

a macro prudential approach to liquidity regulation

SOUTH AFRICAN RESERVE BANK FINANCIAL STABILITY RESEARCH CONFERENCE

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introduction

- the motivation for this presentation

- the core message

the motivation for this presentation

- regulation for capital is both micro prudential (capital ratio) and macro prudential (SIFIs surcharges, countercyclical buffers, loan to value ratios, margins)
- regulation for liquidity is only micro prudential with two ratios :
 - one "buffer" : the Liquidity Coverage Ratio - LCR (30 days of outflows in liquid assets)
 - one quantitative constraint on maturity transformation : the Net Stable Funding Ratio (NSFR)

the core message

1. the need for a macro prudential approach to liquidity and maturity transformation : address both the systemic and cyclical impact of liquidity
2. existing instruments are not adapted
3. analytical challenges are important
4. a diversity of instruments are needed , most already existing
5. the difficulty is to combine them into a consistent and integrated approach across the whole financial system

intuitively, current assignment may not be right

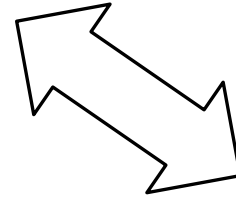
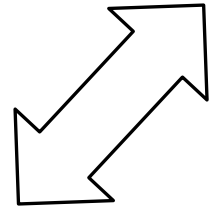
- we should have flexible instruments in the the fast moving parts of the system and rigid instruments in the slow moving part of the system
- liquidity is "fast moving" (high frequency shocks – demand and supply) whereas capital is "slow moving" (low frequency shocks)
- however, there are rigid liquidity ratios and "flexible" leverage tools

I. existing tools are not appropriate for macro prudential regulation

- macro prudential regulation has two objectives :
 - address systemic vulnerabilities
 - influence the financial cycle

- fixed, quantitative, liquidity ratios are not adequate for any of them

market

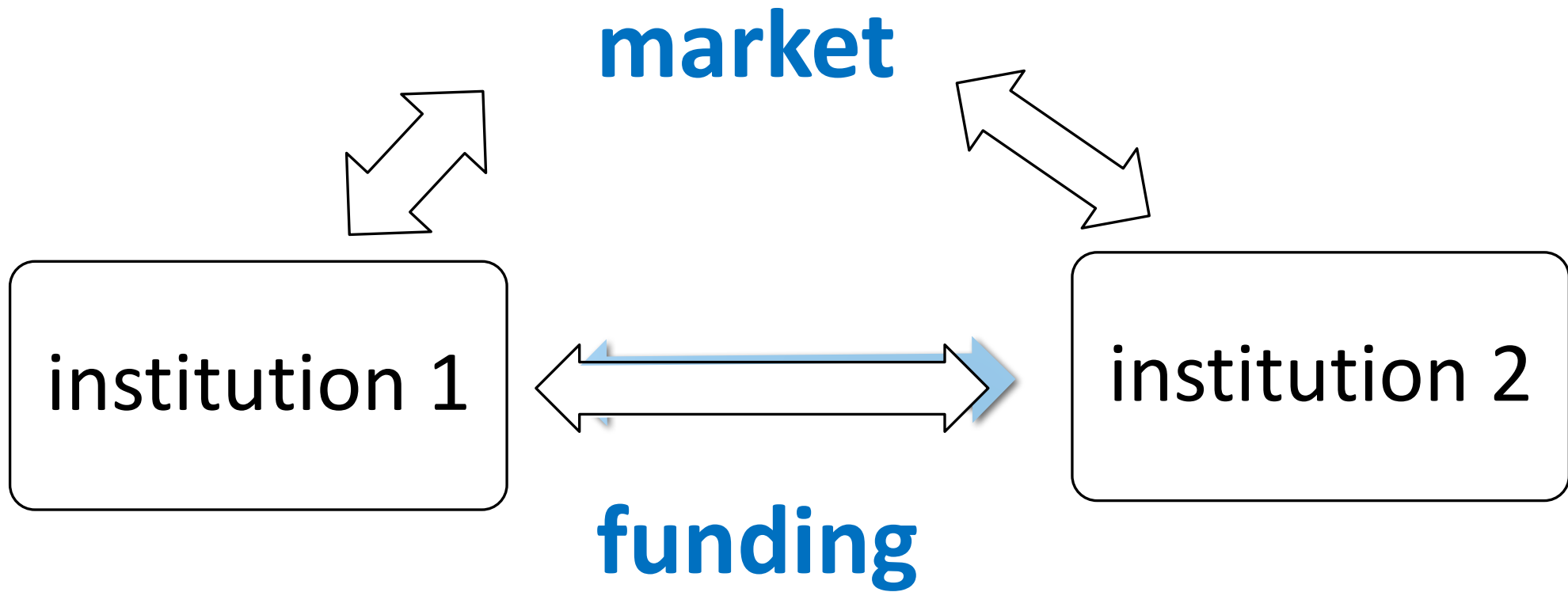


institution 1

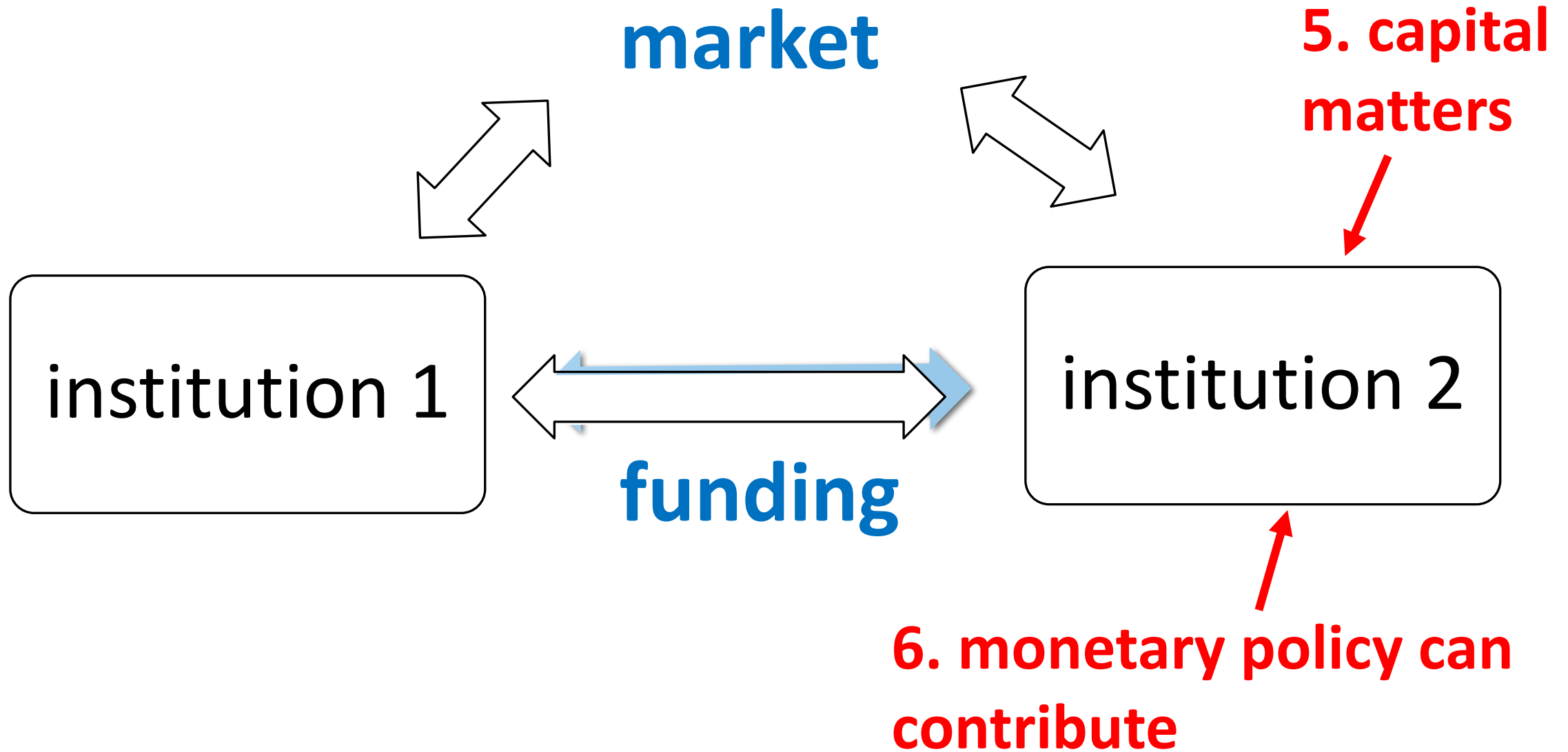


institution 2

funding



1. liquidity (inside) is endogenous (risk appetite)
2. liquidity is systemic (double interconnectedness)
3. incentives to excess maturity transformation (Brunnermeier et al. "rat race")
4. aggregate liquidity shocks are possible and may be generated by the system



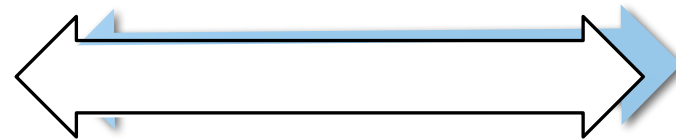
what liquidity buffers do

- increase the need for (dependence upon) outside liquidity if leverage is not limited
- quantitatively constraint maturity transformation if leverage ratio (indeed, direct effect of NFSR)
- protect institution against idiosyncratic liquidity shock and limit moral hazard
- create and/or propagate aggregate liquidity shocks
- the question of the release of buffers (the "Goodhart taxi")

7. outside liquidity

market

5. capital matters



funding

7. outside liquidity (LLR)

6. monetary policy can contribute

what we now know about the lender of last resort

- no alternative to outside liquidity provision if aggregate liquidity shock
- "penalty" is either inefficient or not credible
- distinguishing solvency and liquidity in real time is challenging
- constructive ambiguity does not work
- a strong moral hazard problem (that liquidity ratios help to reduce)
- but not a macro prudential tool

II. four strong reasons to "macro regulate" liquidity and maturity transformation

1. at the root of financial fragility (any crisis is a breakdown in MT)
2. a powerful driver of leverage and the credit cycle
3. attenuate the tensions and dilemmas associated to the LLR
4. protect monetary policy independence (maturity imbalances create the risk of "financial dominance")

III. conceptual challenge : provide an "elastic supply" of maturity transformation

- demand and supply of MT are constantly varying over time (sometimes in a highly non linear way)
- the challenge is to
 - permanently adjust demand and supply
 - under the constraint of minimizing financial fragility
- will likely require a lot of discretion and "elasticity"

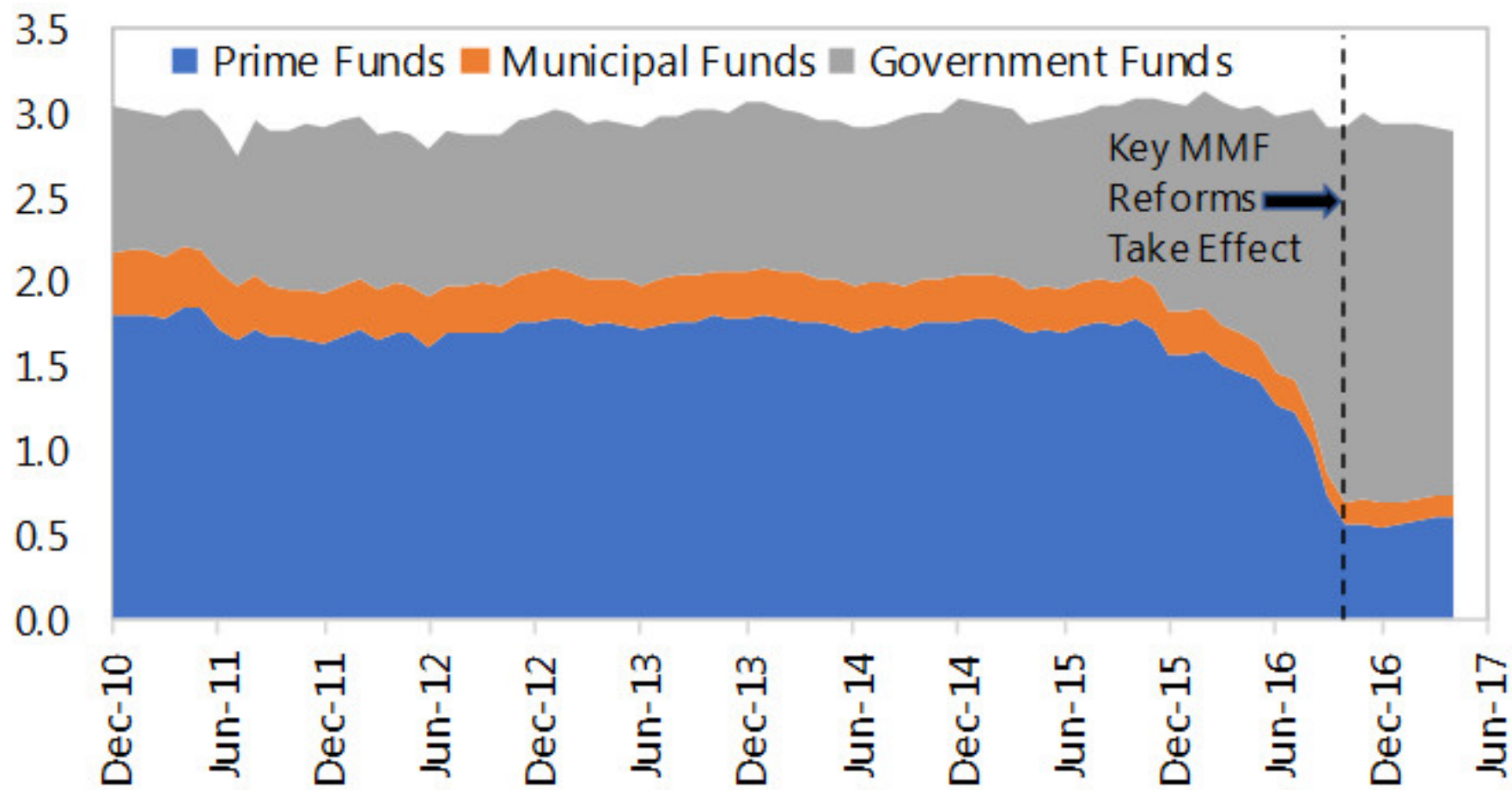
demand for "money like " financial instruments is strong and, maybe, rigid

- the constant "safe asset share"
- more circumstantial : the reaction to changes in money market funds regulation and institution of NAV

Figure 3. U.S. Money Market Fund Assets

U.S. Money Market Fund Assets

(in trillionsof US dollars)



Source: S.E.C., Haver.

what if maturity transformation is quantitatively constrained in banking

- possible macro economic effects (*a direction for future research*)
 - safe asset shortage
 - disconnect between financial and economic risk taking
- certainly, a migration towards other forms of maturity transformation and other parts of the financial system (the "transformation of maturity transformation")

migration is already happening

- Us open funds represent 15% of maturity transformation vs 20% for banks
- relative to GDP, holdings of "illiquid" assets have grown from 0.5% to 30% in 35 years
- "liquid" funds grew from 2% of GDP to 43%

Figure 7: Global gross capital inflows by asset

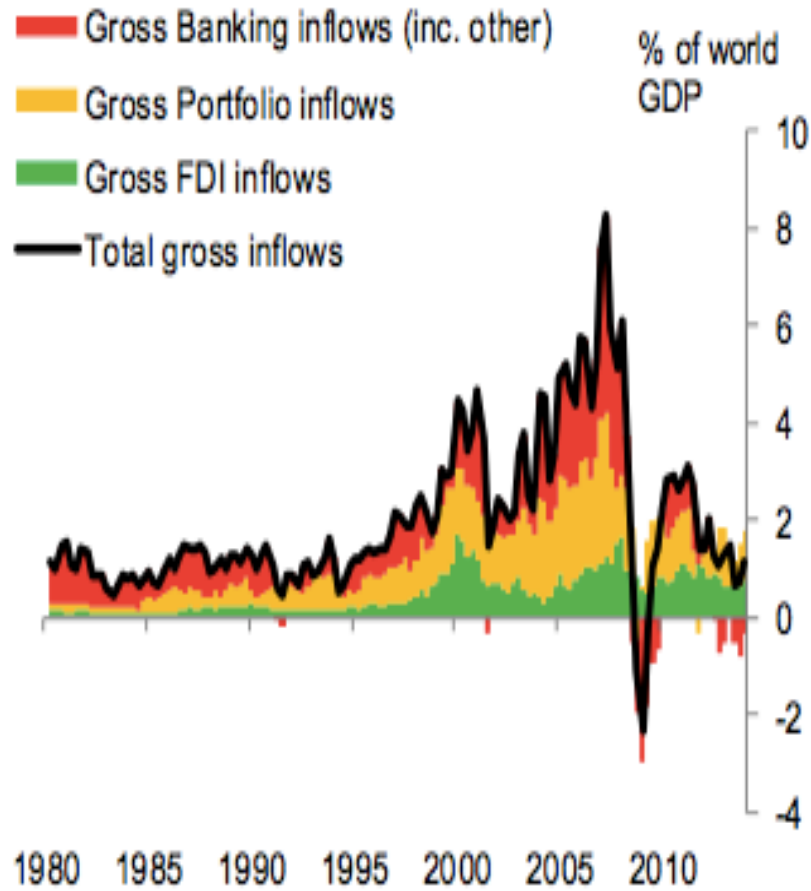
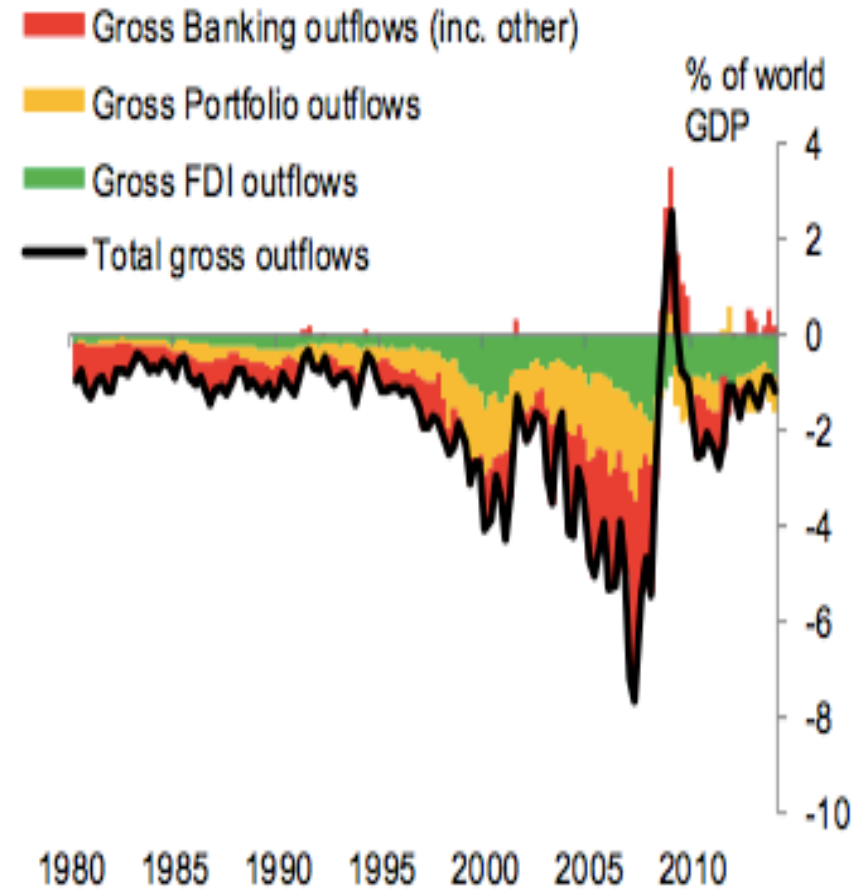


Figure 8: Global gross capital outflows by asset



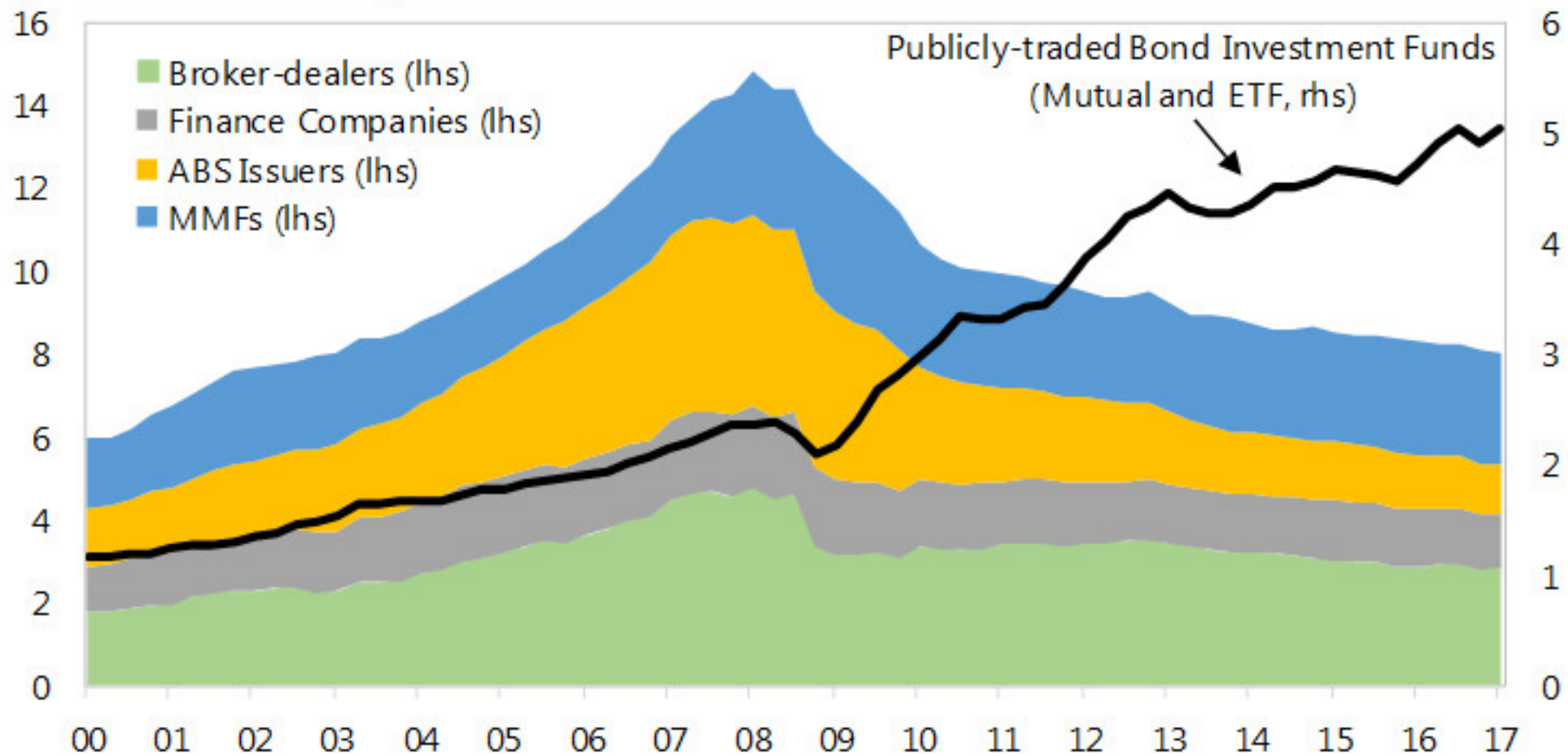
From Forbes 2014

Figure 2. U.S. Non-Bank Credit Intermediation, by Vehicle Type

U.S. Non-bank Credit Intermediation (Select Measures)

(in trillions of US dollars)

(in trillions of US dollars)



Source: Federal Reserve Board, Flow of Funds.

the systemic risks associated with maturity transformation by funds

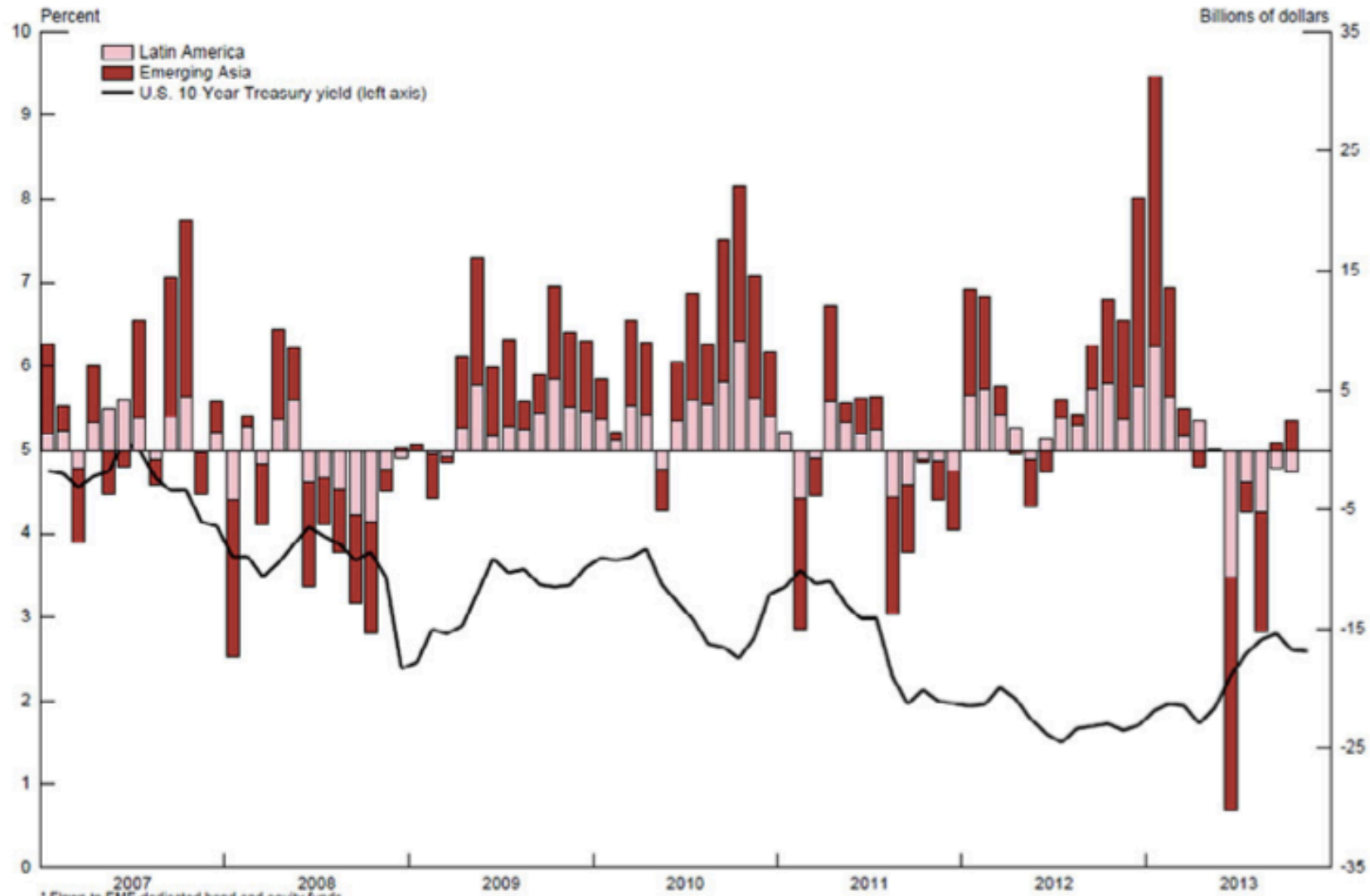
- risk of runs (even with floating NAV (because of first mover advantage))
- risk of herd behavior in liquidity management creating aggregate liquidity shocks
- no backstop or LLR
- no capital to absorb losses
- "gates" and redemption suspension may have negative systemic effects (panic)
- system will be tested when interest rates increase (but Taper Tantrum gave a hint)
- adjustment through large swings in prices

the specific fragility associated to cross border maturity transformation

- the growth of open funds invested in EMEs
- empirical evidence that portfolio flows are more risk sensitive than banking flows (and outflows more than inflows)
- potential illiquidity of many EMEs corporate bond markets
- if flows in dollars, a quantitative "sudden stop" and domestic financial stability problems
- if flows in local currency, price adjustment will take place through huge swings in exchange rates (first movers could trigger "runs" on ER)

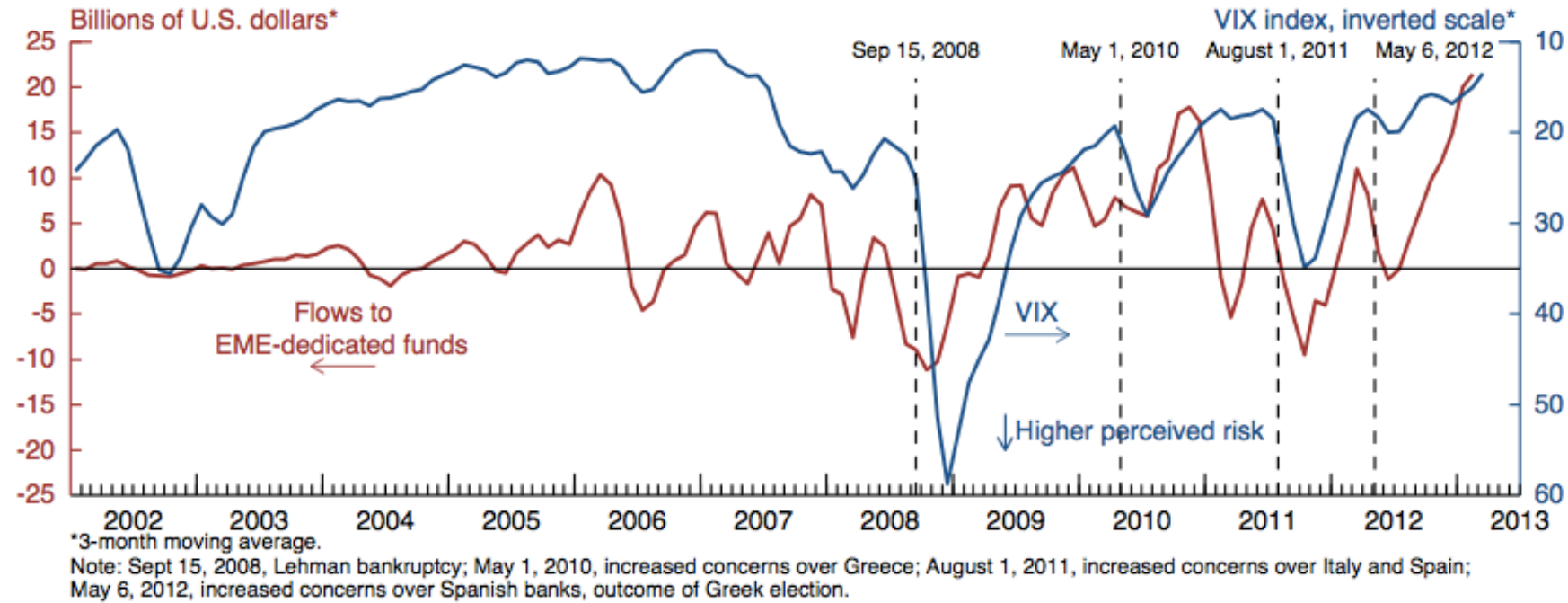
Chart 8

EME Bond and Equity Fund Flows*



* Flows to EME-dedicated bond and equity funds.
Source: Bloomberg and Emerging Portfolio Fund Research.

(c) VIX



Source: Haver Analytics for quarterly real GDP (expressed as the 4-quarter percent change) and the nominal policy interest rates; Emerging Portfolio Fund Research for flows to EME-dedicated funds; Bloomberg for VIX.

IV. some policy orientations

1. a "time varying" tax on maturity transformation by banks (and shadow banks ?)
2. a more active use of the Central Bank's balance sheet
3. a more active supervision of market based maturity transformation
4. an integrated vision – and action – over the whole financial system

1. a time varying "tax" on maturity transformation by banks

- need to influence incentives at the moment decisions are taken (not be constructive ambiguity about future actions)
- several tools available : collateral rules and time varying haircuts . Not excluded, however :
 - incentive effect more difficult to assess
 - also used for private transactions. Danger of negative signalling

reserve requirements are an attractive available tool

- three instruments : the interest on required reserves (IOR), the interest on excess reserves (the policy rate) and the reserve ratio.
- collapse into two if no excess reserves
- can be modulated according to the systemic impact of liquid liabilities (wholesale funding vs deposits)
- can be changed over time and may, if decided, impact average cost) (\neq from countercyclical K that affects only marginal cost)
- extended beyond banks to, at least "shadow banks "?

reinventing the wheel ?

- EMEs longtime frameworks and practices
- inhibitions towards RR in AE are not justified
 - if and when are used as tools for financial stability
 - less distortive and more flexible than ratios ("tax" is more transparent)

2. a more active use of Central Banks balance sheets

- in effect have taken over a lot of maturity transformation during and since the crisis
- maybe used to "crowd out" unhealthy forms of maturity transformation (Stein)
- may also be used to meet excess demand of MT (whereas RR constrain excess supply)

3. a more active supervision of market based maturity transformation

- monitoring
- stress testing
- analyze systemic effects of gates and suspension
- regulate liquidity behavior ?

4. an integrate vision – and action – over the whole financial system

- are market regulators sensitive to systemic risk (the presumption that price adjustment will work and suffice)
- are market and bank regulators sufficiently cooperating ?
- are "source" and "recipient" of cross border transformation sufficiently cooperating ?