



EXCHANGE RATE POLICY  
AND INFLATION TARGETING IN COLOMBIA

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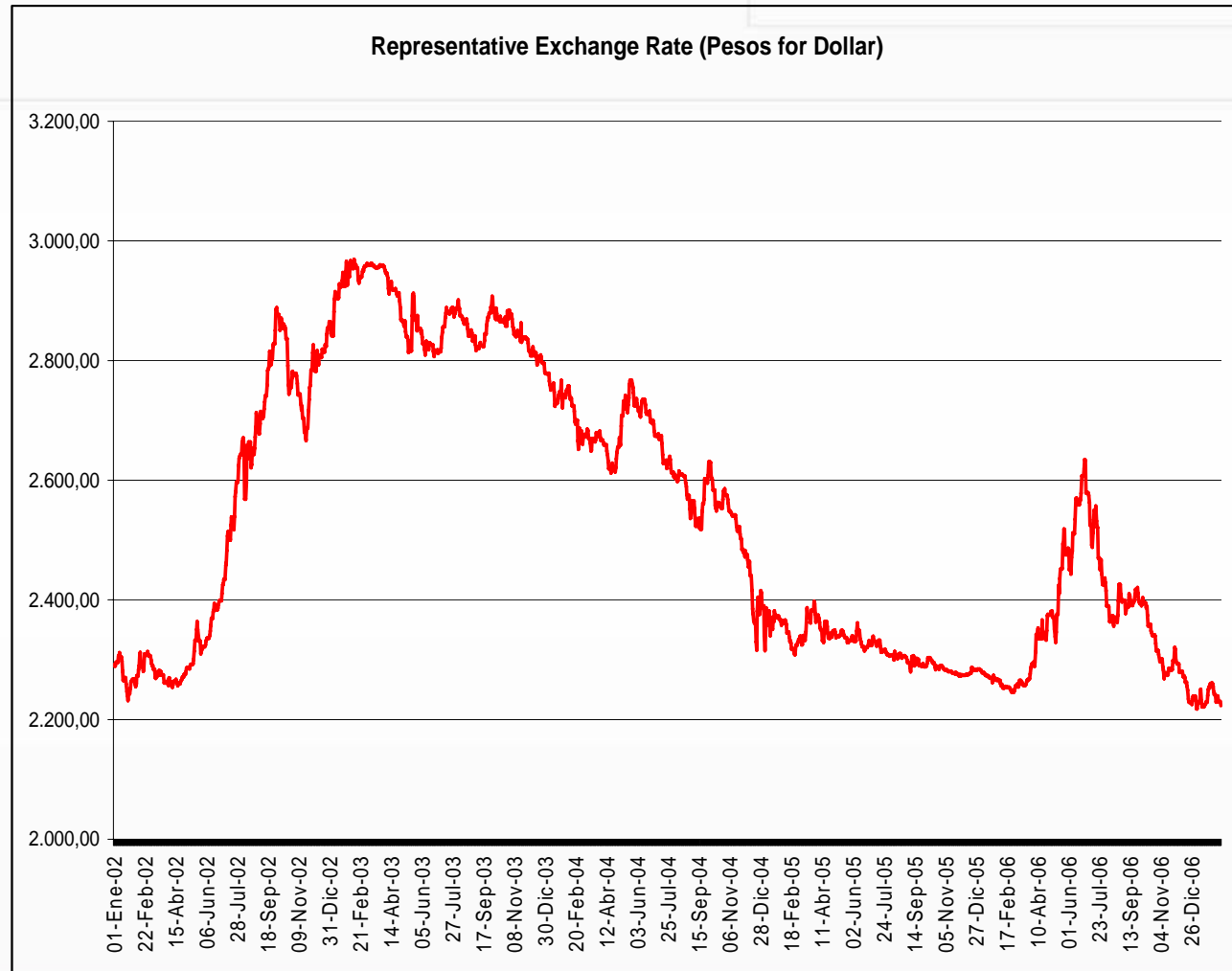
BANCO DE LA REPÚBLICA, COLOMBIA

ECB, FRANKFURT 1,2 MARCH 2007

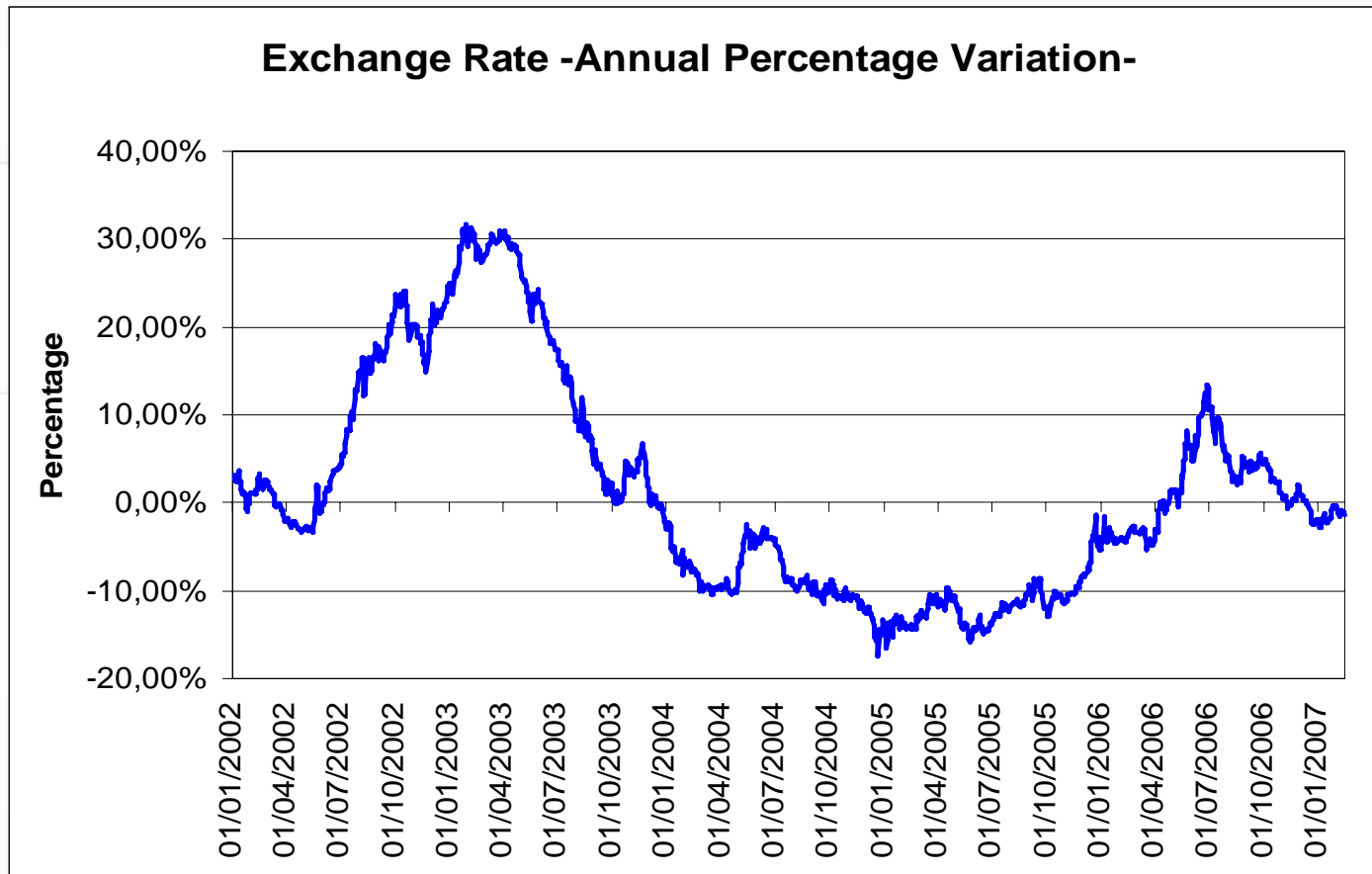
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## APPRECIATION OF THE EXCHANGE RATE

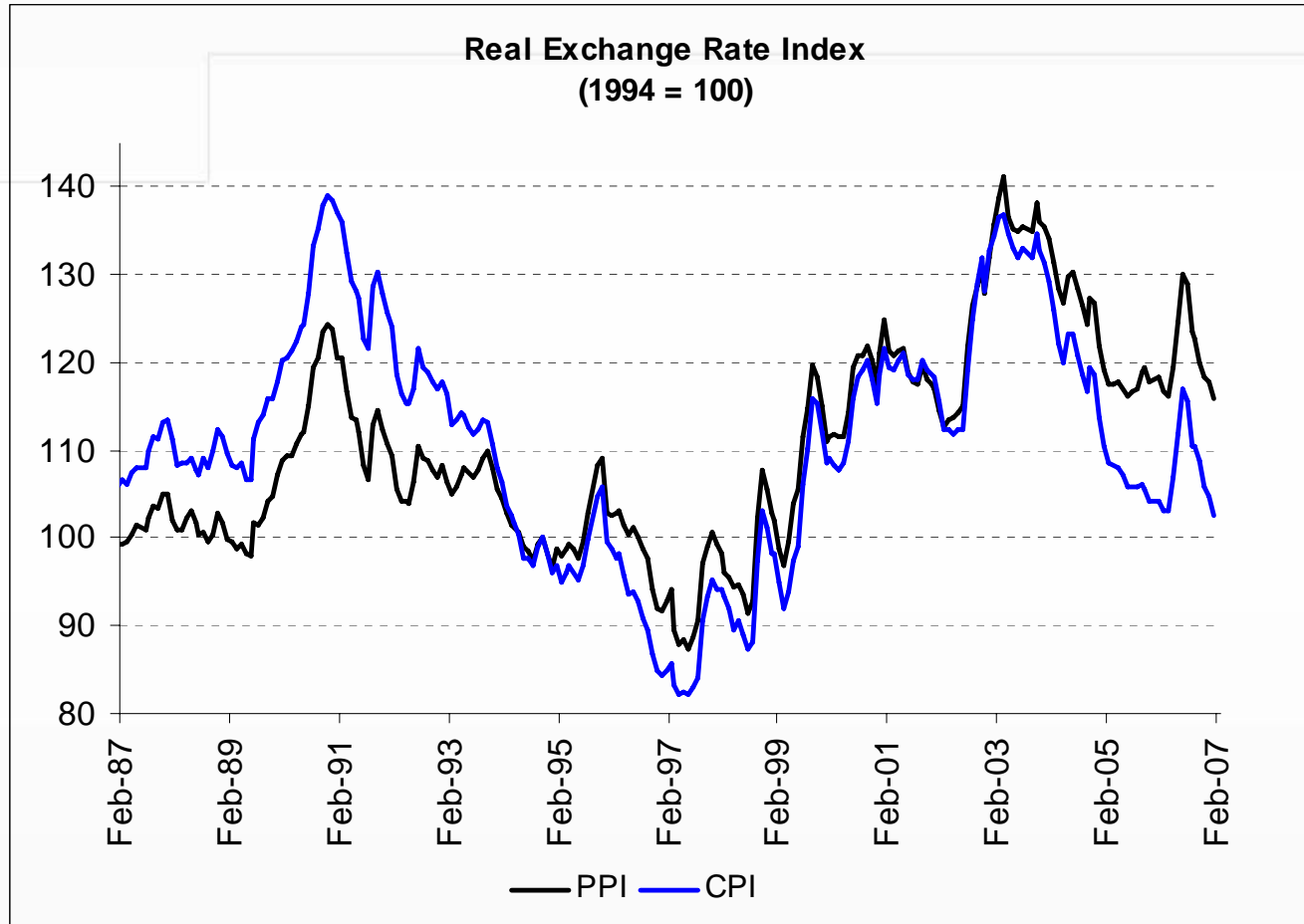
- Steady appreciation since the beginning of 2003
- Temporary reversal in Q II 2006



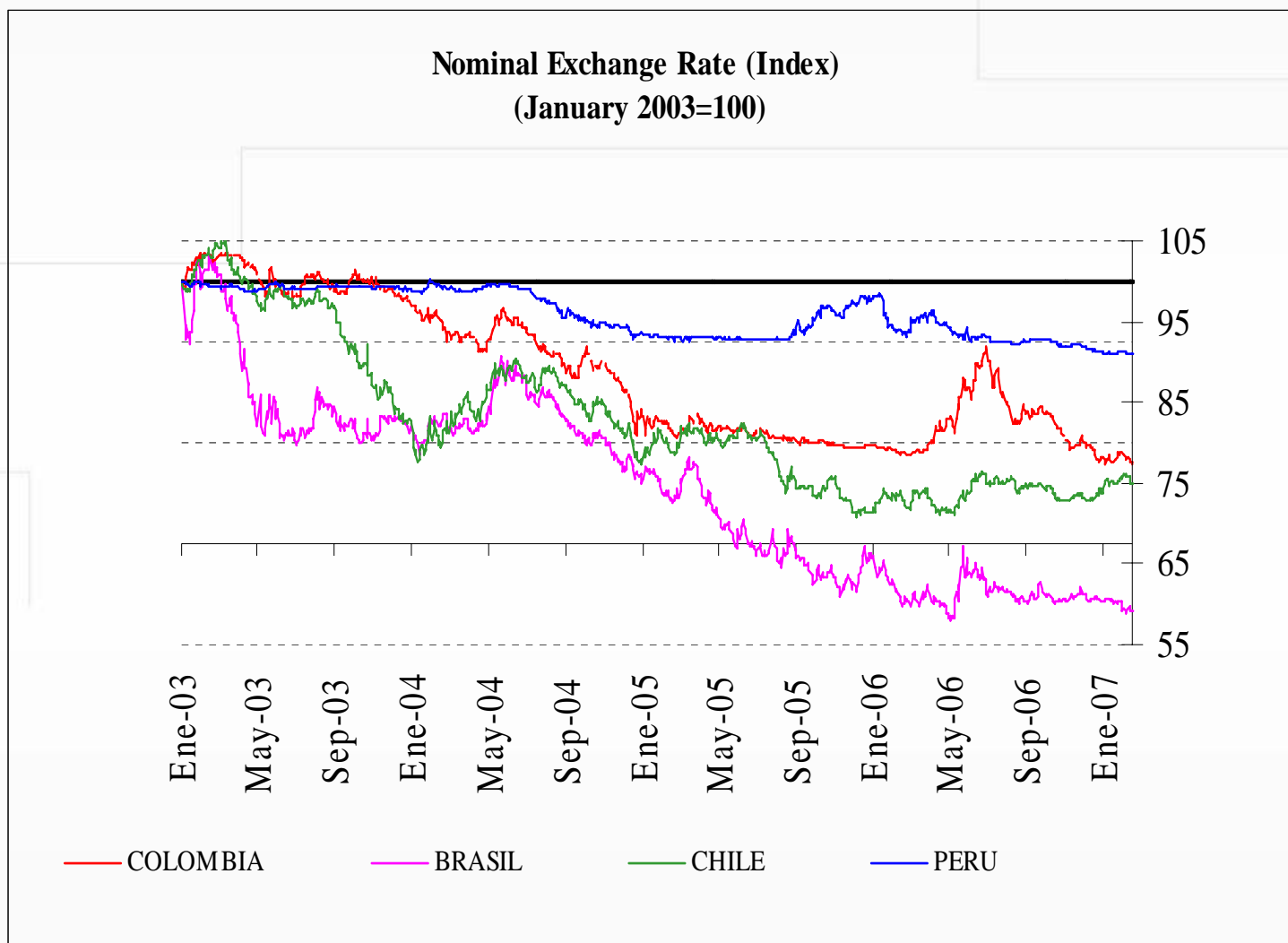
# ANNUAL NOMINAL CHANGE SHOWS THE EXTENT OF APPRECIATION



## APPRECIATION IS ALSO REAL, AFFECTING COMPETITIVENESS



## APPRECIATION HAS ALSO AFFECTED OTHER LATIN COUNTRIES

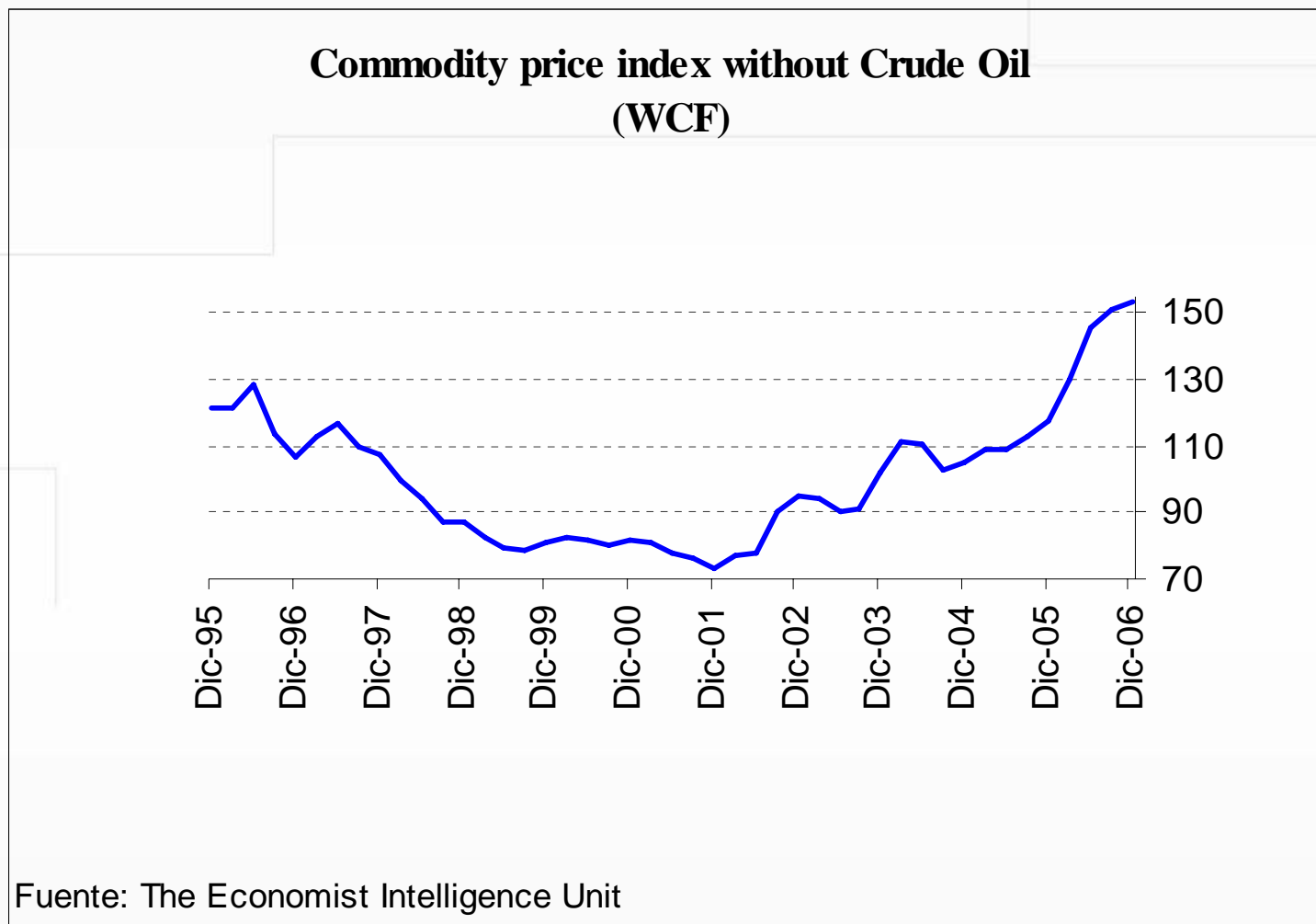


# MAIN FACTORS BEHIND APPRECIATION

## I. TRADE



## STEADY INCREASE OF COMMODITY PRICES EXCLUDING OIL.



IN PARTICULAR, THE PRICE A OF THE MAIN  
COLOMBIAN EXPORT PRODUCTS INCREASED  
CONTINUOUSLY SINCE 2003

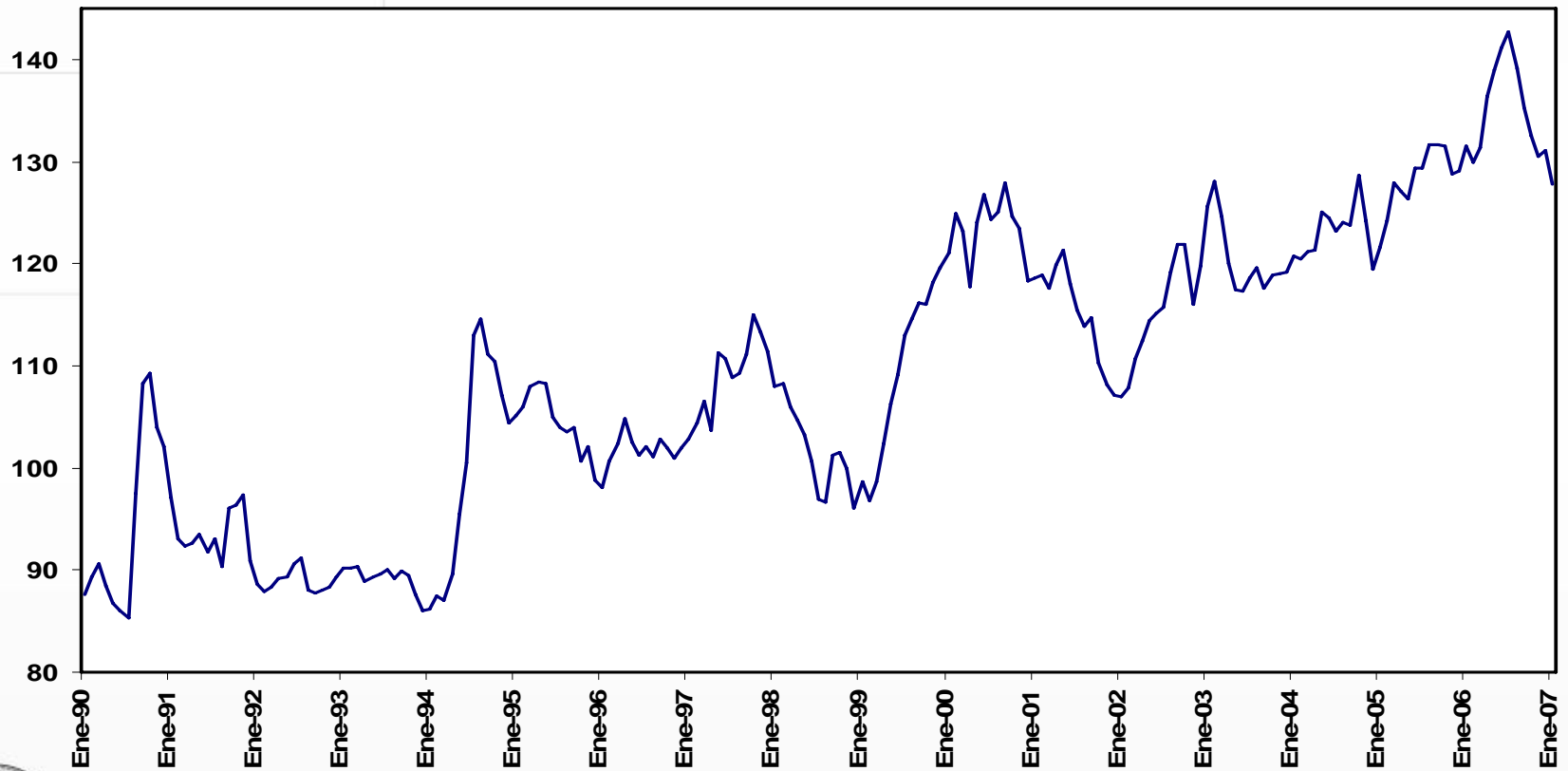
<b>International Prices</b>					
<b>Description</b>	<b>Average</b>			<b>Forecast 1/</b>	
	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Coffee (\$ / lb)	0.8	1.2	1.2	1.2	1.2
Crude Oil ( \$ / bbl)	37.3	49.8	56.3	48.9	51.9
Coal (\$ / mt)	36.1	47.8	47.8	46.1	42.1
Ferronickel (\$ / lb)	2.3	2.4	3.1	2.6	2.1
Gold (\$ / toz)	409.3	445.0	610.2	670.3	705.3

1/ Balance of Payments forecast



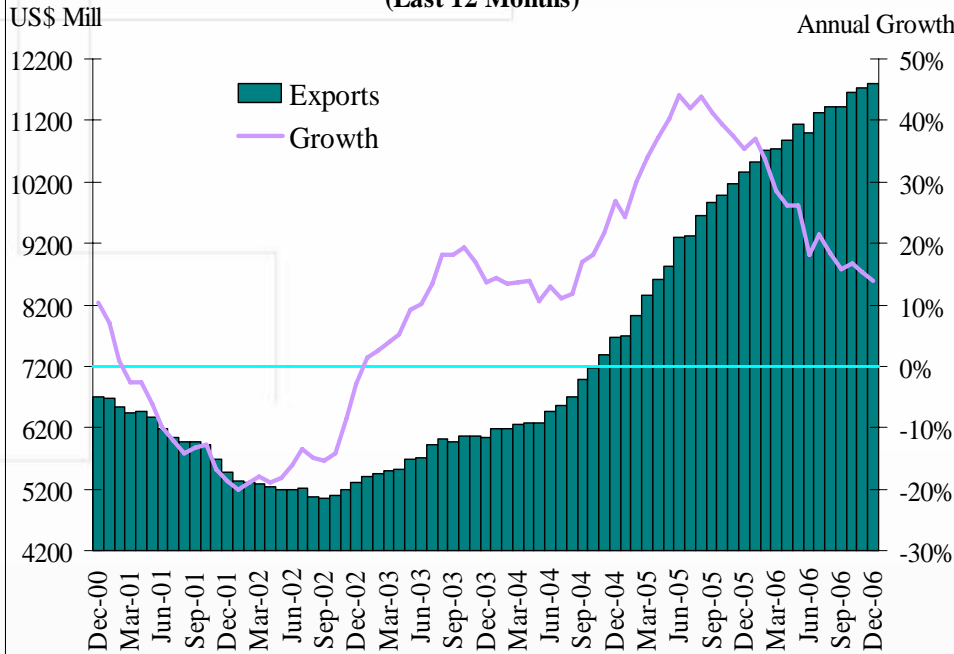
# WHICH SIGNIFICANTLY IMPROVED TERMS OF TRADE

Terms of Trade  
geometric mean 1994=100



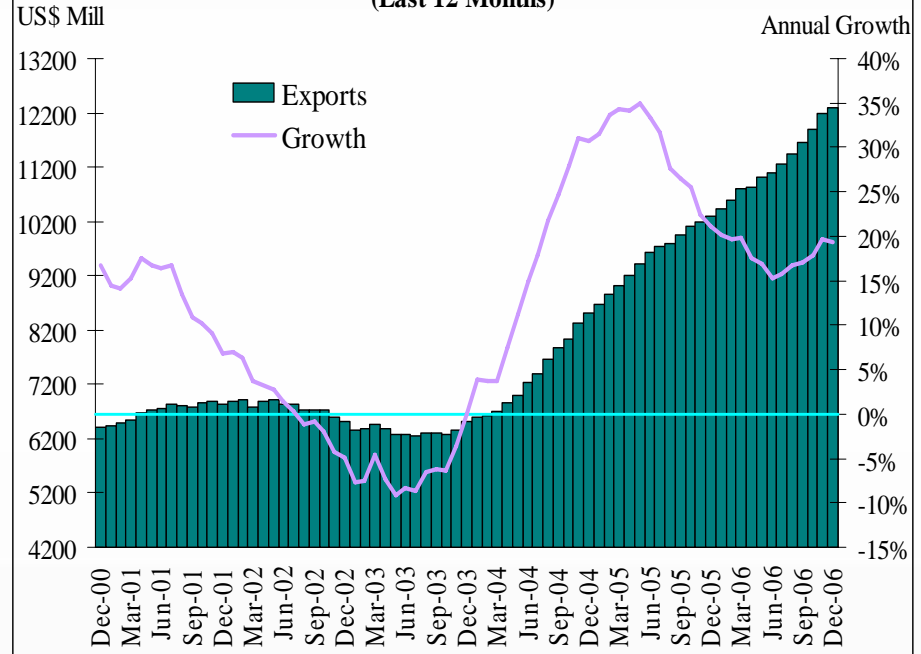
# BOTH TRADITIONAL AND NON-TRADITIONAL EXPORTS POSITIVELY REACTED TO PRICE INCENTIVES AND SUSTAINED WORLD DEMAND

**Traditional Exports  
(Last 12 Months)**



Source: DANE

**Non-Traditional Exports  
(Last 12 Months)**



Source: DANE

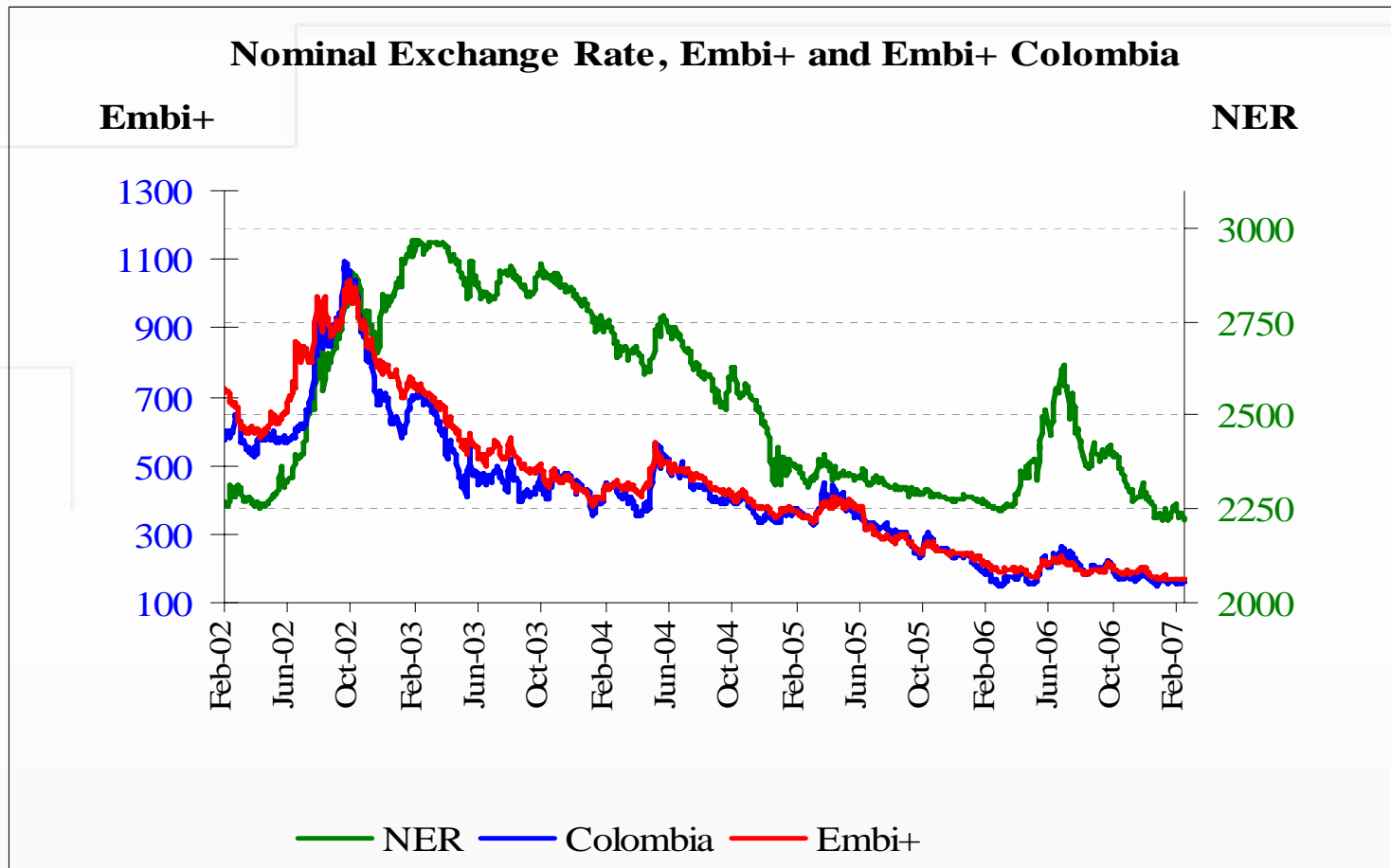


# MAIN FACTORS BEHIND APPRECIATION

## II. CAPITAL

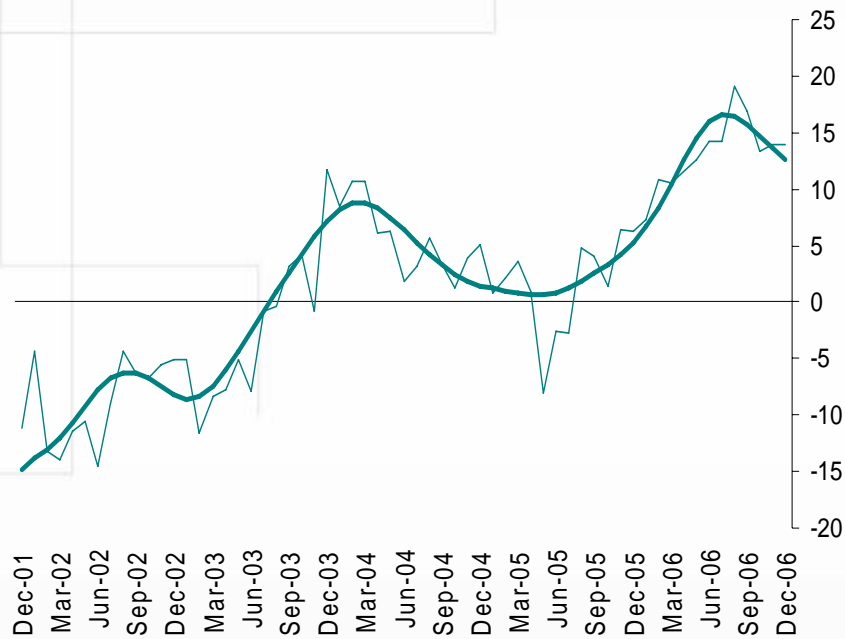


# CAPITAL INFLOWS ENCOURAGED BY A SHARP FALL IN EMBI

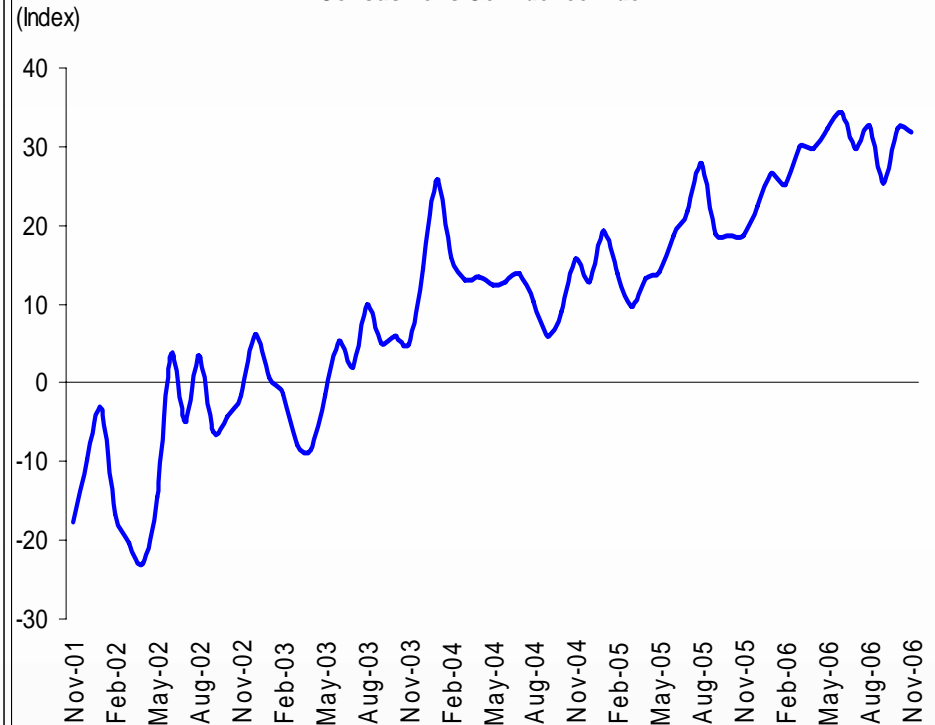


# CAPITAL ALSO ATTRACTED BY HIGH CONFIDENCE LEVELS

Confidence Index for manufacturing sector  
(Tendencial Component)



Consumer's Confidence Index

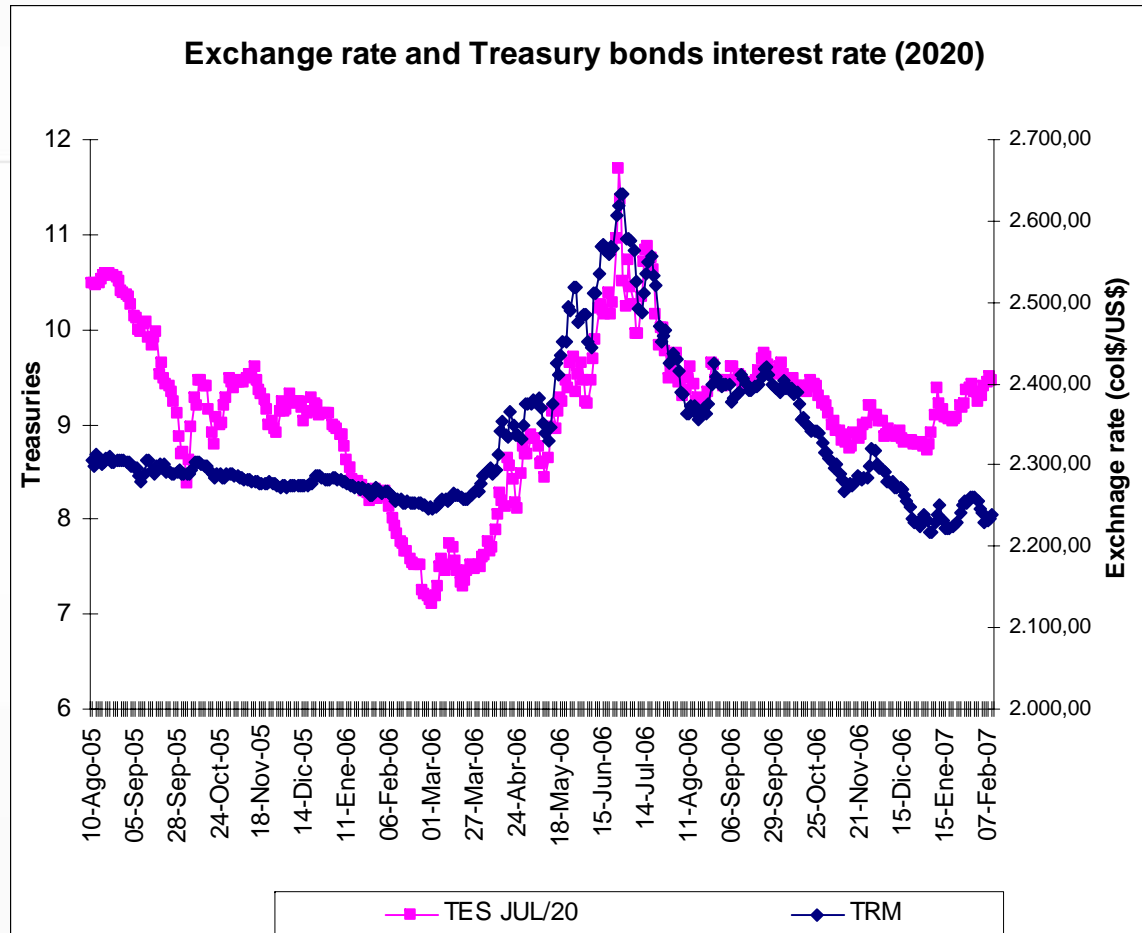


Fuente: Fedesarrollo y Banco de la República

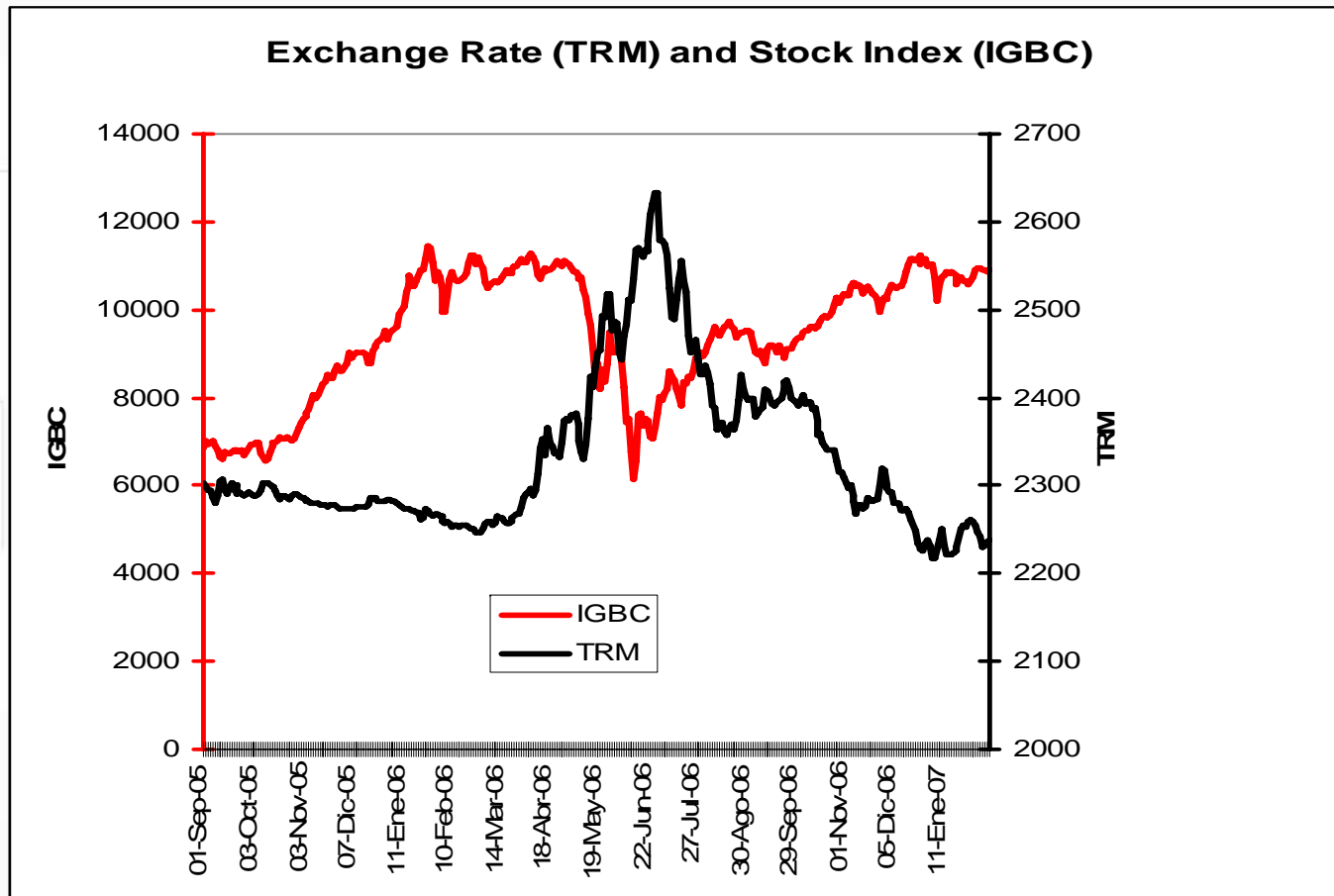
Source: Fedesarrollo



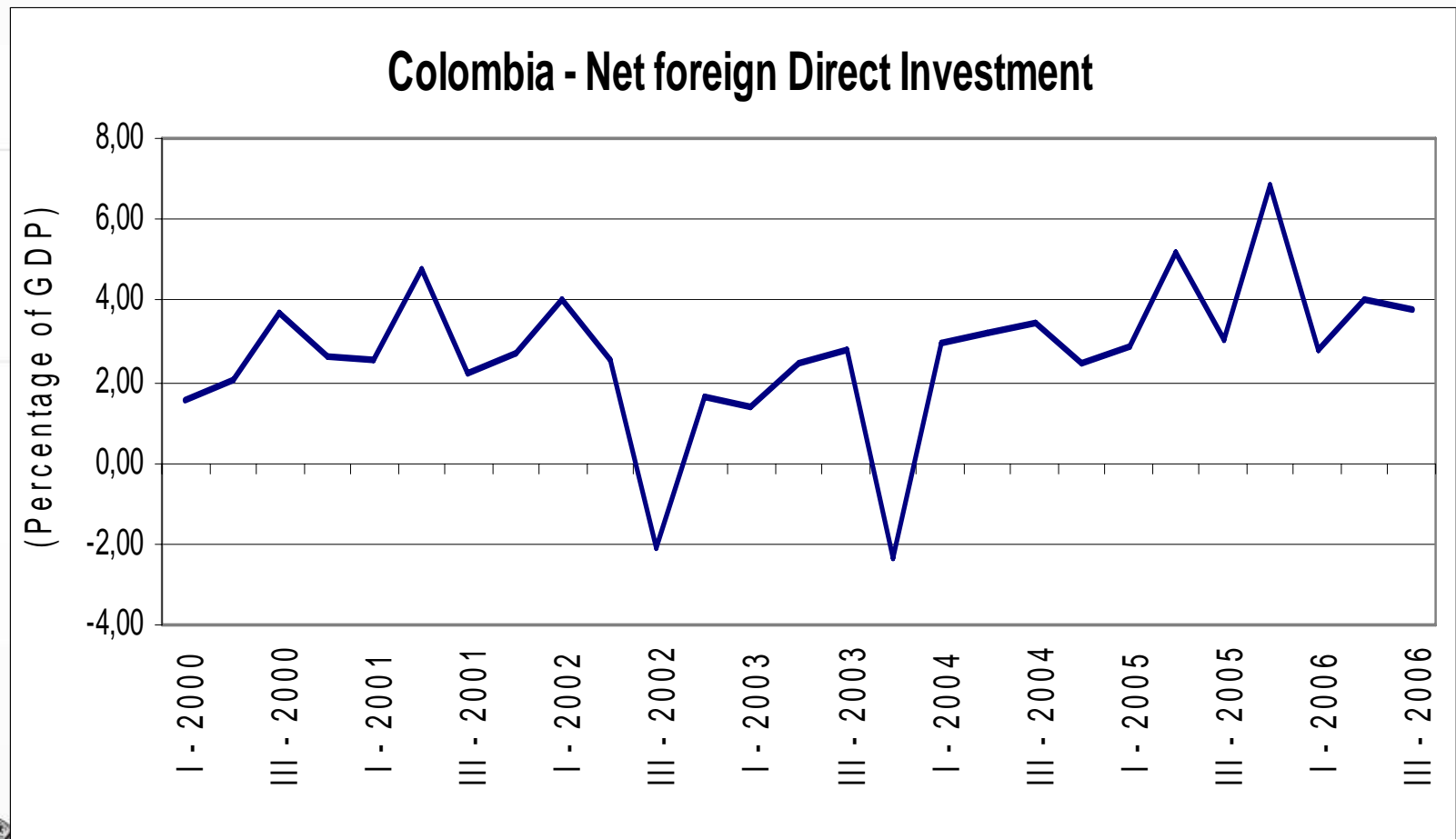
# CAPITAL INFLOWS MOSTLY INVESTED IN TREASURY BILLS, THUS REDUCING TB INTEREST RATES



# CAPITAL INFLOWS HAVE ALSO BEEN INVESTED IN DOMESTIC SHARES

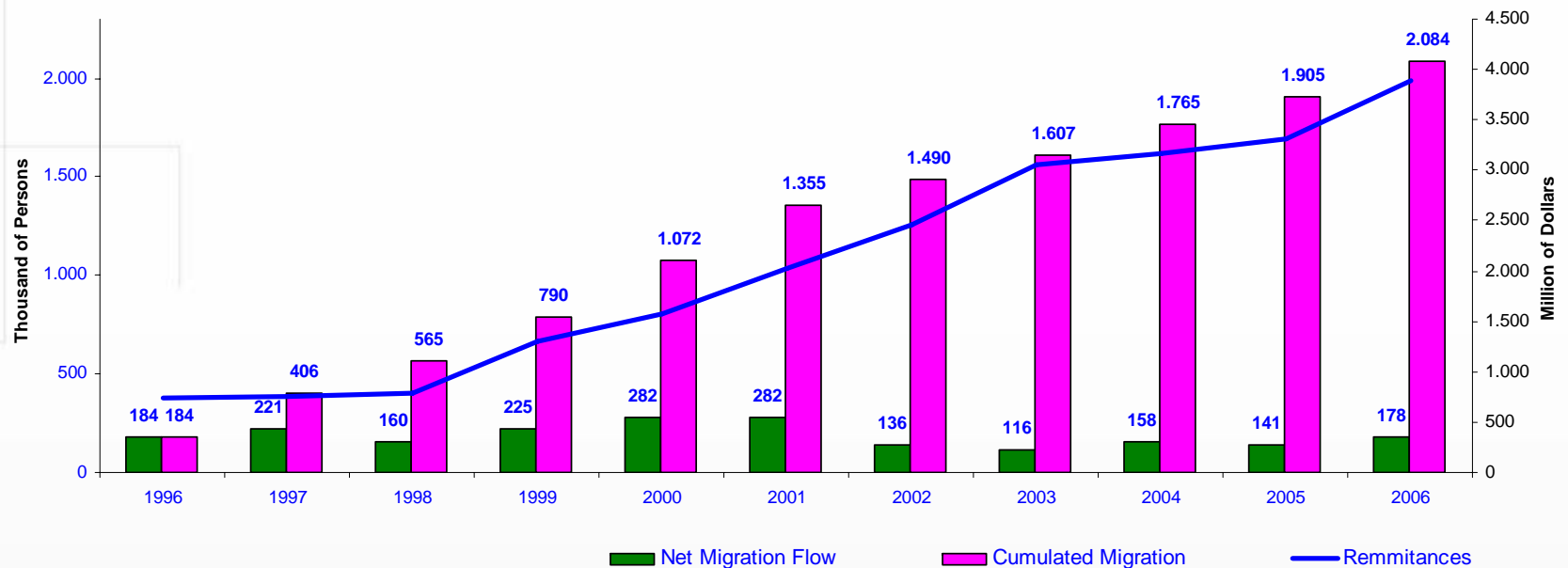


CAPITAL INFLOWS PARTLY ORIGINATED IN FDI,  
MAINLY INTO THE MINING (OIL; COAL) AND  
MANUFACTURING SECTORS



# GROWING REMITTANCES HAVE SIGNIFICANTLY CONTRIBUTED TO CAPITAL INFLOWS

## Migration Flow and Remittances



FX INTERVENTION BY  
THE BANCO DE LA REPÚBLICA



## FX interventions aiming at

- Accumulating international reserves,
- Reducing exchange-rate volatility,
- Moderating unsustainable appreciations or excessive devaluations likely to affect inflation behavior.

## Modalities of FX interventions:

- Put (call) options for accumulating (decreasing) international reserves
- Put (call) options for controlling volatility of the exchange rate
- Discretionary Intervention



**FLUCTUATING CONDITIONS IN THE FOREIGN-EXCHANGE  
MARKET HAVE LED TO THE USE OF THE BANK'S  
DIFFERENT INTERVENTION-POLICY INSTRUMENTS**

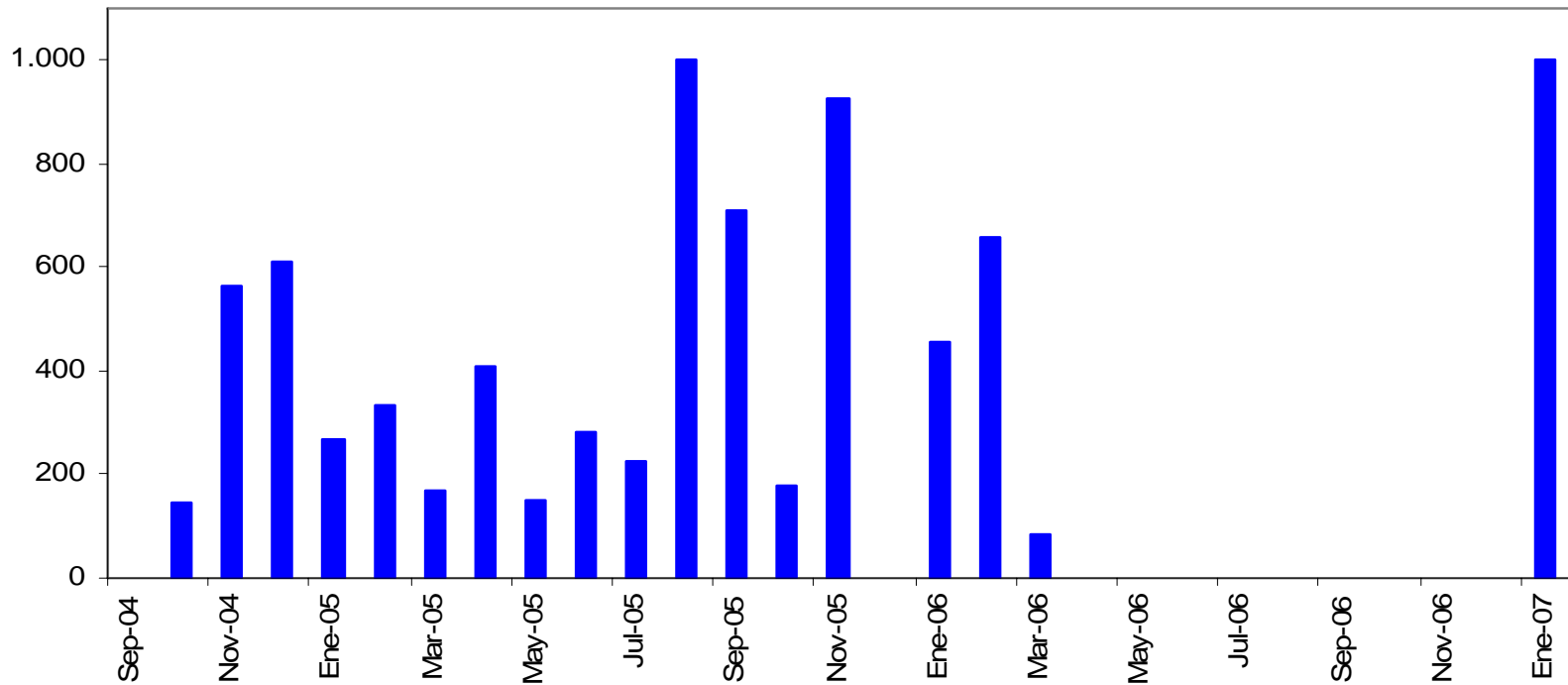
**Purchases and Sales of Foreign Exchange by the Banco de la República  
(Millions de Dollars)**

	1999*	2000	2001	2002	2003	2004	2005	2006	2007 (January)
<b>Purchases</b>	<b>200,0</b>	<b>318,6</b>	<b>629,2</b>	<b>251,5</b>	<b>106,2</b>	<b>2.904,9</b>	<b>4.658,4</b>	<b>1.780,5</b>	<b>1.001,6</b>
<b>Put Options</b>	<b>200,0</b>	<b>318,6</b>	<b>629,2</b>	<b>251,5</b>	<b>106,2</b>	<b>1.579,6</b>	<b>0,0</b>	<b>583,8</b>	<b>0,0</b>
For Accumulation of International Reserves	200,0	318,6	629,2	251,5	106,2	1.399,7	0,0	0,0	0,0
For Volatility Control	0,0	0,0	0,0	0,0	0,0	179,9	0,0	583,8	0,0
<b>Discretionary Intervention</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>1.325,3</b>	<b>4.658,4</b>	<b>1.196,7</b>	<b>1.001,6</b>
<b>Sales</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>414,0</b>	<b>344,5</b>	<b>500,0</b>	<b>3.250,0</b>	<b>1.944,3</b>	<b>0,0</b>
<b>Call Options</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>414,0</b>	<b>344,5</b>	<b>0,0</b>	<b>0,0</b>	<b>944,3</b>	<b>0,0</b>
For Decreasing of International Reserves	0,0	0,0	0,0	0,0	344,5	0,0	0,0	0,0	0,0
For Volatility Control	0,0	0,0	0,0	414,0	0,0	0,0	0,0	944,3	0,0
<b>National Government</b>		<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>500,0</b>	<b>3.250,0</b>	<b>1.000,0</b>	<b>0,0</b>
<b>Net Purchases</b>	<b>200,0</b>	<b>318,6</b>	<b>629,2</b>	<b>-162,5</b>	<b>-238,3</b>	<b>2.404,9</b>	<b>1.408,4</b>	<b>-163,8</b>	<b>1.001,6</b>

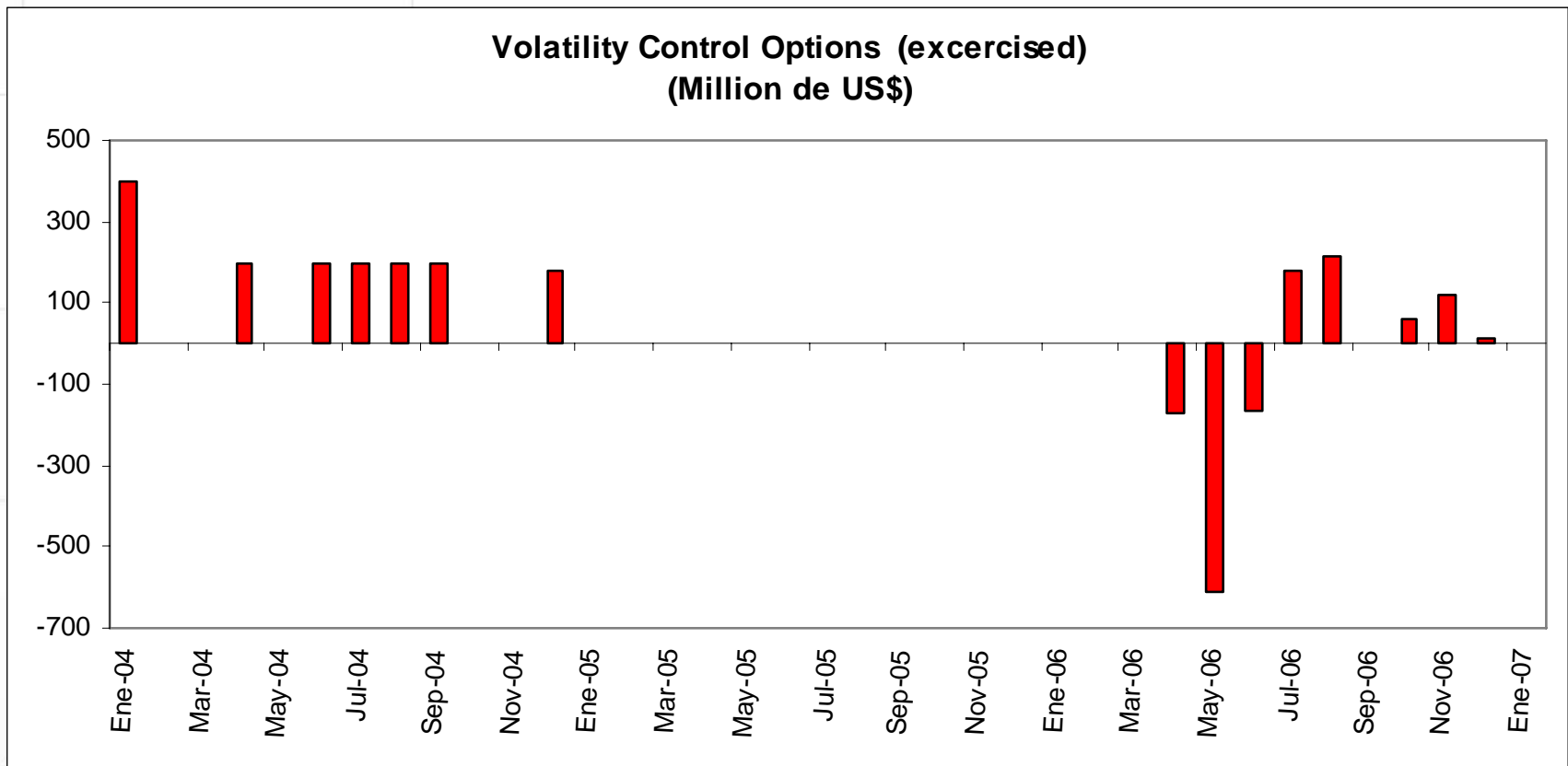


**DISCRETIONARY INTERVENTION WIDELY EMPLOYED, EXCEPT DURING QUARTERS II; III, AND IV OF 2006, WHEN APPRECIATION PRESSURES TEMPORARY CEASED**

**Discretionary Intervention in the FX Market  
(Million of Dollars)**



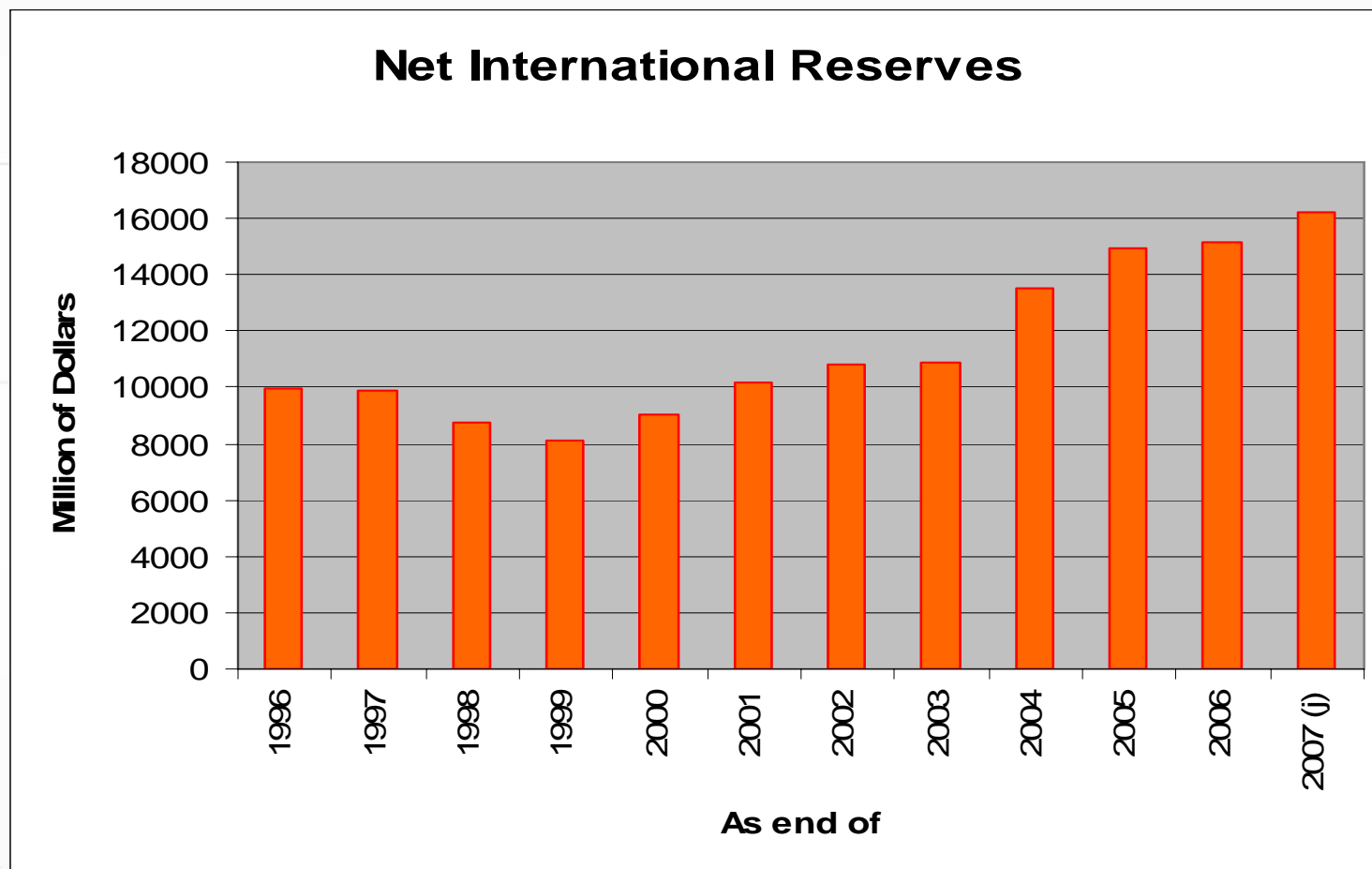
IN ADDITION, VOLATILITY OPTIONS, BOTH PUT AND CALL, HAVE BEEN FREQUENTLY ACTIVATED OVER THE LAST THREE YEARS



# EFFECTIVENESS OF FX INTERVENTION

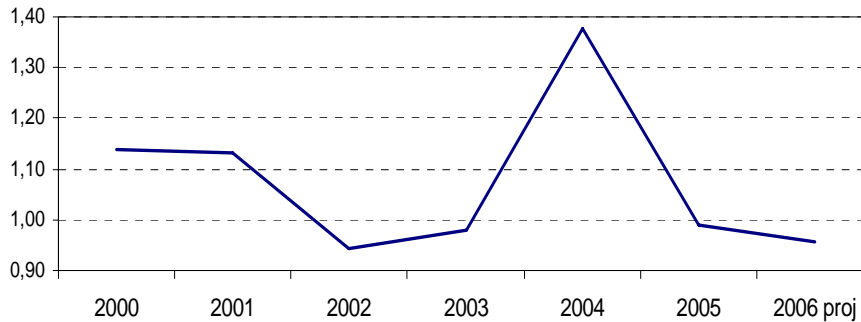


FX INTERVENTION HAS BEEN AN EFFECTIVE INSTRUMENT TO RAISE INTERNATIONAL RESERVES TO ADEQUATE LEVELS

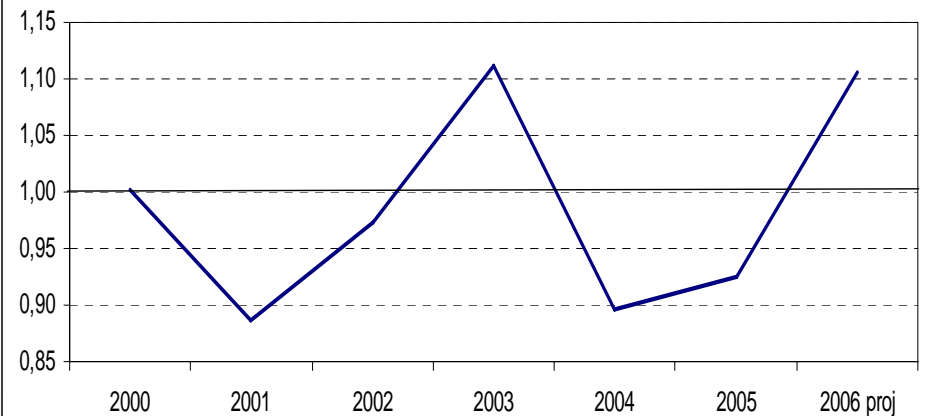


# WHICH HELPED TO IMPROVE KEY INDICATORS OF INTERNATIONAL LIQUIDITY

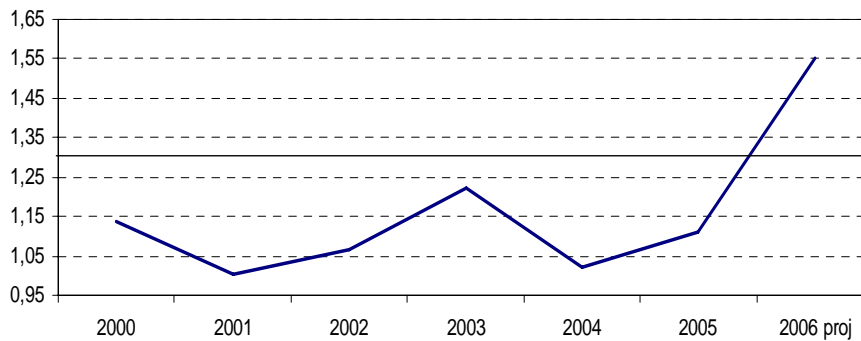
**International Reserves / (Foreign Debt Payments in the next 12 months + Projected Current Account deficit in present year)**



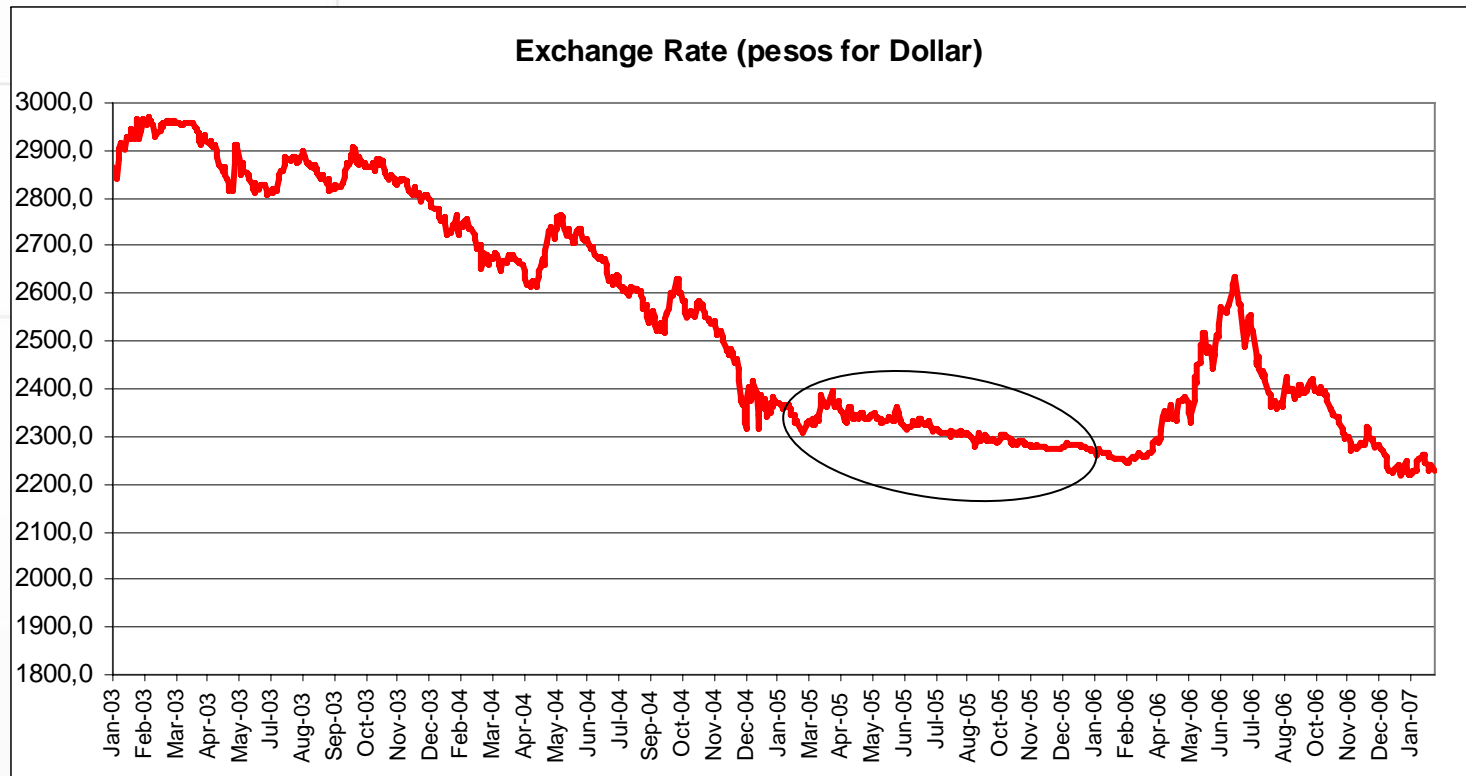
**International Reserves / (Foreign Debt Payments in the next 12 months + Projected Current Account deficit in the next year)**



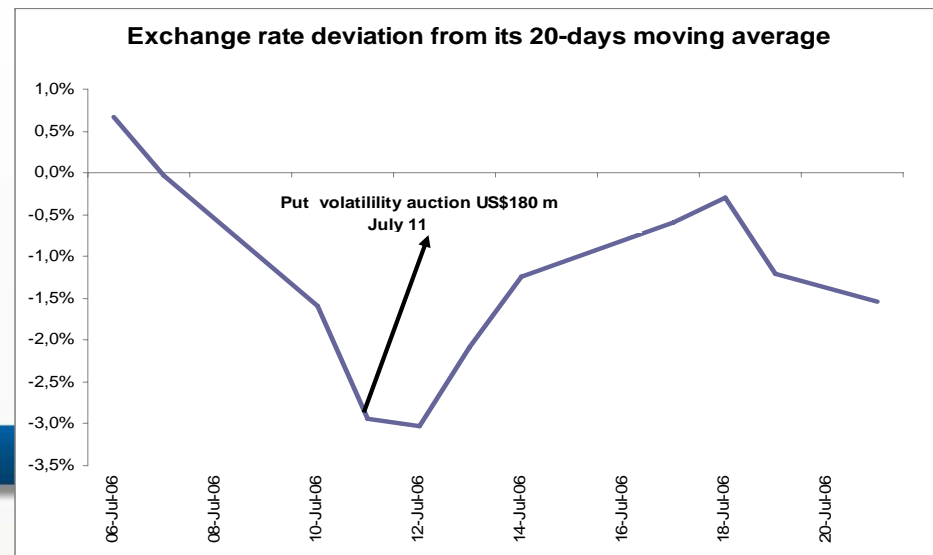
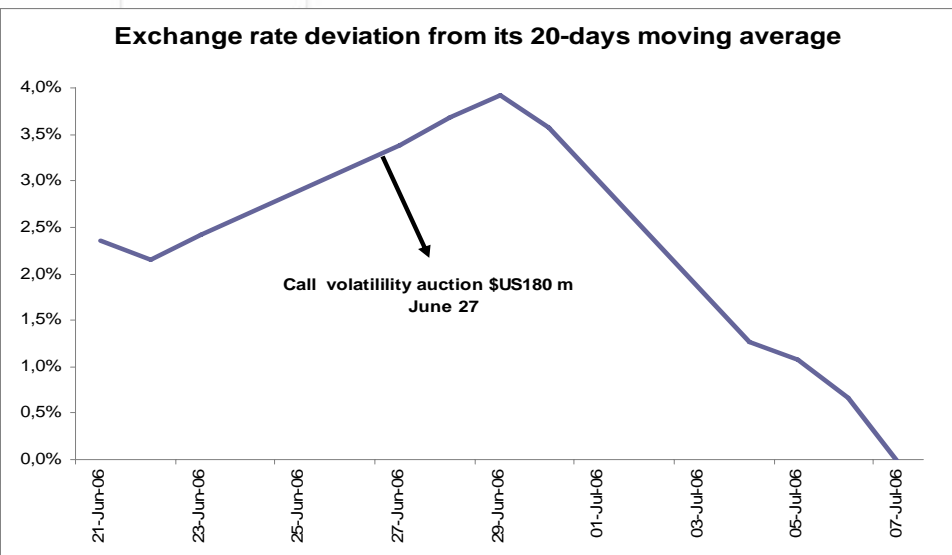
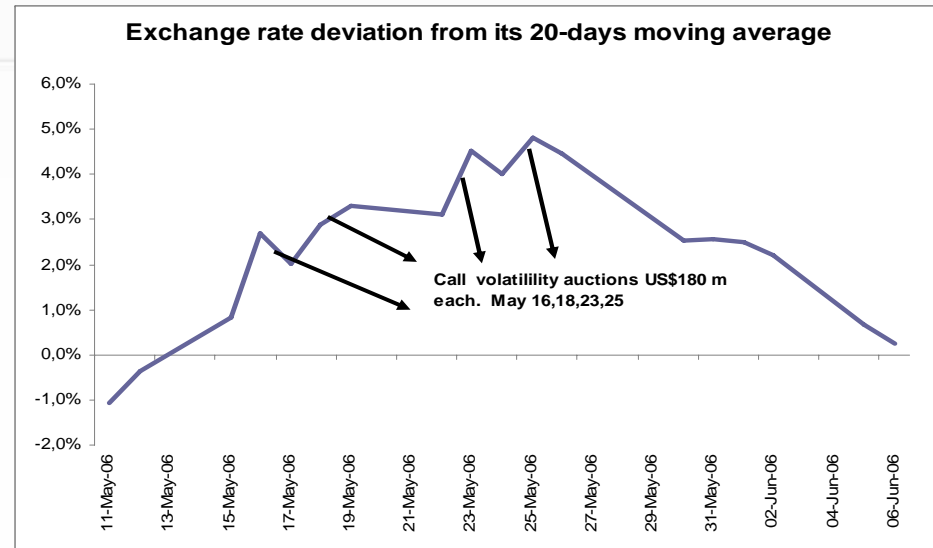
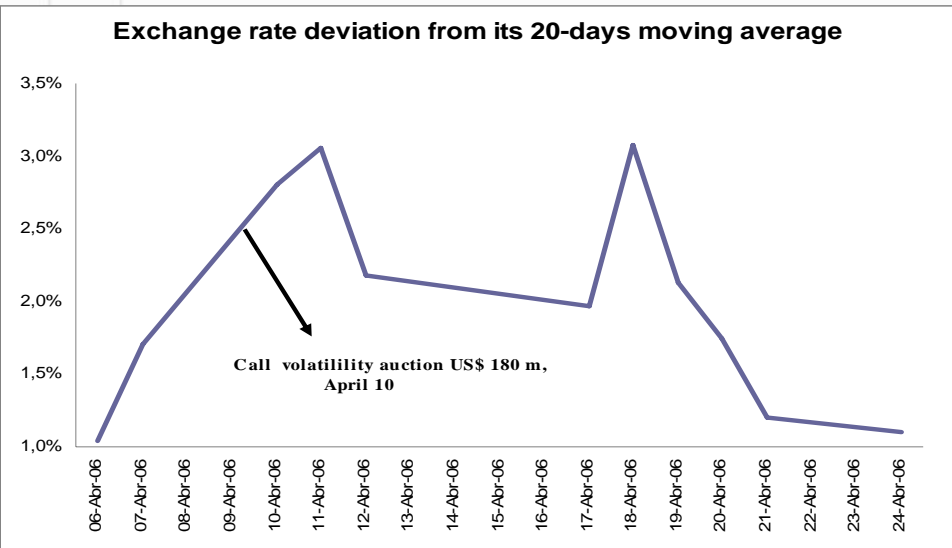
**International Reserves / (Foreign Debt Payments in the next 12 months)**



IN ADDITION, AS IT WAS CLEAR IN 2005, FX INTERVENTION MODERATED EXCHANGE RATE APPRECIATION IN THE FACE OF TRANSITORY SHOCKS



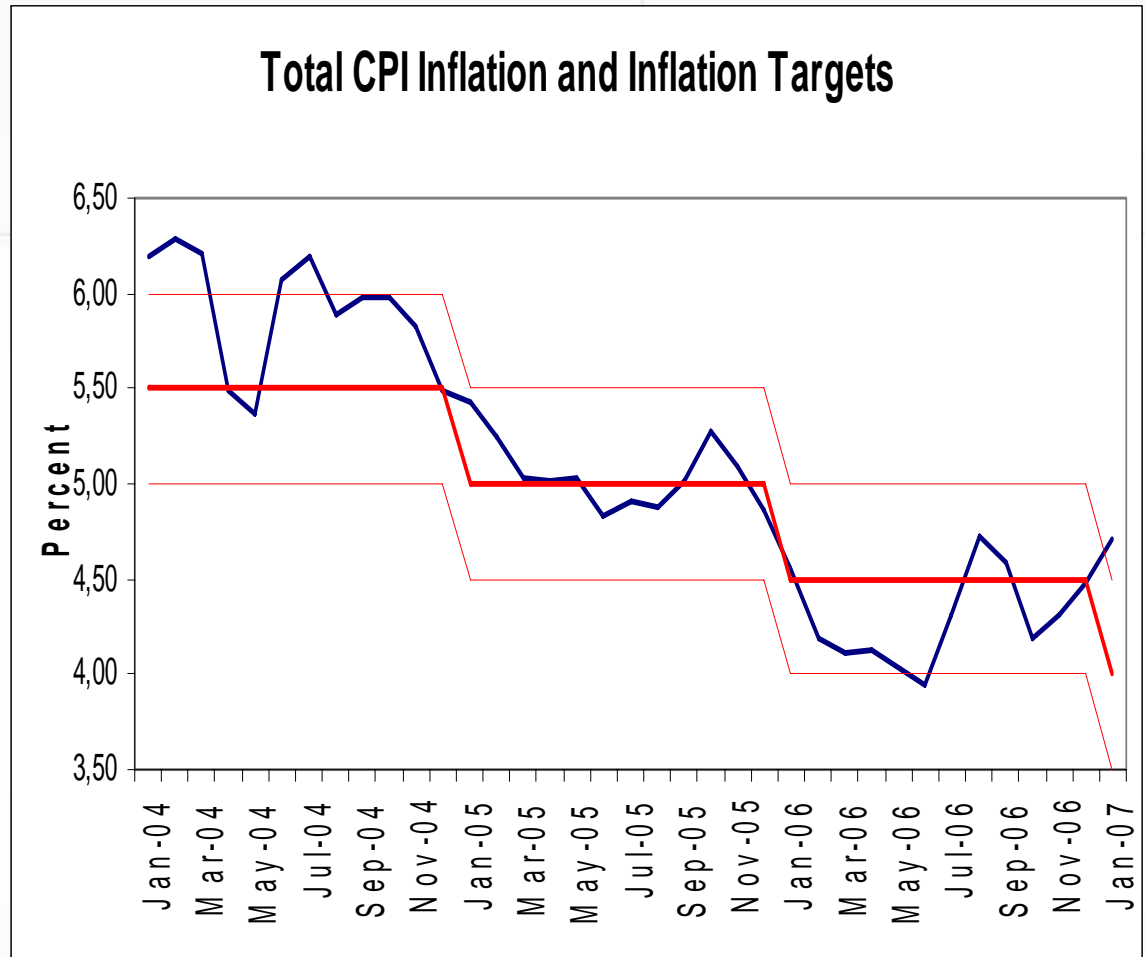
# OPTIONS FOR CONTROLLING VOLATILITY HAVE HAD A RATHER POOR PERFORMANCE FOR ACHIEVING ITS PURPOSE.



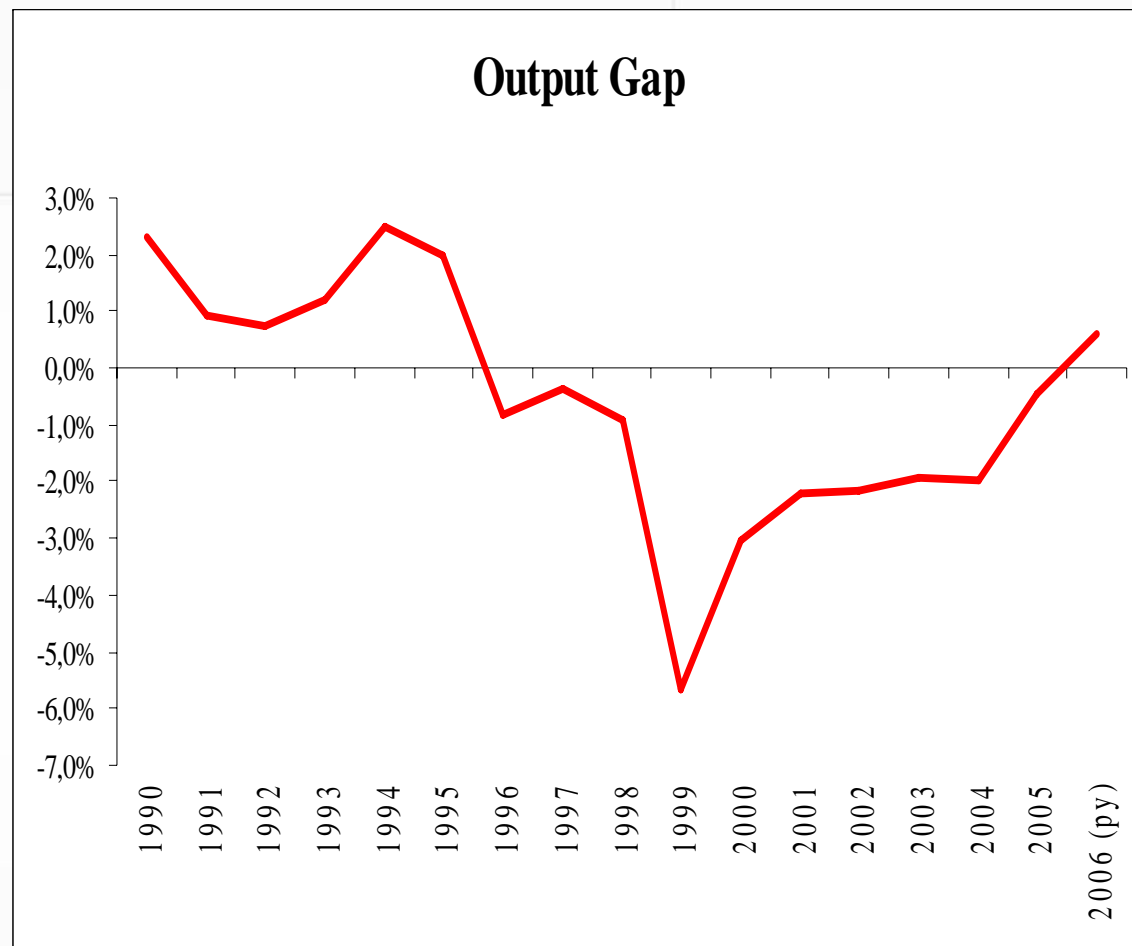
# Consistency between Inflation Targeting and FX Intervention



- Intervention in the FX market has not prevented to continue the disinflation process and to achieve inflation targets with remarkably precision, particularly for the last three years
- Thus, on an ex-post basis, it can be said that FX intervention has been consistent with inflation targeting (IT).



In part, ex-post consistency has been possible due to the existence of a negative output gap that has permitted to combine a loose monetary policy with FX intervention.



POLICY COORDINATION WITH THE TREASURY:  
ANOTHER KEY ELEMENT FOR MAINTAINING  
CONSISTENCY

- The Government has reduced its FX exposure  
→ Part of the reserves purchased in the market by the Bank were sold to the Treasury to shift the composition of public debt.
- The Treasury has kept all its excess liquidity in deposits at the Central Bank (Fiscal restraint helps in this sense).



# THUS, COORDINATION WITH THE GOVERNMENT HAS BEEN AN EFFECTIVE STERILIZATION DEVICE

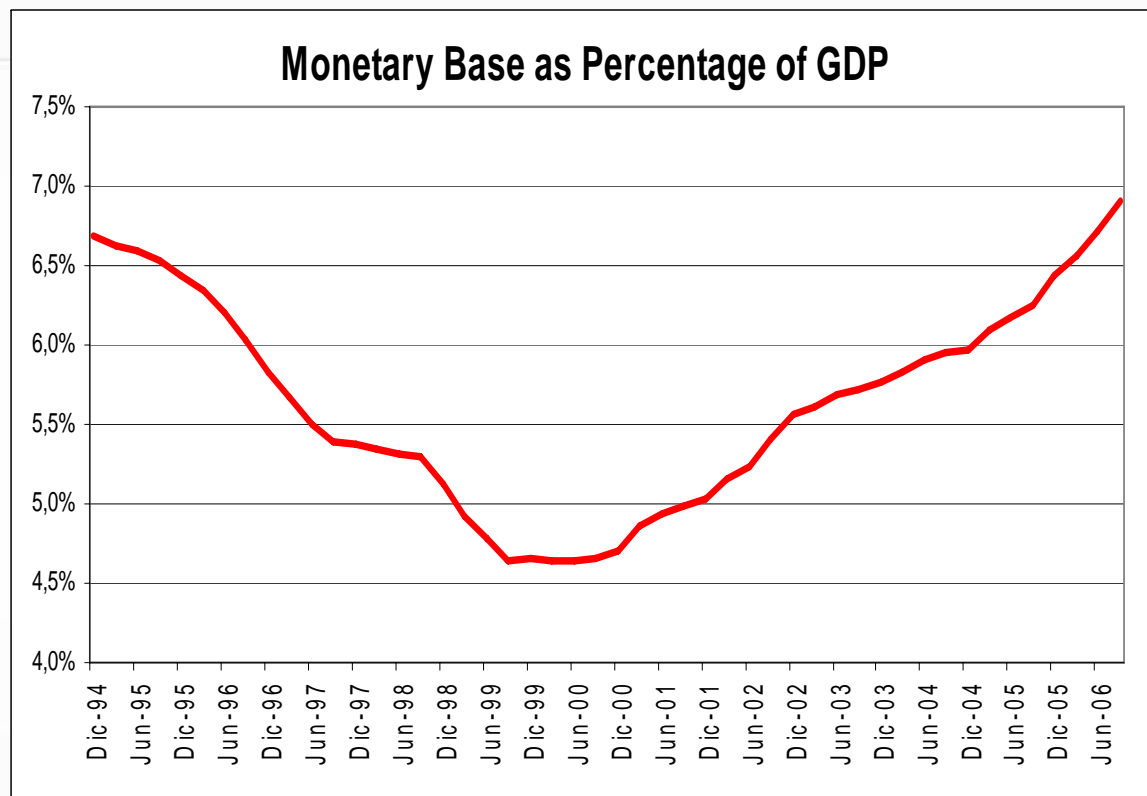
## SOURCES OF GROWTH OF THE MONETARY BASE

Miles of millions \$

	2000	2001	2002	2003	2004	2005	2006
<b>I. Net purchases of international reserves</b>	675	1.445	-517	-703	7.446	10.758	1.785
<b>II. Treasury</b>	432	1.310	1.296	914	-1.488	-10.156	-300
Trasfers of Central Bank Profits	516	1.226	1.226	830	803	0	793
Deposits	-84	84	70	83	-1.038	-2.637	1.175
Sales of international reserves	0	0	0	0	-1.252	-7.519	-2.268
<b>II. Public bonds held by the Central Bank</b>	190	-954	150	568	-2.524	897	-327
<b>IV. REPOS</b>	-755	-730	1.128	1.492	-1.058	1.539	2.586
<b>V. Others</b>	429	-135	399	239	270	506	483
<b>VI. Change of Monetary Base</b>	971	937	2.457	2.510	2.647	3.543	4.227

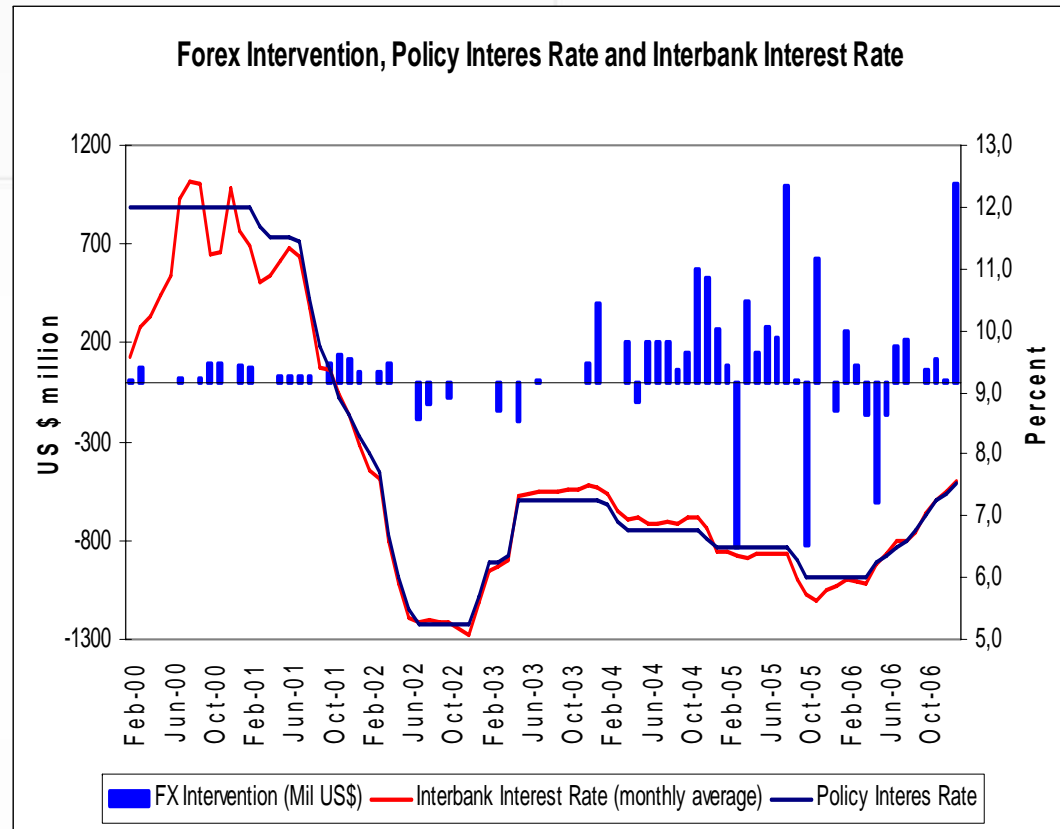


- Consistency has also been possible as a result of the significant increase of money demand that has allowed the Central Bank to purchase international reserves as a way to meet the increasing demand for money at the policy interest rates



- Consistency is reflected in that purchases of reserves have been made in a context of decreasing or constant interest rates (2004-April 2006).

- However, most recently, as the output gap is becoming positive, and the central bank is progressively increasing its interest rate, consistency between intervention and monetary policy is vanishing



- In fact, as inflation is accelerating, monetary authorities will have to continue increasing interest rates. In these conditions, inconsistency between IT and FX intervention will exacerbate

### Transmission Mechanism Model

Period	Inflation		Output Gap	Interbank (average)	Term Dep (average)	Exch. rate	Annual Depreciación (avg)
	Target	Active Forecast					
Mar-06	4,88	4,16	0,29	5,93	5,92	2.264	-9,44
Jun-06	4,75	3,97	0,80	6,15	5,85	2.431	-5,28
Sep-06	4,63	4,54	0,47	6,65	6,31	2.434	-1,04
<b>Dic-06</b>	<b>4,50</b>	<b>4,47</b>	<b>1,00</b>	<b>7,21</b>	<b>6,47</b>	<b>2.304</b>	<b>1,57</b>
Mar-07	4,37	4,61	1,20	8,22	7,44	2.231	2,21
Jun-07	4,25	4,75	1,26	8,90	8,54	2.229	-0,95
Sep-07	4,12	4,03	1,12	9,21	9,31	2.233	-4,41
<b>Dic-07</b>	<b>4,00</b>	<b>3,98</b>	<b>0,88</b>	<b>9,37</b>	<b>9,80</b>	<b>2.231</b>	<b>-5,39</b>
Mar-08	3,87	4,23	0,54	9,40	10,09	2.317	-4,14
Jun-08	3,75	3,98	0,24	9,33	10,23	2.329	-0,96
Sep-08	3,62	3,92	-0,03	9,12	10,21	2.342	2,46
<b>Dic-08</b>	<b>3,50</b>	<b>3,84</b>	<b>-0,30</b>	<b>8,80</b>	<b>10,05</b>	<b>2.356</b>	<b>4,70</b>



- An active sterilization policy, by using all available mechanisms will need to be implemented in order to prevent inflationary effects of FX intervention.
- Nonetheless, Sterilization, even if effective, does not solve the problem of inconsistency, and actually could aggravate it
- In such circumstances FX intervention does not seem to be feasible for too long.
- What to do?
- Pure floating is not a feasible option in face enormous interests at stake
- A decisive countercyclical fiscal policy could help, but it does not seem to be a practical option at least in the short-term

