stability**

There is ample consensus in the sense that macroeconomic stability is a necessary condition for sustained growth, contributing to growth through the reduction of uncertainty. There is evidence found on the expected signs between growth and variables such as the fiscal deficit, inflation and instability on the real exchange rate. The volatility in these variables is negatively related, to economic growth. We also found there is a negative relation between product volatility and long term growth. Given the importance of macroeconomic stability, this aspect gives greater degree to detail in the related clause to politics linked to economic growth.

### **4. Government size**

The size of government is usually related to the expense in government consumption, which mainly refers to common expenses. Regarding the size of government there is no significant evidence that the high levels of government consumption can be damaging for economic growth. Some economists find a negative relation between government consumption and growth. However, it is difficult to find empiric evidence that favors the hypothesis that a small government accelerates economic growth. In general, we can declare that the size of government does not really matter, but the quality itself. For example, more transparent and efficient governments contribute positively to economic growth.

### **5. Government expense in infraestructura**

The empiric evidence suggests that the proportion of public investment in transportation and communications are robustly related to growth. It seems the expense in infrastructure increases the social return in investment in general.

### **6. Inequality**

The socioeconomic inequality is a source of social conflict. More unequal countries tend to have more political and social instability, which negatively affects the investment and business climate. The literature has tended to

coincide in that high inequality has a negative effect on future growth, although evidence is not totally convincing; it has been difficult to find a case in which inequality is positive for economic growth. It is also important to note that the fact that high inequality affects growth does not imply that the government should be specifically focused in re-distributive policies, since poorly designed re-distributive policies can be translated into high costs in terms of efficiency.

## **7. Population growth**

The majority of economists have coincided in that population growth has negative effects on economic growth. The arguments are related to the probable fall of human capital average and the increase in the work-capital relation. Evidence also suggests that the school registration rate is less in countries with higher population growth rates.

The changes in size and composition of population have implications for economic growth. In general, two effects are identified: first, the “dependency” effect, which is observed when changes are produced in the coefficient of young population and the elderly regarding the working age population; reductions in the coefficient have positive effects on the per capita income and on economic growth. Second, the dilution effect of capital. This effect is especially important in less developed countries, where the percentage of economically active population dedicated to agriculture is relatively high, where capital (land) is a fixed resource and the diffusion of new technology for improvement of low productivity. The action space for policy in this area is mainly centered on reproductive health programs and the insertion of women to the formal education system and labor market.

## **8. Political and social factors**

The political and social instability has negative robust effects on economic growth, given that growth is promoted by political institutions that create a propitious environment for employment, savings, investment and the improvements in productivity. Some studies find that even when good institutions do not increase growth through technical progress, these promote investment favoring certainty. It is also found that when democracy is not

notably better than autocratic regimes; in countries with greater economic and property rights protection, economic growth is more dynamic. Among these institutions the following are included: property rights, regulation institutions, institutions for macroeconomic stabilization, social security institutions, conflict management institutions, efficient public administration, transparency and low corruption levels.

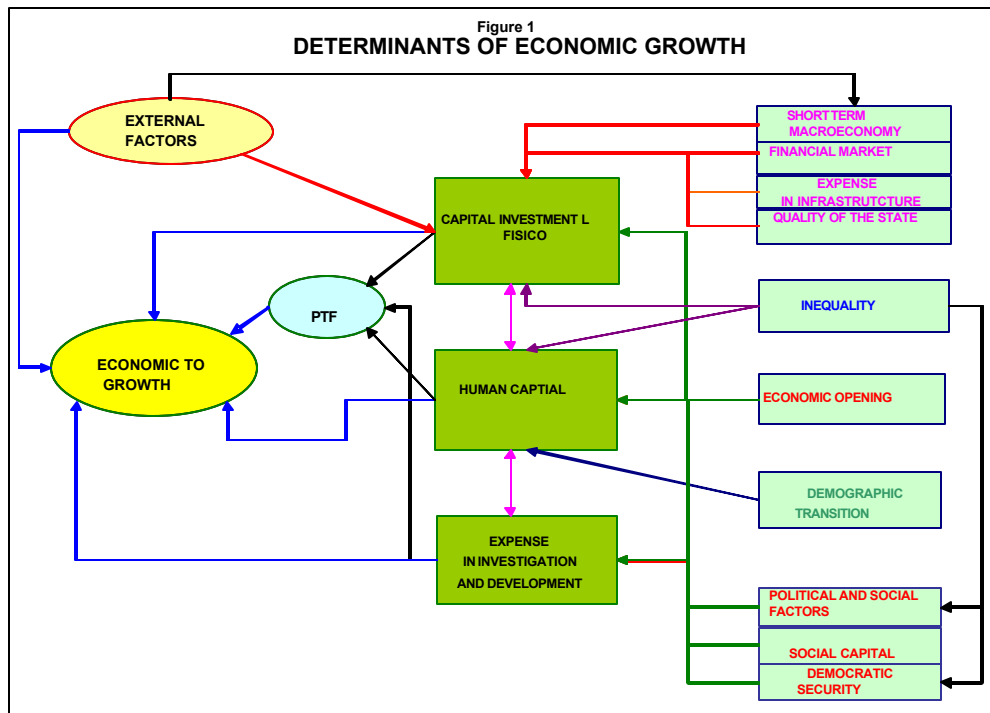
## **9. External Factors**

Last, there is another group of factors that affect economic growth, those that refer to external environments to which the majority of small and open to a global world are exposed. These factors are totally exogenous for affected economies and on many occasions their effect is significance in economic development in the short and mid terms of the countries. Within this group of factors, the following are highlighted: the troubles of exchange terms; the variability of the international interest rate; the international cycle economy; and, the international financial turbulence. The exchange terms refer to variations in the exports and/or of the imports. The international economic cycle, refers to the fluctuations of world economy fundamentally induced by oscillations in large economies, mainly in the United States of America. The financial turbulence can affect the affluence or precipitated exit of private capital of economies .

### **C. Main inter-relations between determinants of economic growth**

Approximations of main inter-relations of the factors that influence in economic growth are presented in figure 1. Said representation is not the only possible way of showing inter-relations. However, in some measure reflect the complexity of economic growth and of the factors that affect it. In the extreme left we find economic growth, which could be called the final goal. The growth is affected directly by total productivity of the factors, the investment in physical capital, human capital and due to the expenses in investigation and development. The direct factors also affect economic growth indirectly, through their effect on Total Productivity of Factors –PTF (for its acronym in Spanish)-,

which means that an adequate combination of factors accompanied by technical innovations can increase productivity.



On the other hand, we observe that external factors can directly affect the growth through the changes in external demand or due to exchange terms. The external troubles also affect the level of private investment and macroeconomic stability through exchanges in the private capital flow and exchanges in the external interest rates.

The investment in physical capital is affected by the macro-economy in the short term, which includes price stability, fiscal solvency, solidity and financial system solvency and product variability. These factors under stable conditions can favor economic growth. The investment is also affected by the quality of the financial system, by the amounts and infrastructure expense quality and the quality of the state. Also inequality directly affects investment and human capital due to the scarce ability to save by large sectors of the population and due to lack of opportunities to access formal education by the excluded population. On the other hand, inequality is linked to political and social factors and democratic security, which, added to social capital and



economic opening, influence in investment, human capital and in investigation and development. Social capital, political and social factors and democratic security constitute the group of institutions that define the investment climate, which can induce an accelerated and sustained growth.

Last, macroeconomic stability or macro-economy in the short term represents an important factor to grow. However, there are other factors that are also important for accelerated and sustained growth, as is illustrated in the previous diagram.

### **III. STRATEGIES FOR GROWTH AND POLITICAL LESSONS**

To now, the main factors that in theoretic and empiric literature have been analyzed where economic growth is linked. However, it is interesting to try to respond to the following questions: What are the measures or policies that countries would have to adopt to accelerate growth? What strategy should be followed to reach accelerated and sustained growth? This type of questions have been widely discussed by macro-economists and although there is no general focus for economies with growth difficulty, there is consensus in the economic science on the policies that promote economic growth and make it sustainable.

#### **A. Policies linked to economic growth**

The most relevant policies to grow are classified in three big groups: policies for stabilization, structural policies and policies for the strengthening of institutions.

##### **1. Policies for macroeconomic stability**

Macroeconomic stability is a necessary condition for economic growth and constitutes the best contribution of fiscal and monetary policies for the achievement of an accelerated and sustained growth in the short, mid and long terms. This is achieved favoring a minimum climate of certainty, through low inflation fiscal prudence and banking crisis prevention.





### **a) Monetary Policy**

The fundamental support of the monetary policy is achieved when reaching low, stable and predictable inflation, since although a minimum inflation per se is not damaging for growth, high inflation is significantly correlated with greater volatility of inflation, which at the same time negatively affects economic activity. Another argument against inflation is the distortion it generates in relative prices, since inflation increases the amount of “noise” in the signals of prices, which is reflected in an increase in the variability of relative prices, negatively affecting the investment. Last, the decrease of inflation increases the credibility of monetary policy, which creates expectations of low inflation in the future, favoring lows in domestic interest rates.

### **b) Fiscal Policy**

The fiscal performance is also important for economic growth. A disciplined fiscal policy reduces the “displacement” effect on private investment and contributes to strengthening the effectiveness of the monetary policy. If the monetary policy is conducted independently, excessive discretion in fiscal policy can potentially create tension between fiscal objectives and monetary policy. Therefore, the coordination between fiscal and monetary policies is necessary. Besides, a predominantly surplus fiscal policy in time favors the anti-cyclical role that the fiscal policy can perform to reduce the volatility of the gross domestic product and the real exchange rate.

### **c) Financial Stability**

A no less important aspect that complements the macroeconomic stability is referred to financial stability; which strengthens and consolidates through a regulation and prudential supervision, according to better international



practices. With that, solvency and liquidity of the financial system and the adequate operation of the payment system of the economy are guaranteed.

## **2. Principal structural policies**

The structural policies include the group of measures that favor the productive efficiency and the assignment of efficient resources. Within this group of policies the following can be mentioned: commercial policy, work policy, health and education expense policy, investigation and development policy, small and medium business promotion policy and financial development policy.

## **3. Policies for the strengthening of institutions**

The relevant institutions for growth are those that contribute to creating a propitious environment for employment, savings and investment. In this clause only the different institutions are mentioned: institutions for protecting property rights, institutions for conflict management, institutions for citizen security and institutions for administering justice, among others.

### **B. Strategies for growth<sup>74</sup>**

According to Rodrick (2003), during the fifties and sixties ideas on planning and import substitution were widely spread in developing countries. These ideas changed in the seventies, toward visions that were more oriented toward the market that emphasized the role of the price system and orientation of outward economy.

At the end of the eighties, what is now known as the “Washington Consensus” came about, which originally emphasized fiscal discipline, competitive exchange rates, financial liberalization, privatization and

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<sup>74</sup> Rodrick “Growth Strategies”. Washington 2003.



deregulation. This group of policies was understood as the scheme of desirable policies for economic growth. However, toward the end of the nineties, in the heart of multilateral organisms linked to development, the original list of the referred “Washington Consensus” was widened, giving origin to what is currently known as the second generation reforms, which emphasize institutional development and pursue corporate government development.

<b>RULES OF GOOD BEHAVIOR FOR ECONOMIC GROWTH PROMOTION<sup>75</sup></b>	
<b>Original Washington Consensus</b>	<b>“increased” Washington Consensus ... the first 10 clauses, more:</b>
1. Fiscal Discipline	11. Corporate government
2. Reorientation of public expense	12. Elimination of corruption
3. Imposition reform	13. Flexible labor markets
4. Liberalization of interest rates	14. Adherence to rules of World Commerce Organization
5. Competitive and unified exchange rate	15. Adherence to international financial codes and standards
6. Commercial liberalization	16. Prudent opening of capital account
7. Opening to direct foreign investment	17. Regimen of flexible exchange rate
8. Privatization	18. Independence of the central bank (scheme of explicit inflation goals)
9. Deregulation	19. Social security networks
10. Property rights	20. Poverty reduction goals

It is worth pointing out that the need of second generation reforms came about due to a combination of factors. First, there was a growing recognition that the policies oriented toward the market can be inadequate without institutional transformations. For example, the commercial liberalization can not reassign resources to the economy if the labor markets are “rigid” or limitedly “flexible”. Second, there was preoccupation that financial liberalization will provoke a crisis and excessive volatility in absence of a solid macroeconomic scheme and of a supervision system and adequate prudential regulation. In this context, among the policies included are the adoption of flexible exchange systems, the independence of the central bank and the implementation of codes and international financial standards. Finally, before the argument that the Washington Consensus represented a step backwards in fighting poverty, the

<sup>75</sup> Rodrick “Growth Strategies”. Washington 2003.



policy scheme was widened with social policies and programs oriented toward the reduction of poverty.

After a brief history of policies that conventionally have been implemented or suggested by economists, Rodrick (2003) presents a rather detailed analysis of successful Asian economies in reaching accelerated and sustained growth, which implemented conventional and unconventional policy measures (for example, subsidies and widening of public business), accompanied by well designed institutional arrangements.

The main lesson derived from the discussion on high and sustainable growth is that the theoretic and empiric literature helps to identify the factors that determine growth. Although there is no standard focus on economic and social policy measures and the institutional designs required for reaching said growth, the studies reveal that the best strategy for countries with limitations to grow is, first, to adopt a short term strategy to stimulate growth and, second, to develop a mid and long term strategy that finds the efficiency of real and financial markets. Therefore, the theoretic elements and evidence must be complemented with specific studies on the country at hand, to elaborate an integral strategy that considers the financial and economic resources, the opportunities and restrictions that the economy faces.

In practice, beginning the path toward economic growth generally requires a limited amount of reforms that do not necessarily imply deep institutional reforms. On the other hand, sustaining growth is more difficult and requires giving the economy a solid and flexible institutional frame, to resist external problems and maintain productive dynamism.

### **1. Short term strategy**

To accelerate economic growth in the short term in an anchored economy in a balance of low economic activity, the following question is important: how to motivate the private sector or invest in the national economy? In that context, investment refers to all activities of entrepreneuring: amplification of installed capacity, use of new technologies, production of new goods and services, search for new markets and other related activities. According to literature, there are two points of view on the factors that generate



a situation of low growth. The first focus emphasized the role of barriers imposed by the public sector to businessmen. These barriers are related to: i) the political bias toward big and politically influencing businesses; ii) institutional faults associated to big imposed charges, arbitrary regulations, high levels of corruption, inadequate property rights and limitations in fulfilling contracts; iii) high levels of political uncertainty and business repression; and iv) macroeconomic instability and high inflation. In summary, an inadequate climate of investment is generated by the distortions introduced by the public sector.

According to the second focus, the government has to play a pro-active role and not simple eliminate the barriers, which takes finding a way to attract investment through the creation of positive incentives. In that vision, growth is not the natural state of things; because there are market imperfections inherent to low risk environments that block the investment and the promotion of non-traditional activities. When examining the experience in Latin America in the light of these two focuses, the experience is very illustrative. In effect, until the mid-eighties the governments were pro-active in granting the considerable business incentives in the frame of the scheme of substitution of importations, but there was also very little discipline in the investment climate; but in the nineties and in the present decade the contrary has happened, given that the investment climate has improved considerably through new incentives, clear and stable rules have been established and have improved development of institutional policies.

## **2. Mid and long term strategies**

For the mid and long term strategies the essential is to build efficient institutions. As a complement to the strategy in the short term, we must ensure the strategy of strengthening institutions that favor growth sustainability, the resistance of exogenous trouble and socially legitimize growth. The empiric studies on institutions, have usually been directed toward the property rights and the sovereignty of law. However, a more ample definition of institutions should be re-presented, understanding them as the prevalent rules of the game in society. The efficient institutions are those that induce a socially desirable



behavior on behalf of the economic agents. According to Rodrick (2003) the taxonomy of institutions for sustainability of markets is the following:

- a) Institutions for creating markets**
  - i) Property rights
  - ii) Contract fulfillment
- b) Institutions of market regulation**
  - i) Regulating entities (basic services)
  - ii) Other mechanisms of correction of market faults (pro-competence regulation)
- c) Institutions of market stabilization**
  - i) Fiscal institutions
  - ii) Monetary and financial supervising institutions
- d) Institutions of market legitimization**
  - i) Democracy development
  - ii) Protection and Social Security networks

After getting to know what institutions promote growth in the mid and long terms, the relevant questions are the following: how to acquire these institutions? And, what is the cost of obtaining said institutions? The acquisition of efficient institutions is difficult and normally requires a prolonged period of time, which leads into a gradual process. The cost of acquiring the institutions is high and require discussion processes and political negotiation between diverse sectors of society, therefore the empiric evidence suggests that the best climate for negotiations is when growth has accelerated; in other words, when a good amount of identified obstacles in the strategy in the short term have been overcome.

Last, it is worth punctualizing that in the previous clauses the main factors that affect growth have been identified, the policies linked to these factors and the strategies to reach an accelerated and sustained economic growth. In the next clause a brief analysis of Guatemalan economy growth is presented.



## V. ECONOMIC GROWTH IN GUATEMALA

During the last 50 years, Guatemalan economy grew at an average rate of 4% annually and the per capita product grew, on average by 1.3% annually. According to the level of income per capita, Guatemala is considered a mid income country by international financial organisms. Compared to countries like Brazil, Costa Rica, Mexico, Dominican Republic, Chile, Colombia and recently El Salvador, the economic development of Guatemala has been relatively low<sup>76</sup>, but is still located over the Latin American median. According to Fanjnzylber and Lederman (1999), the total productivity of factors contributed 5% to growth during the 1950-1995 period, which places Guatemala in the median of 18 Latin American countries, but very below the southeastern Asian countries.

### A. Characterization of Guatemalan economy

Until the eighties, the Guatemalan economy was characterized as a relatively open economy and with a relatively protected industrial sector. The state had control on some of the main macroeconomic variables (exchange rate, interest rates and prices of some goods from the basic food basket) and the economic model that was promoted was the “substitution of importations,” with the objective of improving the external position of the country and promote jobs through direct incentives, mainly using the fiscal and commercial policy for that. Said model was sustained in the process of Central American economic integration that was begun in the sixties. At the end of the eighties and beginning of the nineties, Guatemala began a process of re-conversion of its economy. For example, the exchange rate and the interest rate were regulated by the monetary authority until 1989. The prices of goods from the basic food basket were freed in 1986, concluding the process in 1991. Gradually, exportation taxes were eliminated and laws were issued for the promotion of non-traditional exportations.

The fiscal deficit was financed by the monetary authority until the end of the eighties. As a result of the recurrent fiscal unbalance and the inconsistency of monetary policy (with the objective of the fixed exchange rate), the country

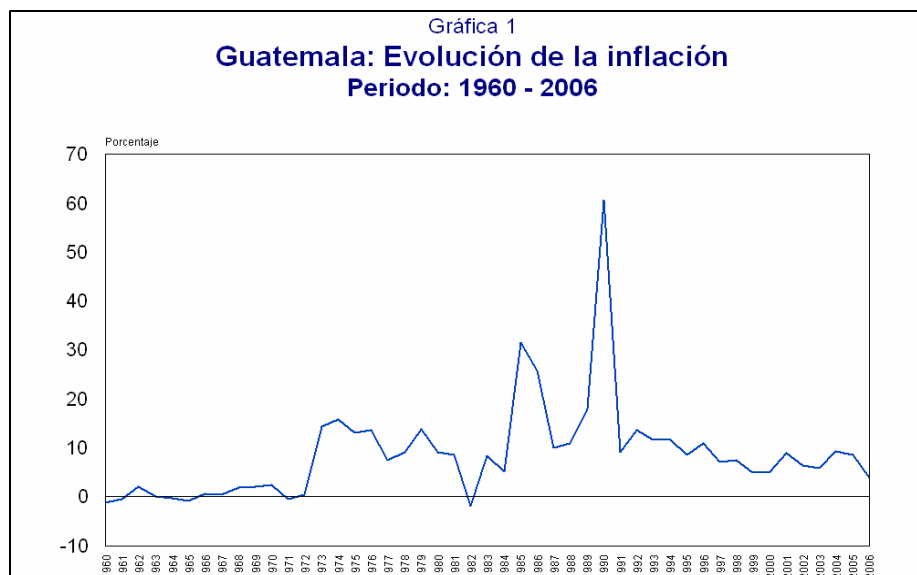
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<sup>76</sup> Bermanke, B. y R. Gürkaynak. “Is Growth Exogenous? Takeng Mankw, Romer, and Weil Seriously”. Washington 2001.

exhausted its net international monetary reserves, which were negative between 1982 and 1989. Derived from the above, in 1994 a constitutional norm was issued through which direct financing of the fiscal deficit by the monetary authority was prohibited.

The deficit in current account of the payment balance reached record numbers in 1992, 1981, 1987 and 1985 (7.0%, 6.7%, 6.6% and 6.4% respectively). The main sources of financing of the deficit in current account, until the eighties were the international monetary reserves and external public debt; but in the nineties, the flow of private capital was the main source of financing and the reserves increased considerably. Last, the process of lowering taxes and the modernization matrix of the national financial system were initiated until the beginning of the nineties.

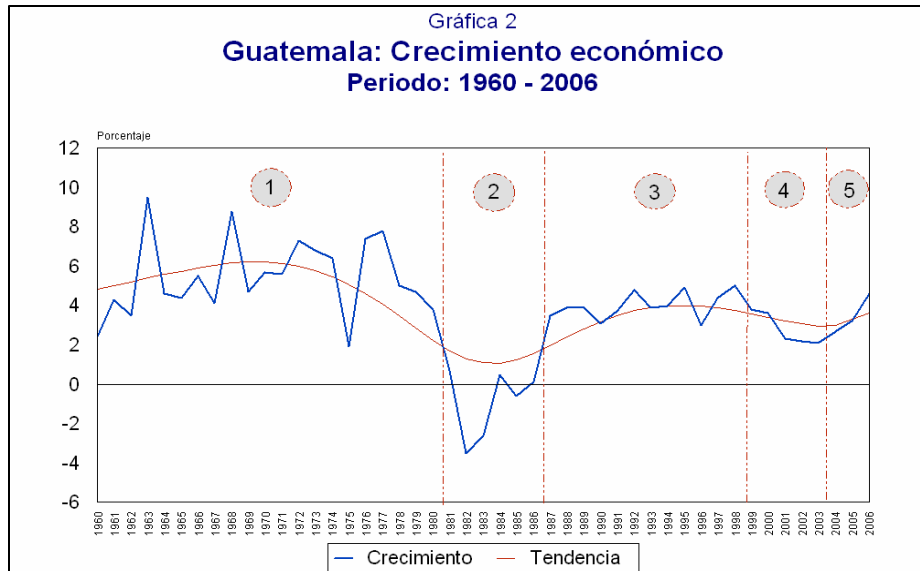
It is worth mentioning that the Guatemalan economy, when compared to the majority of Latin American countries, did not experiment very severe inflationary processes. In the analysis period, there were two inflationary hikes: the first in 1985 and 1986 (31.5% and 25.7% respectively), mainly associated to the excesses of existing liquidity in the economy, originated by the high fiscal deficits. The highest inflation was registered in December 1990 (around 60%.) As of the nineties, the generally restrictive monetary policy and the reduction of the fiscal deficit allowed reaching a lesser rate of inflation and considerable reducing the volatility in this variable, which is clearly appreciated in graph 1.





## B. Economic performance in the 1960-2006 period

In graph 2, the economic growth rate is presented for the 1960-2006 period. In said graph five important sub-periods are identified in the development of Guatemalan economic activity<sup>77</sup>:



### 1. Economic surge (1960-1980)

This period is mainly characterized to high economic growth rates, notably unstable, and it is the period in which growth rates reached the highest in Guatemalan economic history<sup>78</sup>. In 1963 and 1968 growth rates of 9.5% and 8.8% are reached, respectively. The first oil crisis was experimented in 1974, which deteriorated the relation in exchange terms<sup>79</sup> and a strong economic deceleration, reaching a growth rate of approximately 2.0% in 1975. As of 1976 a marked economic recession was observed that gave feedback due to the internal conflict, the second oil crisis and a massive leak of private capital<sup>80</sup>, events that declared a strong fall of private domestic investment (-12.3% and -22.4% in 1979 and 1980, respectively) and the beginning of a significant period that increased external debt (between 1978 and 1985, the balance of external debt grew approximately US\$ 2,000.0 million).

<sup>77</sup> The criteria of identification of sub-periods were the growth rate of the gross domestic product.

<sup>78</sup> The average growth in the period was of 5.4%.

<sup>79</sup> The terms of exchange were reduced in 12% between 1973 and 1975.

<sup>80</sup> Díaz, Guillermo. "Algunos Métodos para Cuantificar la Fuga de Capitales: El Caso de Guatemala para el período 1977-1987". Guatemala 1991. (Some methods to quantify capital leaks: Guatemala's case for the 1977-1987 period)



## **2. Economic Recession (1981-1986)**

This period was characterized by the continuity and deepening of the economic crisis. Negative rates of economic growth, political instability, continuity of the internal conflict, considerable hikes in interest rates in the external market and the crisis of international debt were observed. In this stage a prolonged exchange crisis and the reduction of the international monetary reserves<sup>81</sup> was begun. In the last stage of this period the beginning of the democratic process was begun, the Economic and Social Reordering Plan was set into play –PRES (for its acronym in Spanish)- which had as its objective to recover the growth rhythm of the economy, gradually eliminate the regulation of prices of the basic basket and stabilize the nominal exchange rate.

## **3. Moderate economic growth(1987-1998)**

The main characteristics of this period are: recovery of economic growth as of 1987; macroeconomic stabilization as of 1991; reduction and stabilization of inflation; and, stabilization of the nominal exchange rate. The democratic process and national reconciliation were begun and the Peace Accords were signed in 1996. The country was able to come out of the prolonged exchange crisis and of international monetary reserves. In this period the main economic reforms were implemented: liberalization of the exchange rate and the interest rate, commercial and financial opening. Production policies of export were adopted, taxes were eliminated for exports and legal decree 24-89 was issued to promote the multures activity. Also, the process of privatization of Assets of the State were concreted, in an environment, in which the Guatemalan economy is benefited in an internationally favorable environment (low international interest rates and income of foreign capital) and of the insertion of new international markets, which accelerated the growth mainly of non traditional exportations.

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<sup>81</sup> In 1980 the first control on the capital flow had been established, in 1984 "The emergency regimen in International transfers" was applied, which implied a stricter exchange control and in 1986 established three exchange markets: official, essential and banking.



#### 4. Deceleration of economic growth (1999-2003)

This period is characterized by unfavorable external conditions (fall of international coffee prices and deceleration of world economic activity). In the internal order, the process of healing the banking system was begun (intervention of three banks), decelerated the growth rhythm of banking credit to the private sector and intensified the criteria diverging between the public and private sectors as to the mid term objectives of the country.

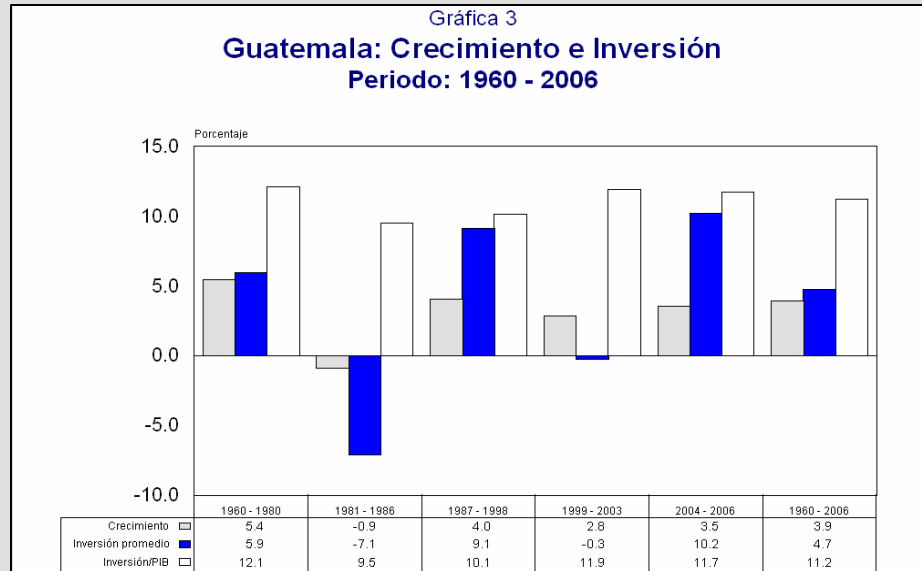
An important aspect in this period is that the third monetary and financial reform was approved, that includes the new Organic Law of the Banco de Guatemala, provided clarity in the fundamental objective of the monetary policy, operative autonomy, economic and financial economy and transparency and account rendering; the Law of Financial Supervision that strengthens the functions of the Superintendence of Banks; the Law of Free Negotiation of Foreign Currency that legalizes the financial intermediation in foreign currency; the Law of Banks and Financial Groups that provide a modern normative for the operation of financial groups operation and the mechanisms of consolidated supervision according to international practices; and, the Monetary Law that makes the legal framework to the changes that have been generated in the international financial markets adequate, regarding monetary species and the convertibility of national currency and the free movement of capital. It is worth indicating that the referred reform constitutes the most important financial reform of the country.

#### GROWTH AND INVESTMENT IN GUATEMALA

During the last 46 years, the economy grew at an average rate of approximately 4%, the average growth of investment was of 4.7% and investment/GDP relation was 11.2% on average. The average growth of investment in Guatemala was over the Central American median, but below the level reached by Costa Rica (4.7%).

In the 1960-2006 period, the simple correlation between economic growth rates and investment was of 56%. When analyzing the behavior of these variables per periods, in graph 3 we observe the average variation of investment is much more volatile than economic growth, reflecting the sensibility of the investment to economic and extra-economic factors. It is also worth highlighting that the variations of growth rate of the GDP in the periods in good measure

obey the behavior of investment measured by its average variation. However, when the relation investment/GDP is observed this is not consistent in time. For example, the relation between the 1999-2003 (11.9%) period was relatively lower to the registered between 1960 and 1980 (12.1%). But in the 2004-2006 period the referred coefficient was of 11.7%, but the average growth of investment was at 10.2%, percentage that surpasses all other periods.



## 5. Acceleration of economic growth (2004-2006)

In the 2004-2006 period the economic growth rate was accelerated, which allowed overcoming the growth rate of the population. In general, in the recent economic surge the following, among other factors, are associated to the discipline of monetary and fiscal policy; relatively favorable to the external environment, in which DR-CAFTA and economic growth of the main commercial partners has been positive; and the improvement of the business climate.

It is worth highlighting that the maintenance of fiscal and monetary policy has been fundamental for consolidating the macroeconomic stability, as well as create an environment of certainty and trust, in which the economic agents take advantage of adequate decisions in matter of consumption, savings and investment, factors that have been fundamental to propitiate the growth and orderly development of the national economy in the last years.



In the described context, it is worth mentioning that the recent report in “*Doing Business*” by the World Bank, indicates that the country is within the eight countries of the world and among the three in Latin America with the most implemented economic-financial reforms. This has allowed Guatemala to move from position 128 in 2005 to 118 in 2006.

In that same order of ideas, the international risk ratings recently improved their grading of the country. In effect, Standard & Poor’s elevated the grade of sovereign debt in the long term in foreign currency of the Republic of Guatemala from BB- to BB. The referred international rater also increased the rating of internal debt in the long term from BB to BB+. On the other hand, the international risk rater, Moody’s changed the grading of sovereign debt of the country in foreign currency from “stable” to “positive.” Also, Fitch Ratings assigned Guatemala the rating of BB+ with an applicable stable perspective to the long term debt, in foreign as well as national currency. According to said entities, the modifications referred to in the country risk ratings are supported, among others, by the low levels of external debt of the country, due to the strengthening of its external position, due to the long fiscal discipline history and moderate inflation, due to its solid payment record of commercial debt, due to the strengthening of the banking system and due to the perspective of sustained economic growth. Last, the Organization for the Economic Cooperation Development (OECD) recently improved the country risk rating for Guatemala, reducing it from 6 to 5 (where 0 and 7 represent the least to greatest country risk, in that order.)

**a) Relative Importance of the productive factors in the economic growth of Guatemalan economy**

In this clause we present the results of two exercises of applied growth to Guatemala<sup>82</sup>. Said exercises represent the first step for the analysis of fundamental determinants of economic growth in the country. The following step involves the chained relation between the growth sources in the long term

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<sup>82</sup> Loening, Ludger. “Human Capital, Productivity and Economic Growth in Guatemala”. Ibero-America Institute for Economic Research, University of Goettingen, Mimeo *Preliminary Draft* 2003. Bailén, José. “Economic Growth in Guatemala”. Apéndice I de Revisión del Artículo IV para Guatemala. Washington 2001.



(productive factors), the factor proportions, the productivity of factors and the most ample growth with political government and structural elements.

In graph 1 the results shown obtained by Bailén (2001) and Loening (2003), were updated by the technical departments of the *Banco de Guatemala*. In the two exercises we part from a production function of the Cobb-Douglas<sup>83</sup> type, for which the two authors use factorial proportions of different income, but coincide in that the proportion of capital is less in developing countries, reason for which Bailen used a value of 0.2, while Loening used a value of 0.33 for said parameter. The total productivity of factors is residual and it is assigned the growth part that is not explained by the accumulation of productive factors. Also, the estimations of capital stock are different, since although they use the same method (perpetual inventories), Bailen uses a depreciation rate of 8% for total capital and Loening applies a depreciation rate of 5%. Last, the consumer work data show differences, which is probably due to the statistics source used and to the chaining that is necessary to build a series of economically active population.

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<sup>83</sup> Supposing constant yield to scale, the operation can be expressed as follows:  $Y = A \cdot K^a \cdot L^{1-a}$ , where  $Y$  represents the product,  $K$  and  $L$  represent the capital stock and work consumption, respectively,  $A$  is the total productivity to the factors (PTF) and  $a$  represents the proportion of product generated by the capital factor. This function was also defined by Larrain (2004) in a study named "Guatemala: Los Desafíos del Crecimiento".

**Cuadro 1**  
**GUATEMALA: SOURCES OF ECONOMIC GROWTH**  
**Function of basic production**

Period	Average Growth	Contribution					
		Capital		Work jo		PTF	
		(1)	(2)	(1)	(2)	(1)	(2)
196080	5.4	1.0	1.6	2.2	3.7	2.2	0.1
198186	-0.9	0.3	0.5	2.0	-1.1	-3.3	-0.3
198798	4.0	0.5	0.9	2.5	1.7	1.0	1.4
199903	2.8	0.9	1.5	1.7	1.4	0.2	-0.1
200406	3.5	0.8	1.3	1.7	1.4	1.0	0.8
<b>196006</b>	<b>3.9</b>	<b>0.8</b>	<b>1.3</b>	<b>2.2</b>	<b>1.8</b>	<b>0.9</b>	<b>0.8</b>

(1) Corresponde al estudio realizado por José Bailén (2001), que abarca el período 1950-2000, en el que se utilizaron los siguientes coeficientes para la función de producción Cobb-Douglas:  $\alpha = 0.2$  (capital) y  $1-\alpha = 0.8$  (trabajo). Los datos de 2001 y 2002 fueron actualizados, utilizando las tasas de crecimiento del stock de capital y de trabajo reportados en la base de datos de Loening (2003). Para el período 2003-2006, los departamentos técnicos del BANGUAT actualizaron las funciones.

(2) Corresponde al estudio realizado por Ludger Loening (2003), que abarca el período 1950-2002, en el que se utilizaron los siguientes coeficientes para la función de producción Cobb-Douglas:  $\alpha = 0.33$  (capital) y  $1-\alpha = 0.67$  (trabajo). Para el período 2003-2006, los departamentos técnicos del BANGUAT actualizaron las funciones.

The aspects that can be highlighted in square 1 are the following:

- The work factor, in both exercises, contributes in more than 50% to economic growth, aspect that is congruent with intense productive processes in handiwork and where capital is a scarce factor.
- The contribution of total productivity of factors descended notable in the 1981-1986 period, which was of -3.3 and -0.3, which is congruent, as was indicated, with the observed economic recession. On the other hand, the 2004-2006 period was of 1.0 y 0.8, respectively.

## VI. Final reflections

In this annex evidence on the main factors that influence economy were presented. The evidence suggests that the relation of direct and indirect factors with economic growth is complex and in many cases is not clear, which allows inferring that the analysis of growth in an economy is not a simple task and also that in the productive process, besides the factors of work and capital, there are others that induce the economic growth of a country. In that context, a compound effort of society is required, in which the short term actions are identified that allow accelerating growth and, later create a solid and flexible



institutional framework that favors the sustainability of the mid and long term growth.

The evidence for the Guatemalan economy suggests that the contribution of the work factor has been more important than that of capital, which is congruent with the evidence of other developing countries.





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### ANNEX 3

#### REVIEW OF THE ESTIMATION OF THE EFFECT OF THE “FREE TRADE AGREEMENT DOMINICAN REPUBLIC, CENTRAL AMERICA, UNITED STATES OF AMERICA” IN THE ECONOMIC GROWTH RATE FOR 2006

This review’s objective is to re-estimate the effect that the economic growth rate of the country could have in the second semester of this year, derived from the fact that DR-CAFTA began on July first, 2006<sup>84</sup>. For the effect, the fiscal year presented in Decree CT 4/2005 was updated, which contains the Monetary, Exchange Rate and Credit Policy: Evaluation to November 2005 and Proposal for 2006, in which the following model was used:

$$\Delta PIB_t = a_1 + a_2 \Delta PIB_{t-1} + a_3 \Delta X_t + a_4 \Delta M_t + a_5 \Delta IED_t + e_t \quad (1)$$

Where:

$\Delta PIB_t$	=	Variation rate of the real GDP in the year $t$
$\Delta PIB_{t-1}$	=	Variation rate of the real GDP in the year $t - 1$
$\Delta X_t$	=	Variation rate of goods exportations in the year $t$
$\Delta M_t$	=	Variation rate in the goods importations in the year $t$
$\Delta IED_t$	=	Variation rate of direct foreign investment in the year $t$
$a_i$	=	Parameters to estimate ( $i = 1, 2, \dots, 5$ )
$e_t$	=	error term in the year $t$

It is worth mentioning that in November 2005, the model was estimated based on annual data for the 1990-2004 period, so when it was updated the observed data to 2005 was added and the projections for 2006.

In that sense, in the following square we present the results obtained when updating the fiscal year in reference.

<sup>84</sup> In note published by the *Ministerio de Relaciones Exteriores* [Roughly equivalent to the Department of State of USA] in the *Diario de Centroamérica* [Official daily newspaper.] on July 6, 2006 (page 5), indicated that DR-CAFTA was enforced for Guatemala as of July 1, 2006.

Variable	Coefficients	Statistics	Probabilities
$\Delta PIB(-1)$	0.75589	5.987717	0.0001
$\Delta X$	0.044741	3.333333	0.0067
$\Delta M$	0.055842	4.697823	0.0007
$\Delta IED$	0.003939	1.644243	0.1284
$R^2$	0.855844	F statistic	16.32656
$R^2$ adjusted	0.803424	Probability	0.000135

Note: The statistical trials correspond to a level of significance of 10%.

Since it is a first difference model, to fine tune the calculation of effect of the DR-CAFTA in economic growth, equation (1) was transformed to the following:

$$\Delta PIB_t = a_2 \Delta PIB_{t-1} + w_t \quad (2)$$

Where  $w_t = a_1 + a_3 \Delta X_t + a_4 \Delta M_t + a_5 \Delta IED_t + e_t$ . So, for  $t + 1$ , the equation (2) is converted in:

$$\Delta PIB_{t+1} = a_2 \Delta PIB_t + w_{t+1} = a_2 (a_2 \Delta PIB_{t-1} + w_t) + w_{t+1}$$

That is equivalent to:

$$\Delta PIB_{t+1} = a_2^2 \Delta PIB_{t-1} + a_2 w_t + w_{t+1}$$

According to the above, we can estimate the effect in  $\Delta PIB_{t+1}$ , due to a change in  $w_t$ , assuming that  $w_{t+1}$  remains constant. This effect is given by

$$\frac{\partial \Delta PIB_{t+1}}{\partial w_t} = a_2 \quad (3)$$

With the above equation it is possible to calculate the effect of a unit increase in exportations, in importations and in direct foreign investment on economic growth. The above can be calculated through the chain rule:

$\frac{\partial \Delta PIB_{t+1}}{\partial \Delta X_t} = \frac{\partial \Delta PIB_{t+1}}{\partial w_t} \cdot \frac{\partial w_t}{\partial \Delta X_t} = \mathbf{a}_2 \mathbf{a}_3$	(4)
$\frac{\partial \Delta PIB_{t+1}}{\partial \Delta M_t} = \frac{\partial \Delta PIB_{t+1}}{\partial w_t} \cdot \frac{\partial w_t}{\partial \Delta M_t} = \mathbf{a}_2 \mathbf{a}_4$	(5)
$\frac{\partial \Delta PIB_{t+1}}{\partial \Delta IED_t} = \frac{\partial \Delta PIB_{t+1}}{\partial w_t} \cdot \frac{\partial w_t}{\partial \Delta IED_t} = \mathbf{a}_2 \mathbf{a}_5$	(6)

In this way, the effect on economic growth will be had as an increase of one per cent in exportations, importations and in direct foreign investment, would be the following:

$\frac{\partial \Delta PIB_{t+1}}{\partial \Delta X_t} = (0.75589)(0.044741) = 0.033819274$	(7)
$\frac{\partial \Delta PIB_{t+1}}{\partial \Delta M_t} = (0.75589)(0.055842) = 0.042210409$	(8)
$\frac{\partial \Delta PIB_{t+1}}{\partial \Delta IED_t} = (0.75589)(0.003939) = 0.002977451$	(9)

In that sense, taking into account, on the one hand, the estimations made by the Commerce Commission of the United States of America (USITC) and by the International Monetary Fund –IMF- regarding export and import growth and, on the other hand, the estimation made by the *Banco de Guatemala* as to growth in direct foreign investment, as a result of the enforcing of DR-CAFTA, the total effect had on the economic growth rate would be the following:

a) In a first scenario, in which the USITC estimations can be used, the exports would grow 3.46 percentage points, the imports would increase 4.09 percentage points and direct foreign investment would increase 65.34 percentage points. Based on this data, and according to equations 7, 8 and 9,



abovementioned, the total impact on economic growth, after one year of the enforcing of the DR-CAFTA would be of  $(0.033819274 \times 3.46) + (0.042210409 \times 4.09) + (0.002977451 \times 65.34) = 0.48$  percentage points .

b) In the second scenario, in which the estimations of IMF are used, the exports will grow 7.78 percentage points, the imports would increase 9.20 percentage points and direct foreign investment would increase by 65.34 percentage points. Based on this data, and according to equations 7, 8 and 9, abovementioned, the total impact on growth, after a year of enforcing DR-CAFTA, would be of  $(0.033819274 \times 7.78) + (0.042210409 \times 9.2) + (0.002977451 \times 65.34) = 0.85$  percentage points.

Finally, with the object of re-estimating the impact of DR-CAFTA in the economic growth rate for 2006, derived of the enforcing of the referred agreement in the second semester of said year, the geometric measure of the annual estimated growth was then calculated for each one of the mentioned scenarios:

**First scenario:**

Efecto para el segundo semestre de 2006 =  $(\sqrt{1.0048} - 1) \times 100 = 0.24$  puntos porcentuales.

**Second scenario:**

Efecto en el segundo semestre 2006 =  $(\sqrt{1.0085} - 1) \times 100 = 0.42$  puntos porcentuales.

In synthesis, the effect on economic growth rate for 2006, derived of the enforcing of the DR-CAFTA in the second semester of said year, would be the following:

**SCENARIOS**

(In percentage points)

FIRST SCENARIO	SECOND SCENARIO
0.24	0.42



## **ANNEX 4**

### **DETERMINATION OF A CREDIT BOOM: THEORETIC FRAME AND EMPIRIC EVIDENCE**

#### **I. Introduction**

The banking credit to the private sector in Guatemala, in the last two years, has been growing at relatively high rates, which has been a concern by the monetary authorities, due to the macroeconomic impact (and especially on inflation) that said increase could have in the short and mid terms. In that sense, it is worth mentioning that the banking credit to the private sector could grow for three reasons: i) greater financial deepening (increase in its tendency level); ii) normal growth cycles; and, iii) excessive fluctuation cycles in credit levels, also known as credit booms. However, it is necessary to identify at what moment there is a credit boom, since when this is the case it could produce negative macroeconomic effects in the mid term, especially if said growth is accompanied by serious external unbalance.

The present objectives of this annex are: comment theoretical aspects associated to credit booms; identify the main episodes in which credit expansions are observed; evaluate the microeconomic level (quality of the credit portfolio) as well as macroeconomic level (deficit in current account, nominal exchange rate, gross domestic product and inflation), the effects that produce accelerated expansions in the banking credit to the private sector, and finally determine when an acceleration of the referred credit can be considered a boom. It is worth indicating that the analyzed period is understood from January 1990 to October 2006.

#### **II. Credit booms and monetary policy**

When the empiric evidence points to a credit boom gestating or that is already manifesting itself, then it is suggested to take the following action: i) strengthen the supervision of the banking system; ii) make a careful analysis of the signatures, especially in foreign currency, of the main debtors of the bank systems; and, iii) restrict of the monetary policy even when few inflationary pressures are observed.



Taking into account that the credit booms are associated to an increase in the level of corporate debt, it is advisable to supervise accounting practices more carefully and determine if these are transparently providing financial statements to the authorities in charge of banking supervision.

Additionally, when a credit boom is identified, restricting the monetary policy is suggested, even when inflation is found in relatively low levels, given that credit booms are generally associated to a significant increase in aggregate demand, and a later contraction of the same. In consequence, a more restrictive monetary policy would tend to lessen the amplitude of the economic activity cycles generated by the credit booms.

### **III. Expansion of the banking credit to the private sector in Guatemala**

The behavior of the banking credit to the private sector from the beginning of the decade of the nineties has shown four episodes of pronounced acceleration; the first, from the beginning of 1991 until the end of 1993, reaching an inter-annual growth rate of 37.6%; the second, registered during 1994, year in which the inter-annual growth rate of 34.5% was reached; the third, between 1998 and 1999, period in which a maximum inter-annual growth rate of 30.9% was registered; and, the fourth, at the beginning of 2005 to October of 2006 in which an inter-annual variation rate of 29.1% was registered.

The first episode mentioned is mainly characterized by a monetary policy that had as its fundamental objective the abating of inflation through the correction of monetary unbalance, the stabilization exchange and the moderation of the asset interest rate level; however, said moderation, that was made through the reduction of the Open Market Operations –OMAS (for its acronym in Spanish)-, not having been compensated with greater savings by the public sector, propitiated accelerated growth from the banking credit to the private sector. On the other hand, the second episode is associated to greater availability of resources for loan on behalf of the banking system, mainly explained by the delayed effects associated to the reduction in the reserve rate in 1994 and , therefore, in the increase of banking multiplier. During the third episode, the *Banco de Guatemala* substantially reduced the realization of OMAs, under the premise that with that the interest rate would decrease and





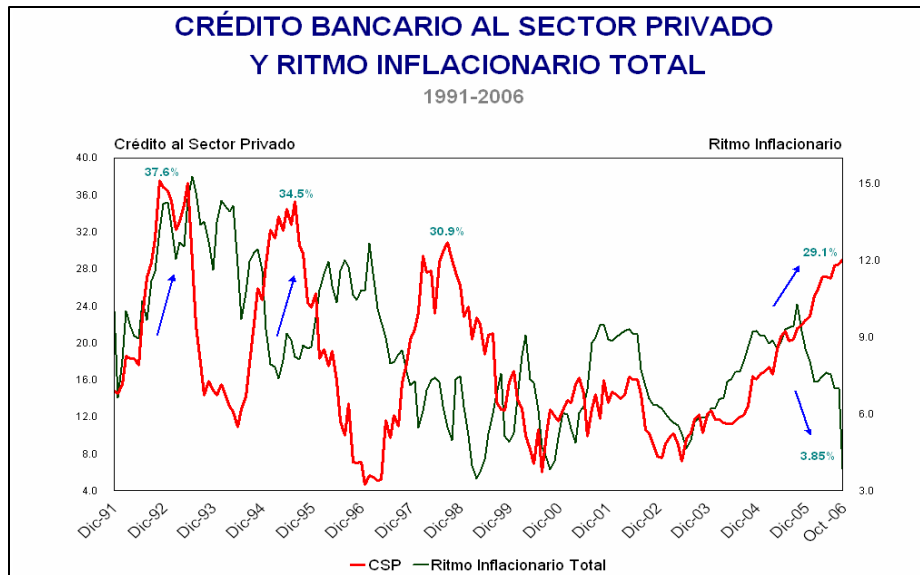
the demand for credit from the economic agents with a productive end would have incentives. Therefore, the OMAs and the remunerated deposits were reduced in balance as well as in proportion of the gross domestic product<sup>85</sup>, which implied a net transfer of resources from the Central Bank toward the private sector. As a result of the above, the interest rates registered a fall and showed differential regarding the current interest rates in other countries, which at the same time propitiated that in 1998 the private sector credit showed an expansive behavior, having consequences in the credit portfolio quality of banks. Last, in the fourth episode, the observed behavior from the beginning of 2005, can be associated to greater dynamism of the productive activity of the country, which began in 2004.

#### **A. Consequences of macroeconomic and microeconomic credit booms**

A first approximation to establish if the effects derived of the referred credit expansions affected the macroeconomic situation in the country, would analyze if in those episodes an impact on the general level of prices is observed. In that sense, in the graph presented in the following it is observed that if in the first two episodes, the growth of the banking credit to the private sector was accompanied from increases in inflation; however, in the third and fourth episodes, this relation reverts, since in the last period, although the growth rate of the banking credit exhibits a growing marked tendency. In that sense, it can be concluded that the current expansion of banking credit has not generated inflationary pressures.

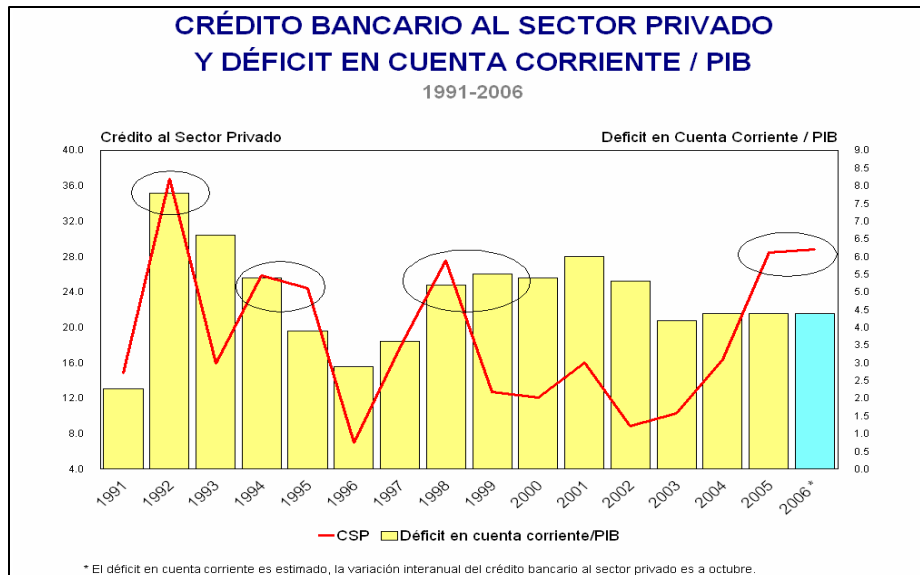
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<sup>85</sup> To December 2, 1999 the OMAs and banking reserve represented, regarding the GDP, around 2.1% and 2.7%, respectively, so much so that at the end of 1996 reached 4.7% and 5.6%, in their order.



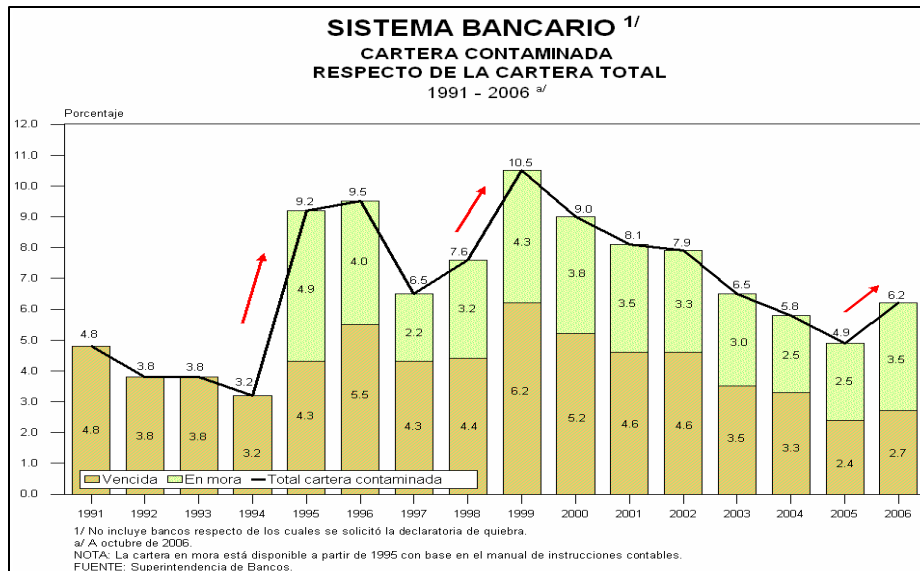
On the other hand, it results relevant to know the effects of credit expansions in the payment balance and, fundamentally, in the balance of current account. In that sense, the empiric evidence in different countries (of developed as well as in development), show that due to greater international financial integration, the credit booms can be explained by the income of private capital flow. The greater affluence of private capital, at the same time temporarily increases the surplus of account capital for payment balance. However, said affluence of capital can represent a risk for the macroeconomic stability of risk for the macroeconomic stability given that a significant part of the same can be destined to financing the importations of consumer goods.

In the following graph, it shows that in the case of Guatemala, the first two episodes of expansion of banking credit to the private sector caused a deterioration in the current payment balance account, so much so that in the last episode said situation is not observed, this can be explained by the greater flow of private capital and family remittances.



As to what concerns the microeconomic effects that are directly related with a credit expansion, the possible deterioration of credit portfolio quality of the banks is highlighted, which could be affected by the increase of contaminated portfolio<sup>86</sup> after the periods of greater dynamism of banking credit to the private sector. In that sense, in the following graph, credit expansion in the second and third episode was observed (in 1994; and, between 1998 and 1999, respectively), the proportion of contaminated portfolio registered considerable increases (9.5% and 10.5% respectively, the highest levels observed in the 1991-2006 period). As to the last episodes mentioned, although it is true that there was an increase in contaminated portfolio in October of 2006, it is also true that the same is affected by the situation of credit portfolio. Notwithstanding, it is worth highlighting that as of the enforcing of the banking legislation in 2002, a structural change is observed in the credit portfolio quality fundamentally associated to a prudential norm improvement and a more careful analysis on behalf of the banking system when granting credit.

<sup>86</sup> Includes the expired portfolio and current default portfolio.



#### IV. Methodology to determine credit booms

The credit booms have generally been a fundamental part of recent theories of banking and financial crisis. The origin of said booms is a decrease; they can be generated by an inappropriate financial liberalization, by a weak financial regulation, by a massive affluence of capital or exogenous shocks that after increasing the levels of investment or consumption, later translate in abrupt falls. The credit boom episodes have a variable duration and follow a natural tendency, in the majority of studies they begin to define the complete event, differentiating between normal increases in the credit volume and boom episodes.

Within the above context, according to Gourinchas *et al* (2001) the credit boom is defined as a deviation of the credit coefficient to the private sector in nominal terms and the nominal gross domestic product regarding a historic dynamic tendency and stochastic in a specific country. In order for it to be a boom, the deviation of the tendency has to be greater than the limit determined by the relative and absolute deviations. Based on the previous definition by Roldos (2004), considers that the credit boom for Latin America when the credit/GDP relation experiments a sustained deviation regarding the historic tendency, generally equivalent to more than 4 and 5 percentage points of the GDP per year. Also, for empiric effects, Marco Terrones *et al* (2004) points out that an expansion in the credit of a given country, is identified as a boom, if it

exceeds the standard deviation of the credit fluctuations of that country around its long term tendency (estimated through a Hodrick-Prescott filter) by a factor of 1.75, denotes the year when the credit boom began.

### **A. Some characteristics of credit boom**

In the characterization of credit boom episodes, analyzing the number of cases and their duration, Gourinchas *et al* (2001), points out that with an absolute deviation of 5 percentage points, there are 65 cases observed worldwide; regarding their duration, the average complete episode is of approximately 5.5 years; and, in the majority of cases, the formation of an episode can take 2.5 years. Also, pointing out that the longest boom occurred in Syria, which lasted 27 years, in contrast, 8 countries experimented booms of a year, deep and short cycles of the credit behavior<sup>87</sup>.

According to the IMF, the credit booms of countries with emerging markets have five basic characteristics: less frequent than the episodes of rapid expansion credit; occur simultaneously in countries that show greater financial integration among themselves; are asymmetric, given that they do not affect in the different branches of economic activity in the same magnitude; the probability that a credit boom coincides with a consumption surge or an investment surge is approximately of 70%; and, usually accompany a banking and monetary crisis, although for this part the IMF points out that it is difficult to extract precise conclusions.

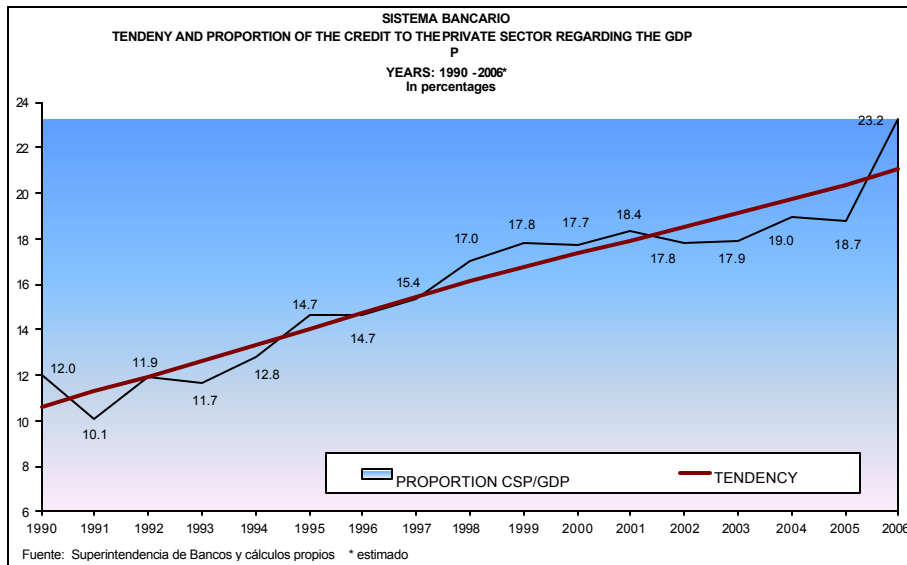
### **B. Characterization of credit behavior in Guatemala**

Based on the methodological proposal framework, for Guatemala's case, the following are analyzed: in first place, the behavior of the tendency and proportion of credit to the private sector regarding the GDP, during the 1990 to 2006 period; and, in second place, an approximation is made to determine the existence of credit booms during the period under study.

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<sup>87</sup> A cycle is an expansion phase that occurs at the same time as multiple activities, followed by a recession phase, of similar magnitude; later, presented in successive form as a contraction phase and a recovery phase, which intertwine with an expansive phase of the following cycle. This sequence of changes is recurrent, but not periodic, and the duration of economic cycles varies from more than a year, up to ten or twelve years. The cycle of growth, or an adjusted level by its tendency, offers information on the fluctuations of the current rates of growth regarding the long term normal rate.

The behavior of the tendency, calculated through the Hodrick-Prescott filter<sup>88</sup> and the proportion of credit to the private sector regarding the GDP, evidence, in the first place from 1990 to 1997, an average proportion of 12.9%, the majority of observed cases are registered below its historic tendency; from 1998 to 2001, an average proportion of 17.7% is shown, observed results on a historic tendency, from 2002 to 2005, an average proportion of 18.3%, the majority of observed data below their historic tendency; finally, an extraordinary behavior of 23.2% is observed, estimated for 2006, on its historic tendency. As is observed in the following graph:



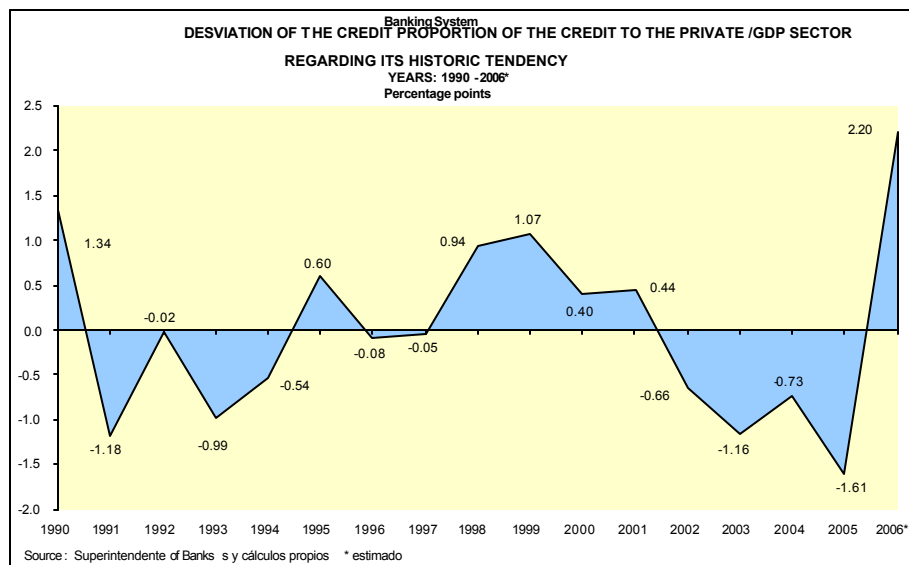
It is worth indicating that through the absolute deviations regarding the tendency, short growth episodes are observed in the evolution of banking credit to the private sector during the 1990 to 2006 period. In effect, the credit expansions began as of low levels, particularly from 1997 and of 2006. From 1990 to 2006 no significant deviations were observed regarding the historic

<sup>88</sup> With the purpose of knowing the long term tendency of the banking credit proportion in the private sector, it was calculated that the component through a decomposition process of variance of the variable; using for this effect, the Hodrick-Prescott filter, which determines the seasonal component of the series. Its calculation is made with the econometric package E-views, which uses the following minimization process:

$$\sum_{t=i}^T (y_t - s_t)^2 + \lambda \sum_{t=2}^{T-1} [(s_{t+1} - s_t) - (s_t - s_{t-1})]^2$$

Where:  $y_t$  is the original series  $s_t$  is the softened series,  $T$  measures the size of the sample  $\lambda$  is the parameter that indicates the cost or penalization by incorporating fluctuations in the tendency. In view that the information is annual, Hodrick-Prescott suggests that an equal value of 100 be used as parameter  $\lambda$ .

tendency, given that the highest deviation is of 1.07 percentage points observed in 1999, except during 2006, year in which the greater deviation within the low period analysis is registered with 2.20 percentage points, over its historic tendency. It is pertinent to observe that according to the methodological frame recommended by Gourinchas *et al* (2001) and Roldos (2004), credit booms are not observed during the analyzed series, since the deviations regarding its historic tendency, do not surpass the range of 4 and 5 percentage points of the GDP per year in a sustained manner; while, in the methodology recommended by Terrones (2004), the highest deviation is 2.20 percentage points for 2006, which slightly surpasses by 0.14 standard deviation points the maximum ceiling suggested of 2.06% (calculated as the standard deviation of deviations by 1.03 times  $2\sigma$  per factor) that would build the beginning of a credit boom. Such as appears in the following graphs .





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