



The Market Expectations System: An Important Tool for Policy Support and Forecasting

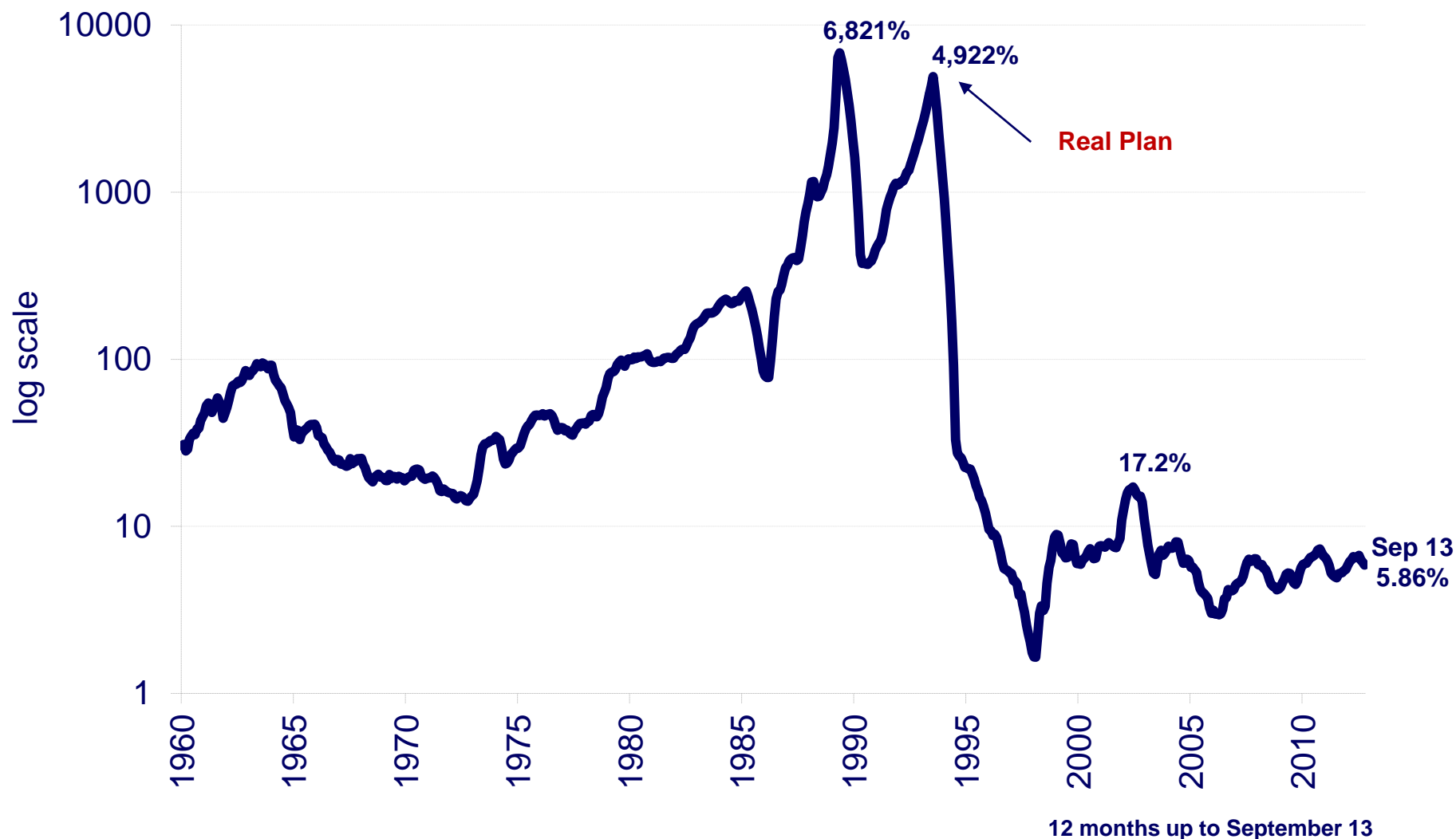
Renato Jansson Rosek

October 2013

-
- I. Historical Background**
 - II. Main Features of the System**
 - III. Reports**
 - IV. Use in Policy Making Process**

I. Historical Background

Inflation: Historic Background



Inflation Targeting Regime: Implementation in Brazil

- In the first years (1994-1999) of the Real Plan, inflation control relied on a foreign exchange anchor. With the fixed exchange rate regime collapse (January 99), it was necessary to search for a new nominal anchor for the economy; alternatives like....
 - **Monetary aggregate control?**
 - **New exchange rate anchor?**
 - **Dollarization?**

.... did not seem viable in practice;
- **Inflation Targeting Regime** was implemented in June 1999, complementing the transition to the floating exchange rate regime.

Nominal Exchange Rate – US\$



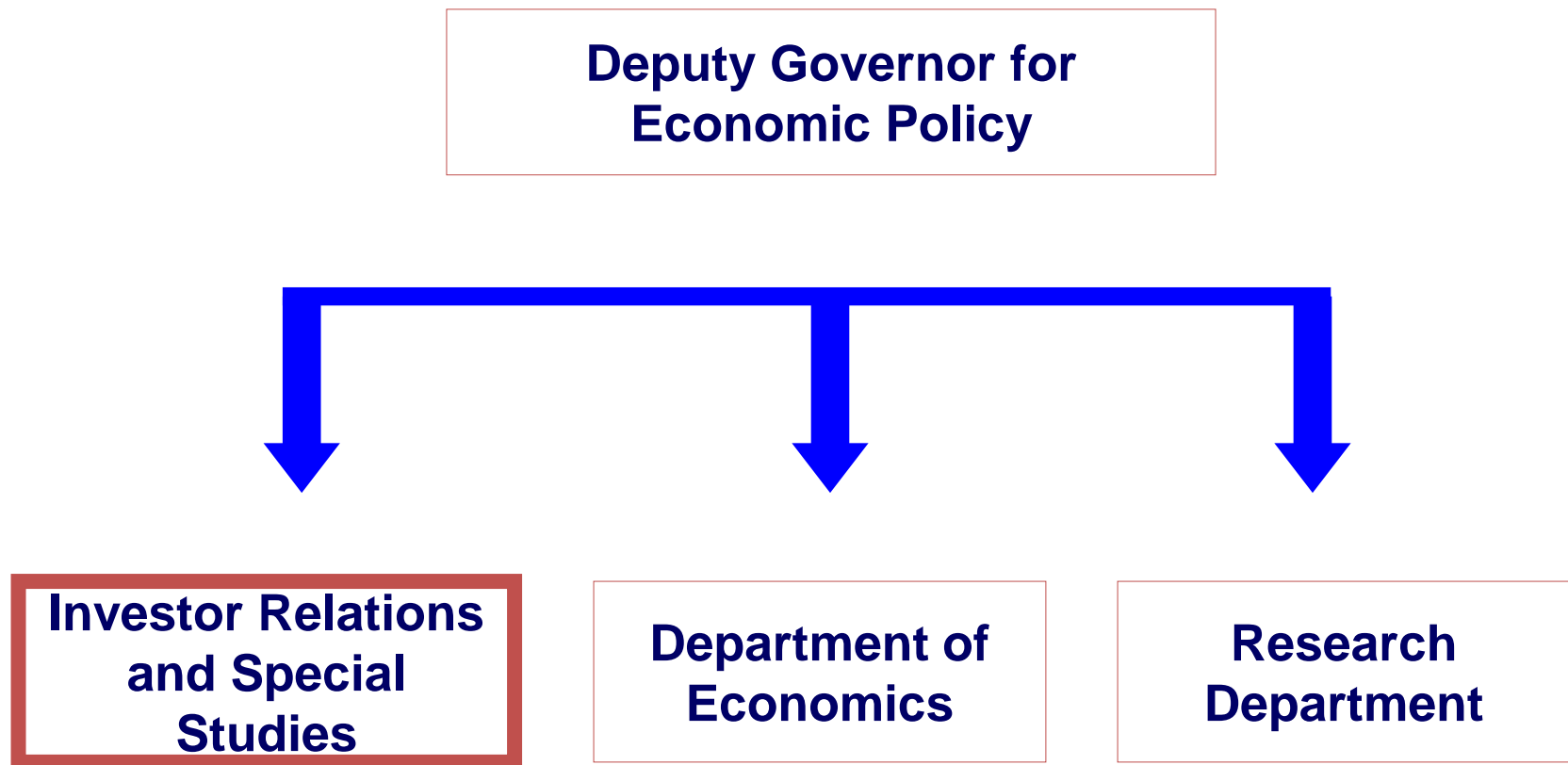
Inflation Targeting Regime

- The BCB is committed to act in order to guarantee that the inflation rate remains in line with a pre-established target, publicly announced;
- Under an Inflation Targeting framework, the coordination of inflation expectations plays an important role;
- Hence, the need for collecting expectations in a systematic and adequate way arose, leading to the development of the survey on expectations.

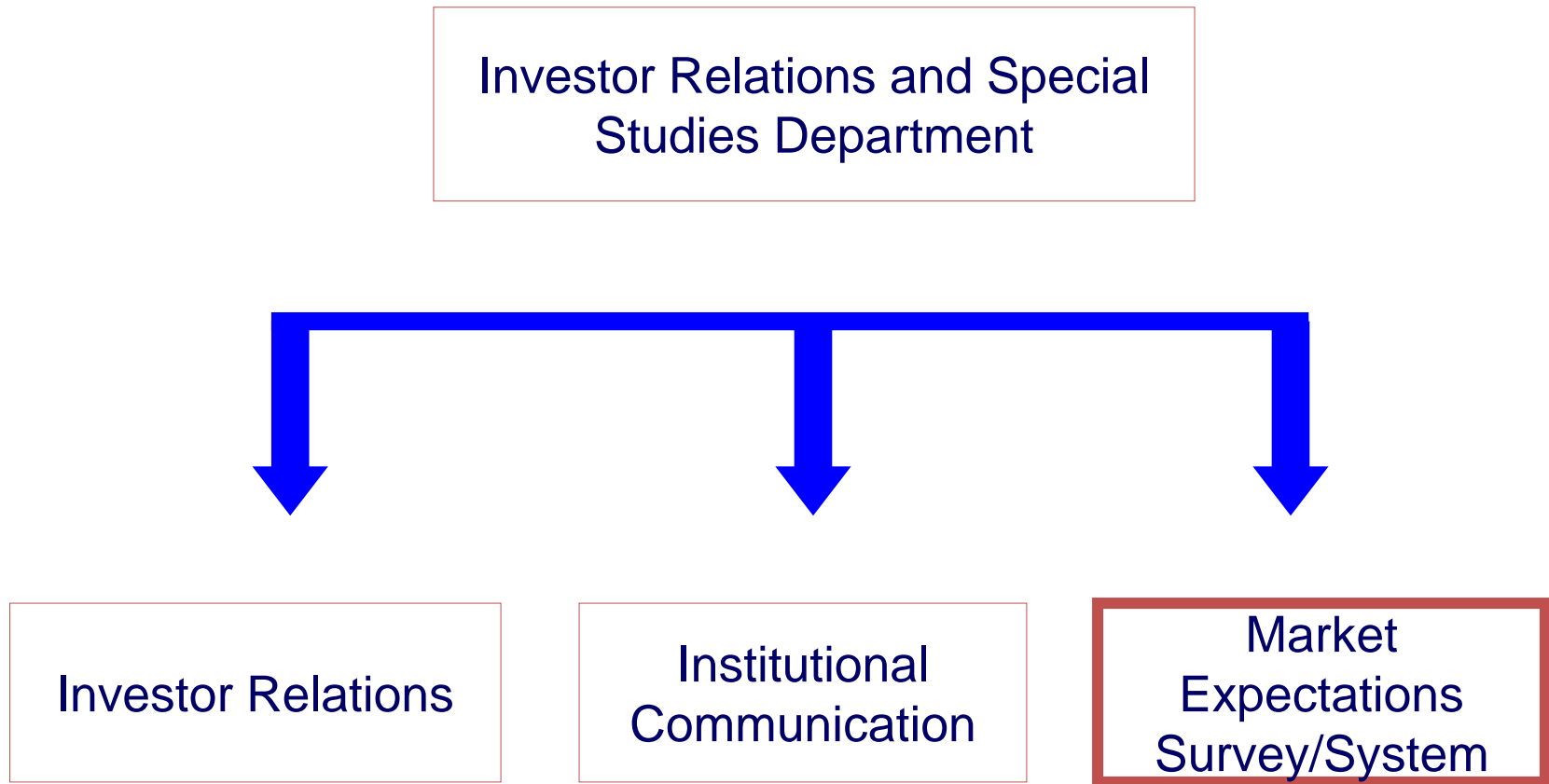
BCB's Investor Relations Unit (Gerin)

- **Created in 1999 in the transition to the inflation targeting regime;**
- **Objective:**
 - Improve two-way communication between the BCB and the private sector (both domestic and foreign), with a special focus on investors;
- **Main Tasks:**
 - **Management of the market expectations survey/system;**
 - Maintenance of the communication channel with domestic and foreign investors and the public in general;
 - Technical support for the Board (presentations).

BCB: Economic Area Organizational Chart



Investor Relations' Main Tasks



Expectations Survey: First Steps (1999/2000)

- The survey was designed to collect professional forecasting from economists;
- Investor Relations Staff (Gerin) initially contacted market participants by phone or fax;
- Market participants informed their expectations for annual inflation, GDP growth and exchange rate;
- Gerin published the statistical measures (mean, median, standard deviation) on a monthly basis;
- **At the beginning, a very simple survey !!!**

Expectations Survey: Online version (2001)

- In November 2001 the online system was implemented. A major IT upgrade took place in March 2010;
- The Market Expectations System nowadays collects forecasts from **more than a hundred** professional forecasters (economists) about the main macroeconomic variables in Brazil.

II. Main Features of the System

Expectations Survey: Online version (2001)

- It is a relevant tool for the monetary policy decision. The statistics generated by the System are presented at the Monetary Policy Meetings and are also used as inputs for the inflation forecasting models;
- Summary of Data and the daily calculated statistics are published on BCB's webpage on a weekly basis;
- Data get extensive coverage by the media and it is widely used by the public.

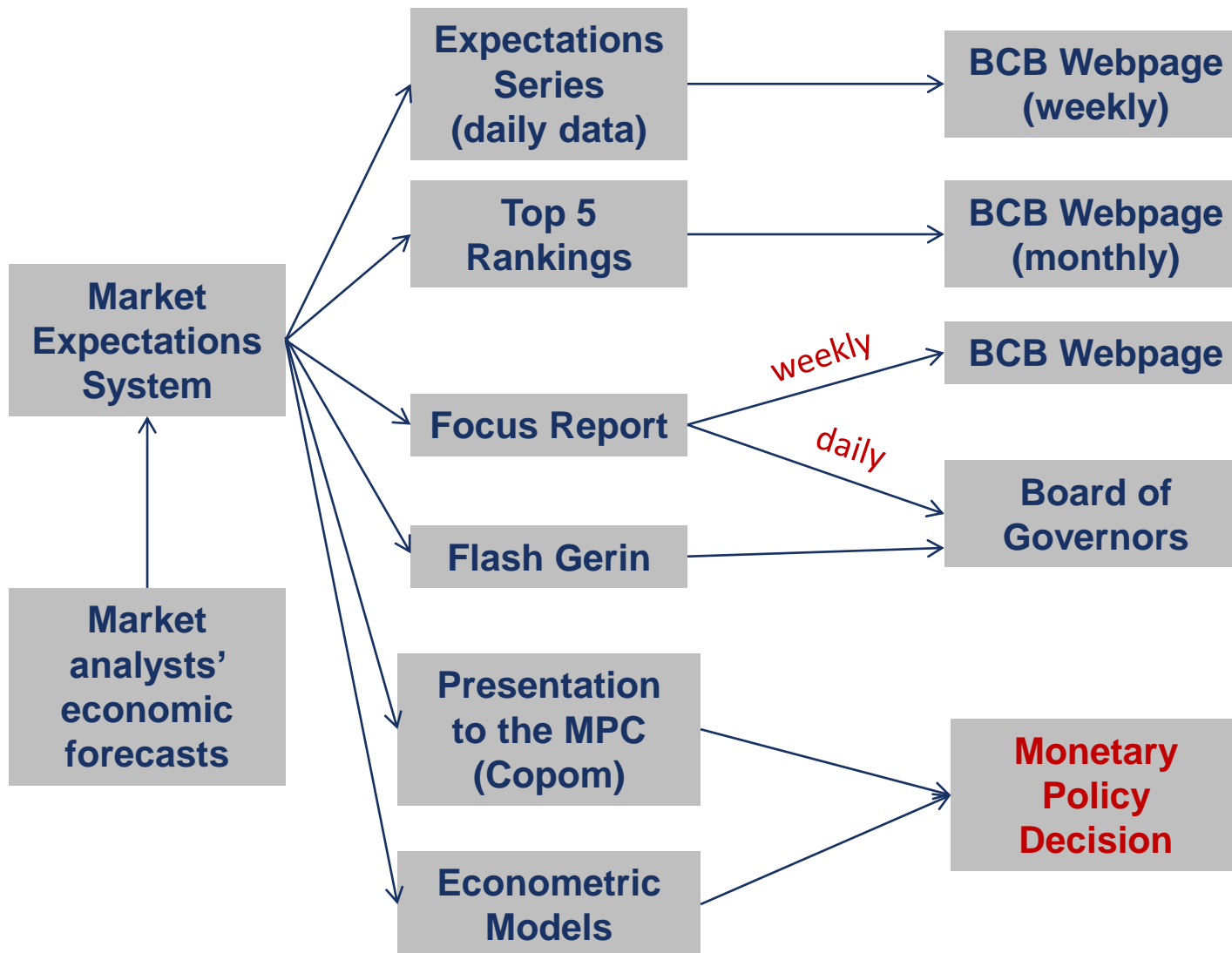
Main Features

- About 120 previously accredited institutions can provide projections online at any moment through a specially designed web-based platform;
- **An economist must be responsible for the projections;**
- Forecasts may be updated at any moment, and **statistics are calculated every working day, at 5 PM,** based on the most recent information provided in the previous 30 days;
- Individual information is confidential, and all the published reports consider just consolidated data.

Characteristics

- Variables collected: price indices, GDP growth, industrial output, basic interest rate (Selic), exchange rate (BRL/USD), fiscal results and variables of the BoP. **Forecasts are provided for horizons up to 18 months, 6 quarters and 5 years, according to each variable;**
- Surveyed institutions may access their individual historical forecasts, besides Gerin, as the system manager;
- Historical series and a weekly summary of the statistics may be accessed by the public at <https://www3.bcb.gov.br/expectativas/publico/en/serieestatisticas> and <http://www.bcb.gov.br/?MARKETREADOUT>.

Market Expectations System Flow of Data



III. Reports

Focus – Market Readout

The Focus-Market Readout, **released on a daily basis to the Board of Governors**, is a summary of the statistics calculated by the system at **5pm** on every working day. It also contains several graphs showing the evolution of the projections. The report generated on Friday is published at the *Banco Central* website and gets extensive coverage by the media. The weekly version is also sent to a mailing list, subscribed by **more than 18,000** individuals and companies, for the Portuguese version, and by **more than 5,000**, for the English one.

Publicity: Focus – Market Readout



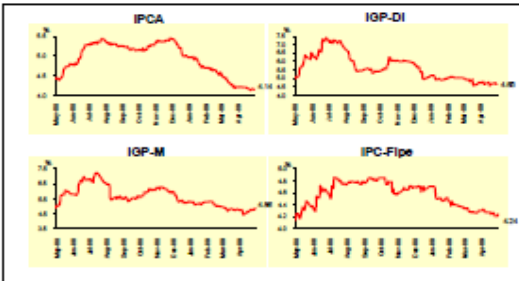
Focus - Market Readout

Gerin

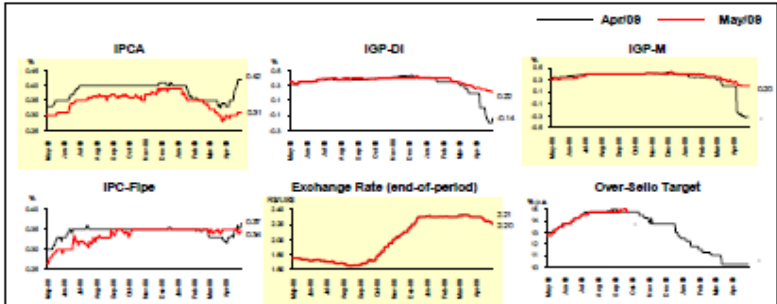
April 30, 2009

Market Expectations				
Inflation in the next 12 months - Smoothed				
Median - Aggregate	4 Market Readouts ago	Last Market Readout	Today	Weekly trend*
IPCA (%)	4.19	4.13	4.14	▲ (1)
IGP-DI (%)	4.75	4.66	4.65	▼ (1)
IGP-M (%)	4.73	4.75	4.86	▲ (3)
IPC-Fipe (%)	4.32	4.21	4.24	▲ (1)

* trend since the last Market Readout; the figures in parenthesis express the number of weeks with the same behavior (▲ increase, ▼ decrease or = stability)



Market Expectations								
Median - Aggregate	Apr09				May09			
	4 Market Readouts ago	Last Market Readout	Today	Weekly trend*	4 Market Readouts ago	Last Market Readout	Today	Weekly trend*
IPCA (%)	0.33	0.42	0.42	▲ (1)	0.29	0.31	0.31	▲ (1)
IGP-DI (%)	0.20	-0.20	-0.14	▲ (1)	0.26	0.23	0.22	▼ (2)
IGP-M (%)	0.20	-0.32	-	-	0.27	0.20	0.20	▲ (2)
IPC-Fipe (%)	0.31	0.35	0.37	▲ (4)	0.35	0.34	0.34	▲ (1)
Exchange rate - end-of-period (R\$/US\$)	2.30	2.24	2.20	▼ (3)	2.30	2.24	2.21	▼ (3)
Over-Sello Target - end-of-period (% p.a.)	10.25	10.25	-	-	-	-	-	-



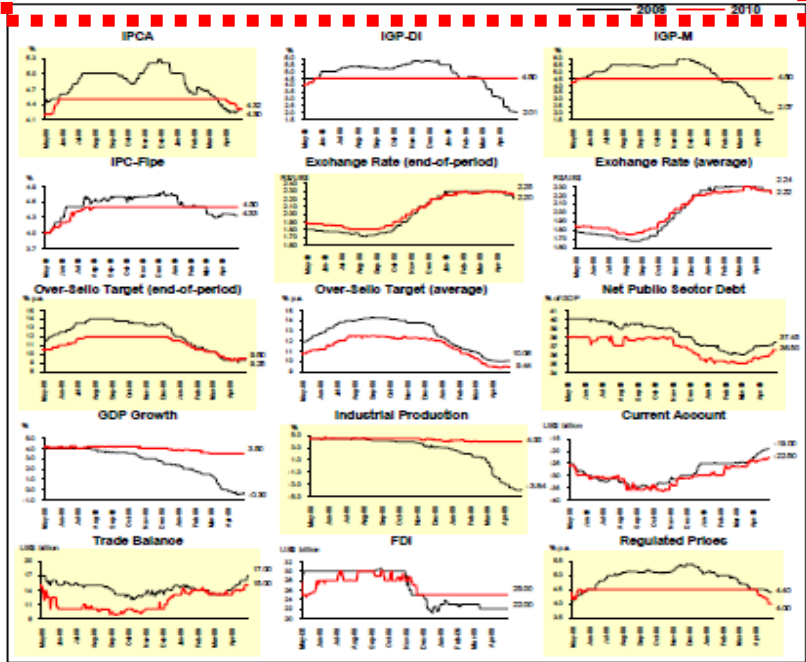
Focus - Market Readout

Gerin

April 30, 2009

Market Expectations							
Median - Aggregate	2009				2010		
	4 Market Readouts ago	Last Market Readout	Today	Weekly trend*	4 Market Readouts ago	Last Market Readout	Today
IPCA (%)	4.26	4.30	4.30	▲ (1)	4.46	4.30	4.32
IGP-DI (%)	3.03	2.98	2.91	▼ (12)	4.50	4.50	4.50
IGP-M (%)	2.71	1.99	2.07	▲ (1)	4.50	4.50	4.50
IPC-Fipe (%)	4.37	4.35	4.33	▲ (1)	4.50	4.50	4.50
Exchange rate - end-of-period (R\$/US\$)	2.30	2.25	2.20	▼ (1)	2.29	2.27	2.25
Exchange rate - average (R\$/US\$)	2.29	2.25	2.24	▼ (1)	2.25	2.25	2.22
Over-Sello Target - end-of-period (% p.a.)	9.25	9.25	9.25	▲ (6)	9.30	9.50	9.50
Over-Sello Target - average (% p.a.)	10.03	10.03	10.06	▲ (2)	9.50	9.50	9.44
Net Public Sector Debt (% of GDP)	37.00	37.17	37.45	▲ (2)	36.76	36.50	36.50
GDP growth (%)	-0.19	-0.39	-0.30	▲ (2)	3.50	3.50	3.50
Industrial Production (% growth)	-3.06	-4.00	-3.84	▲ (1)	4.00	4.00	4.00
Current Account (US\$ billion)	-22.80	-19.50	-19.00	▲ (6)	-24.00	-23.58	-22.50
Trade Balance (US\$ billion)	14.50	16.00	17.00	▲ (1)	13.70	15.00	15.00
Foreign Direct Investment (US\$ billion)	22.00	22.00	22.00	▲ (7)	25.00	25.00	25.00
Regulated Prices (%)	4.50	4.45	4.40	▼ (2)	4.50	4.00	4.00

* trend since the last Market Readout; the figures in parenthesis express the number of weeks with the same behavior (▲ increase, ▼ decrease or = stability)



Focus – Market Readout



Gerin

Focus - Market Readout

April 30, 2009

Median - Aggregate	Market Expectations							
	2009				2010			
	4 Market Readouts ago	Last Market Readout	Today	Weekly trend*	4 Market Readouts ago	Last Market Readout	Today	Weekly trend*
IPCA (%)	4.26	4.30	4.30	= (1)	4.46	4.30	4.32	▲ (1)
IGP-DI (%)	3.03	2.05	2.01	▼ (12)	4.50	4.50	4.50	= (49)
IGP-M (%)	2.71	1.99	2.07	▲ (1)	4.50	4.50	4.50	= (50)
IPC-Fipe (%)	4.37	4.35	4.33	▼ (1)	4.50	4.50	4.50	= (39)
Exchange rate - end-of-period (R\$/US\$)	2.30	2.25	2.20	▼ (1)	2.29	2.27	2.25	▼ (3)
Exchange rate - average (R\$/US\$)	2.29	2.25	2.24	▼ (1)	2.26	2.25	2.22	▼ (1)
Over-Selic Target - end-of-period (% p.a.)	9.25	9.25	9.25	= (6)	9.38	9.50	9.50	= (3)
Over-Selic Target - average (% p.a.)	10.03	10.03	10.06	▲ (2)	9.50	9.50	9.44	▼ (1)
Net Public Sector Debt (% of GDP)	37.00	37.17	37.45	▲ (2)	35.76	36.50	36.50	= (1)
GDP growth (%)	-0.19	-0.39	-0.30	▲ (2)	3.50	3.50	3.50	= (9)
Industrial Production (% growth)	-3.06	-4.00	-3.84	▲ (1)	4.00	4.00	4.00	= (11)
Current Account (US\$ billion)	-22.60	-19.50	-19.00	▲ (6)	-24.00	-23.55	-22.50	▲ (3)
Trade Balance (US\$ billion)	14.50	16.00	17.00	▲ (1)	13.70	15.00	15.00	= (1)
Foreign Direct Investment (US\$ billion)	22.00	22.00	22.00	= (7)	25.00	25.00	25.00	= (23)
Regulated Prices (%)	4.50	4.45	4.40	▼ (2)	4.50	4.00	4.00	= (1)

* trend since the last Market Readout; the figures in parenthesis express the number of weeks with the same behavior
(▲ increase, ▼ decrease or = stability)

Focus Report Headlines and News

07/10, 8:32 --FOCUS: INDUSTRIAL OUTPUT FOR 2014 FALLS FROM 2.40% TO 2.30%
07/10, 8:32 --FOCUS: INDUSTRIAL OUTPUT FOR 2013 FALLS FROM 1.92% TO 1.70%
07/10, 8:32 --FOCUS: MONITORED PRICES INCREASE FOR 2014 FALLS FROM 4.20% TO 4.10%
07/10, 8:31 --FOCUS: MONITORED PRICES INCREASE FOR 2013 REMAINS AT 1.80%
07/10, 8:31 --FOCUS: IGP-M FOR 2014 RISES FROM 5.90% TO 5.92%
07/10, 8:31 --FOCUS: IGP-M FOR 2013 FALLS FROM 5.73% TO 5.72%
07/10, 8:31 --FOCUS: IGP-DI FOR 2014 FALLS FROM 5.96% TO 5.92%
07/10, 8:30 --FOCUS: IGP-DI FOR 2013 RISES FROM 5.63% TO 5.67%
07/10, 8:30 --FOCUS: IPCA FOR 2014 - TOP5 MEDIUM TERM REMAINS AT 6.17%
07/10, 8:30 --FOCUS: IPCA FOR 2013 - TOP5 MEDIUM TERM REMAINS AT 5.80%
07/10, 8:29 --FOCUS: AVERAGE EXCHANGE RATE FOR 2014 REMAINS AT R\$ 2.37
07/10, 8:29 --FOCUS: AVERAGE EXCHANGE RATE FOR 2013 FALLS FROM R\$ 2.18 TO R\$ 2.17
07/10, 8:29 --FOCUS: BRL/USD FOR END-2013 REMAINS AT 2.30 AND FOR END-2014 AT 2.40
07/10, 8:29 --FOCUS: SELIC FOR OCTOBER REMAINS AT 9.50%
07/10, 8:29 --FOCUS: IPCA FOR OCTOBER REMAINS AT 0.56%
07/10, 8:28 --FOCUS: IPCA FOR SEPTEMBER REMAINS AT 0.35%
07/10, 8:28 --FOCUS: IPCA SMOOTHED FOR 12 MONTHS AHEAD RISES FROM 6.21% TO 6.23%
07/10, 8:28 --FOCUS: SELIC FOR END-2013 AND 2014 REMAINS AT 9.75%
07/10, 8:28 --FOCUS: GDP GROWTH FOR 2014 REMAINS AT 2.20%
07/10, 8:27 --FOCUS: GDP GROWTH FOR 2013 GOES FROM 2.40% TO 2.47%
07/10, 8:27 --FOCUS: IPCA FOR 2014 FALLS FROM 5.97% TO 5.95%
07/10, 8:27 --BC/FOCUS: IPCA FOR 2013 REMAINS AT 5.82%

Focus Report Headlines and News

08:45 FOCUS: SELIC FOR END-2013 AND END-2014 REMAINS AT 9.75%

Brasília, 07/10/2013 – With just some days left until the upcoming decision of the Central Bank Monetary Policy Committee (Copom), financial market analysts participating in the Focus survey kept the median of their forecasts for the basic interest rate at 9.75% p.a. for the end of both 2013 and 2014. A month ago, the median of these expectations was already at this level in both cases.

For the short-term, the median of forecasts for the October Selic rate remained at 9.50% p.a., as in the previous week and four weeks ago. According to the market analysts, the basic interest rate will average 8.34% p.a. this year – percentage already achieved a week ago and four weeks ago. For 2014, Selic forecasts average 9.75%, as in the Focus Reports of the previous week and four weeks ago. (Célia Froufe - celia.froufe@estadao.com)

Focus – Frequency Distribution (monthly)



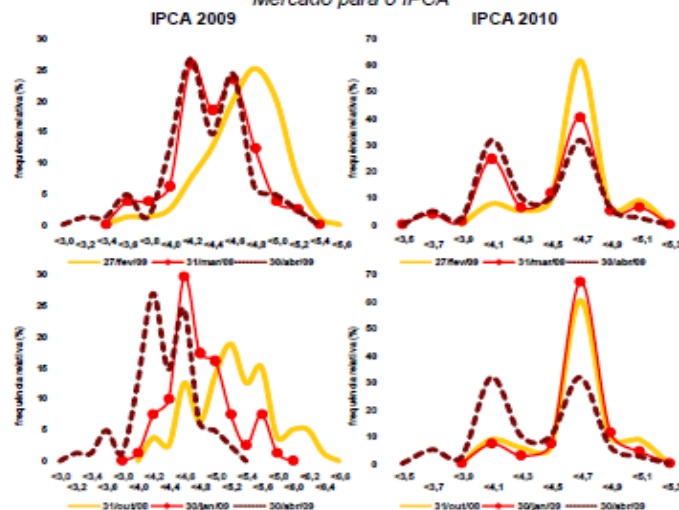
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Focus - Distribuições de Frequência das Expectativas de Mercado para o IPCA

4 de maio de 2009

A Gerência-Executiva de Relacionamento com Investidores (Gerin) divulga a seguir a evolução recente das distribuições de frequência das expectativas de mercado para o IPCA do ano corrente e do próximo ano.

Evolução Recente das Distribuições de Frequência das Expectativas de Mercado para o IPCA



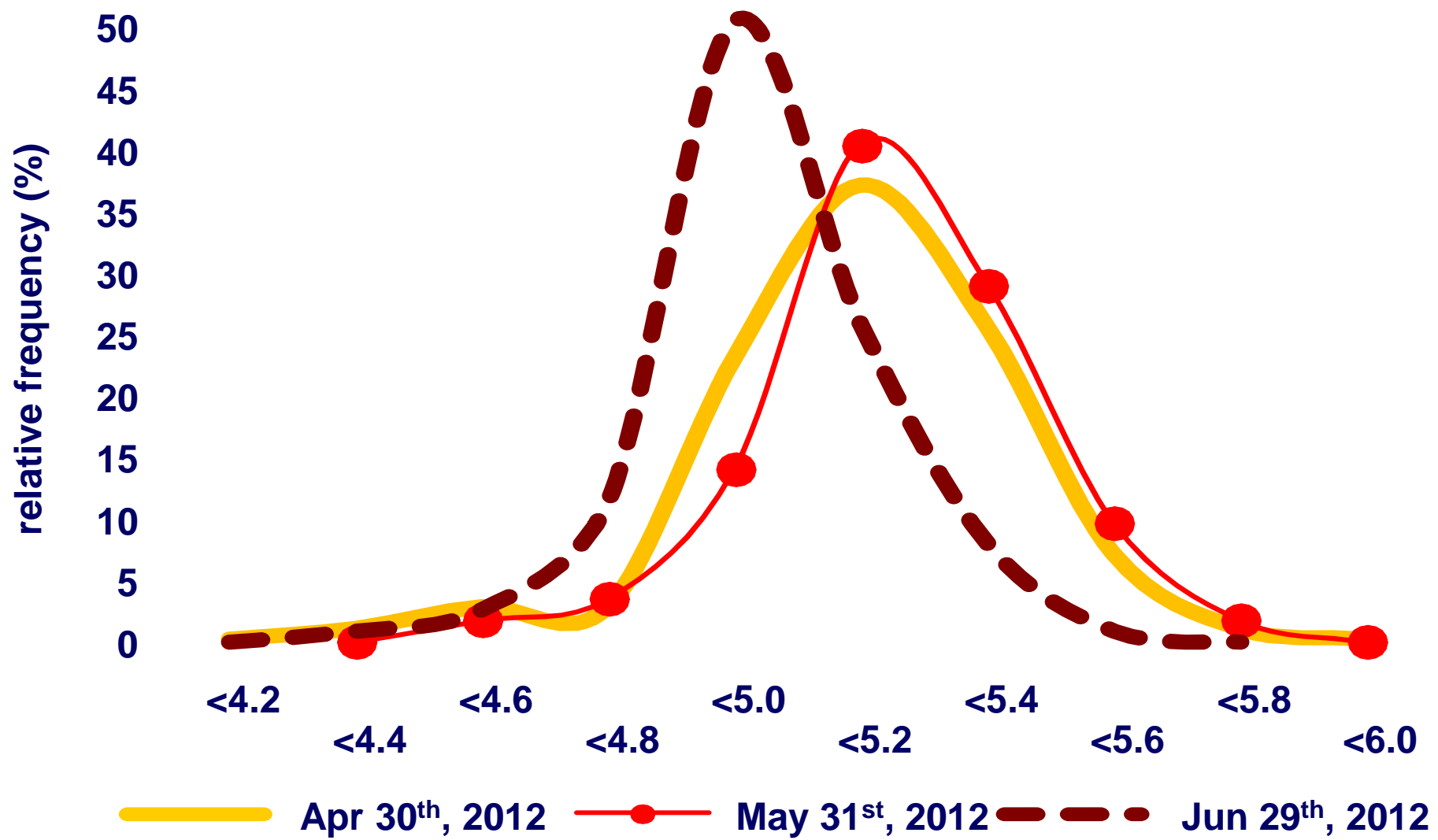
data	Medianas IPCA	
	2008	2010
27/fev	4,98	4,50
31/mar	4,32	4,50
30/abr	4,30	4,32
31/out	5,08	4,50
30/jan	4,80	4,50
30/abr	4,30	4,32

Obs.: o formato do gráfico, a partir de uma mesma base de dados, pode sofrer alterações em edições futuras, caso os intervalos sejam alterados em virtude da maior ou menor amplitude da distribuição.

O conteúdo deste documento é informativo. Não restringe as ações de política monetária e cambial do Banco Central do Brasil. Questões e comentários para gerin@bcb.gov.br

1

Focus – Frequency Distribution



Top 5 Rankings

- **Objective: to foster private sector's forecasting expertise and to stimulate the timely input of data;**
- Published every month for the short and medium term categories, and annually for the long term categories;
- Calculated for three inflation indices, exchange rate and the base interest rate (Selic);
- The System also calculates statistics for the Top 5 institutions.

Top 5 Rankings

Every month Gerin publishes the Top 5 rankings, which comprise the institutions with the forecasts' best track record.

- Monthly rankings include:
 - ⇒ Short-term Ranking;
 - ⇒ Medium-term Ranking;
- Annual rankings include:
 - ⇒ Long-term Ranking (considers the projections made up to one year prior to the reference date); and
 - ⇒ Short and Medium-term (started in 2009): a ranking based on the monthly rankings published during the year.

Top 5 Rankings

Top 5 Forecasting Institutions – January

February 5, 2010

The Investor Relations Group (Gerin) has announced the Top 5 forecasting institutions for January 2010.

Table 1
Top 5 Forecasting Institutions – Short-Run
January 2010

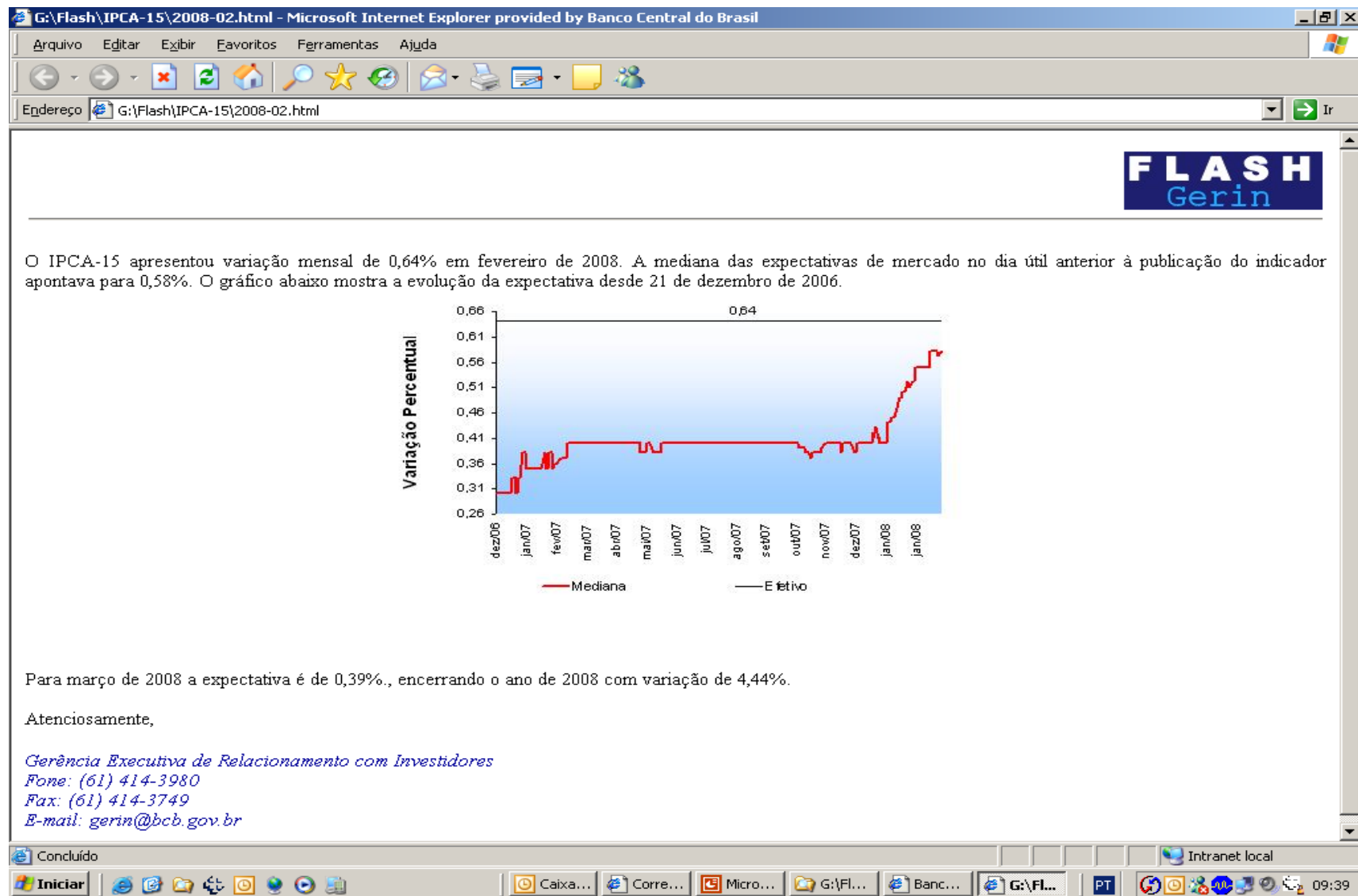
IPCA		Deviation
1	Banco Bradesco S.A.	0.0342
2	Banco JP Morgan S.A.	0.0363
3	Brascan Gestão de Ativos	0.0383
4	BNP Paribas Asset Management Brasil Ltda	0.0417
5	Banco Itaú - Asset Management	0.0433

IGP-DI		Deviation	IGP-M		Deviation
1	Banco Itaú S.A.	0.1650	1	GAP Asset Management	0.1017
2	GAP Asset Management	0.1767	2	UBS Pactual S.A.	0.1217
3	Mauá Consult. Invest. & Econômica Ltda	0.1850	3	Rosenberg & Associados S/C Ltda.	0.1350
4	Banco de Investimentos Credit Suisse	0.1867	4	Modal Asset Management Ltda	0.1400
5	Goldman Sachs do Brasil Banco Múltiplo SA	0.1950	5	Banco JP Morgan S.A.	0.1433
5	UBS Pactual S.A.	0.1950	5	Concórdia S.A. CVMCC	0.1433

Exchange Rate		Deviation	Over Selic		Deviation
1	Banco Fibra S.A.	0.0431	1	Banco Fator S/A	0.0000
2	ING Bank N.V.	0.0441	1	Banco Fibra S.A.	0.0000
3	Votorantim Asset	0.0442	1	Banco West LB do Brasil S.A.	0.0000
4	Tendências Consultoria Integrada	0.0469	1	CM Capital Markets	0.0000
5	Mauá Consult. Invest. & Econômica Ltda	0.0471	1	Kinea Investimentos Ltda	0.0000
			1	Mauá Consult. Invest. & Econômica Ltda	0.0000
			1	UBS Pactual S.A.	0.0000

Brief report distributed by e-mail to the Board of Governors and to some senior BCB officers, just after the release of economic indicators, comparing the actual values with the evolution of the median of market expectations.

Flash Gerin



IV. Use in Policy Making Process

Monetary Policy Decision Main Inputs

- Seven BCB's departments, including the Investor Relations, make technical presentations to the MPC, based on the following subjects:
 - Economic activity, inflation, monetary and credit aggregates;
 - International financial markets, external capital flows, FX market, global economy;
 - Domestic financial markets and liquidity conditions;
 - Banking reserves and reserve requirements;
 - **Market expectations for key economic variables (Investor Relations); and**
 - **Econometric Models: Inflation forecasts (Research Department).**

Market Expectations in Small-Sized Models

Phillips Curve for the Market Price Inflation

$$\pi_t^L = \sum_{i>0} \alpha_{1i} E_t \pi_{t+i} + \sum_{j>0} \alpha_{2j} \pi_{t-j} + \sum_{k \geq 0} \alpha_{3k} \pi_{t-k}^* + \sum_{l>0} \alpha_{4l} h_{t-1} + \sum_{m \geq 0} \sum_n \alpha_{5m}^n Z_{t-m}^{\pi,n} + \varepsilon_t,$$

Where:

π_t^L is the IPCA - market price inflation;

$E_t \pi_{t+i}$ is the current expectation for inflation i quarters ahead;

π_t is the headline inflation measured by the IPCA change;

π_t^* is the external inflation measured by the change of the CRB index in domestic currency;

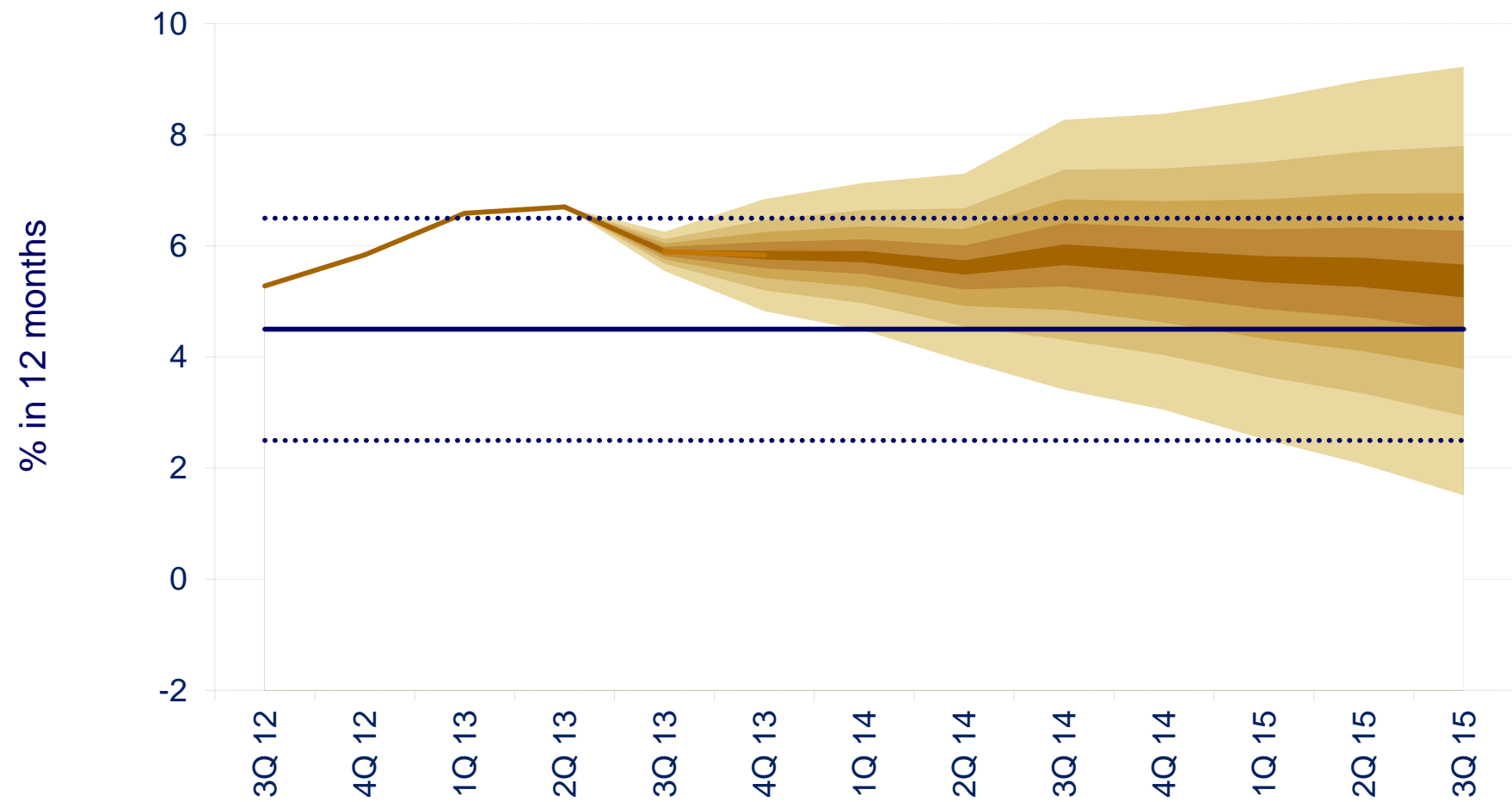
h_t is a measure of the output gap;

$Z_t^{\pi,n}$ is the controlling variable n; and

ε_t , is an error variable.

BCB Inflation Forecasts

Market Scenario (using market expectations data)*

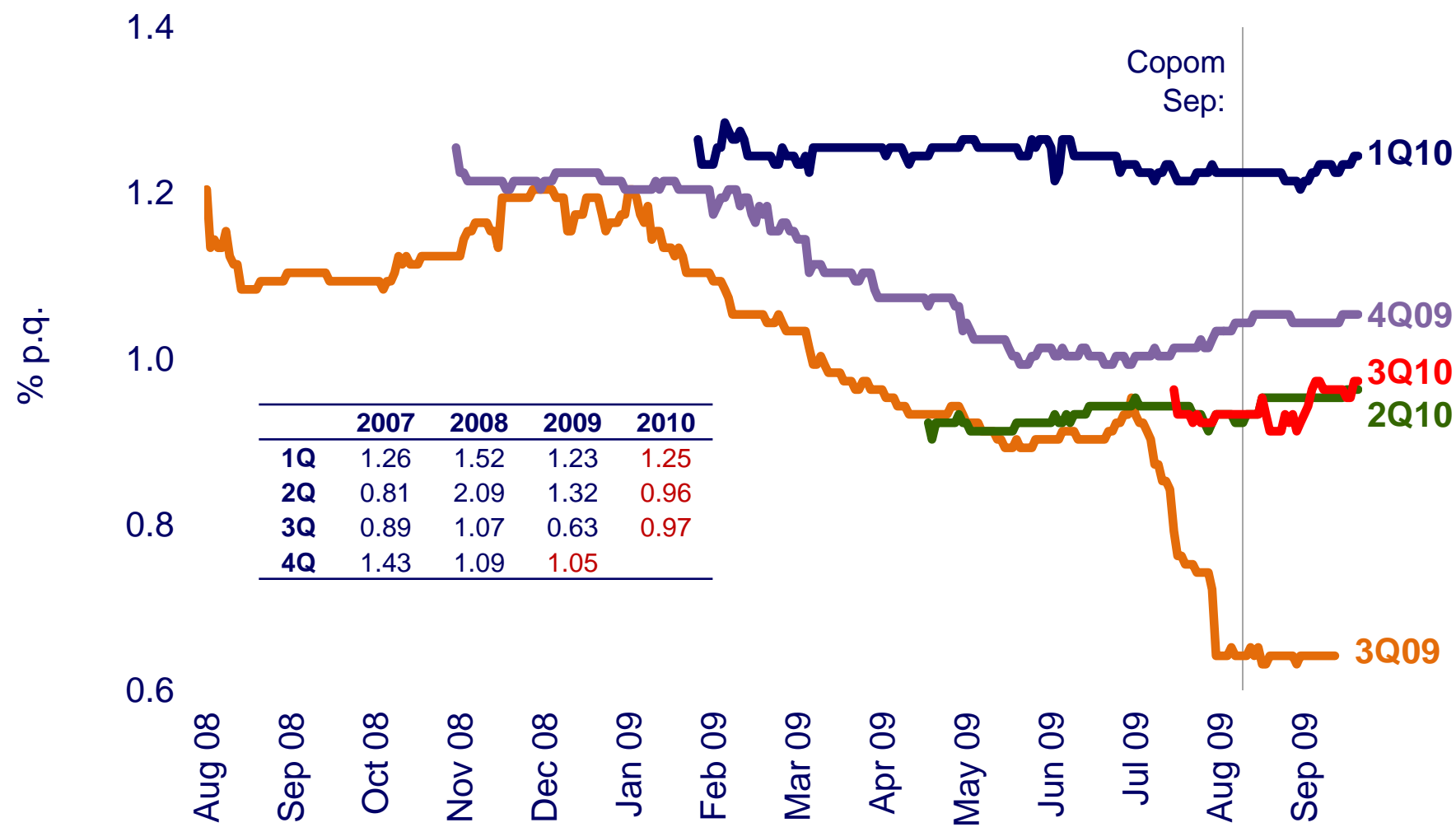


*published on the Quarterly Inflation Report

MPC Meeting: Presentation on Market Expectations

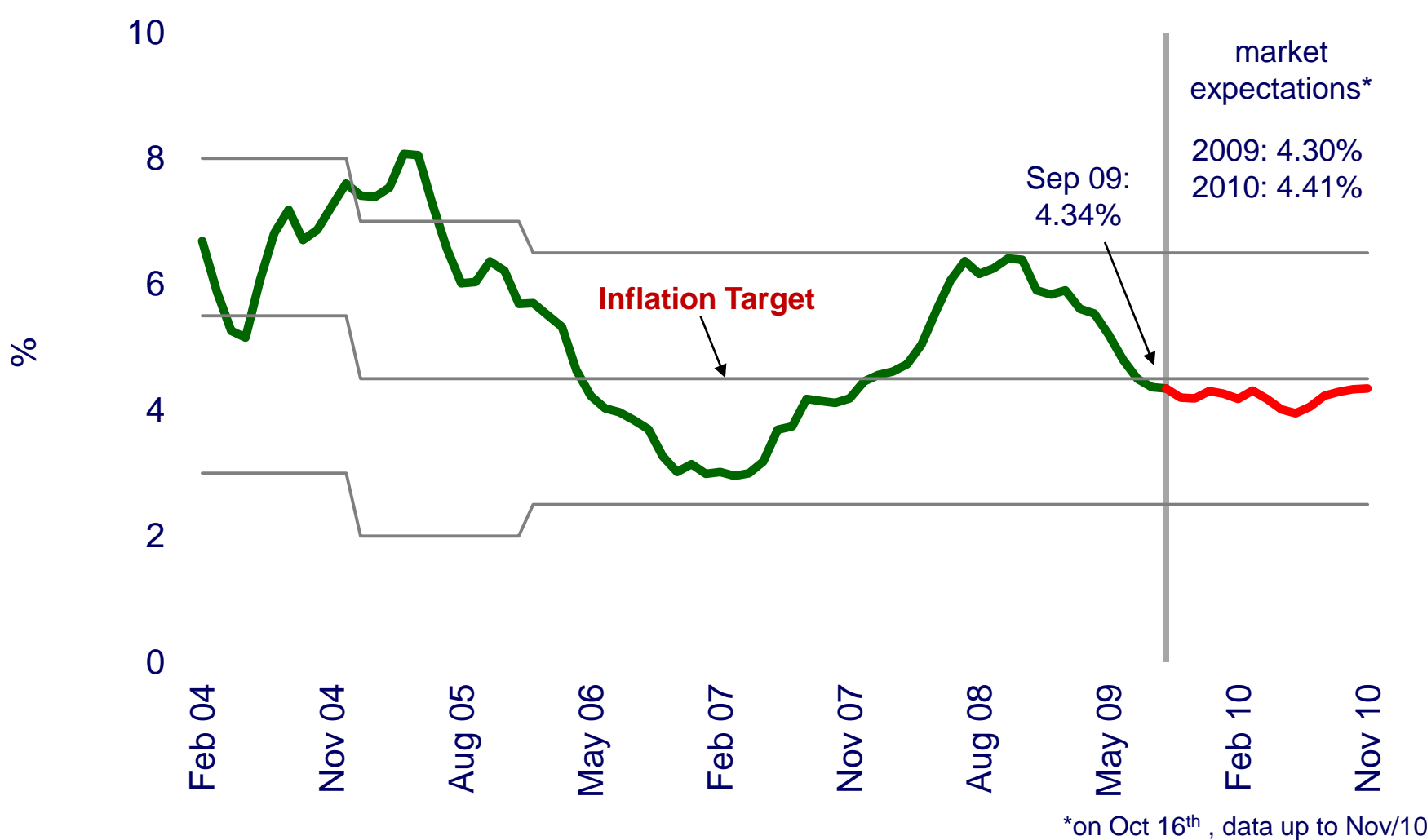
- Market Expectations have been one of the subjects presented to the Monetary Policy Committee since the inception of the Inflation Targeting Regime in 1999;
- **Almost 50 graphs and tables on 11 variables** regarding economic activity, price indices, external accounts, fiscal indicators, USD/BRL and the basic interest rate are presented at the meeting.

Sample of Graphs on Expectations Available for the MPC (Copom): Quarterly CPI Inflation*



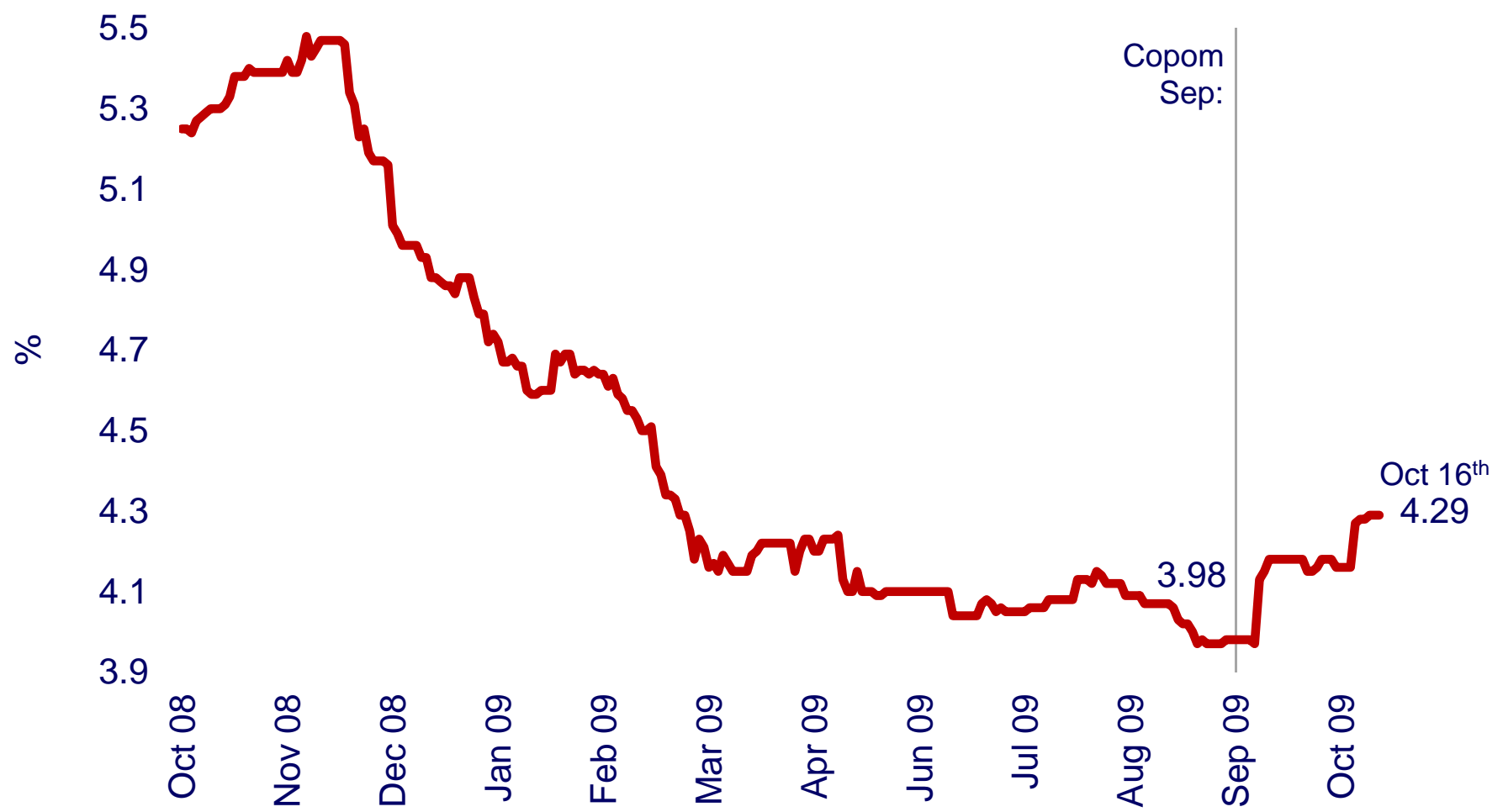
*up to Oct 16th

12 Month Accumulated Inflation: Future Path Using Monthly CPI Inflation Data

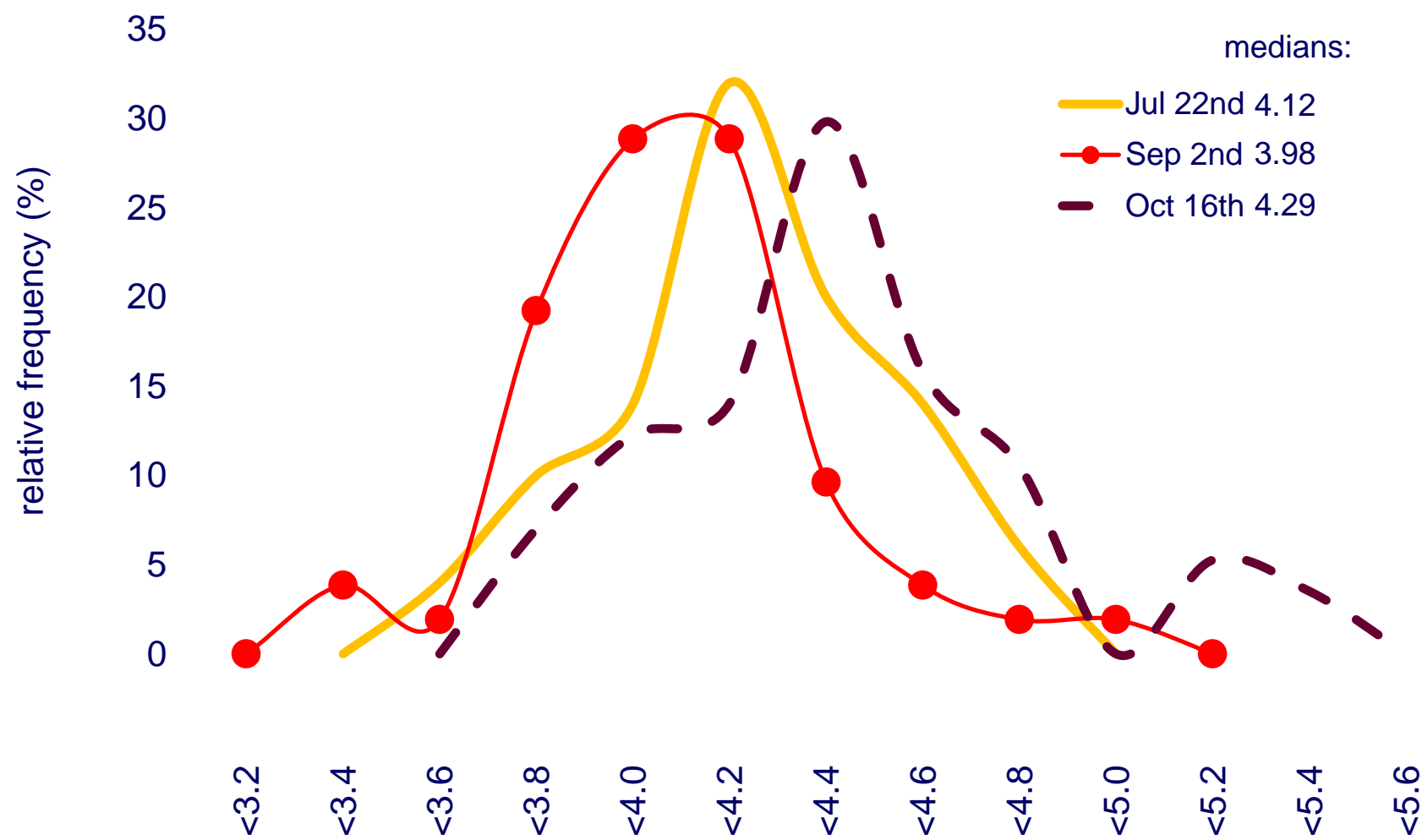


*on Oct 16th , data up to Nov/10

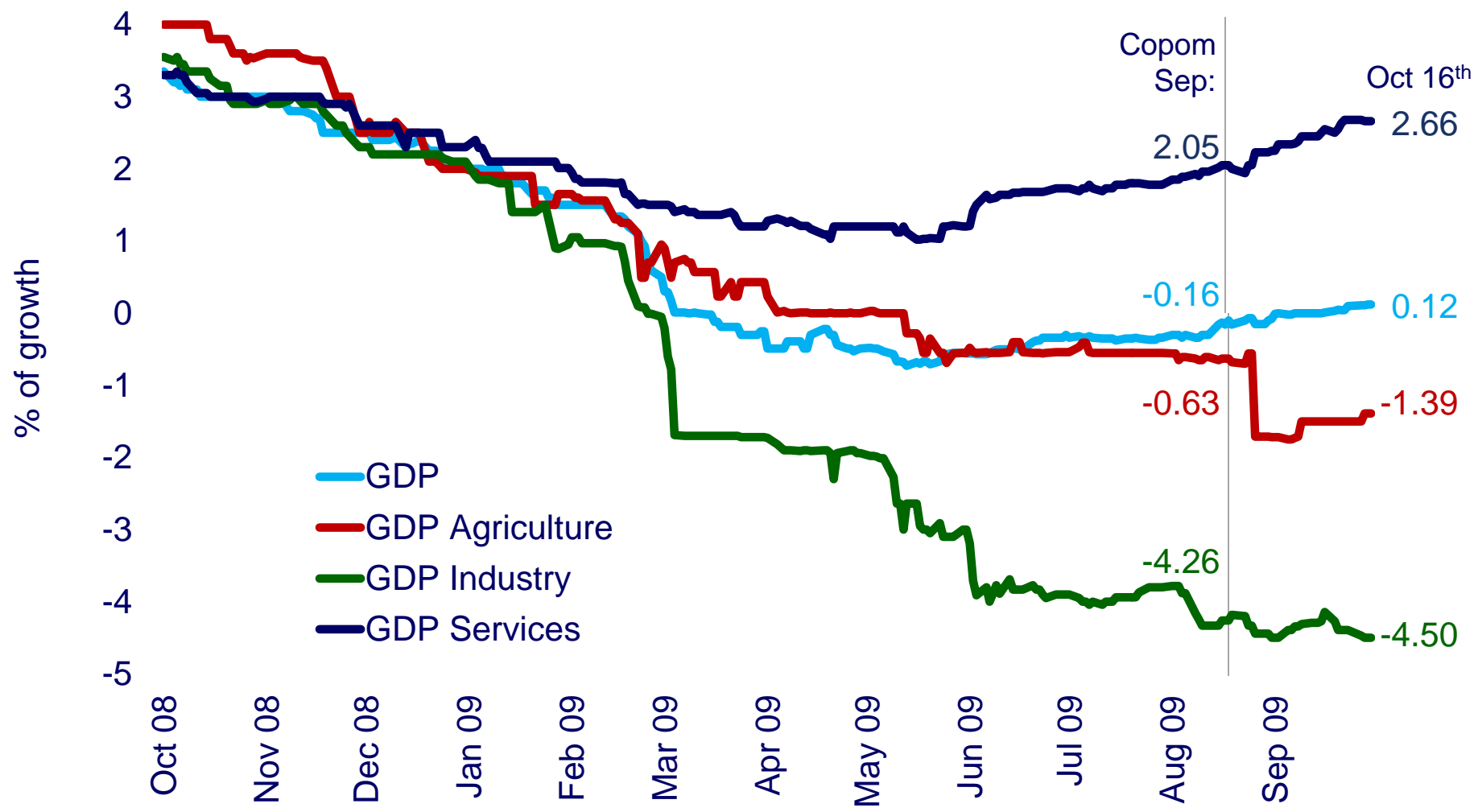
Expected CPI in the Next Twelve Months



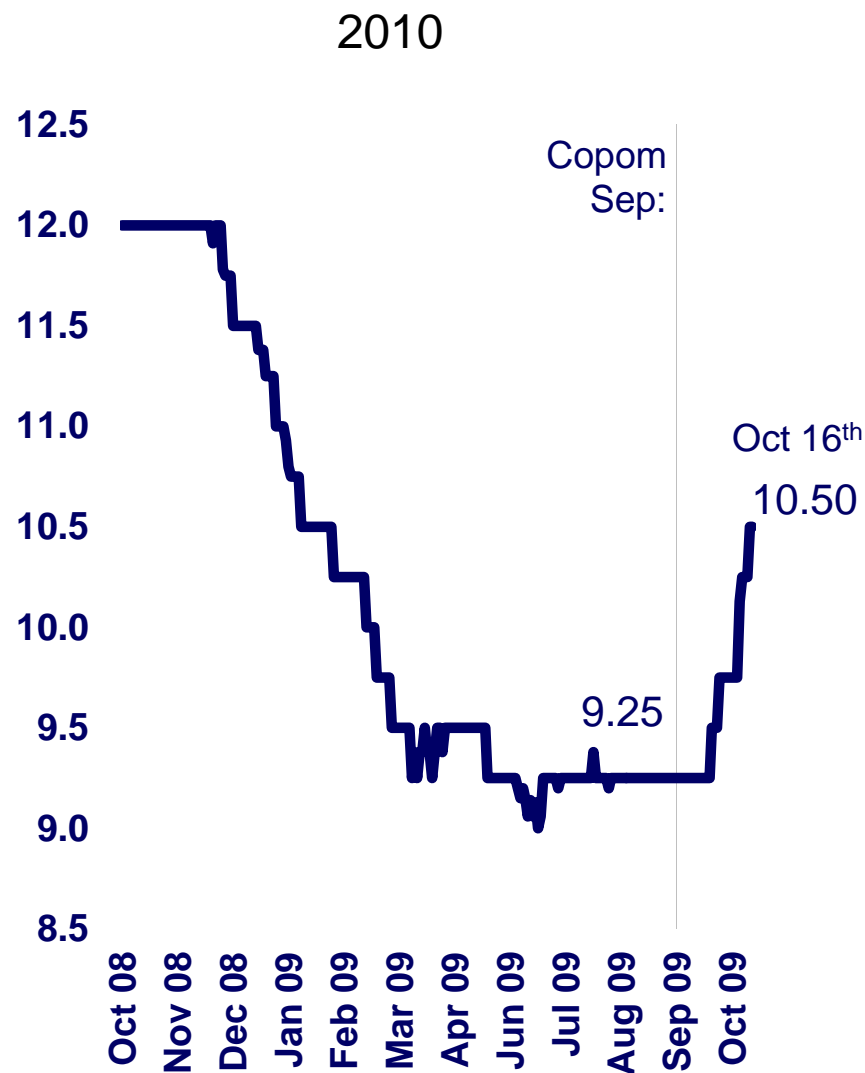
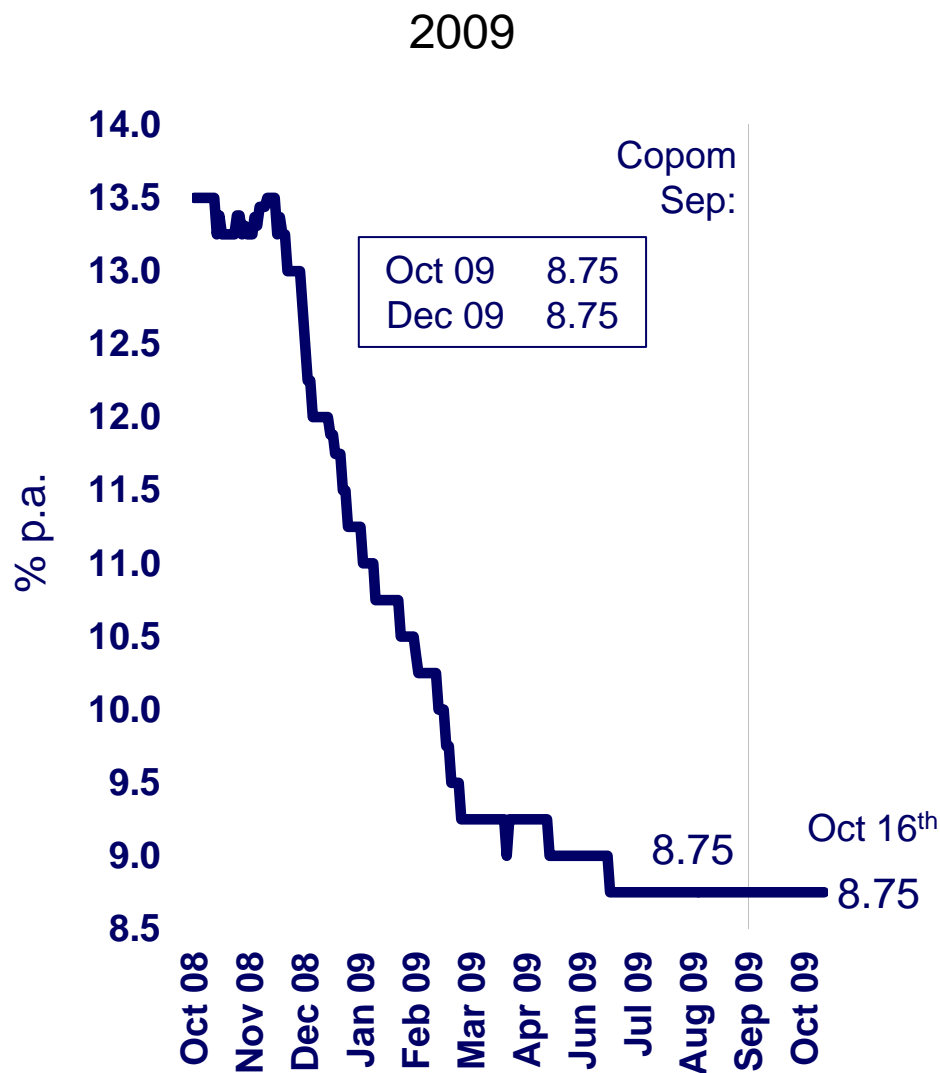
Expected CPI in the Next Twelve Months



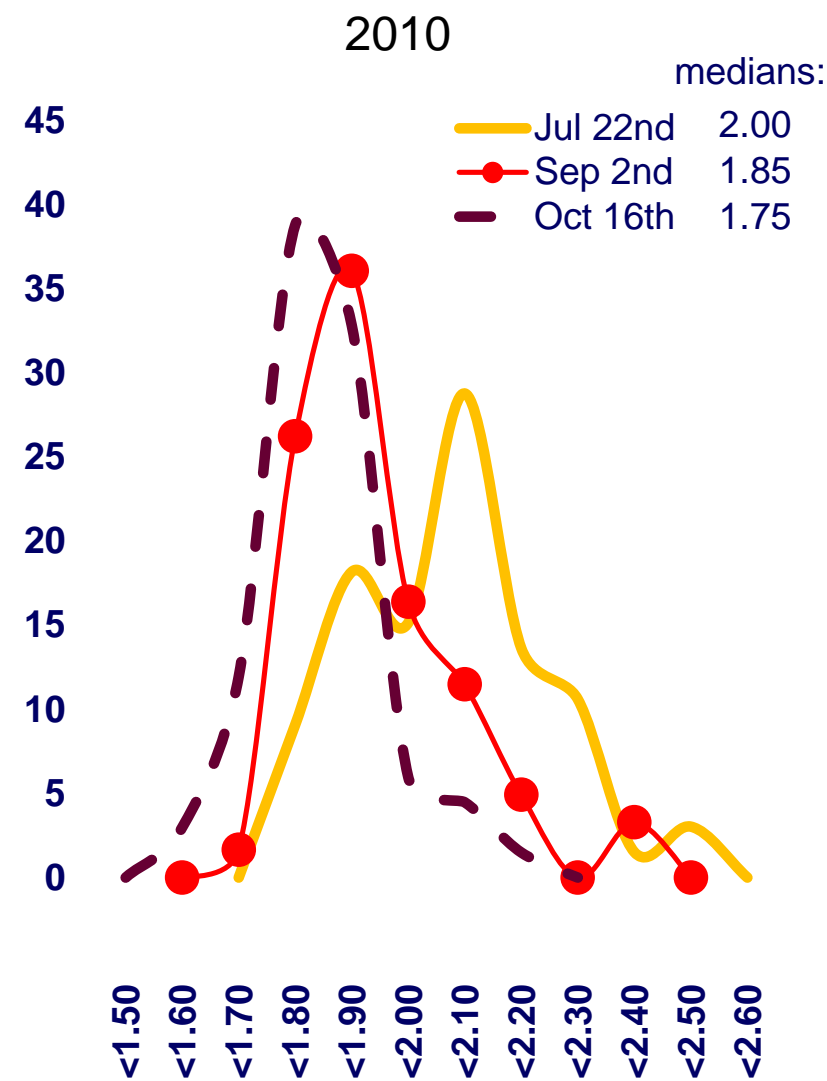
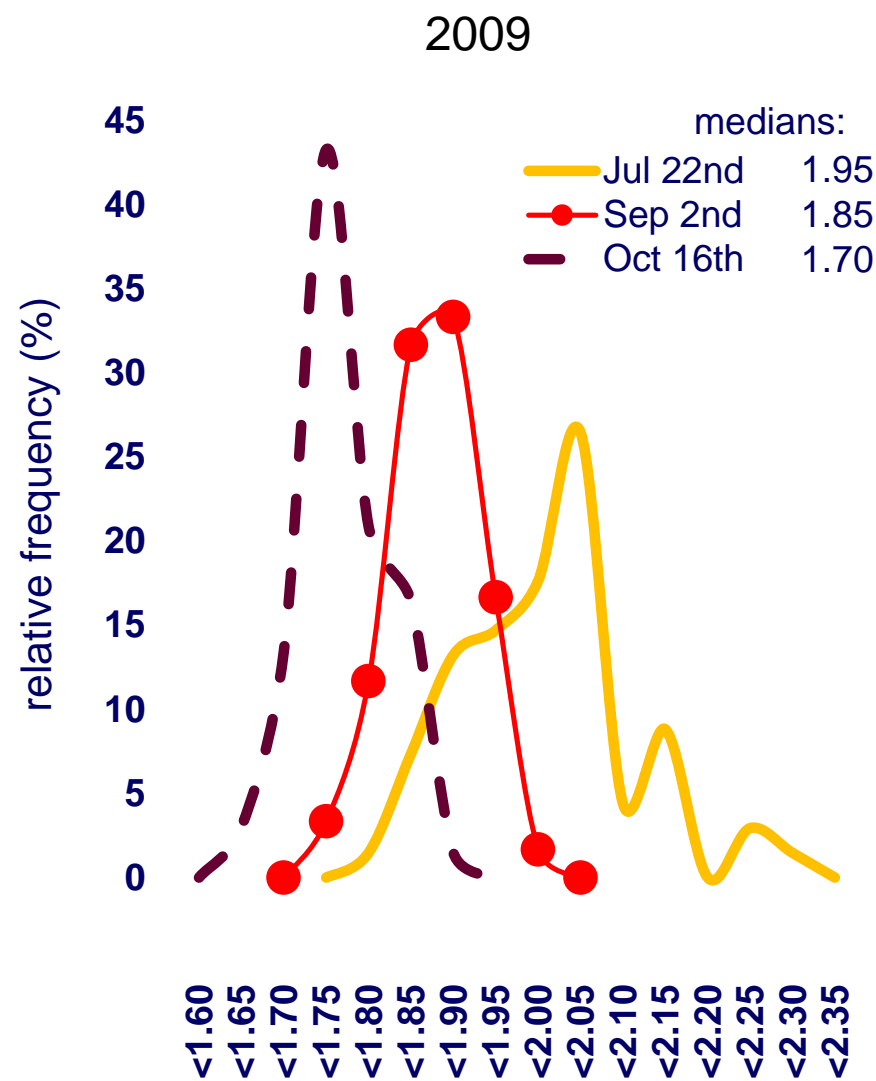
Expectations for GDP – Current Year



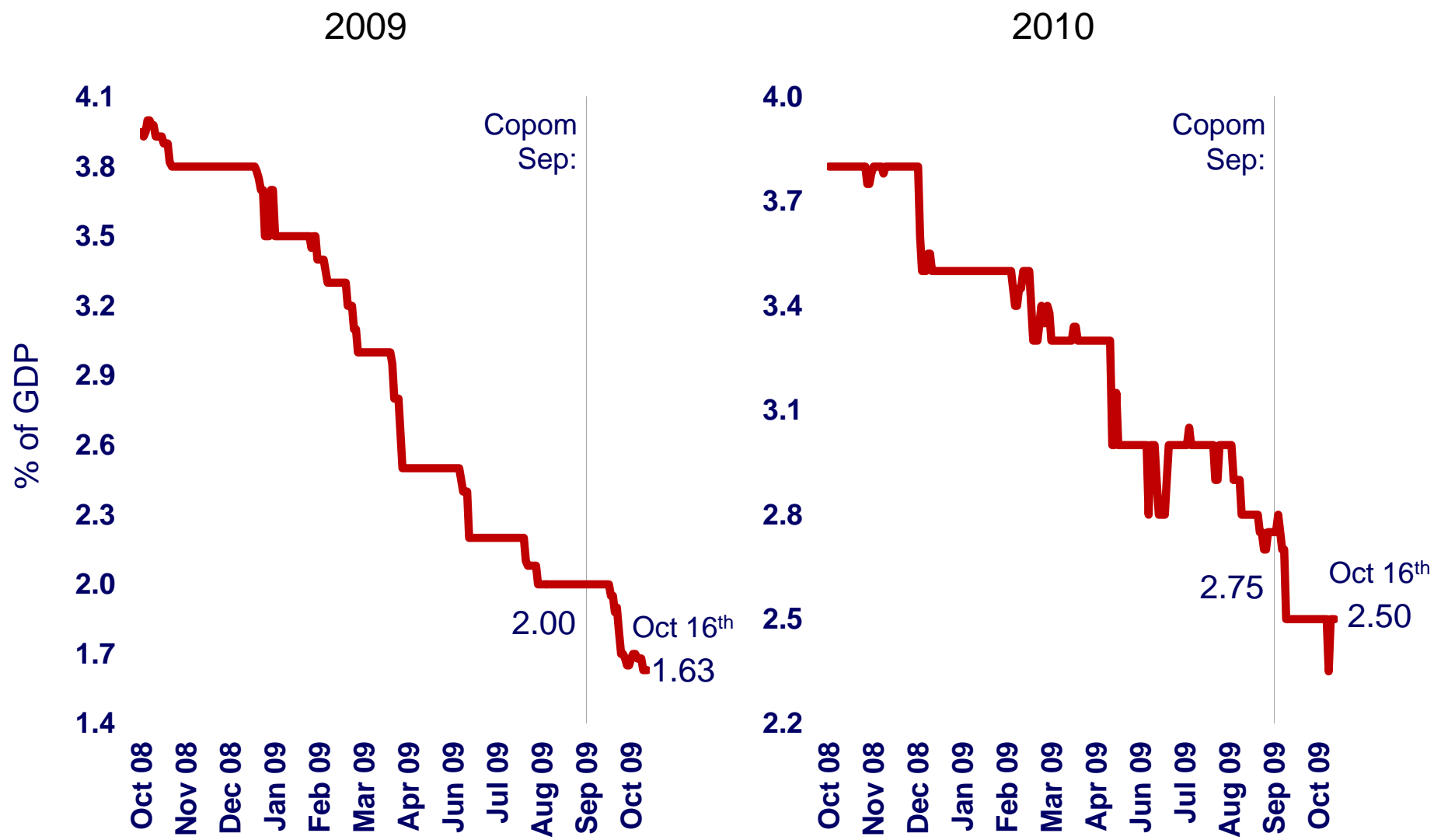
Expectations for Selic Rate



Expectations for Exchange Rate



Expectations for Primary Result



Conclusion

- The Market Expectations System: almost an unique tool;
- **Valuable information for the monetary policy decision by authorities in Brazil;**
- Statistics generated from this database are **inputs for the inflation forecasting models** developed by the Central Bank of Brazil; and
- The online access to weekly updated information provides easy and free access to the statistics regarding economic forecasts made by more than one hundred analysts, for different timeframes.



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