Financial Intermediation Services Indirectly Measured (FISIM) in the CPI

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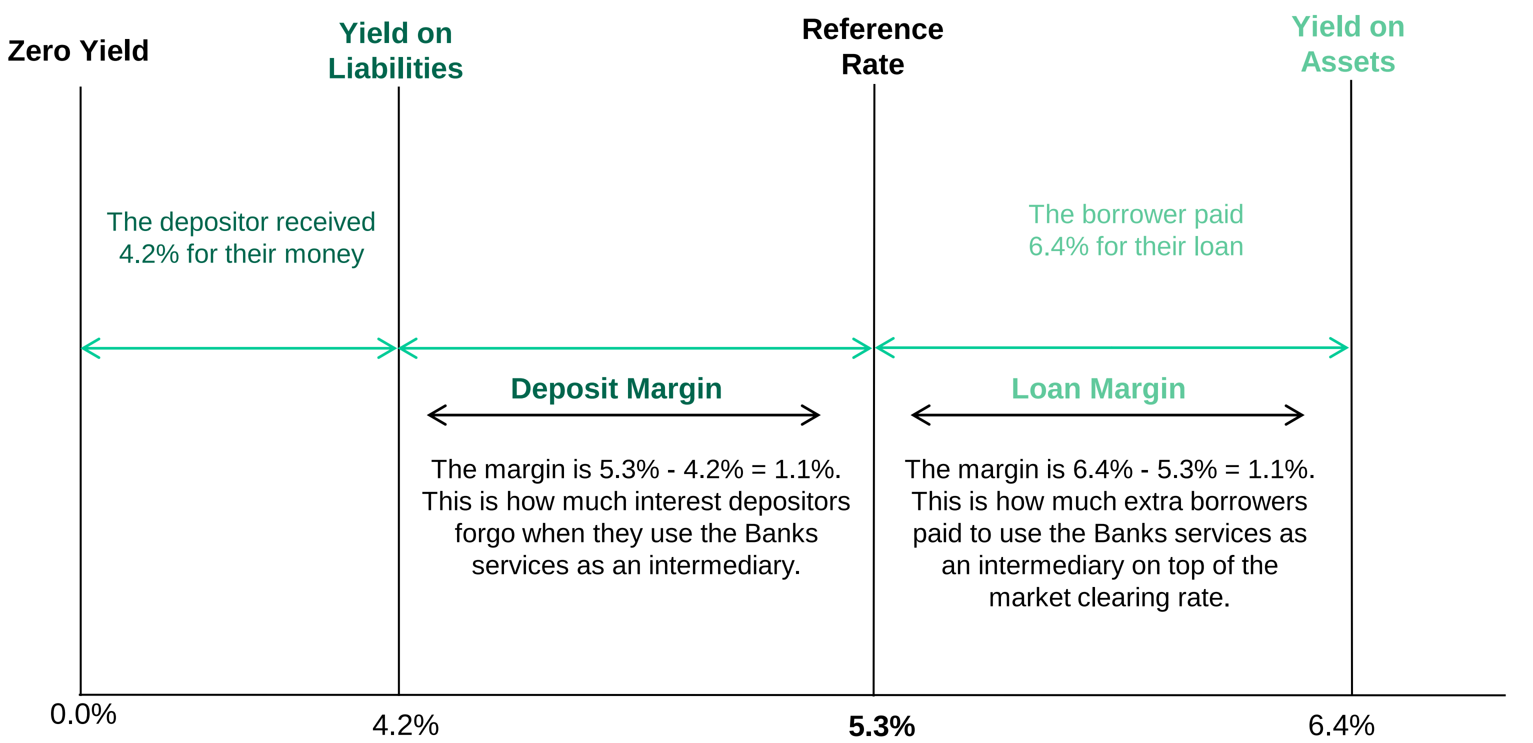
FISIM Explained



The Reference Rate is the arithmetic average (***mid-point)*** of the yields on Assets and Liabilities;

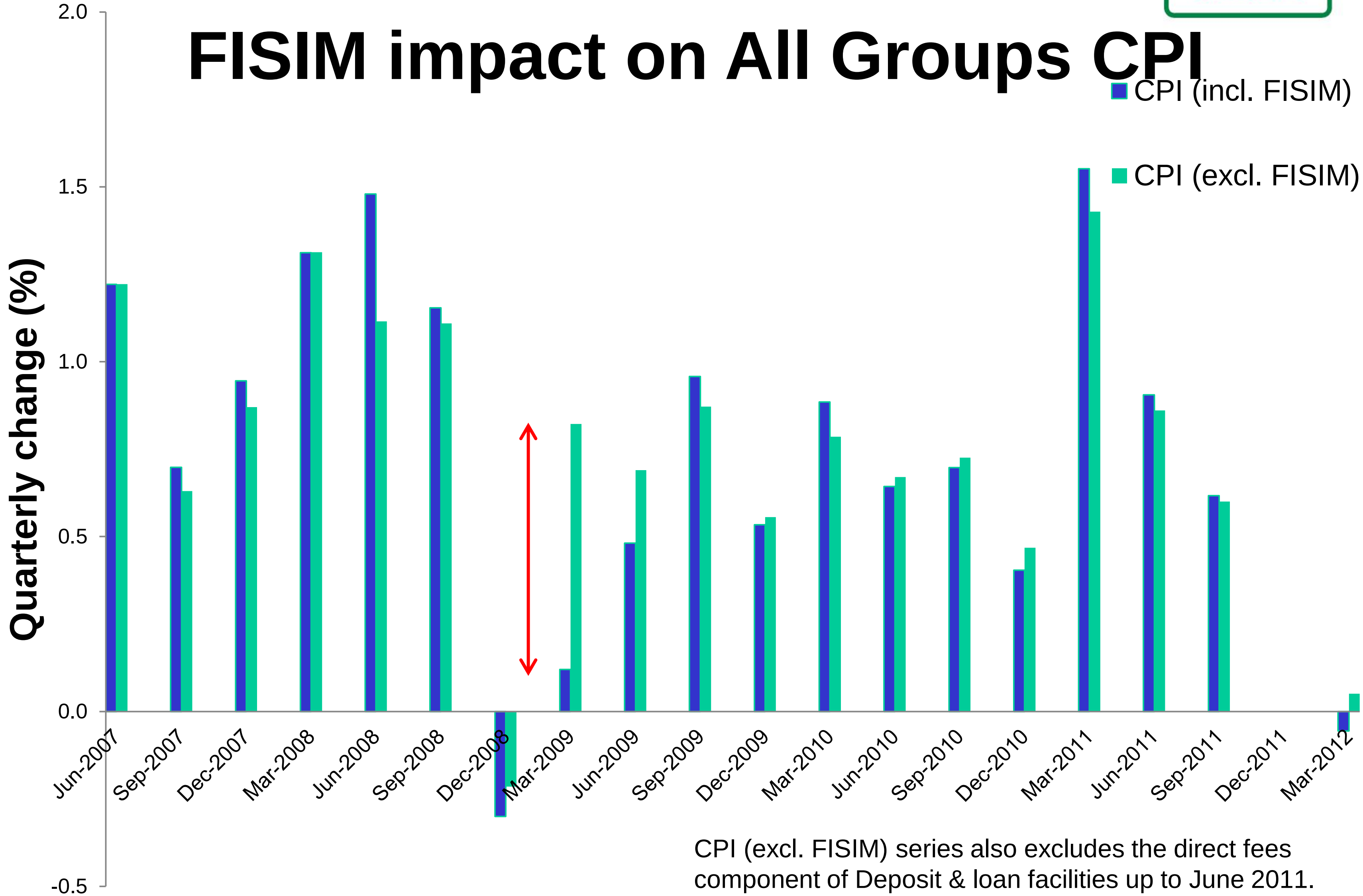
(4.2% + 6.4%) / 2 = **5.3%**

User concerns with FISIM in the CPI

Major review of the CPI in 2010. Conceptually FISIM should be in, but GFC highlighted issues with …

- Volatility in final price series
- Predictability / forecasting difficult
- Choice of reference rates
- Concerns about cost of wholesale funds and treatment of fixed rate products
- No international consensus and comparability
- Impact on headline rate (relative weight in CPI)

FISIM impact on All Groups CPI



CPI (excl. FISIM) series also excludes the direct fees component of Deposit & loan facilities up to June 2011.

Improvements to FISIM measure

- Comprehensive, detailed and timely data – allowed ***disaggregation*** of product categories.
- Annual reweighting of dollar margins and updated sampling of products.
- Mitigation of negative prices.
- Engagement with users to increase the transparency of methodological processes and interpretability of outputs.

… still outstanding issues

International Developments

The Intersecretariat Working Group on National Accounts (ISWGNA) FISIM Task Force formed in 2010 to investigate;

“How the composition of the services that FISIM covers—particularly <u>risk management</u> and <u>liquidity transformation</u>—affects the selection of the reference rate…”

FISIM price change is highly sensitive to the choice and movement of the <u>reference rate</u>.

Default Risk

Contracted Rates	
16%	16%
16%	~~16%~~ Default

=

Effective Rate
12%

- Defaulting loans are covered by the non-defaulting loans.

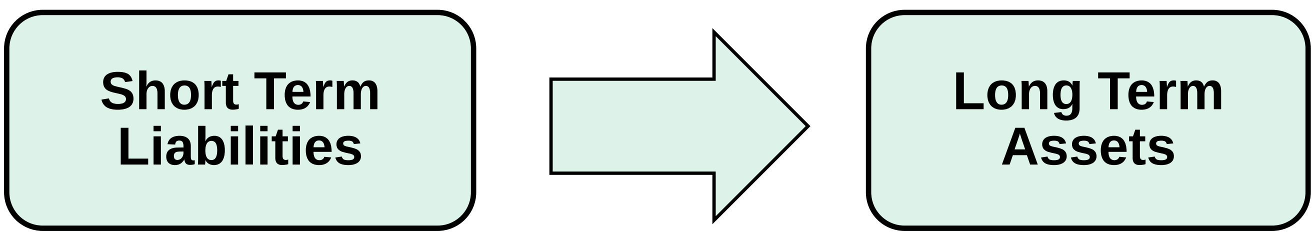
  Default risk premium is not *production* exclude from FISIM

  i. Use effective / real yields, not contracted / advertised

  ii. Adjustments for expected loan write-offs

Term Risk

- Banks hold mixture of fixed outstanding rate products and floating rate products that adjust to current market conditions
- Maturity transformation function of financial intermediation



- Rewarded for managing term risk – included in FISIM
  i. Multiple reference rates to price products off
  ii. Weighted average of maturities to produce single reference rate

Choice of Reference Rate(s)

“A proxy for a 'service-free' rate” - 2008SNA [6.166]

i. Interbank lending rate (2008SNA 6.166)
ii. Multiple reference rates matched to maturities
iii. Weighted average of maturities benchmark rate
iv. Midpoint of yields on deposits and loans (ABS)

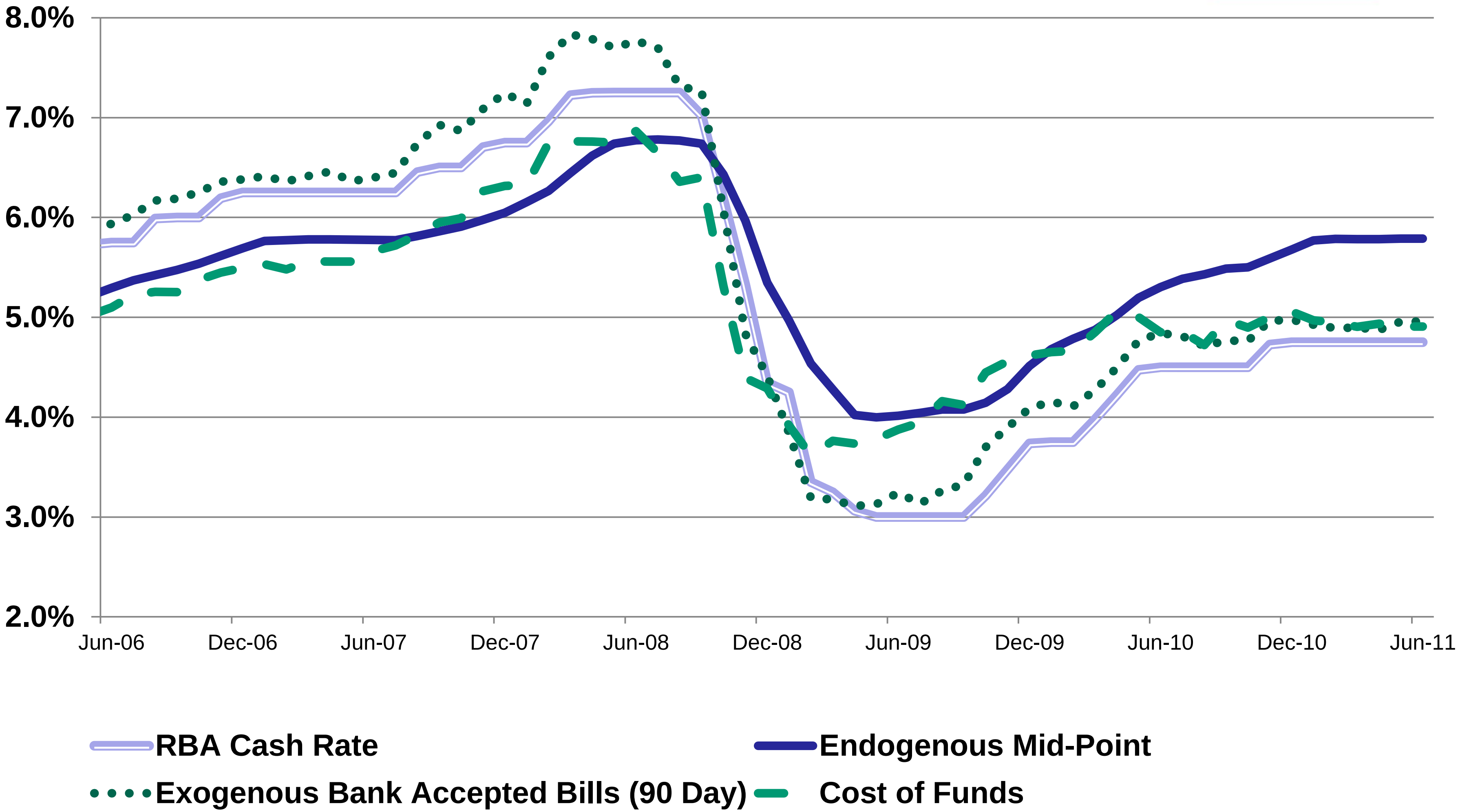
- ✓ Strong connection to underlying economic conditions as measured by volatility
- ✓ No sustained periods of negative FISIM
- ✓ Sensible changes in FISIM near economic turning points
- ✓ Data is observable

Public Simulation

- Simulation using public data to test three ***single*** reference rate models.
  1. Endogenous mid-point (<u>current</u>)
  2. Exogenous interbank lending rate (<u>SNA2008</u>)
  3. Cost of funds (includes some maturity windows)

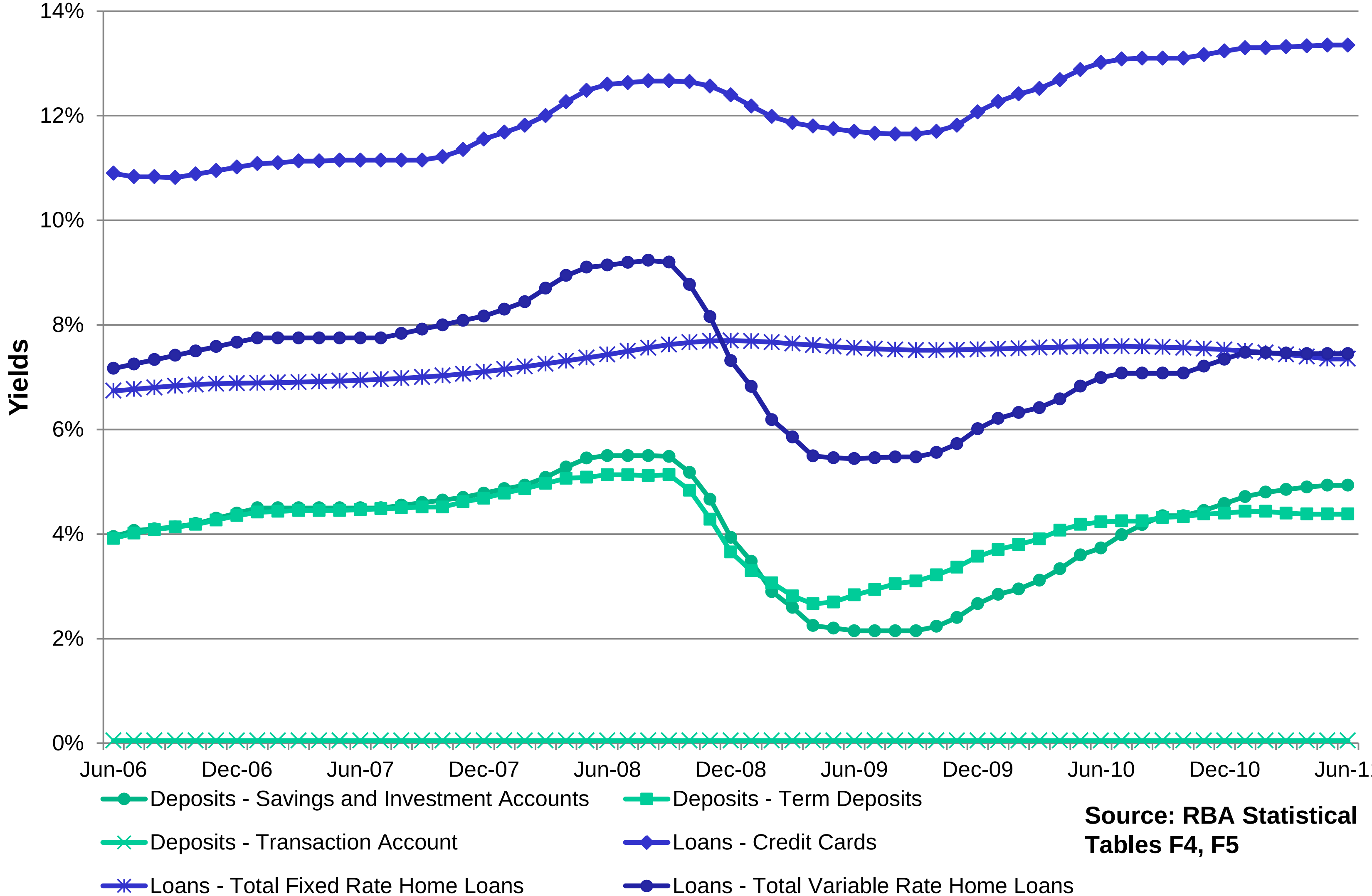
"*no service element and reflect the risk and maturity structure of deposits and loans*" **– SNA2008**

Derived Reference Rates



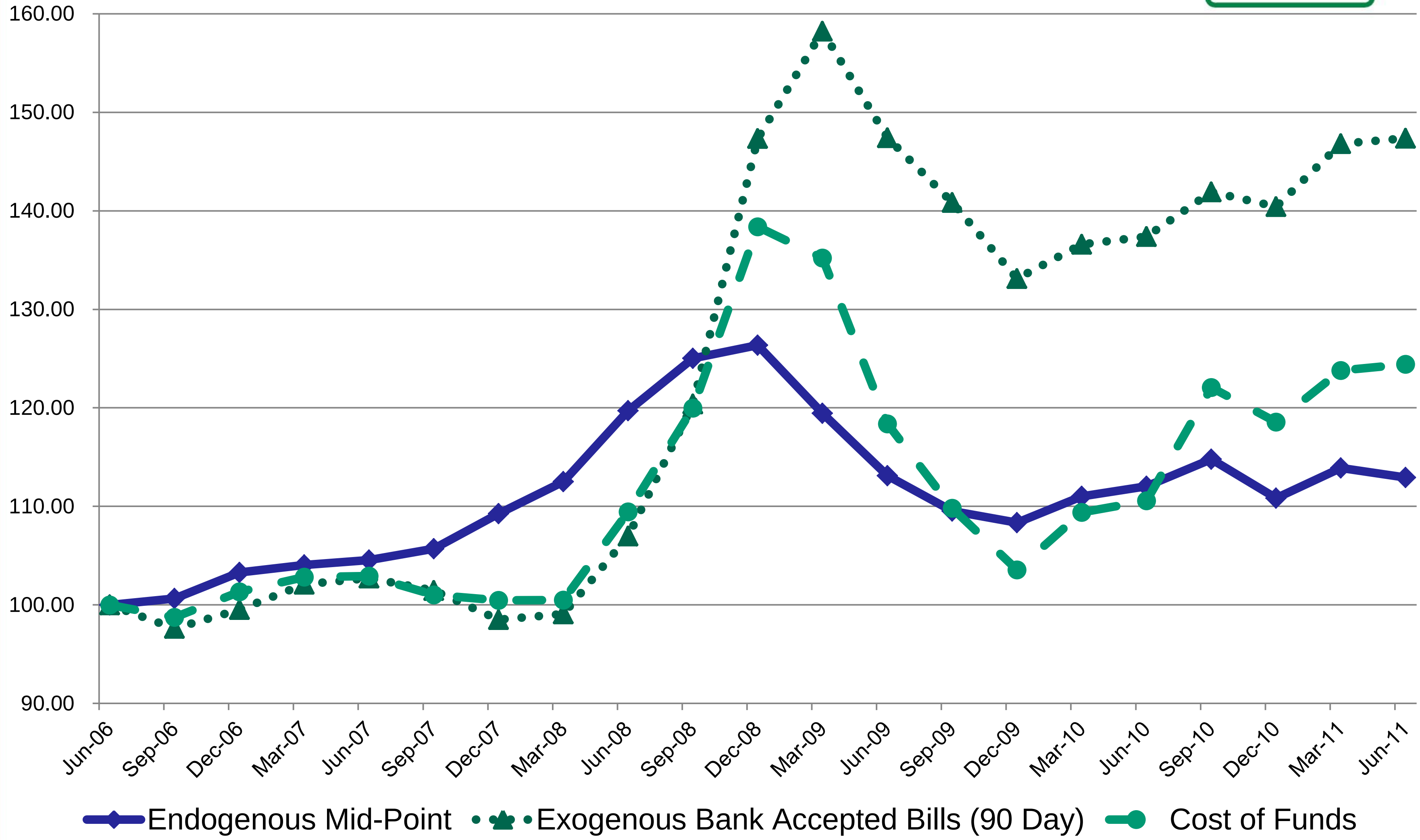
Source: Reserve Bank of Australia, Australian Prudential Regulation Authority, ABS Financial Accounts

Yields



Source: RBA Statistical Tables F4, F5

Price Index Indirect Fees (FISIM)



Sources: Reserve Bank of Australia, Australian Prudential Regulation Authority, ABS Financial Accounts

Reference Rate Comparison

Single Reference Rate Models	Advantage	Disadvantage
Endogenous Mid-Point	Insulates the methodology in times of financial market volatility. Excludes default premium when actual flows are used.	Missed the higher cost of wholesale debt in GFC. *Persistent issue with fixed rate products and term structure in reference rate*
Exogenous Interbank Lending Rate	Easily available measure on current cost of money Picked up decrease on margins at outset of GFC	High volatility during GFC. Low interpretability (linking to consumer behaviour) *Persistent issue with fixed rate products and term structure in reference rate*
Cost of Funds (with maturity windows)	Broad approach that captures all funding considerations faced by banks. Some insulation from volatility . Picked up squeeze on margins at outset of GFC. Some maturity weighting	Complexity of model and volume of information required. Definitive answer on term risk treatment conceptually

Way forward

Conceptually

- FISIM belongs in all macroeconomic accounts and the CPI

Methodologically

- Accounting for fixed and floating rate products through international consensus on treatment of term risk
- Accounting for cost of wholesale funds
- Choice of reference rate(s)
- Improved price and volume measurement
- Transparency of process

Data Sources

- Product detail and improved reporting
- Replication based on public data