

**BANCO CENTRAL DO BRASIL**

# **Global Rise in Commodity Prices: Risks and Policy Options**

**Calgary, Alberta, June 2008**

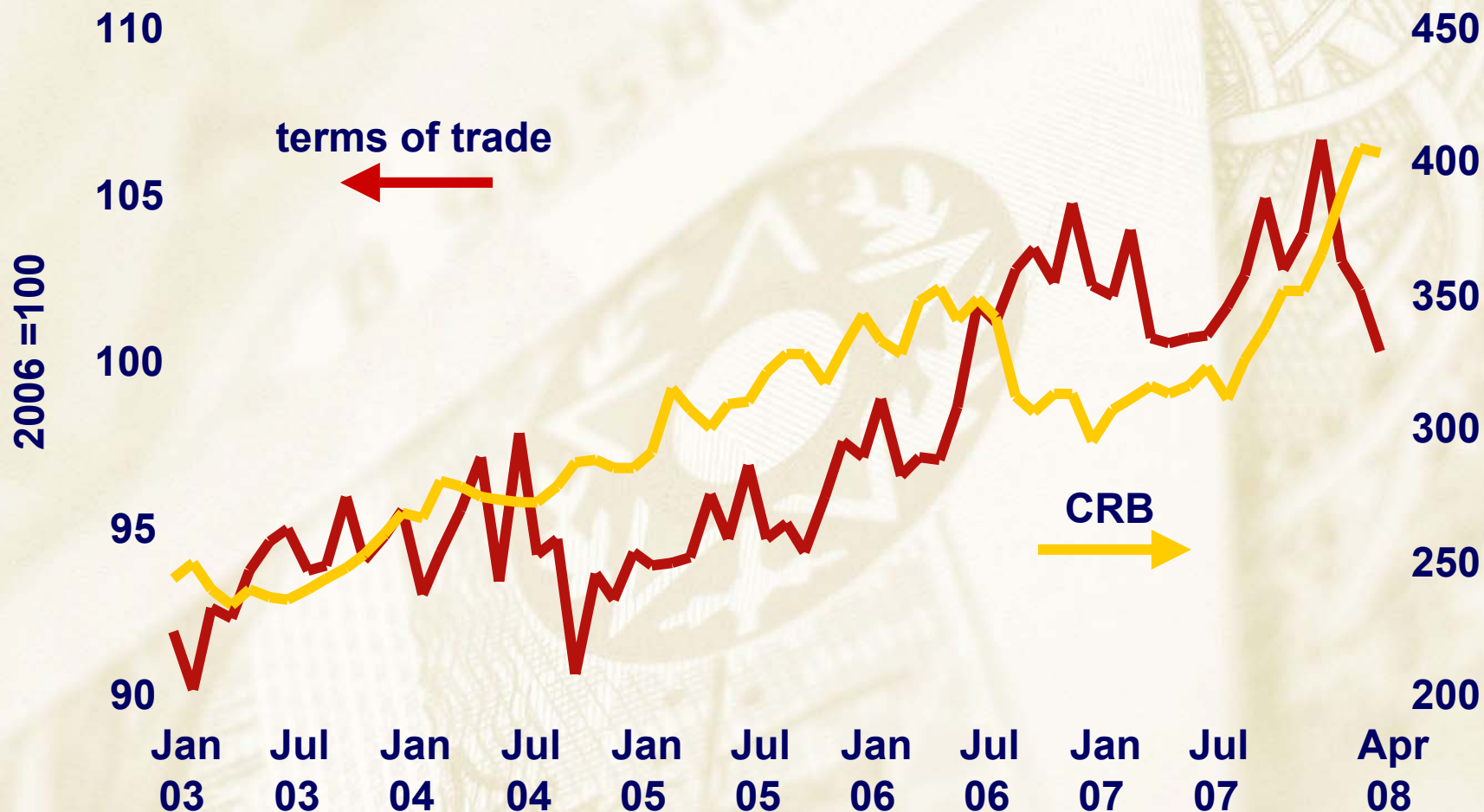
- 
- I: Impact of rising commodity prices**
  - II: Behavior of domestic demand**
  - III: Monetary policy response**
  - IV: The Brazilian Energy Sector**



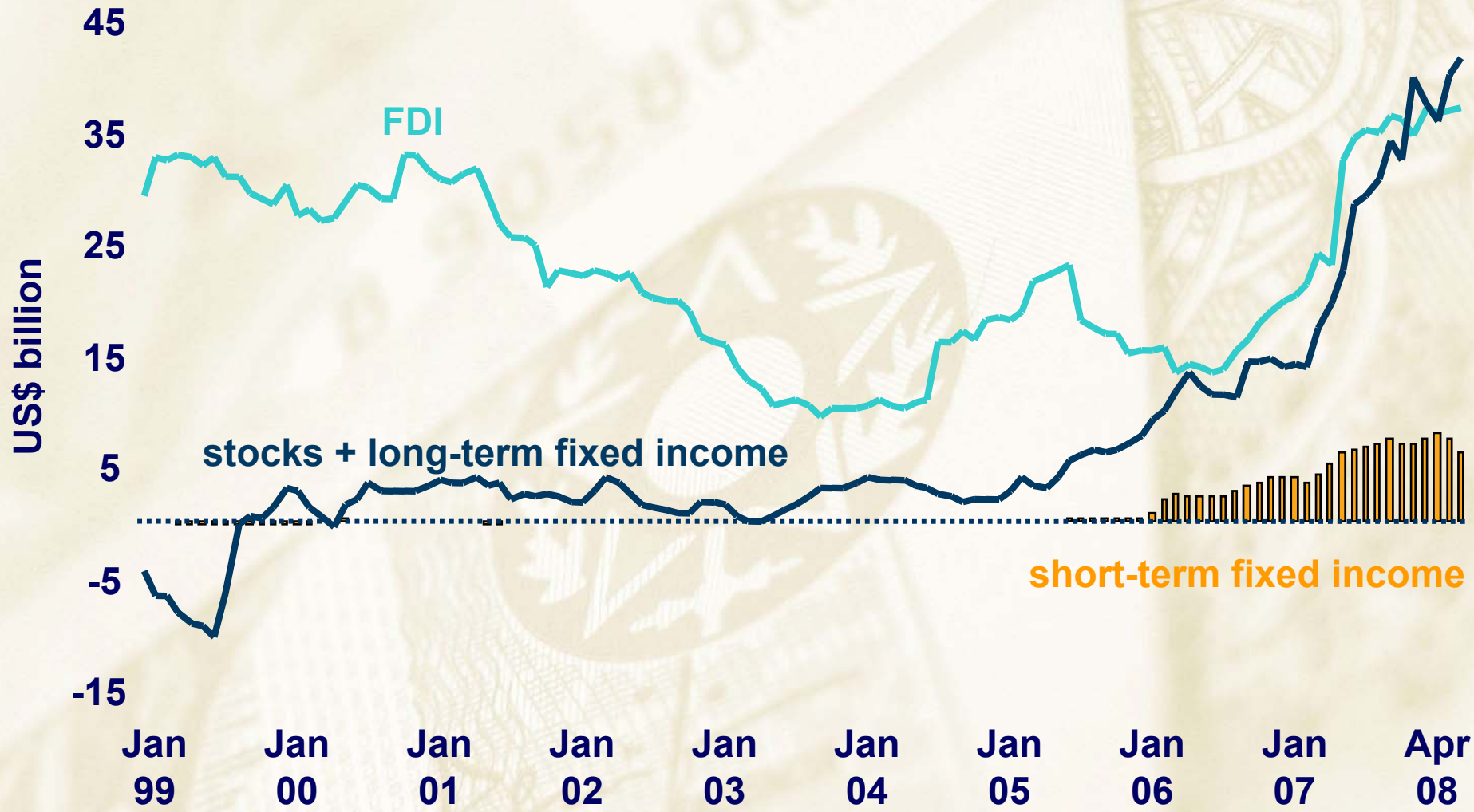
# Rising Commodity Prices: Risks and Policy Options

- **Benign effects**
  - **Better trade performance**
  - **Increased capital inflows**
  - **Better solvency and sovereign ratings**
  - **Enhanced ability to import**
- **Negative effects**
  - **Increase in food prices**
  - **Rising costs of inputs**
  - **Income effect adding to demand pressure**
  - **Rising inflation expectations**

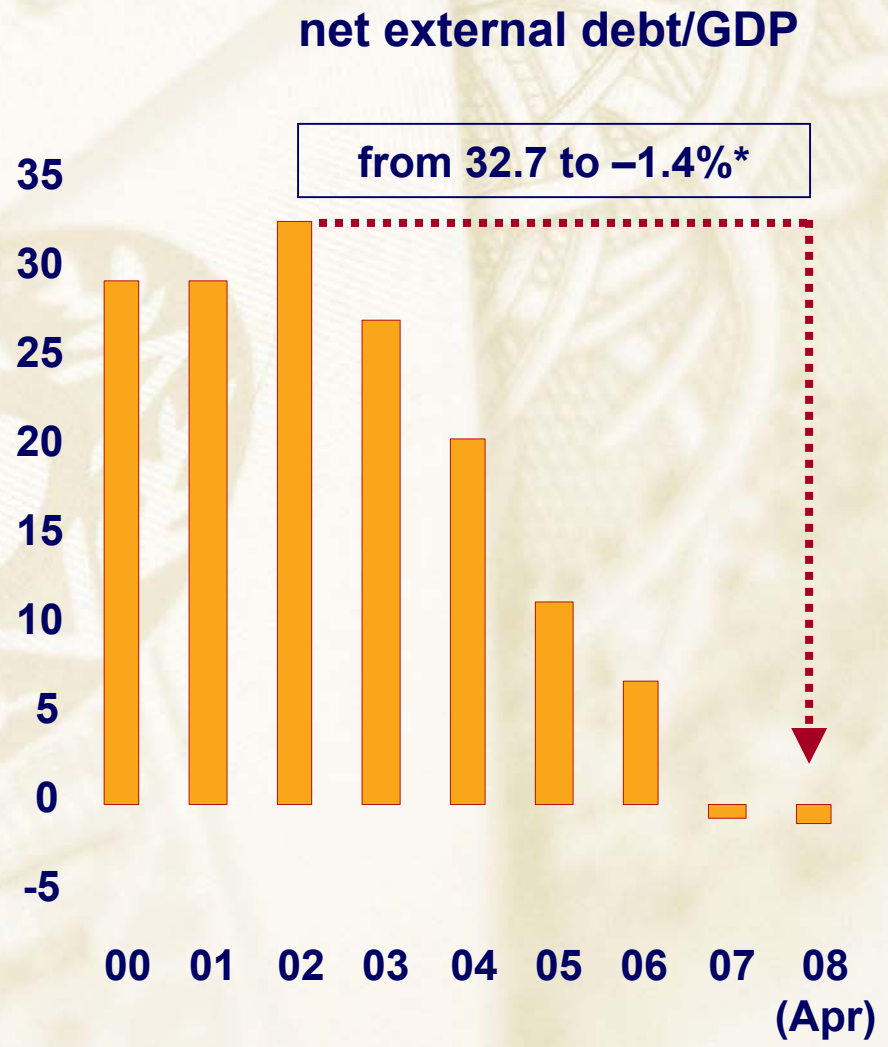
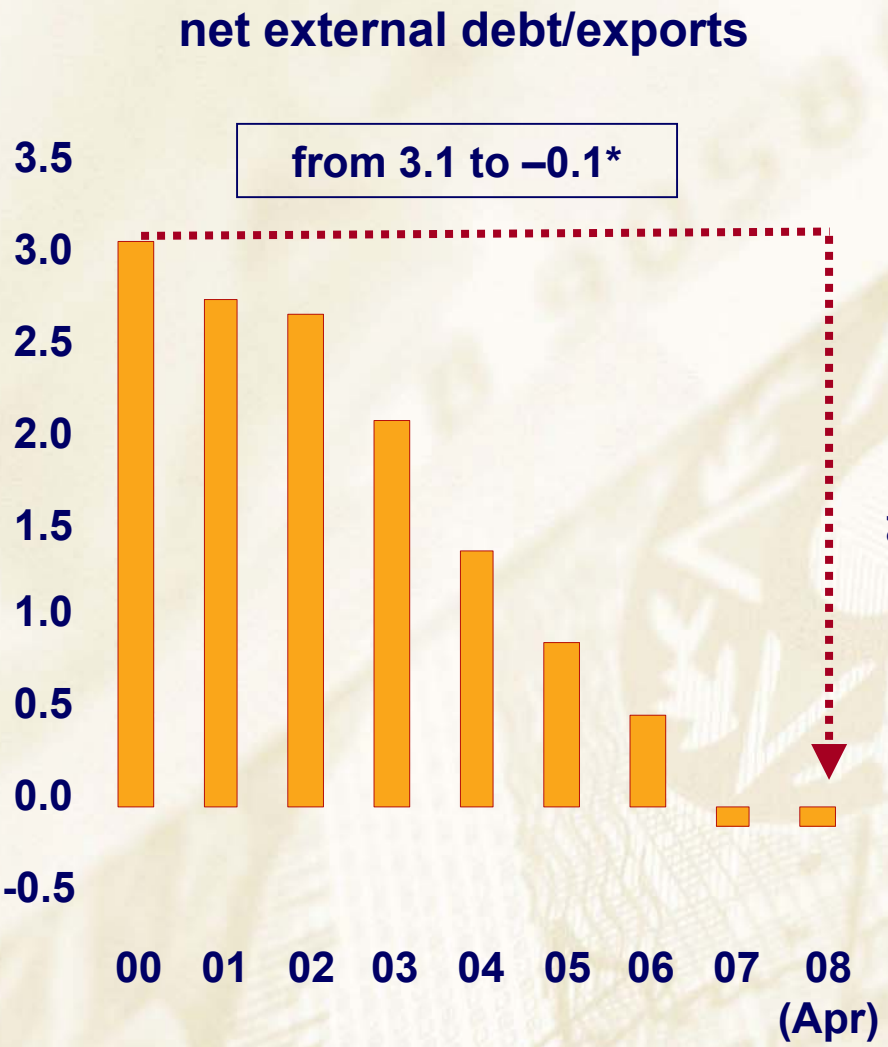
# CRB Index and Brazilian Terms of Trade



# Brazil: Increasing Capital Inflows

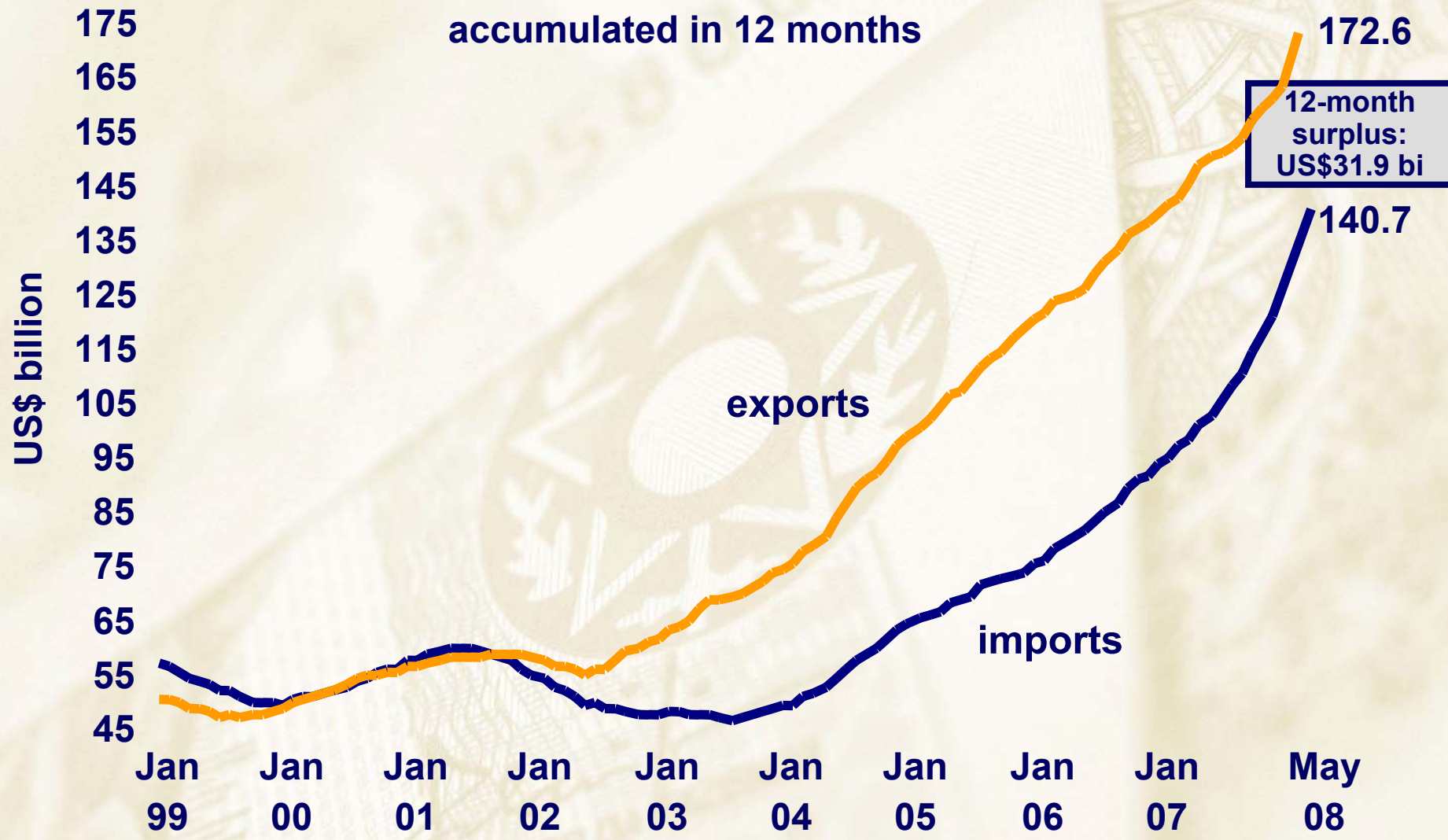


# Brazil: Better Solvency Indicators



\* Lower value of the series started in 1970; 2007/8: preliminary

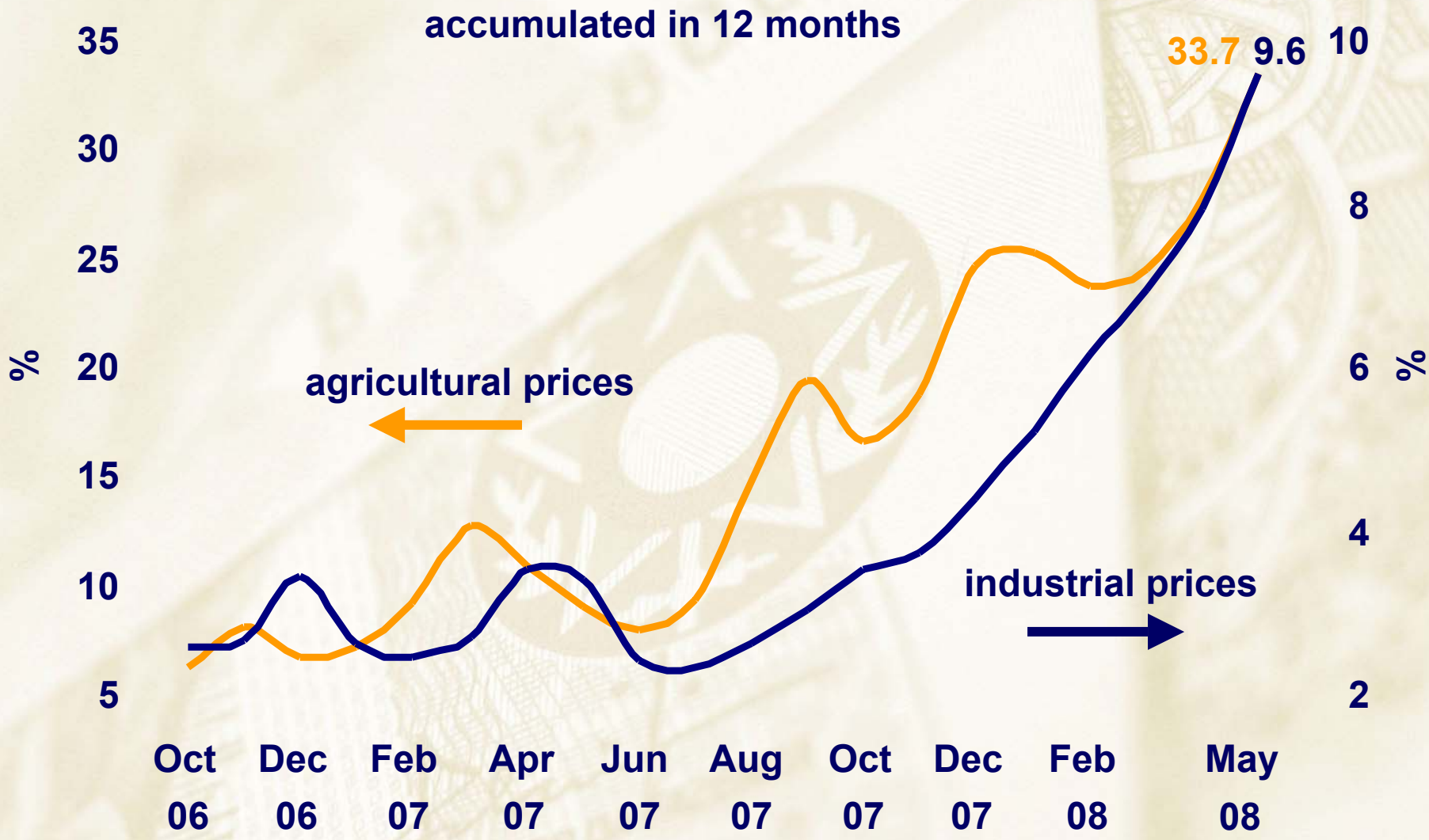
# Enhanced Ability to Import



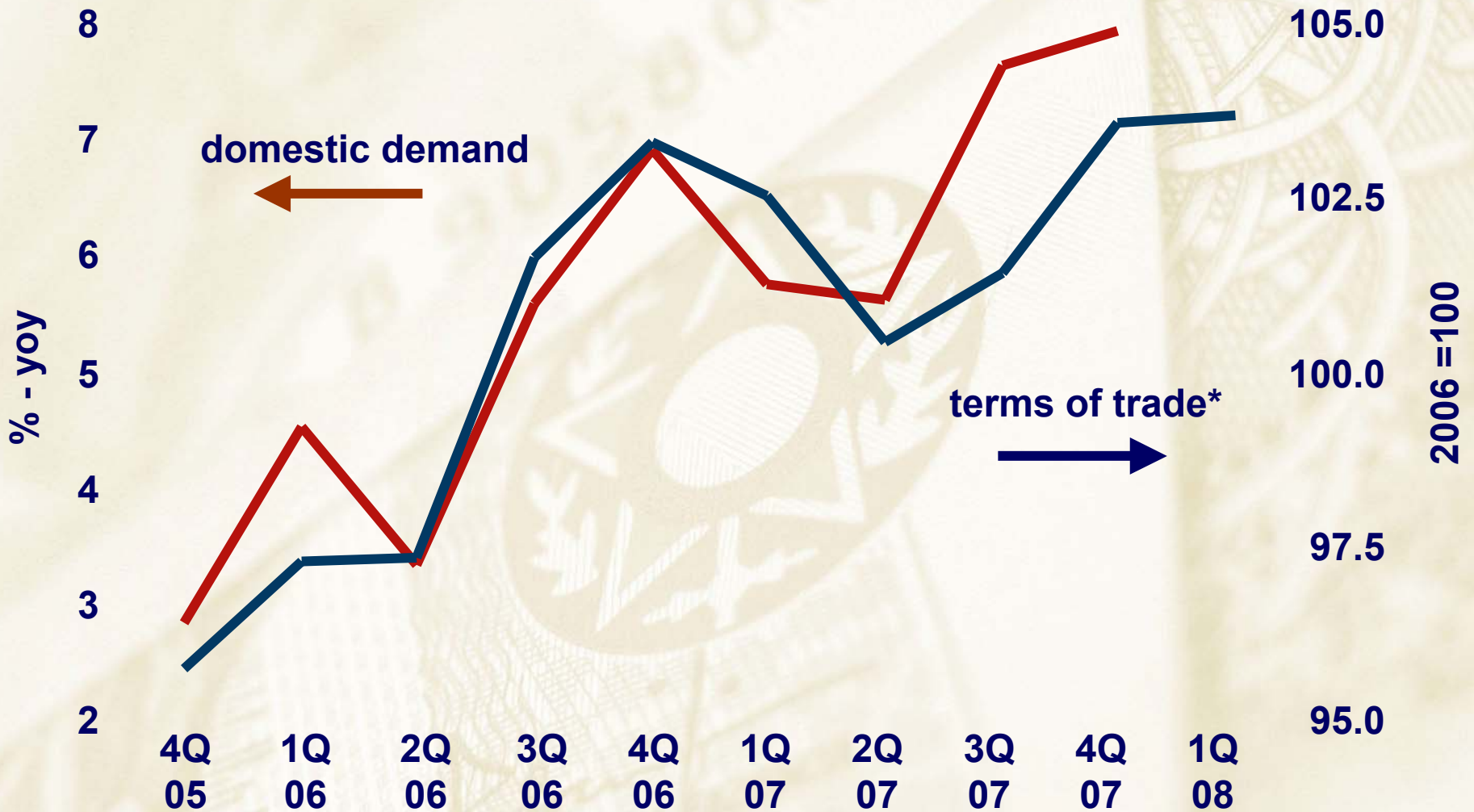
# Trade Balance: Prices and Volumes

|                 | US\$ billion |          |         |
|-----------------|--------------|----------|---------|
|                 | Exports      | Imports  | Balance |
| May/06-Apr/07   | 145.0        | 98.0     | 46.9    |
| May/07-Apr/08   | 166.9        | 135,2    | 31.7    |
| % change        | 15.2%        | 37.9%    | -32.4%  |
| Price % change  | 14.7p.p.     | 13.8p.p. |         |
| Volume % change | 0.9p.p.      | 21.3p.p. |         |

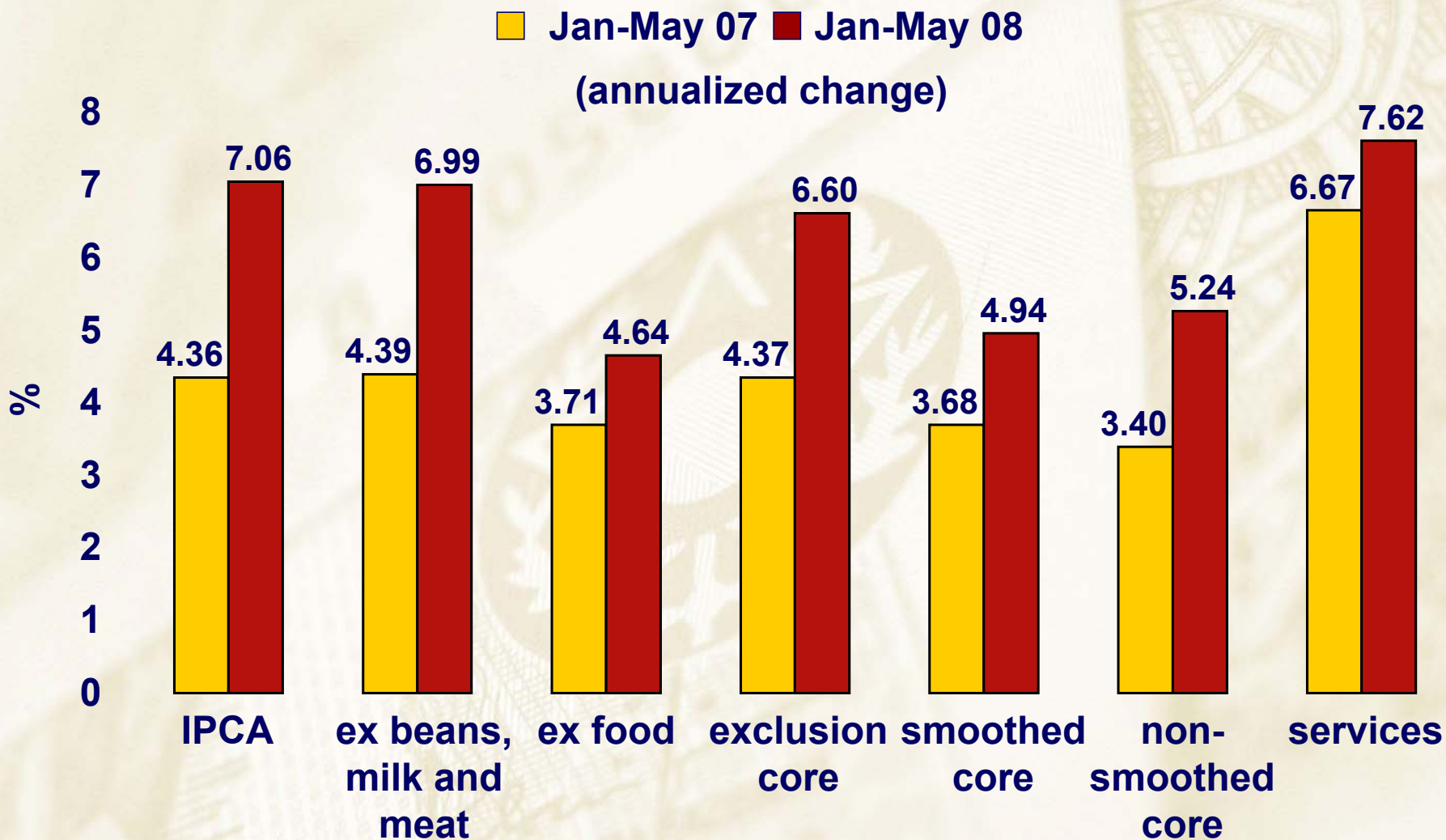
# Rising Wholesale Prices



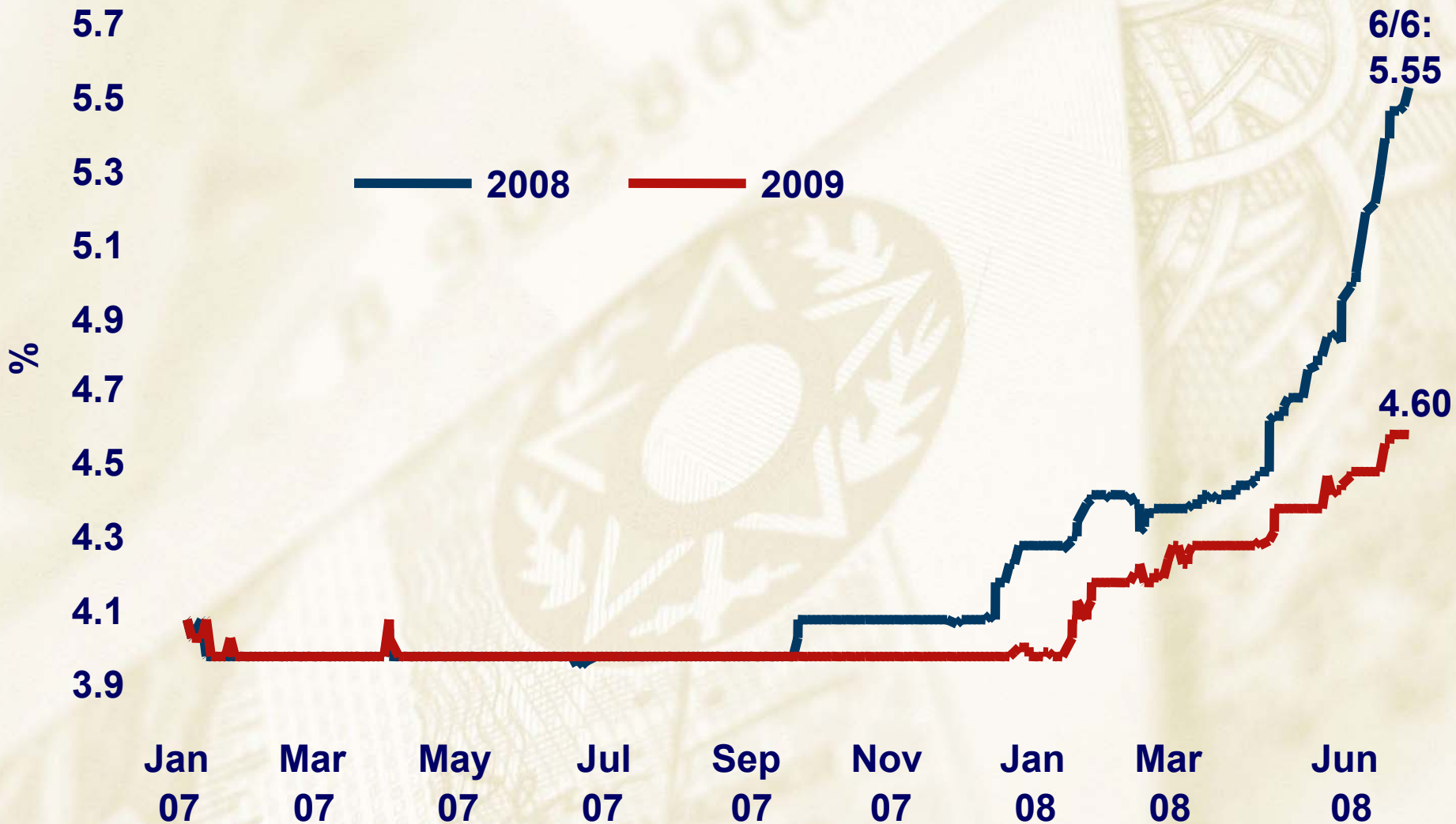
# Terms of Trade: the Income Effect



# Faster Inflation: not only foodstuff



# Deterioration of Inflation Expectations (Target = 4.5%)

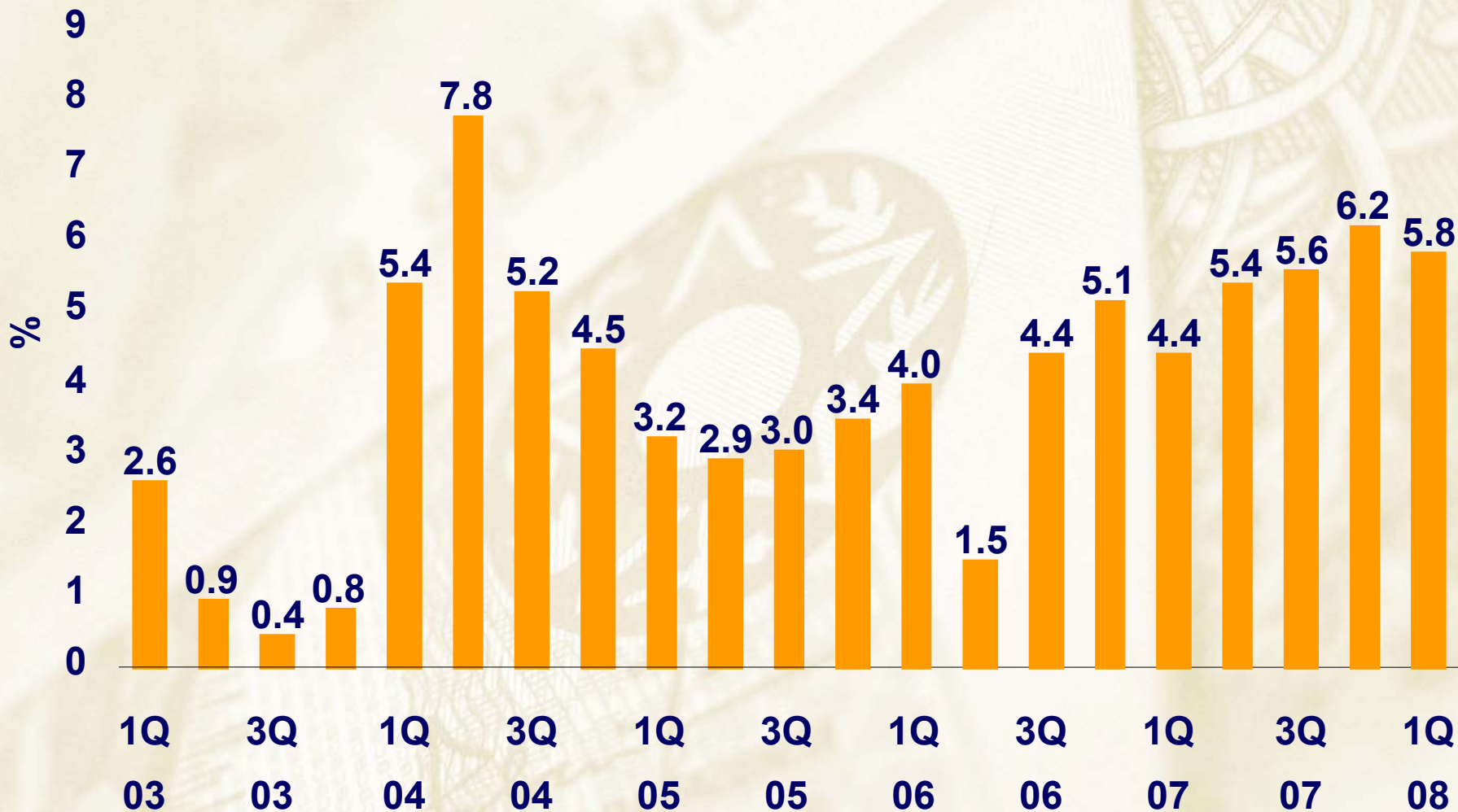




## **II. Behavior of Domestic Demand**

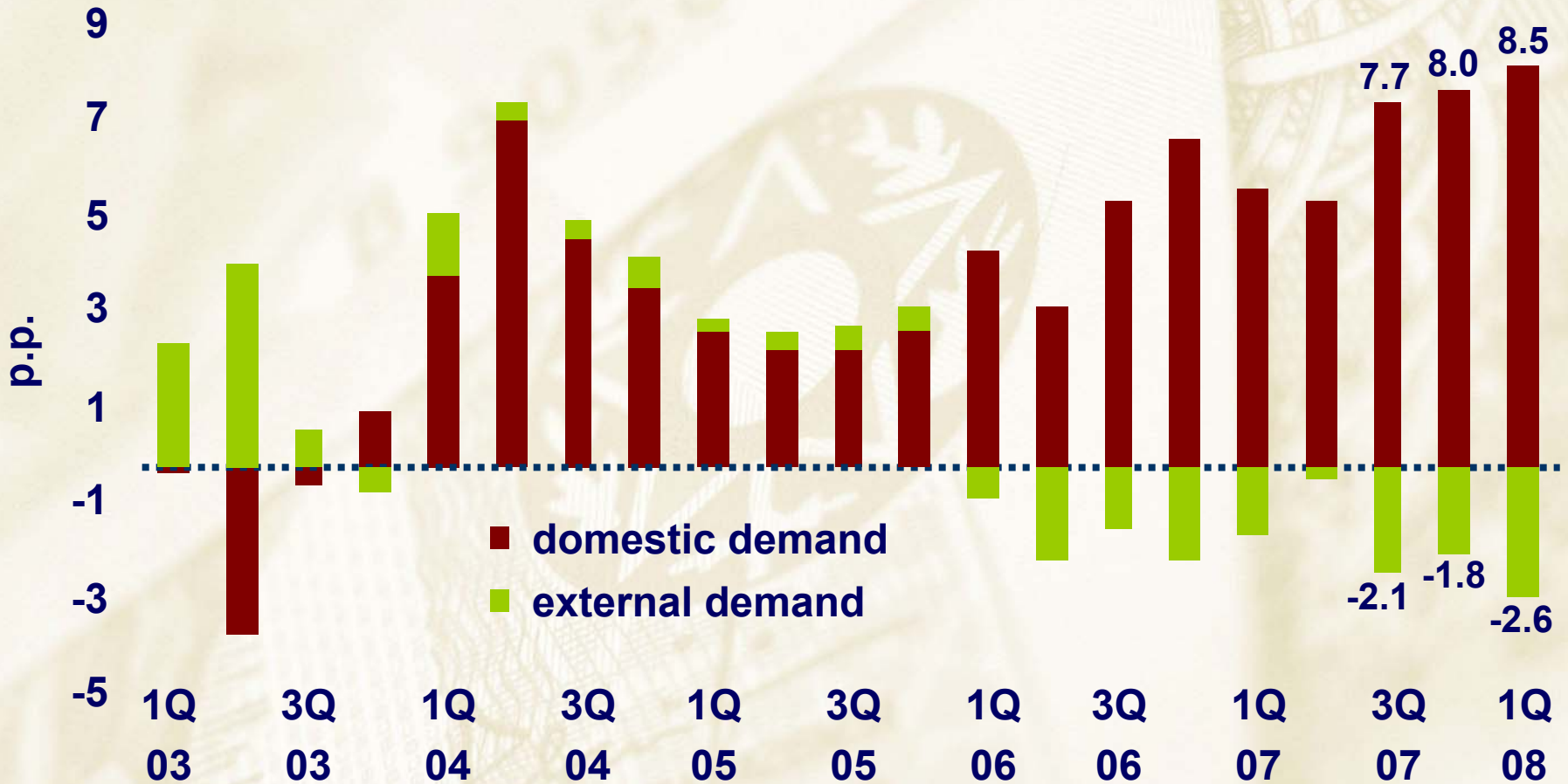
# GDP Growth

compared to same quarter of previous year



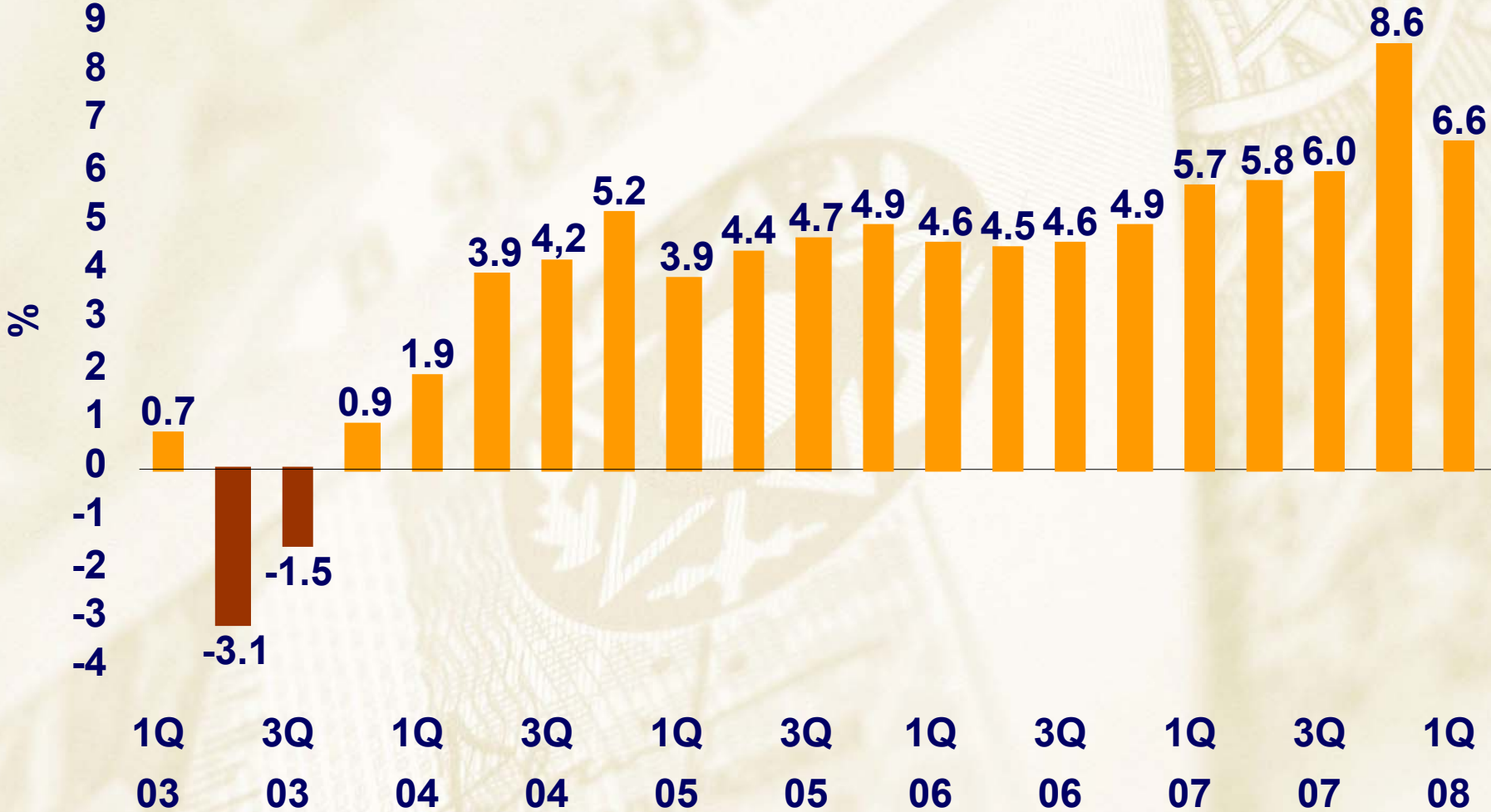
# Domestic vs. External Demand

compared to same quarter of previous year



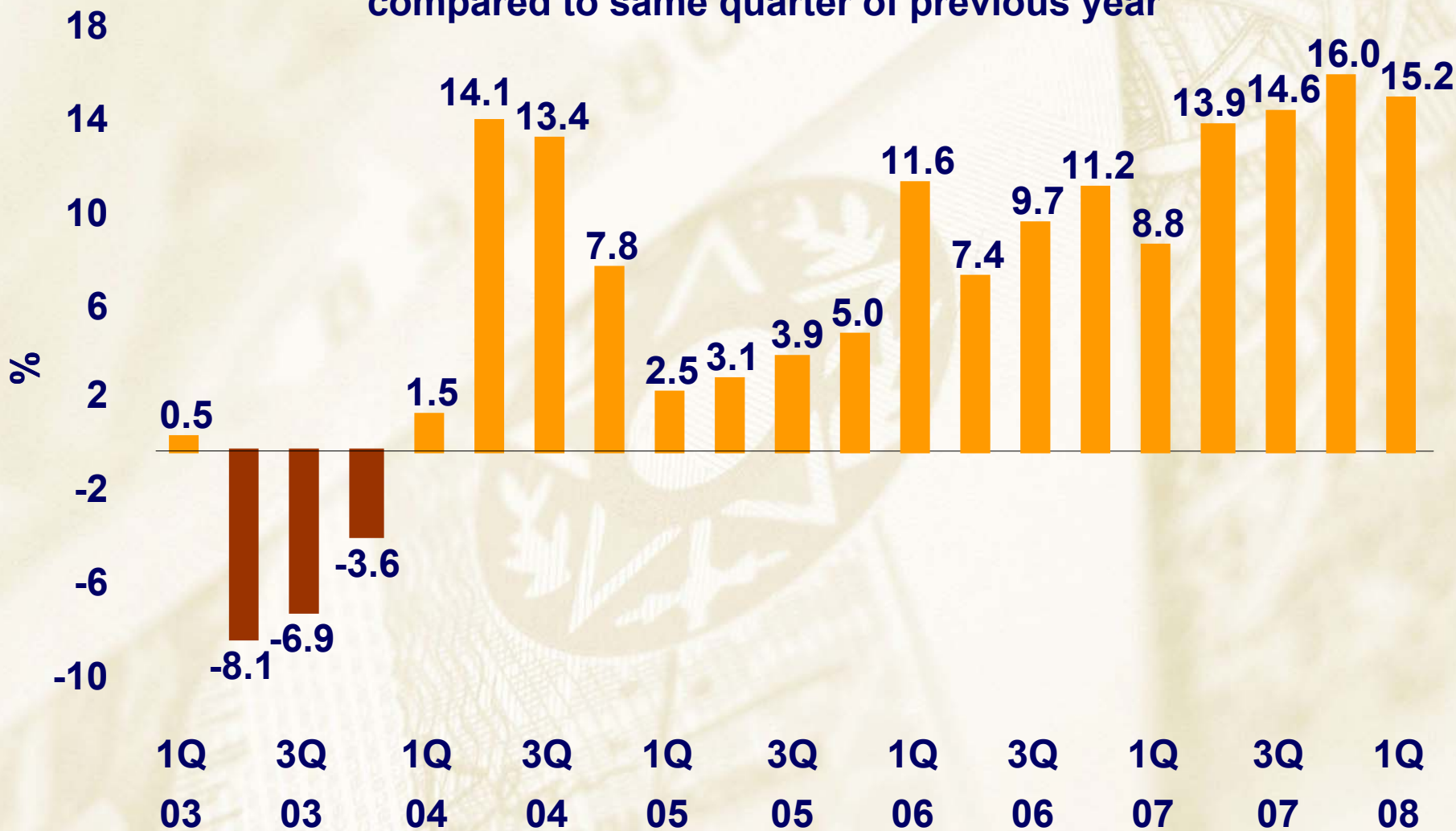
# Household Consumption

compared to same quarter of previous year



# Investment

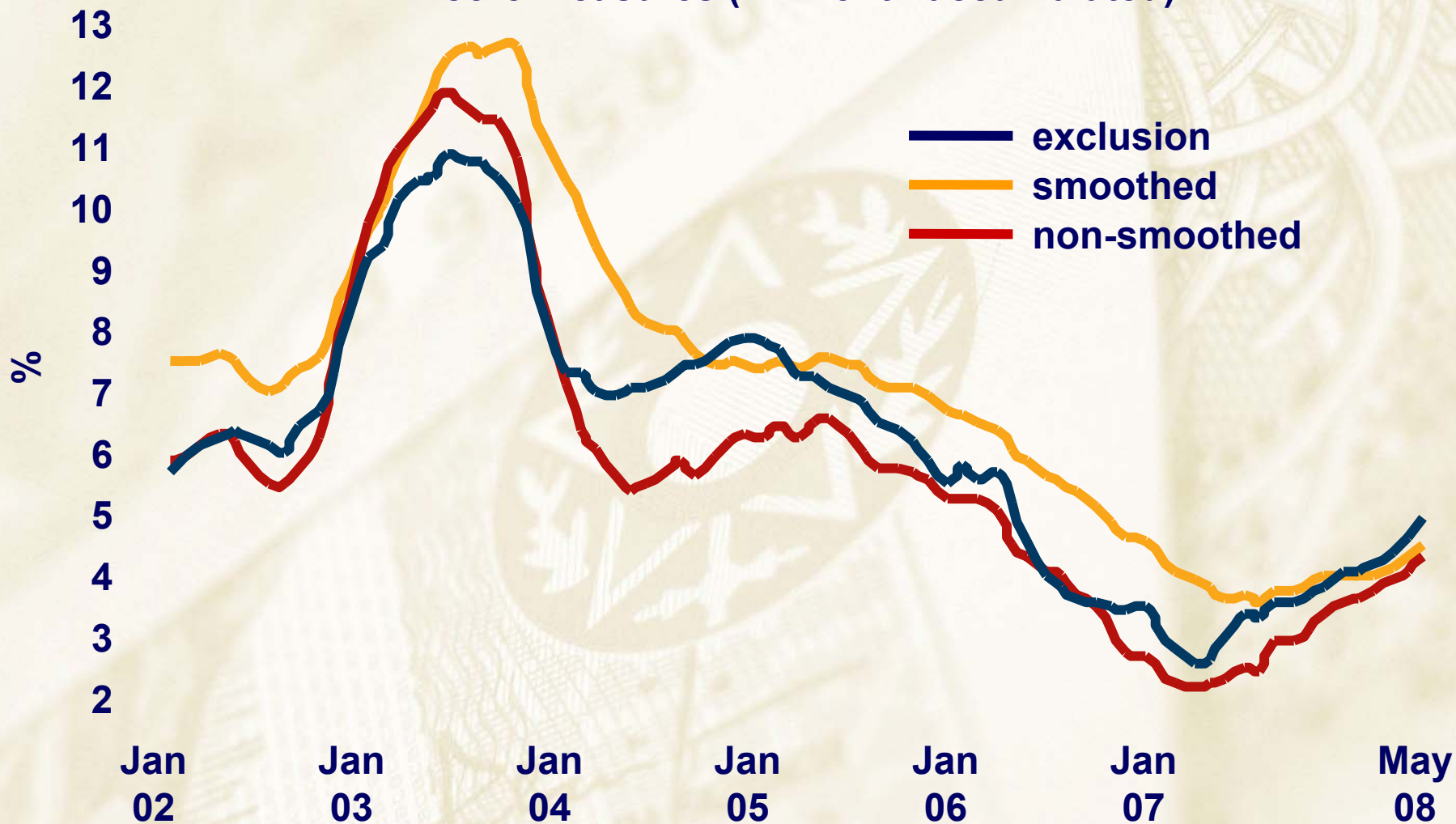
compared to same quarter of previous year



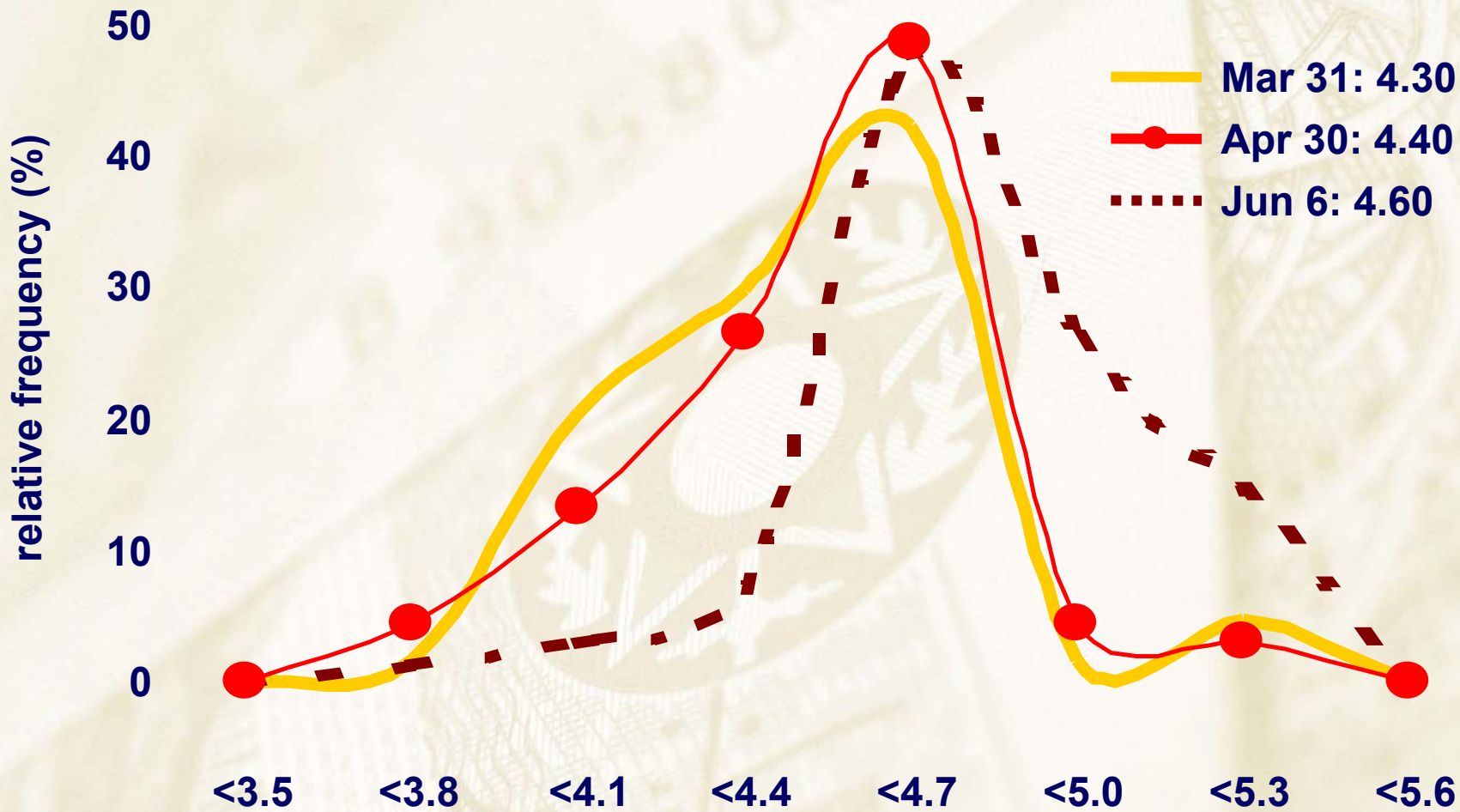
### **III. Monetary Policy Response**

# Risk has been Increasing

IPCA: core measures (12-month accumulated)



# Inflation Expectations for 2009



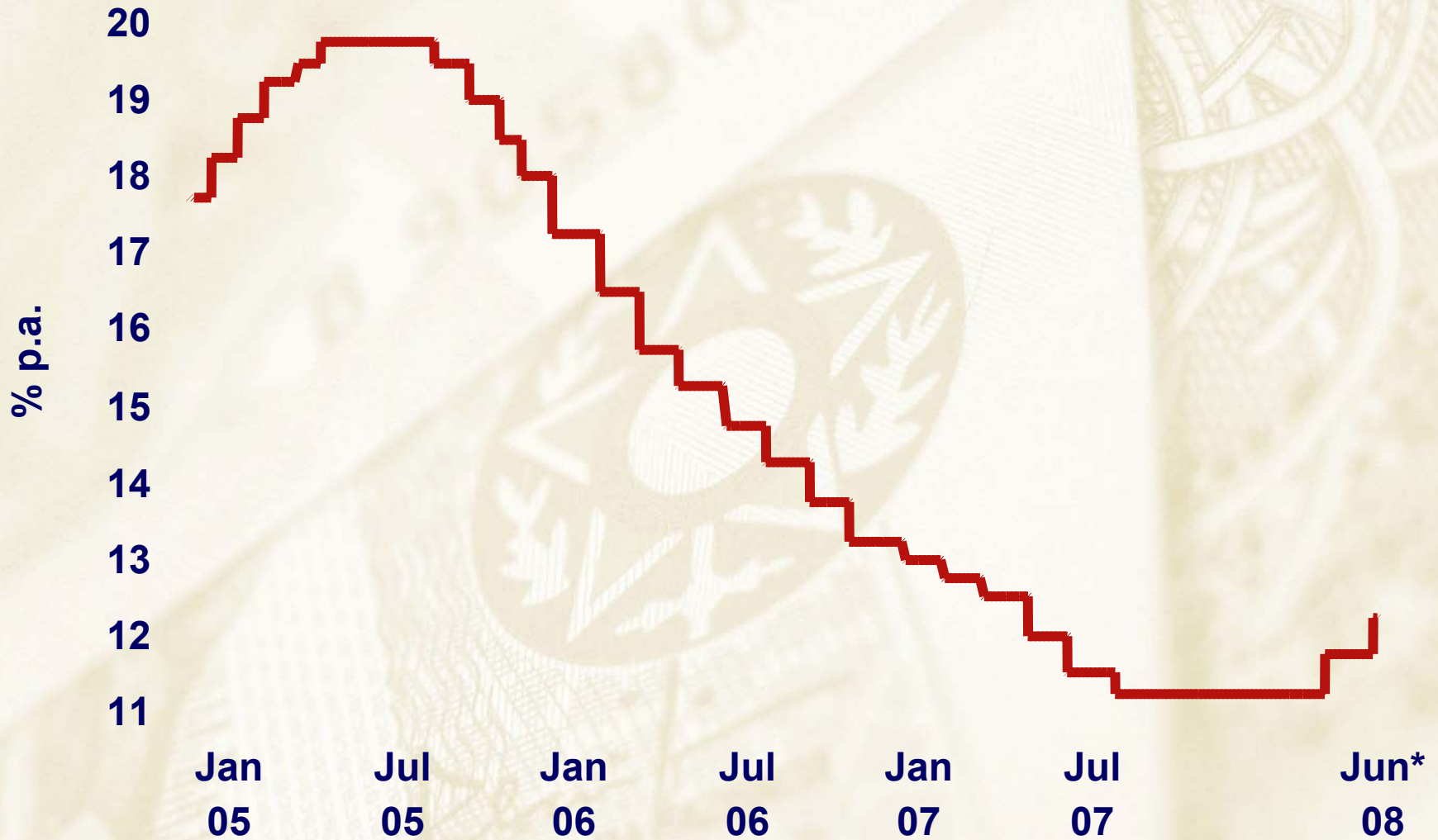
# Food is Not Dominant within the Brazilian CPI

%

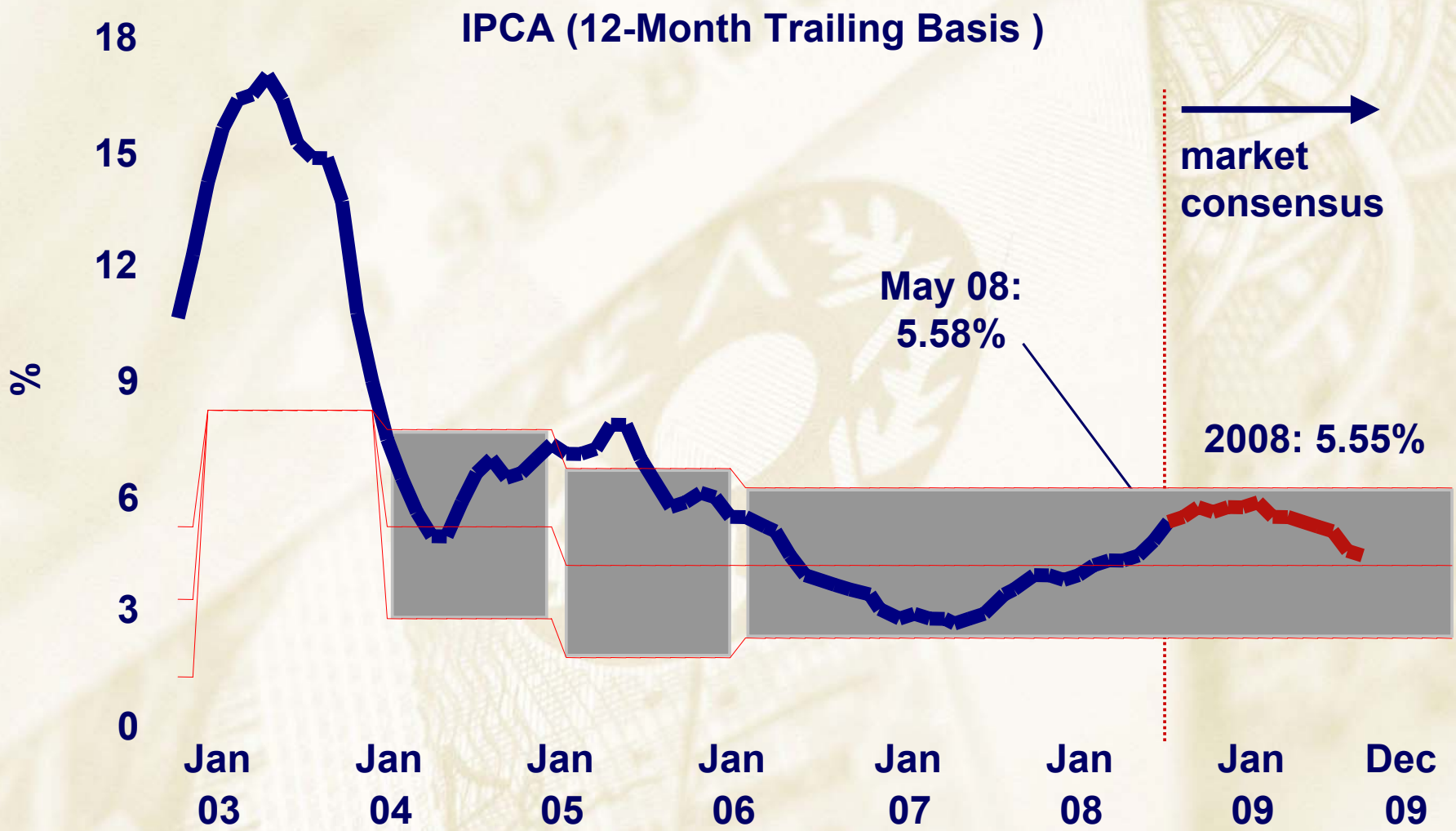
## Emerging Economies

|                     |             |                     |             |
|---------------------|-------------|---------------------|-------------|
| <b>Israel</b>       | <b>17.1</b> | <b>China</b>        | <b>33.0</b> |
| <b>Brazil</b>       | <b>21.1</b> | <b>Saudi Arabia</b> | <b>36.0</b> |
| <b>Mexico</b>       | <b>22.7</b> | <b>Thailand</b>     | <b>36.1</b> |
| <b>Hungary</b>      | <b>23.1</b> | <b>Egypt</b>        | <b>38.9</b> |
| <b>Singapore</b>    | <b>23.4</b> | <b>Russia</b>       | <b>40.2</b> |
| <b>South Africa</b> | <b>23.5</b> | <b>Pakistan</b>     | <b>40.3</b> |
| <b>Taiwan</b>       | <b>25.1</b> | <b>Indonesia</b>    | <b>42.3</b> |
| <b>Chile</b>        | <b>27.2</b> | <b>Vietnam</b>      | <b>42.7</b> |
| <b>Poland</b>       | <b>27.3</b> | <b>Kazakhstan</b>   | <b>44.8</b> |
| <b>Turkey</b>       | <b>28.5</b> | <b>Filipinas</b>    | <b>46.6</b> |
| <b>Argentina</b>    | <b>31.3</b> | <b>India</b>        | <b>60.2</b> |
| <b>Malaysia</b>     | <b>31.4</b> | <b>Ukraine</b>      | <b>63.8</b> |

# Monetary Policy Response



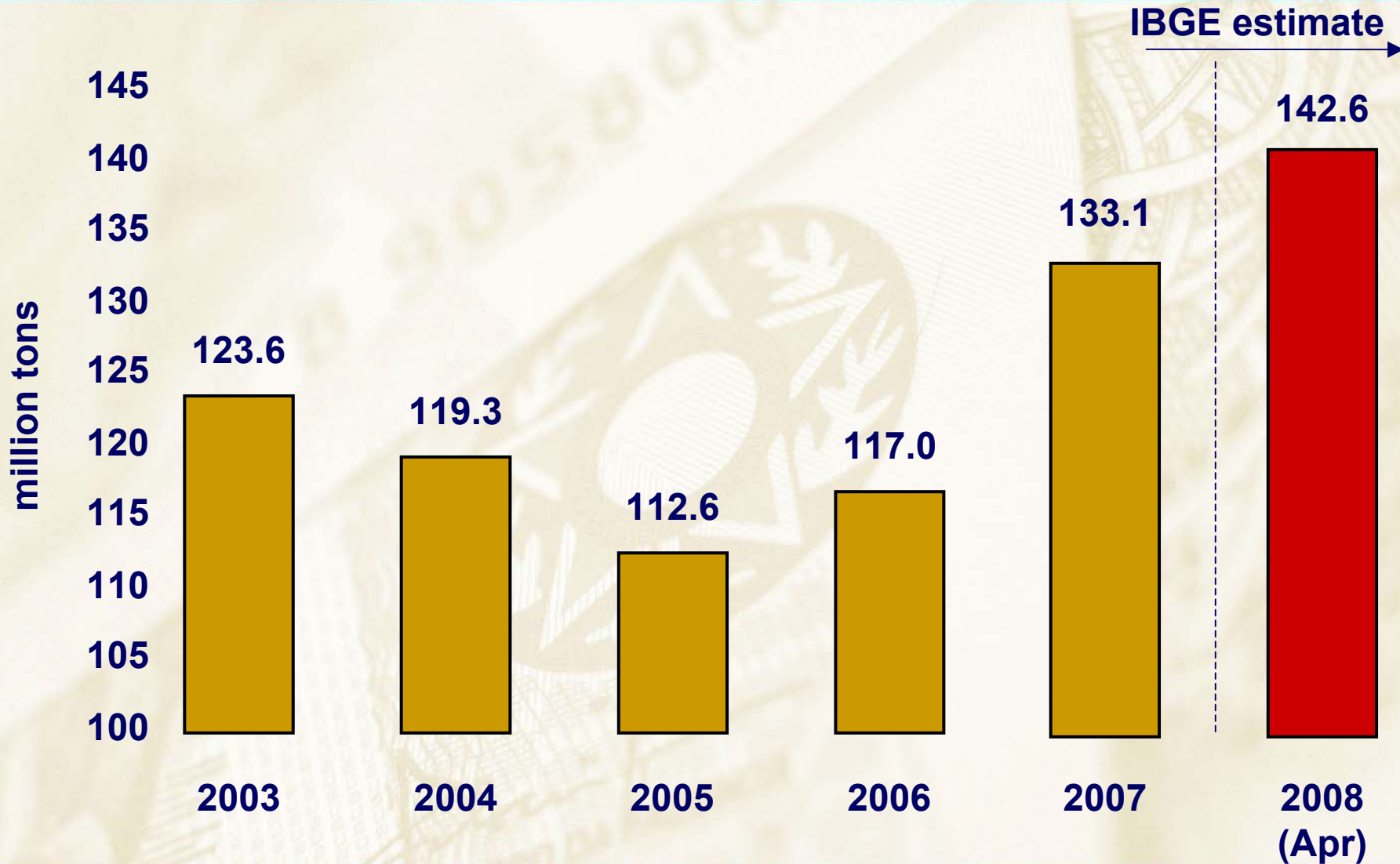
# Goal is to Ensure Convergence of IPCA Inflation to Target Path



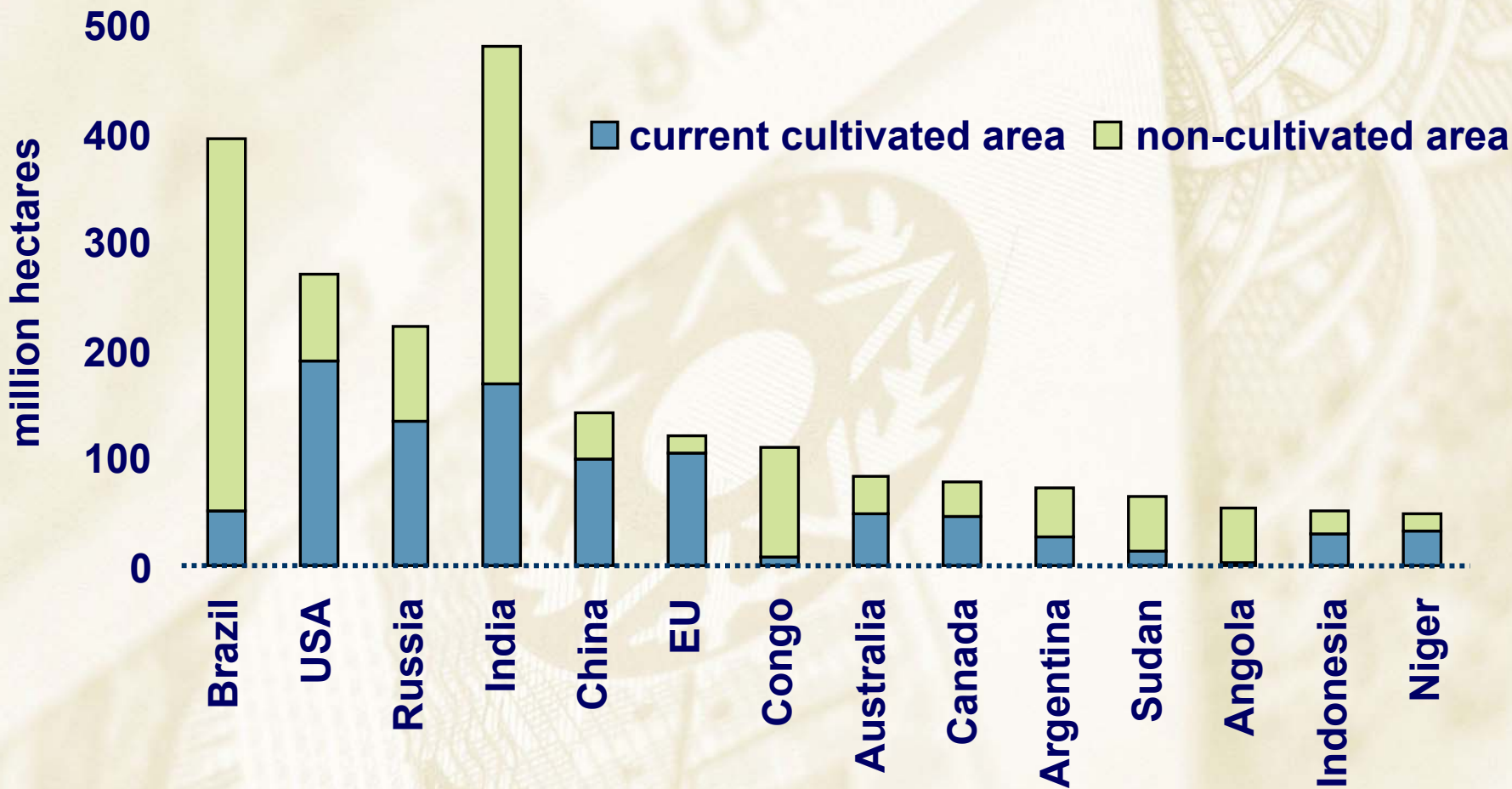


## **IV. The Brazilian Energy Sector**

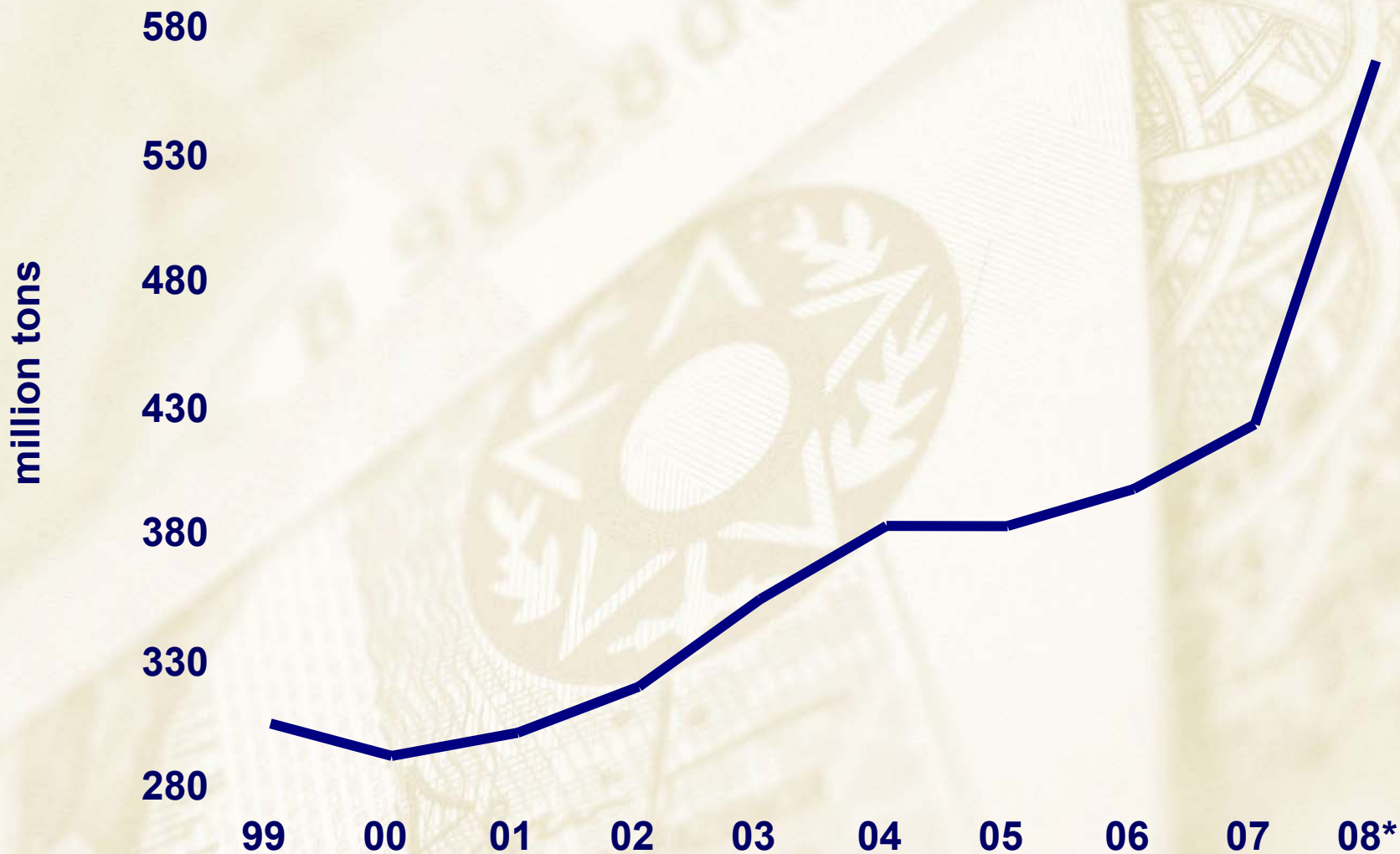
# Agriculture: no domestic supply shock







# Agriculture: room for expansion



# Sugar-Cane Production in Brazil

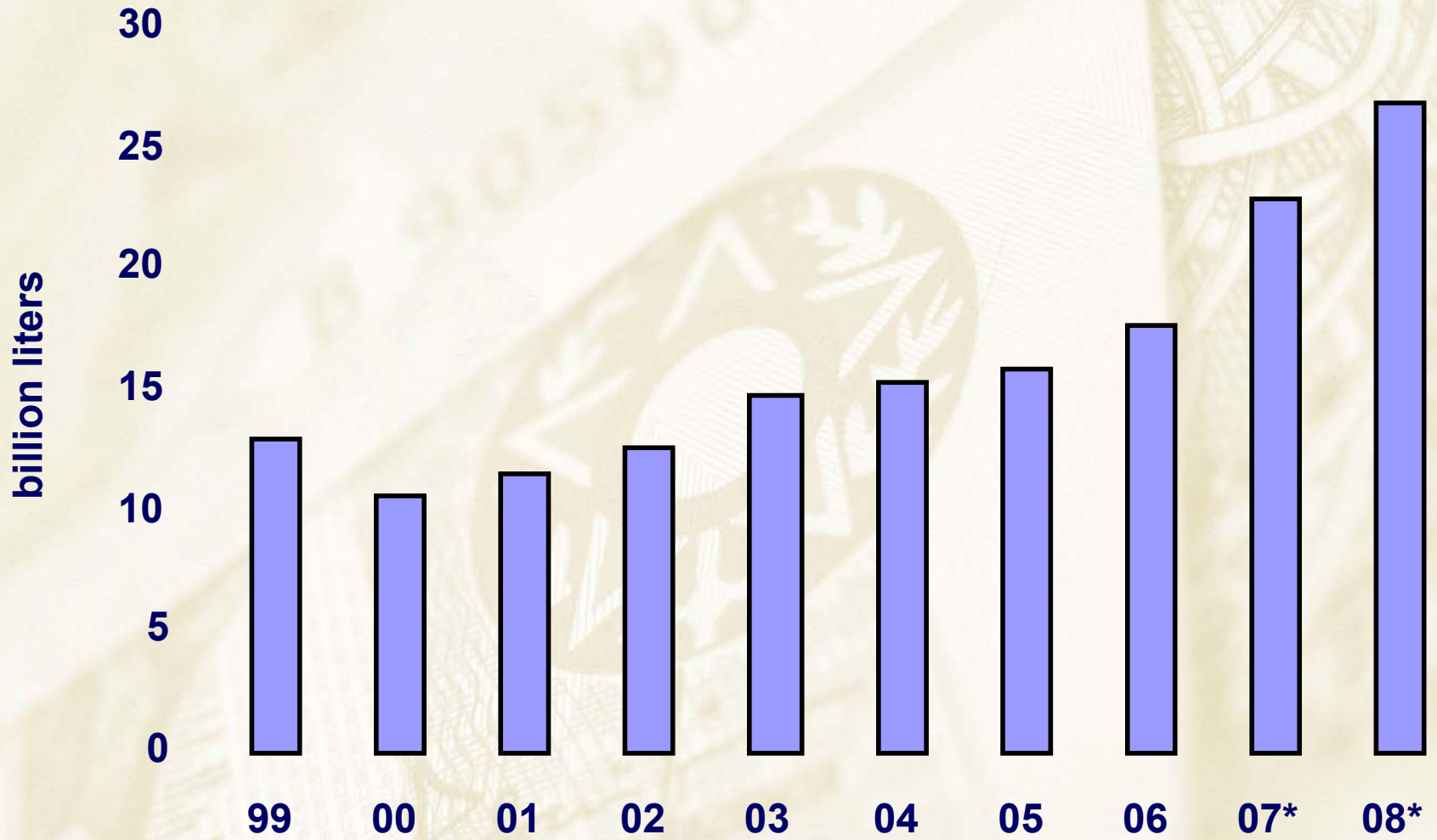


# Energy Balance

| Country   | Type                     | Energy Balance <sup>1</sup> |
|---|--------------------------|-----------------------------|
|  <b>Brasil</b>         | <b>Sugarcane ethanol</b> | <b>9.3</b>                  |
|  <b>Germany</b>        | <b>Biodiesel</b>         | <b>2.5</b>                  |
|  <b>European Union</b> | <b>Beetroot ethanol</b>  | <b>2.3</b>                  |
|  <b>United States</b> | <b>Corn ethanol</b>      | <b>1.9</b>                  |

<sup>1</sup> The total amount of energy released by burning the resulting ethanol/biodiesel fuel relative to input into the process

# Ethanol Production in Brazil



# Potential for the Expansion of Ethanol output

| Millions of hectares (2005)            |                  |              |                  |
|--|------------------|--------------|------------------|
| <b>BRAZIL</b>                          | <b>850</b>       |              |                  |
| <b>Total of Arable Land</b>            | <b>340 (40%)</b> | % of total   | % of arable land |
| <b>1. Harvested land: total</b>        | <b>61</b>        | <b>7.2%</b>  | <b>17.9%</b>     |
| Soybeans                               | 23               | 2.7%         | 6.8%             |
| Corn                                   | 11               | 1.3%         | 3.2%             |
| <b>Sugar cane</b>                      | <b>6</b>         | <b>0.7%</b>  | <b>1.8%</b>      |
| <b>Sugar cane for ethanol</b>          | <b>3</b>         | <b>0.4%</b>  | <b>0.9%</b>      |
| Orange                                 | 1                | 0.1%         | 0.3%             |
| <b>2. Grass land</b>                   | <b>200</b>       | <b>23.5%</b> | <b>58.8%</b>     |
| <b>3. Available land (agr, cattle)</b> | <b>80</b>        | <b>9.4%</b>  | <b>23.5%</b>     |

# Investments in the Brazilian Sugar Cane Industry

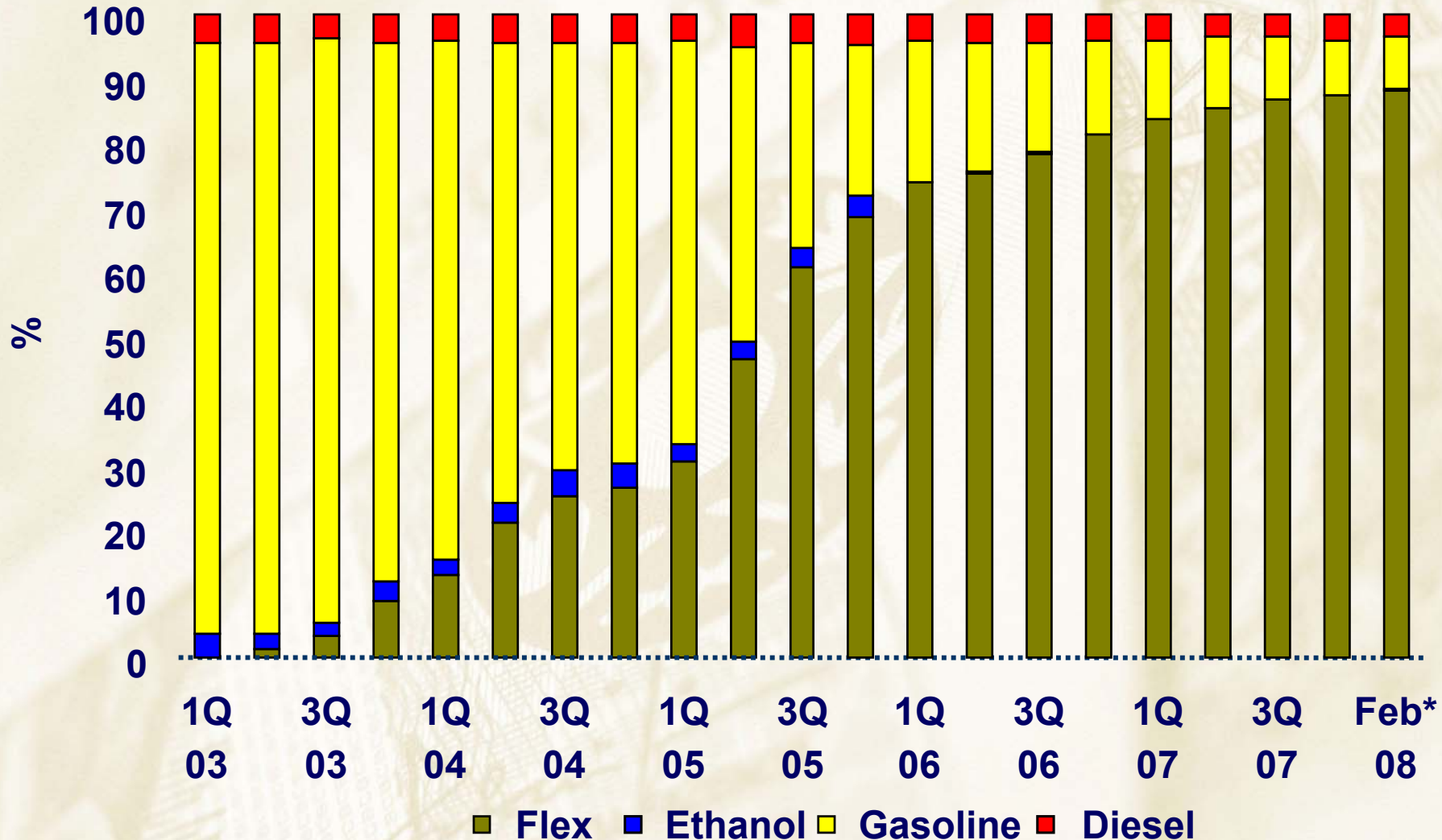
| Investments 2006-2012                |                    |
|--------------------------------------|--------------------|
| <b>New plants (77)</b>               | <b>US\$12.2 bn</b> |
| <b>Modernization of plants (335)</b> | <b>US\$2.4 bn</b>  |
| <b>Total</b>                         | <b>US\$14.6 bn</b> |

2006  
335 plants

➔

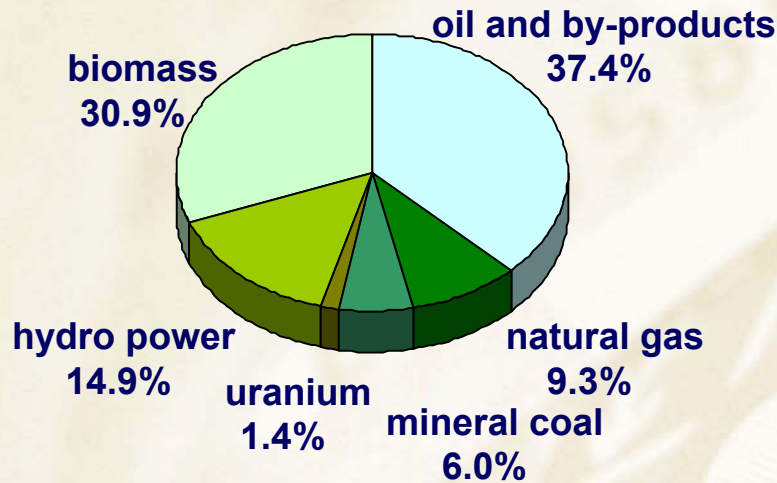
2012  
412 plants

# Cars – Domestic Sales by Type of Fuel

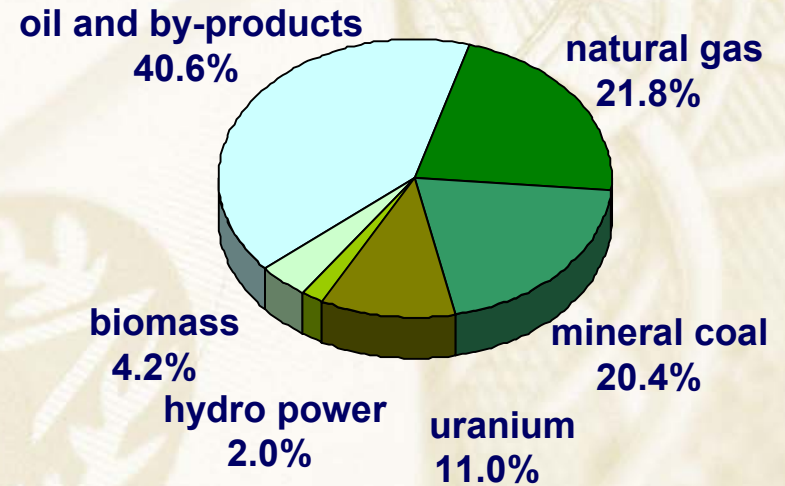


# Energy Matrix – Domestic Supply of Energy -2007

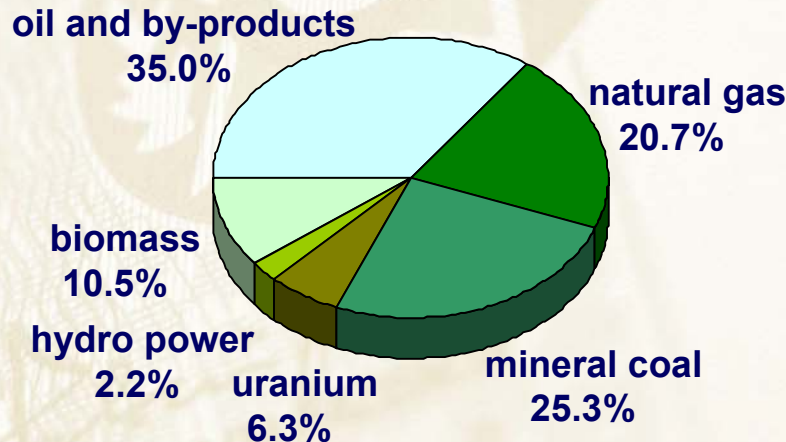
## Brazil



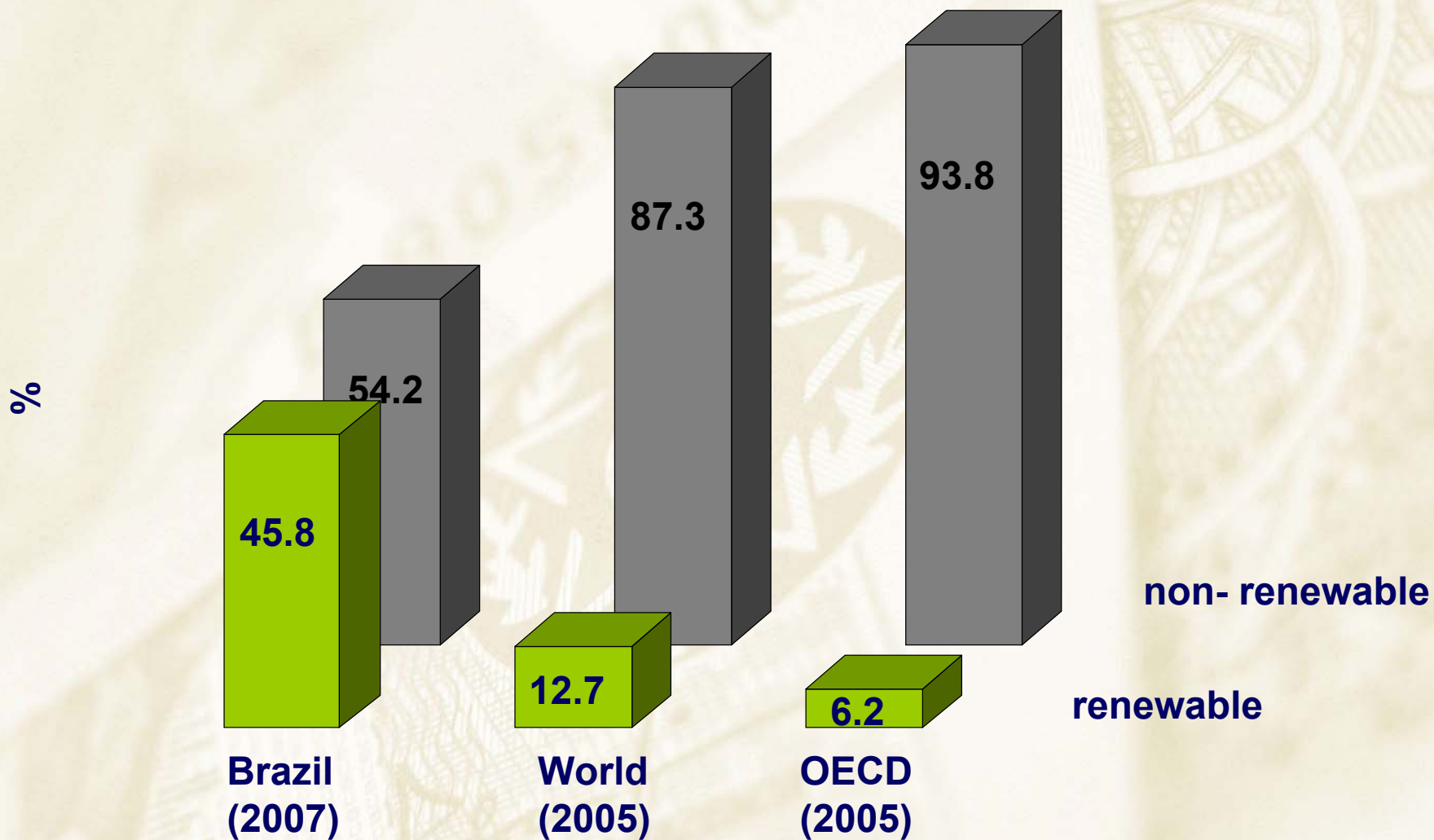
## OECD\*



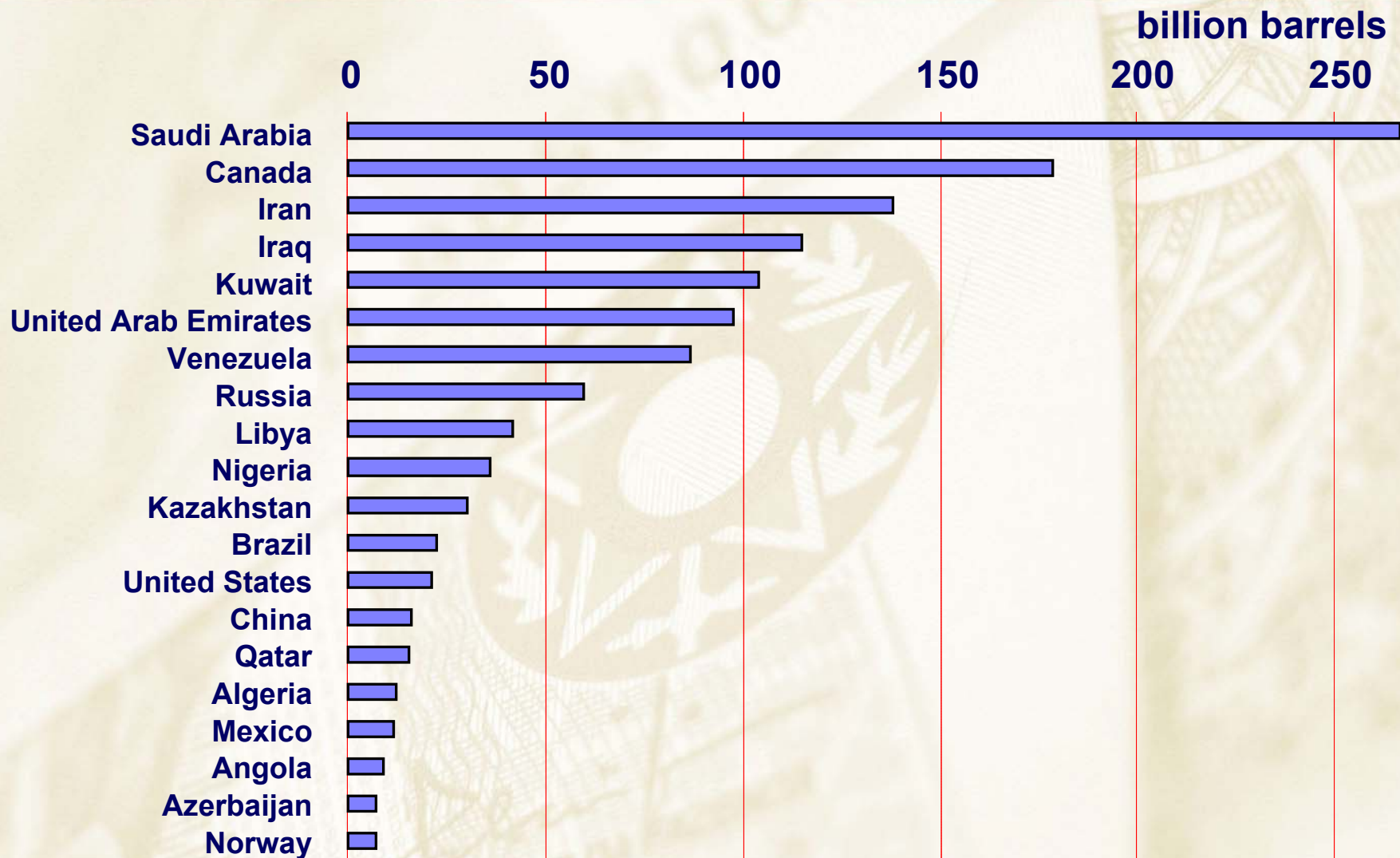
## World\*



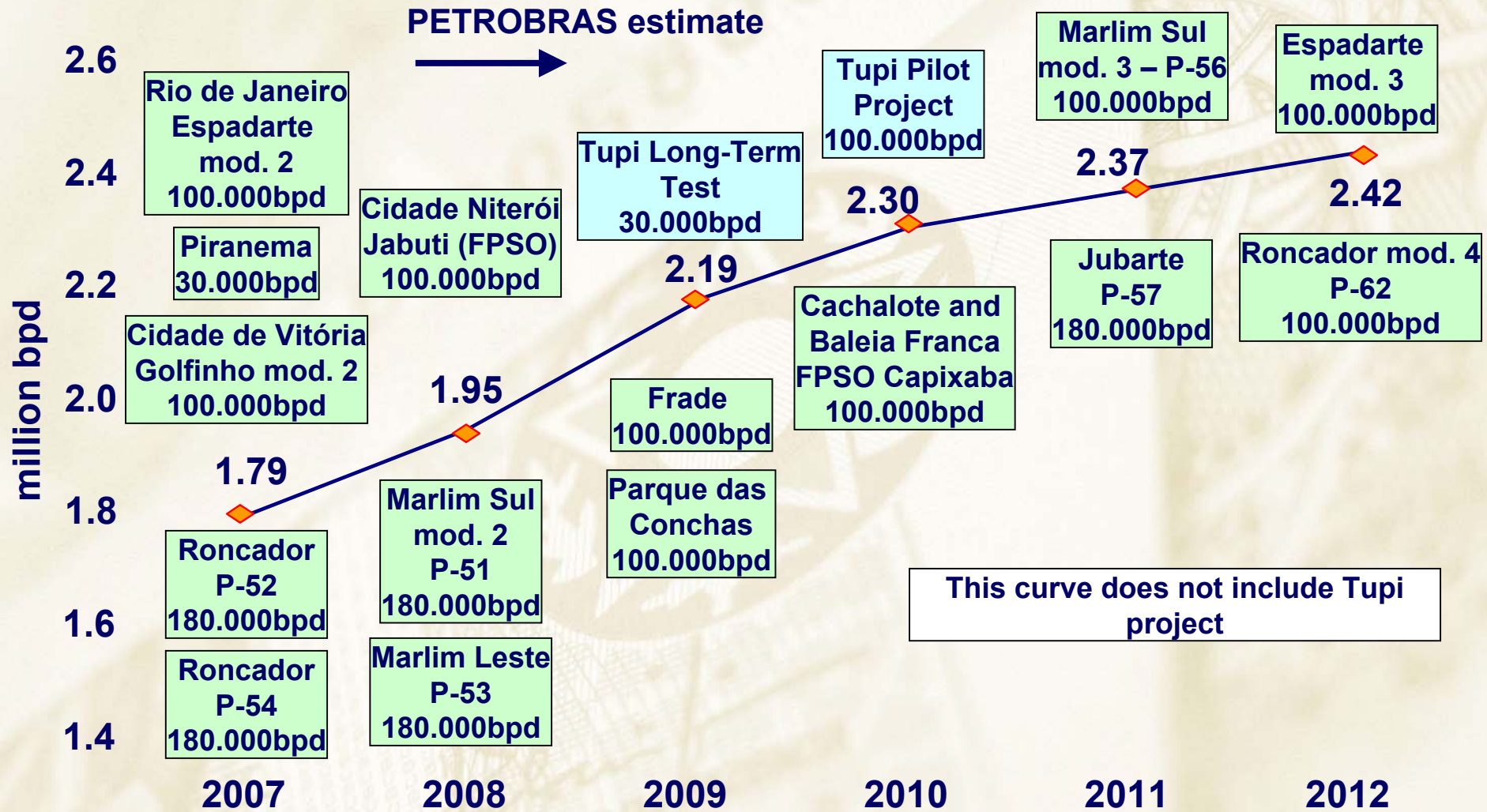
# Energy Matrix – Domestic Energy Supply Structure



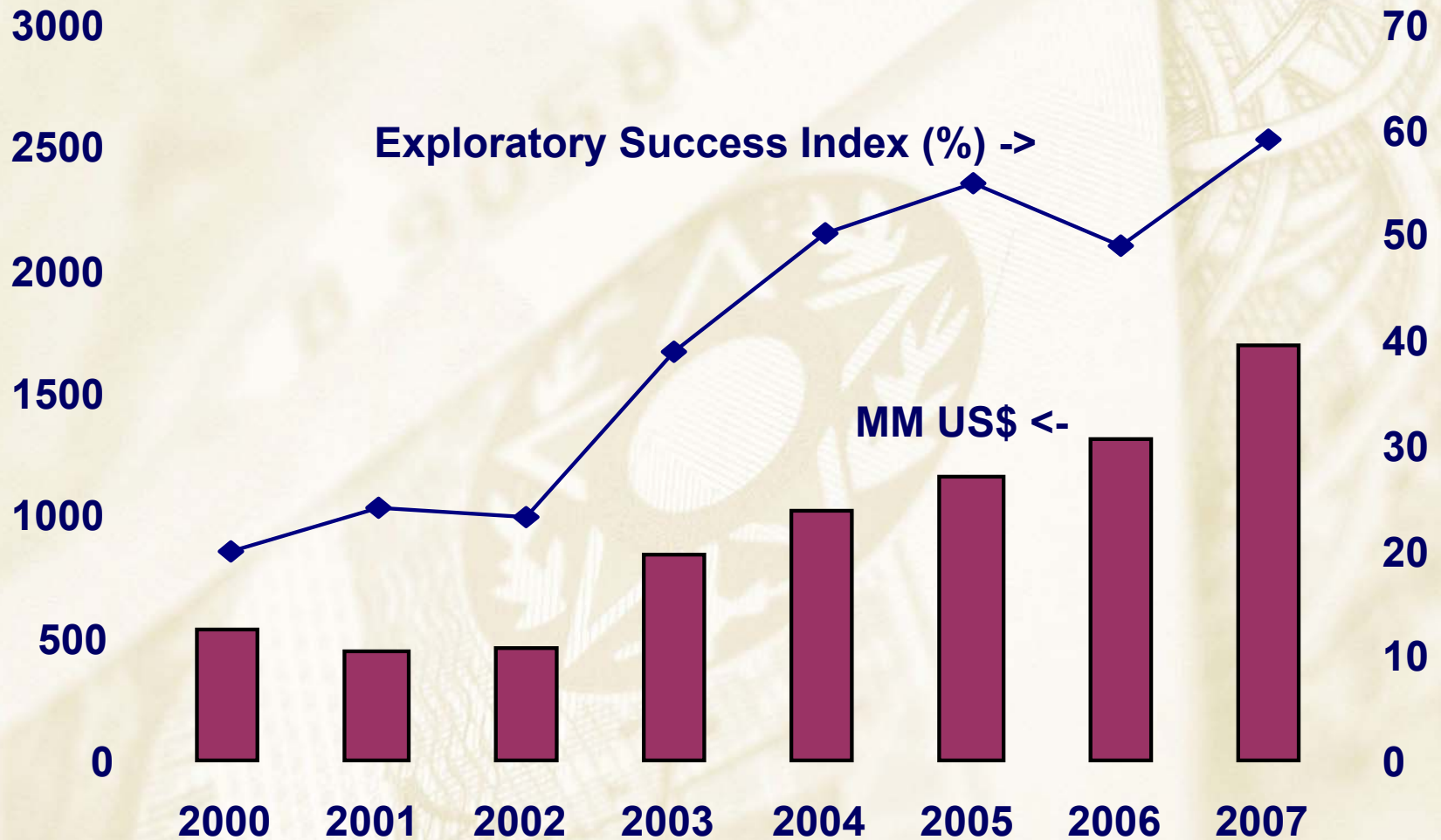
# Proved Reserves of Oil - 2008



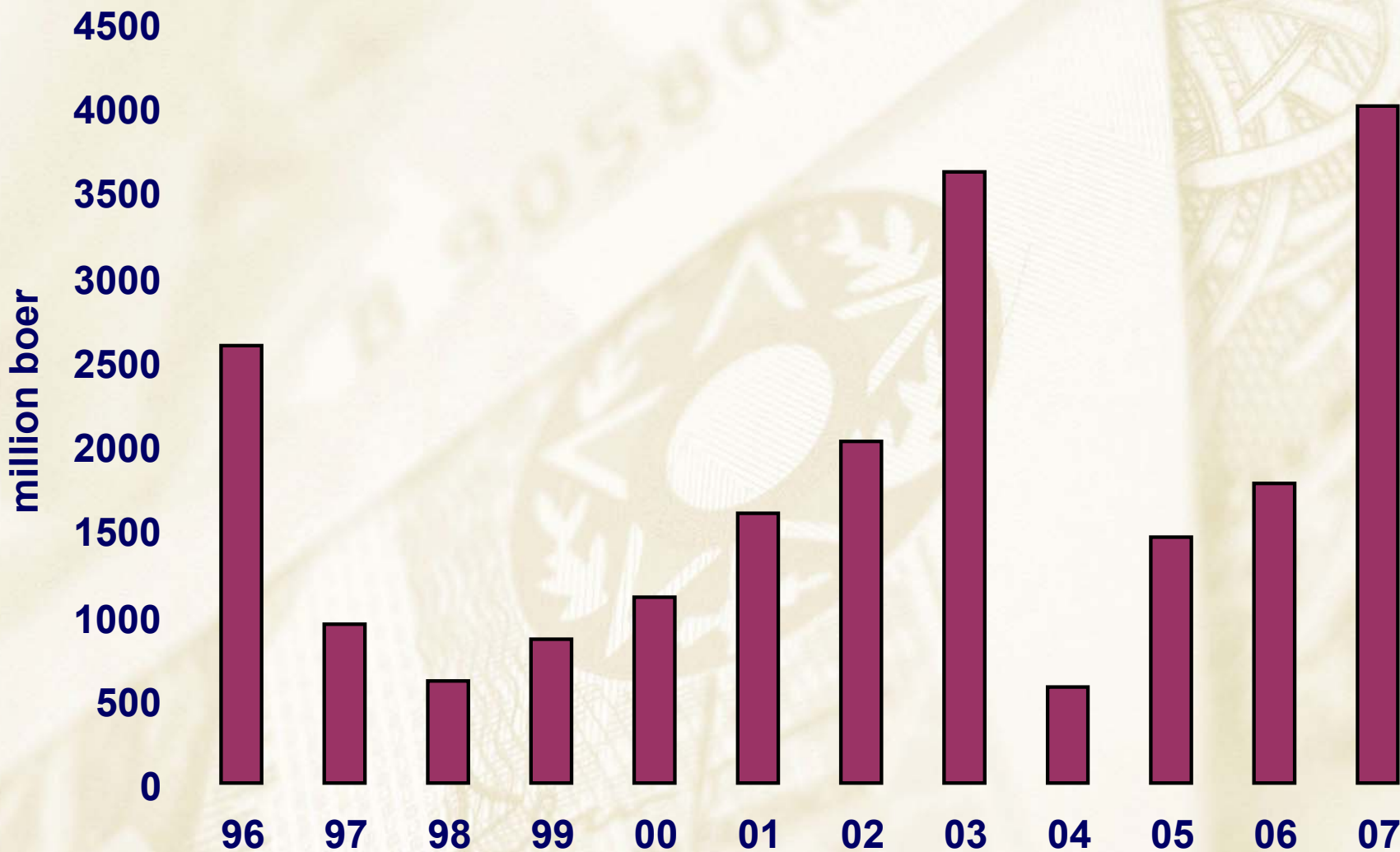
# Oil Production



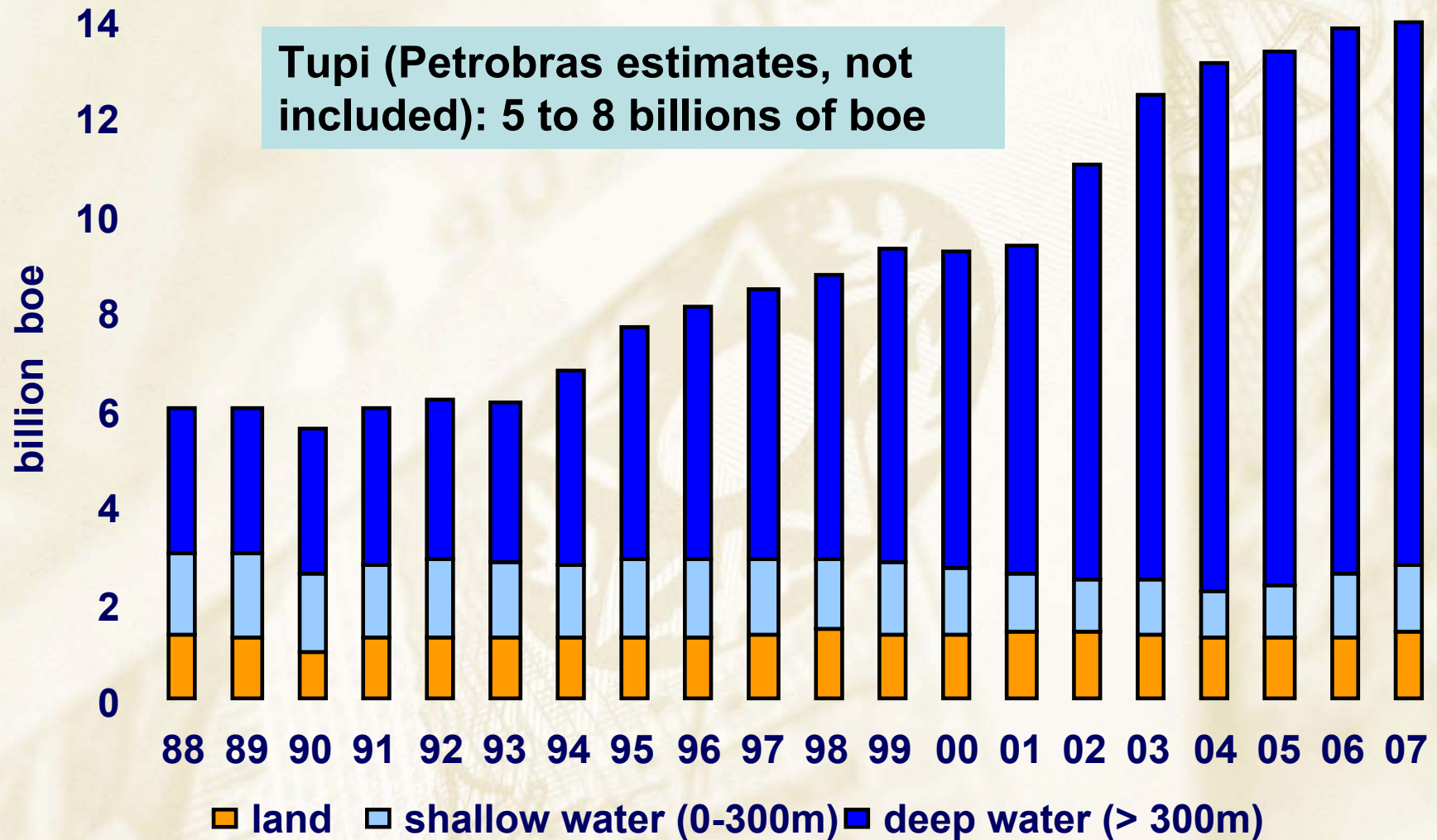
# Exploratory Investment

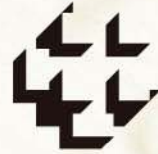


# Economically Recoverable Volume Found in Brazil



# Brazilian Reserves of Oil and Gas





**BANCO CENTRAL DO BRASIL**

# **Global Rise in Commodity Prices: Risks and Policy Options**

**Canada**

**June 2008**