EUROPEAN CENTRAL BANK

The accumulation of foreign exchange reserves

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Outline of the presentation

1 - Evidence on the accumulation of cross-border official financial assets:

(a) fx reserves

(b) alternative uses

2 - Drivers

3 - Impact on U.S. yields

4 - Risks and costs

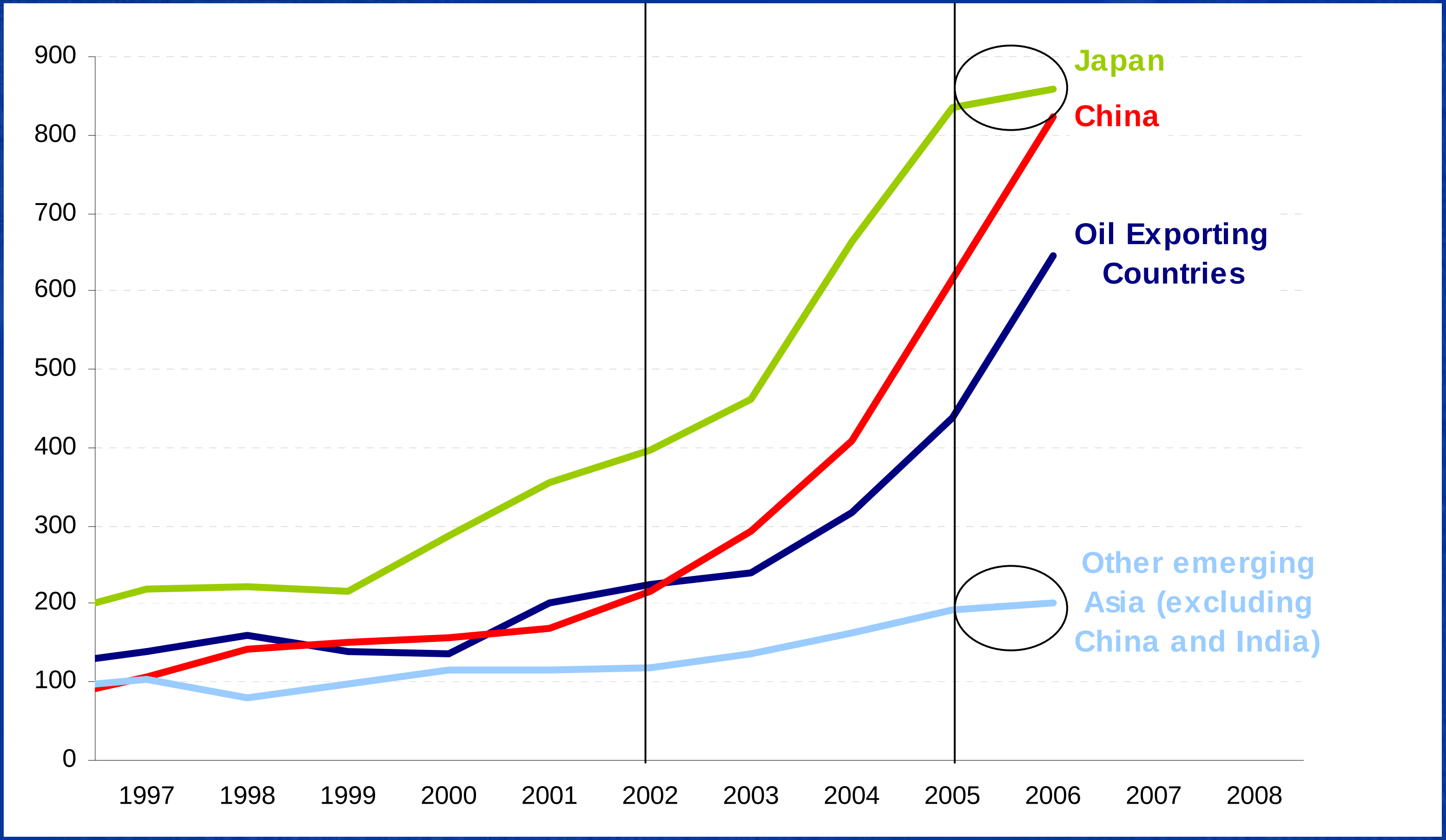
5 - Conclusions

Part I (a)

Evidence on the accumulation of foreign reserves

The rapid increase in foreign exchange reserves of Asian and oil-exporting countries since 2002

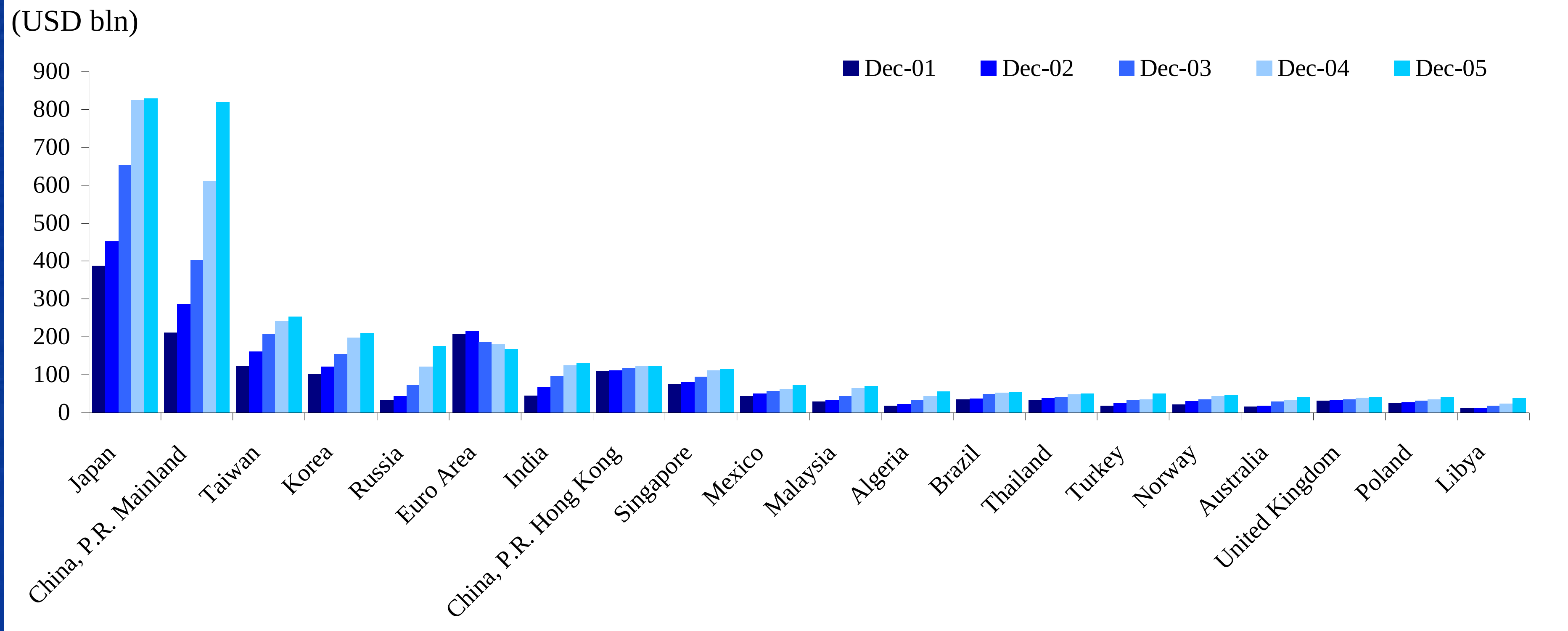
Foreign exchange reserve assets holdings *(USD billions)*



***Source:** IMF, World Economic Outlook*

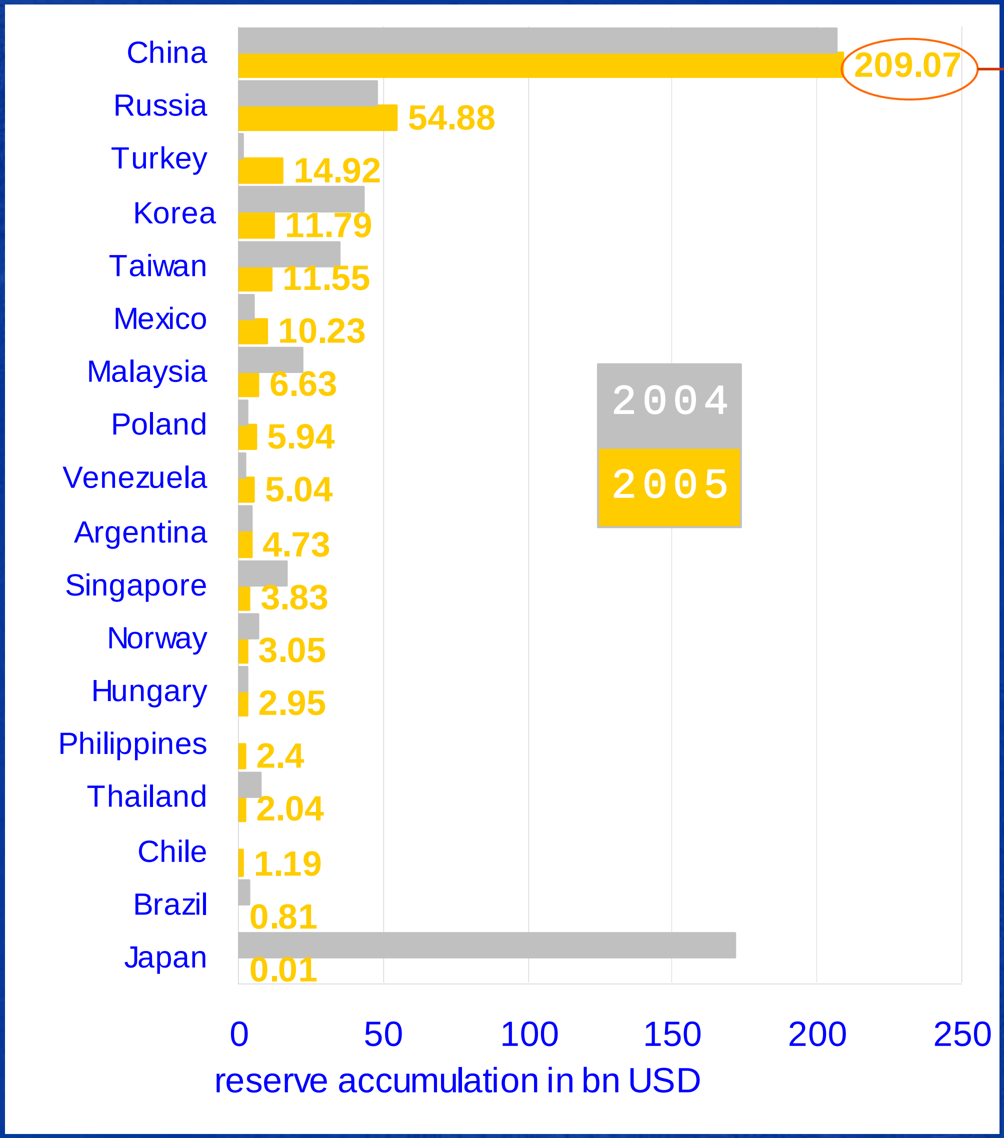
8 Asian countries currently rank among the 10 largest reserve holders

Foreign exchange reserves of countries with the largest holdings *(2001 - 2005)*



Source: IMF, The Central Bank of China and Bank Negara Malaysia.

The degree of concentration in reserve accumulation increased in 2005

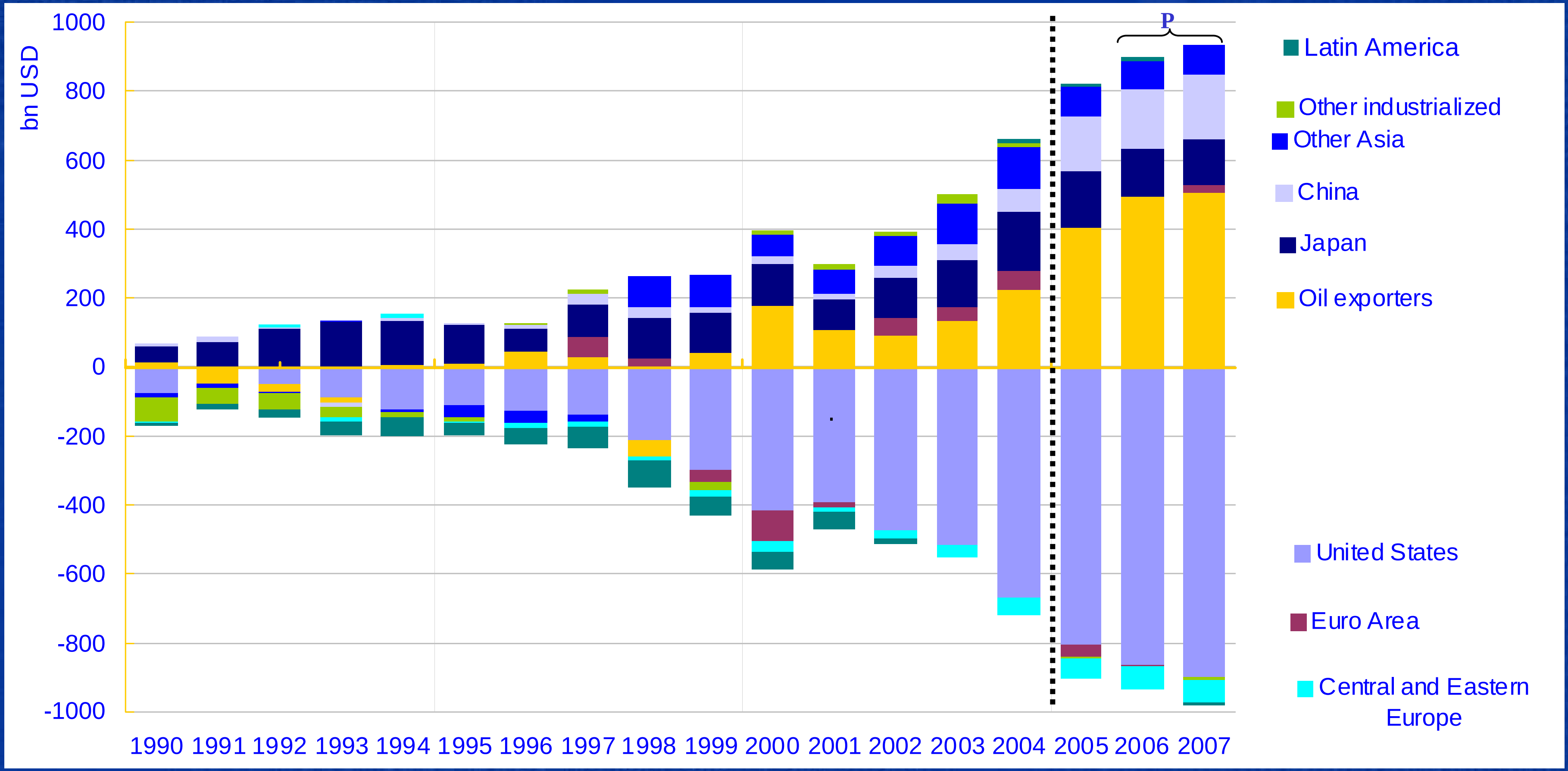


54% of total reserve accumulation in 2005

Top-five share in total reserve accumulation:

- 57% in 1995-2001
- 68% in 2004
- 78% in 2005

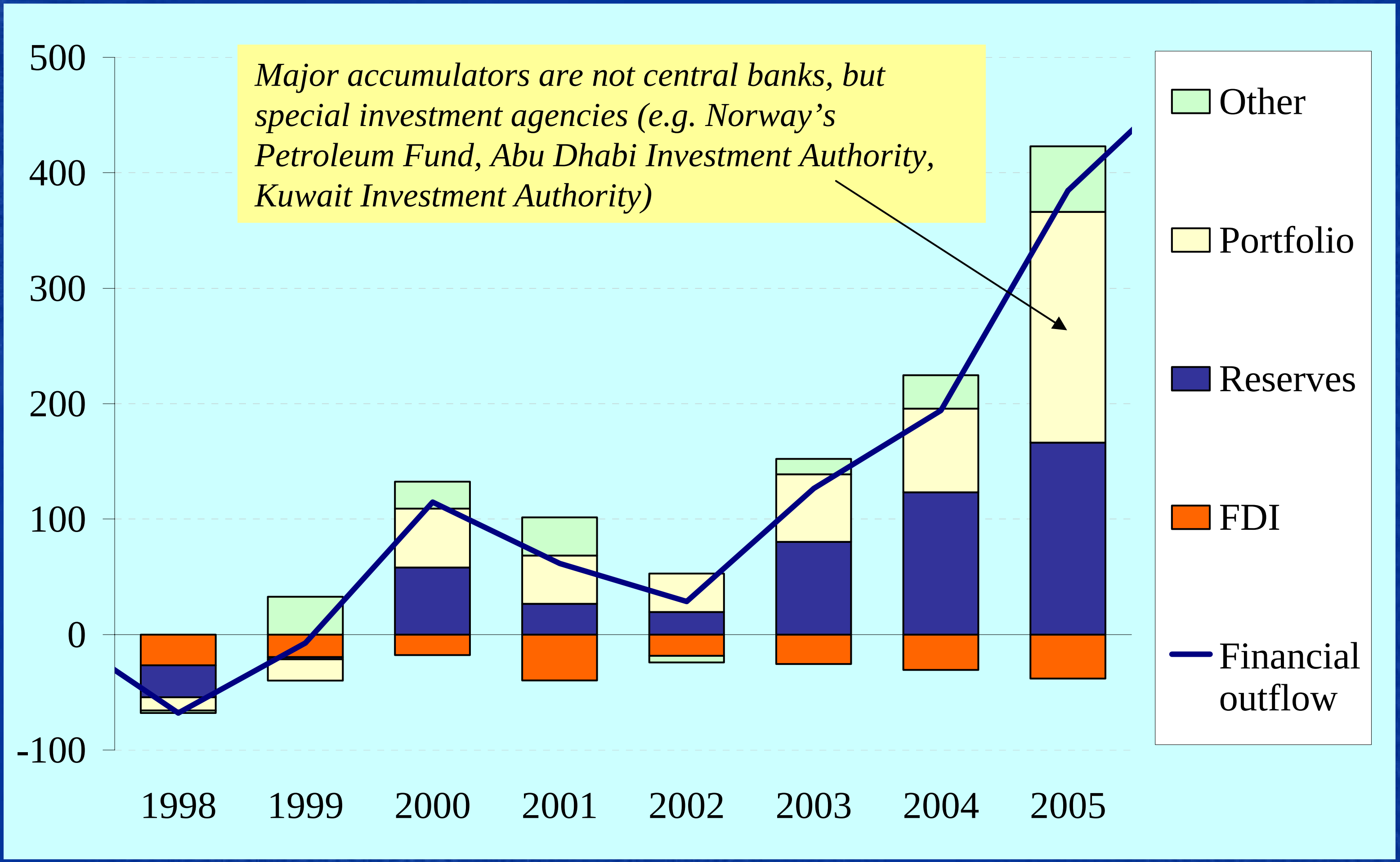
The emergence of oil exporters in 2005 as the main region with current account surpluses …



Source: IMF WEO

Current account imbalances: overview

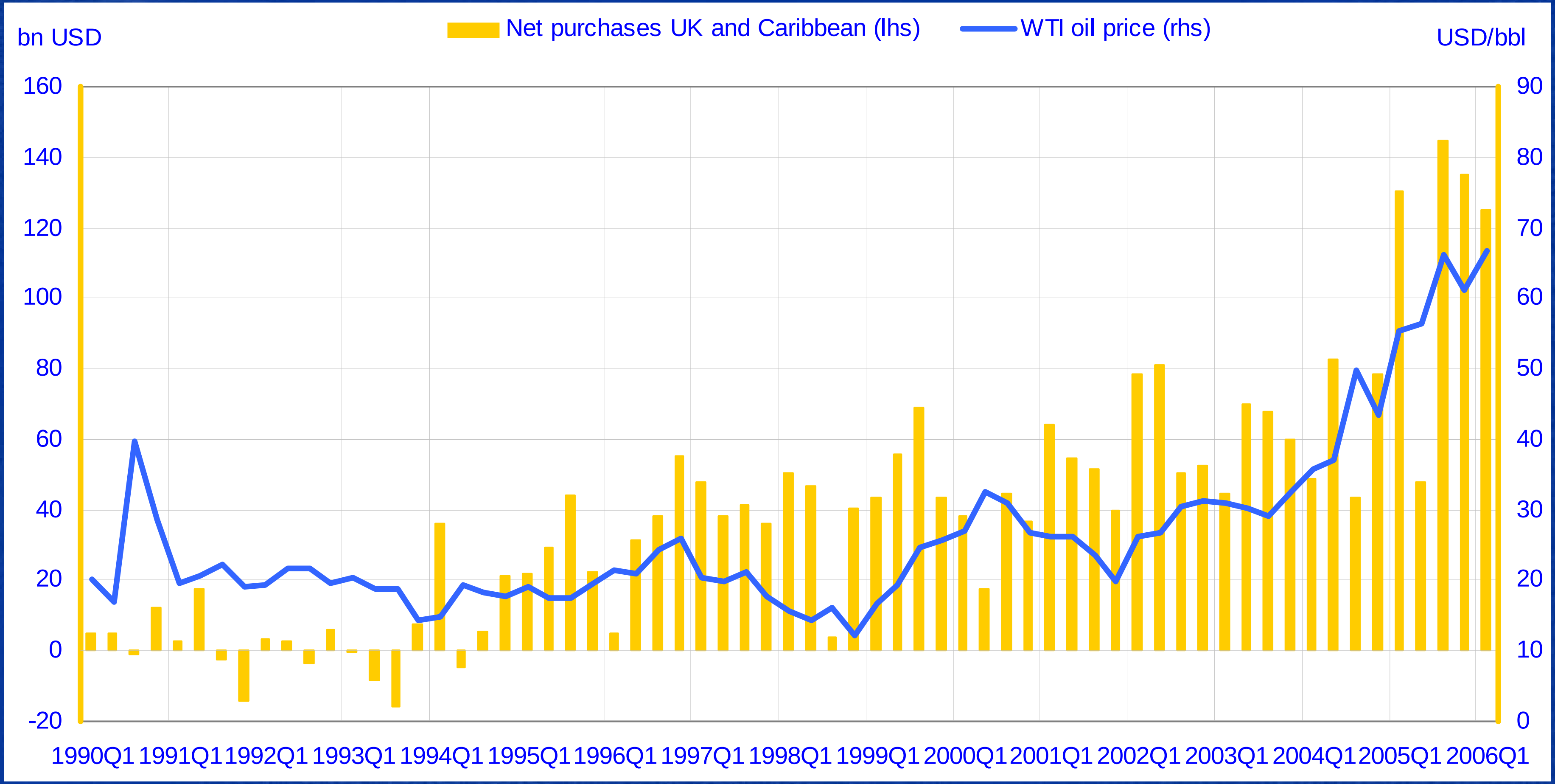
… is not clearly reflected in the statistical evidence on reserve accumulation …



Source: IMF WEO and ECB staff calculations

Oil exporters. Net financial outflows (+) ***(USD billion)***

… but may be indirectly detected in the evidence on US portfolio inflows



Net purchases of US long-term securities by UK and Caribbean offshore centres (in USD billion) and oil price (in USD/bbl)

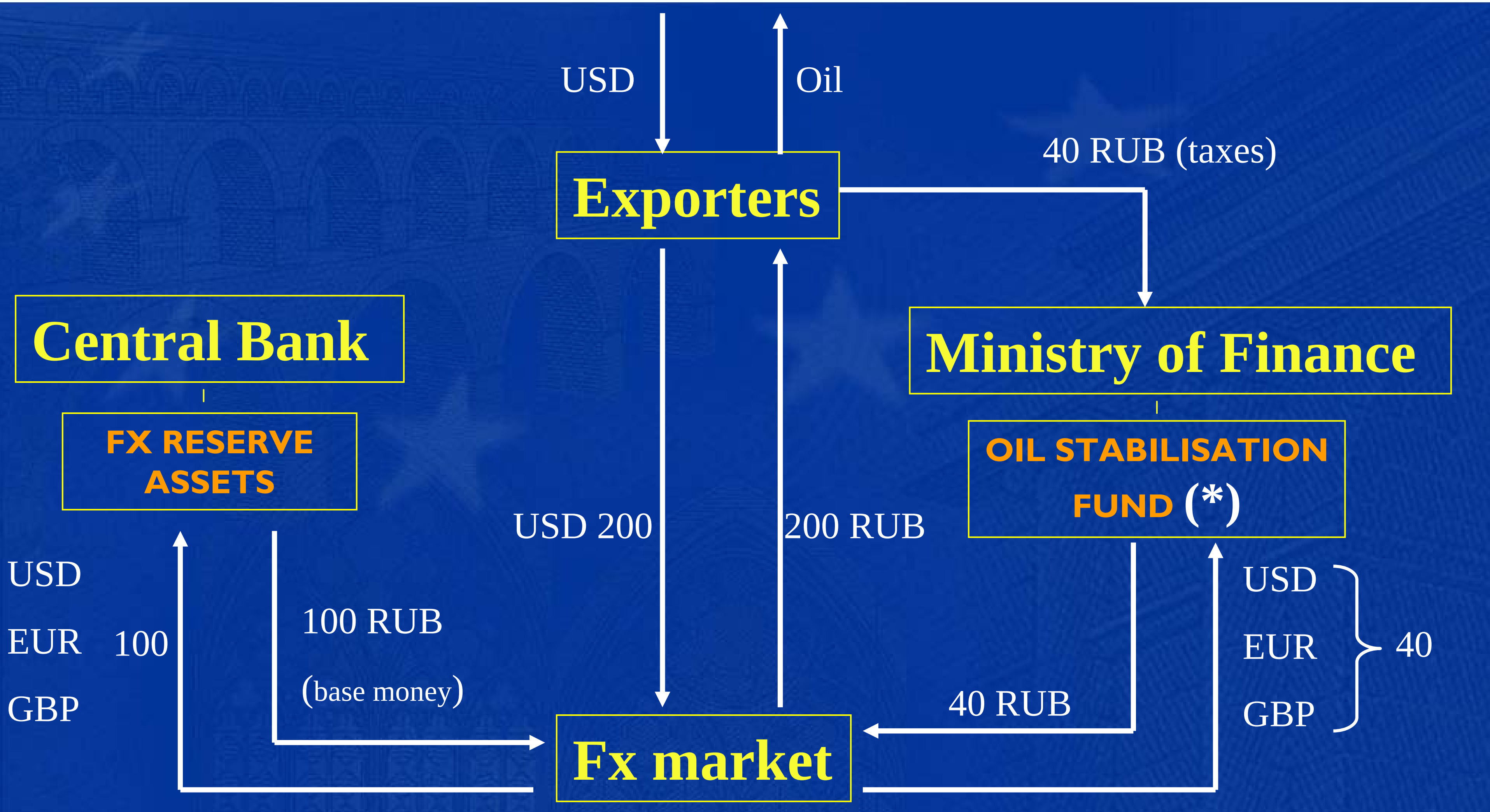
Part 1 (b)

Alternative uses of accumulated cross-border official foreign assets

Main alternative uses

- **Oil funds**: stabilising volatile oil revenues through time (Russia, Norway, Venezuela, Kuwait, Oman, etc.)
- **Heritage funds**: preserving the value of foreign assets for future generations (Singapore, Abu Dhabi, Kuwait)
- **Recapitalising state-owned banks** (China)
- **Repaying external debt** (Russia, Argentina, Brazil) **or domestic debt** (Saudi Arabia)
- **Financing major investment projects** (Taiwan)

The Russian Oil Stabilisation Fund: How does it work now?



(*) *Invested by the central bank on behalf of MoF (45% USD, 45% EUR, 10% GBP)*

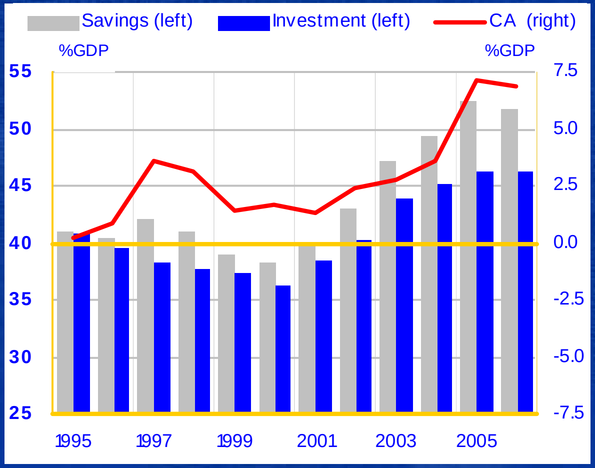
Part 2

What are the main drivers of reserve accumulation?

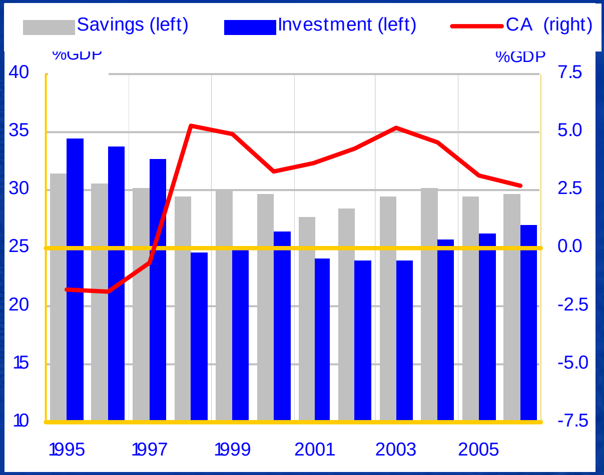
The accumulation of foreign reserves: macroeconomic preconditions

Current account, savings and investment

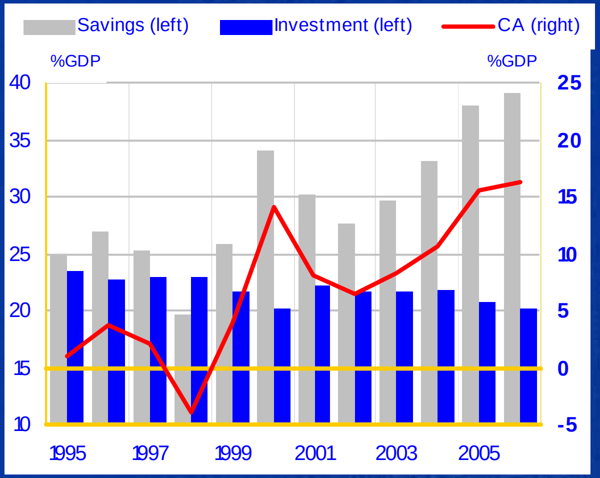
China



Other Asia



Oil exporters



S > I

… *Moreover:*

- Exchange rate pressure also from net portfolio and banking inflows in certain countries (China, Korea, India, Taiwan)

Three fundamental drivers of reserve accumulation

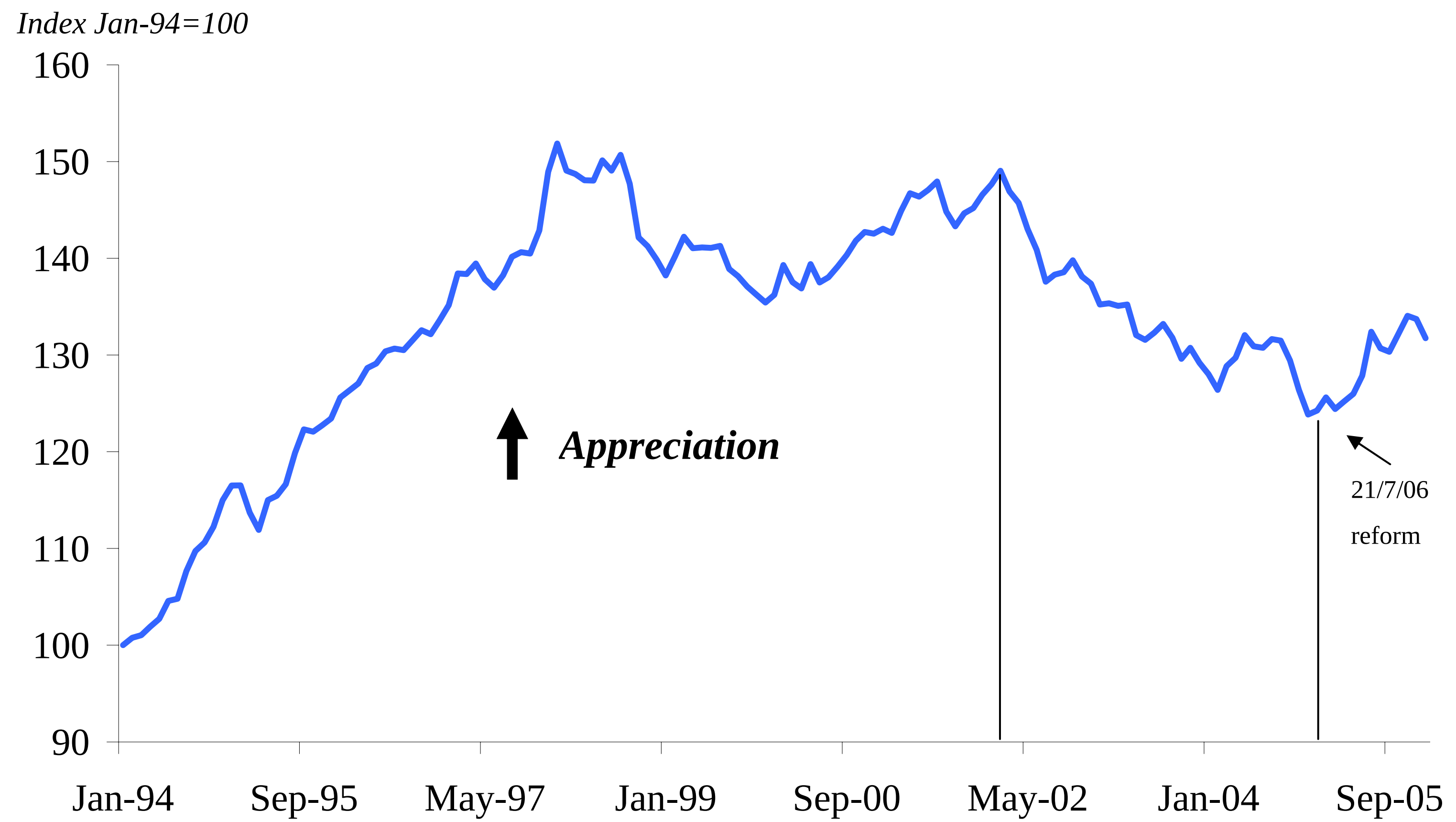
Given **savings glut/investment drought:**

1. Unilateral **self-insurance** against future financial crises

2. **Export-led growth** (post-crisis recoveries) supported by exchange rates anchored to the US dollar

3. The **underdeveloped financial structure** of several emerging countries, including (i) difficulties to channel private S to I, (ii), dollarization of foreign assets, and (iii) costly hedging if one-way bet

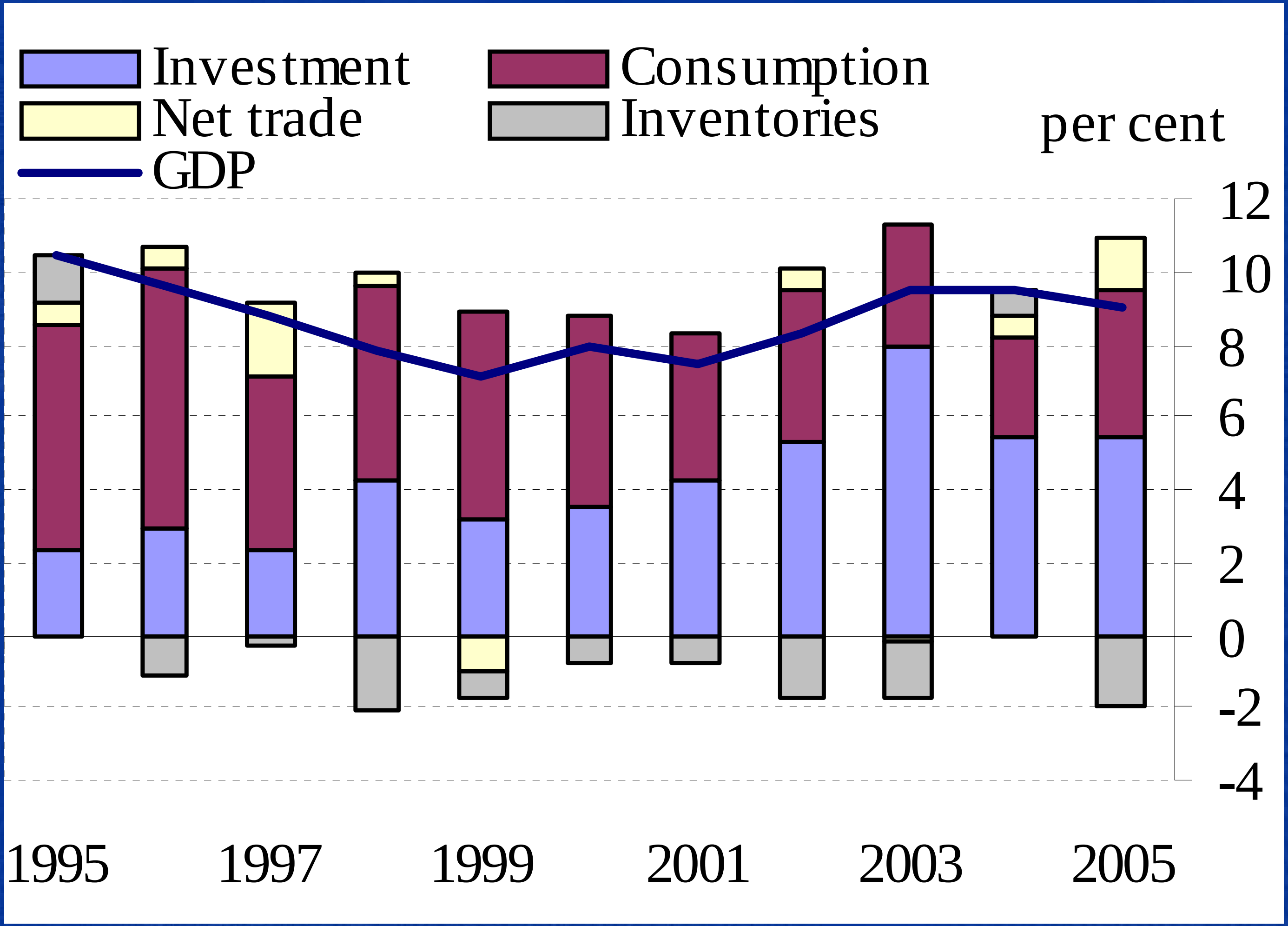
The renminbi REER depreciated by 15% between 2002 and the exchange rate reform of 21 July 2005 …



Source: JP Morgan

Real exchange rate of the renminbi

… but the "export-led growth" argument should not be overemphasised for China



Source: IMF World Economic Outlook.
Contribution by expenditure component, annual growth rates.

China: Contributions to real GDP growth

Part 3

Measuring the impact on
U.S. yields

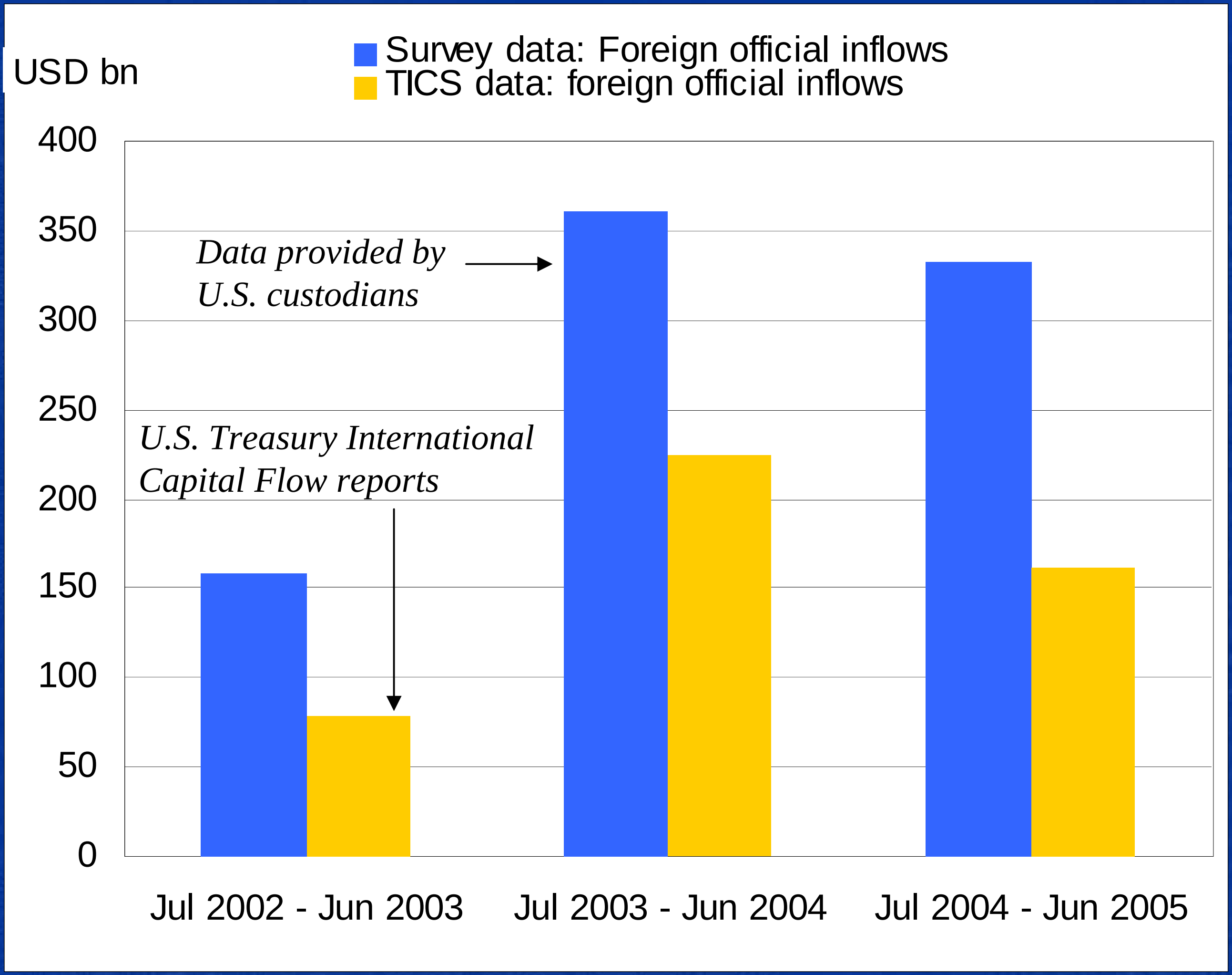
Impacts on U.S. government bond yields of reserve accumulation: Some estimates

Estimates of the effect of reserve accumulation on US Treasury yields
(basis points)

Source	*Estimated reduction of yields*
Merrill Lynch	30
JP Morgan	30 — 50
Goldman Sachs	40
Eurosystem	**65**
Edwin Truman	75
Patrick Arthus	75
Ben Bernanke et al.	50 — 100
Bill Gross	100
Banque de France	125
Stephen Roach	100 — 150
Nouriel Roubini et al.	200
Robert McCauley	Significant, but unstable and short–lived relation
Vanguard Group	No long–term effect

Source: Eurosystem.

Do the "traditional" U.S. TIC data underestimate the relative importance of official portfolio flows to the United States?



Foreign official purchases of US long-term securities: Total inflows

Part 4

Risks and costs of reserve accumulation

The accumulation of foreign reserves: potential risks and costs (see ECB Occasional Paper No. 43)

	Potential risks or costs	Underlying factors
Risks	❑ Conflict between exchange rate stability and easing of monetary conditions if interventions not fully sterilised ➔ inflation and/or asset price bubbles	❑ Underdeveloped financial markets; ❑ shortage of sterilisation instruments; ❑ snowball effects: sterilisation coupled with expected exchange rate appreciation ➔ capital inflows ➔ more sterilisation and expected appreciation
	Segmentation in the public debt market	Excessive sterilisation through issuance of central bank liabilities instead of government securities
	Potential deterioration of central bank balance sheet	Domestic currency appreciation (currency risk)
Costs	Opportunity costs	Yields paid on domestic sterilisation instruments exceed those on foreign assets
	Concerns about bank profitability	Because of controls on bank lending, the banking sector might not have alternatives to buying low-yield sterilisation instruments

Source: Eurosystem.

Conclusions

Reserve accumulation and global imbalances:

Short-term effects →
- Financing US CA deficit
- Low yield environment

Longer-term effects →
- Insufficient fx flexibility in CA surplus countries
- Less policy discipline in deficit countries

→ **… but:**
- Multi-pronged approach to global imbalances (G7 statements): Exchange rate flexibility alone does not work
- There are deep reasons for reserve accumulation which call for some gradualism in its discontinuation

Thank you