

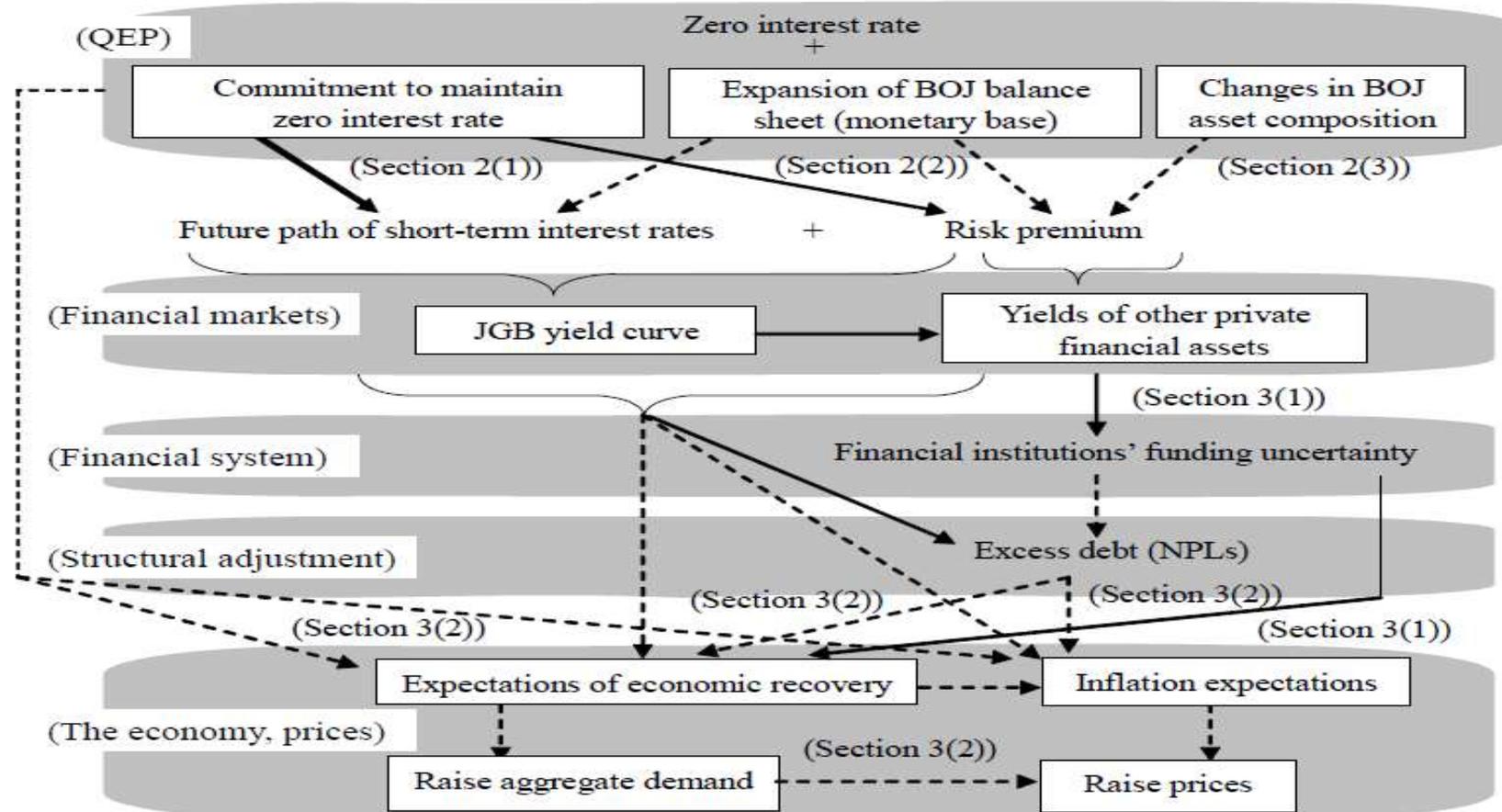


## Banking – Conceptual and Related Issues

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SUERF-OeNB conference 11 March 2015 Vienna "Asset-liability management with ultra-low interest rates"

**Conceptual Issues – Insights from Japans 2001-2006 QE**



strong effects    some effects    uncertain/small effects  
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Ugai, H (2006) The effects of QE policy, A survey of empirical analyses, Bank of Japan Working Paper, 6-e10, July



**Bank Portfolio Rebalancing and Signalling effect – Early evidence from Japans QE 2001-2006**

	Portfolio rebalancing effect					Signaling effect
	JGBs	High grade corporate bonds	Foreign exchange rate	Stocks	Low grade corporate bonds	
Oda and Ueda (2005)	Insignificant	—	—	—	—	Significant (With additional 10 trillion yen of CABs, 0.19% for 3-year yield, 0.17% for 5-year yield)
Takeda et al. (2005)	Significant (at the time of introduction)	—	—	—	—	—
Kimura and Small (2006)	—	Significant (with additional 10 trillion yen of CABs, +1-4b.p. for Aa grade)	Somewhat (Some measurements insignificant)	Significant with opposite sign	Significant with opposite sign	—
Sadahiro (2005) <sup>22</sup>	—	—	Insignificant	—	—	—
Fujiki et al. (2004)	—	—	—	—	—	Significant for certain phases (May 2003)

Ugai, H (2006) The effects of QE policy, A survey of empirical analyses, Bank of Japan Working Paper, 6-e10, July, Figure 7



## Large recent literature on the impact of UK and US CB asset purchases

### 1) Impact of asset purchases on financial markets:

UK - Joyce et al (2011); Breedon, Chadha and Waters (2012); D'Amico et al (2012)

US - Gagnon et al (2011); D'Amico and King (2013); Hancock and Passmore (2014)

Impact varies depending on type of financial assets the CB acquires. Purchase of MBS seems to have had bigger impact on financial markets

### 2) Impact on the wider economy:

US - Chung et al (2012) and Chen, Curdia and Ferrero (2012)

UK - Kapetanios et al (2012), Bridges and Thomas (2012); Pesaran and Smith (2012)

Japan – Berkmen (2012)

QE has a modest impact on economic indicators – output / growth / inflation



## Large recent literature on the impact of UK and US CB asset purchases

### 3. Yield curves:

QE has effectively lowered long-term yields and lowered volatility

Vissing-Jorgensen and Krishnamurthy, (2011); Gagnon et al., (2011); Swanson et al., (2011); DAmico et al., (2012); Wright, (2012); Aksoy and Basso (2014); Wu (2014), Neely (2015), Steeley and Matyushkin (2015)

BUT There has been very little analysis of the effects of QE/asset purchases on banks!!!! Apart from:

4. Bowman et al. (2011) – Japan's QE between 2001 and 2009 had a modest positive influence on bank lending

Joyce and Spaltro (2014) – UK – modest impact on bank lending



## Impact of QE on banks – Empirical studies

Empirical literature appears to focus more on the influence of financial markets and (via) yield curve effects as it looks like this is what policymakers view as the main channel of QE / alternative monetary policy

(This is illustrated in the bold lines shown in the first figure in this presentation)

So there is need for more work on the impact of QE on banks, particularly as there is evidence elsewhere that alternative monetary policy can have specific industry effects – see following slides:



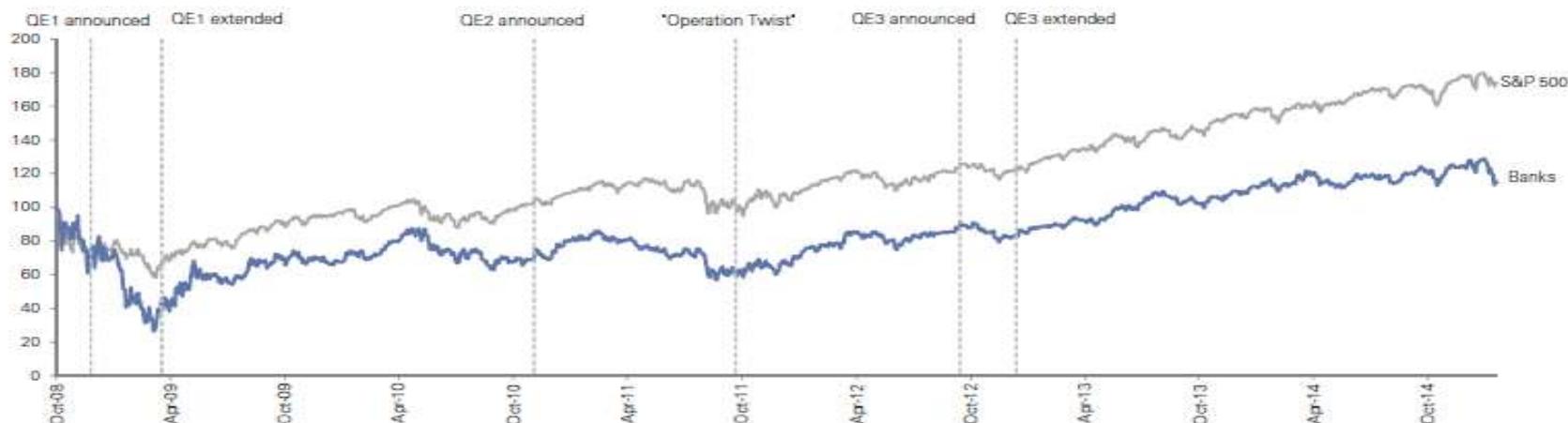
## Banks: US QE announcement risk-positive – longer-term P&L effects negative

In the 1 month following the 6 QE announcements, banks outperformed in 4 cases. Medium term, however, profitability suffered, owing to margin pressure. QE introduced the following moving parts:

- **Margin pressure:** funding cost decline was more than offset by the fall in securities yields. Banks' NIMs were pressured, and profitability impacted, as a consequence.
- **Lower volatility:** By reducing volatility, QE impacted investment banks' securities trading operations.
- **QE-related deposits:** institutional investors placed some of the excess liquidity as deposits. Deposit volumes grew, and bank liquidity positions improved.
- **(Some) book value accretion:** ALM portfolios showed an uplift, owing to unrealised gains.

We note that banks underperformed in the years following QE extension, despite an initial positive reaction on the announcement date. This underperformance is reflective of factors other than QE (litigation, regulation, volume pressures).

**Exhibit 2: Banks outperformed after the extension of QE1, but have consistently lagged the broader market in subsequent years**  
S&P 500 and S&P 500 Banks sub-index (1st Oct 2008 = 100)



Source: Datastream, Federal Reserve Board

Source: Goldman Sachs (2015)

## Eurozone banks and QE

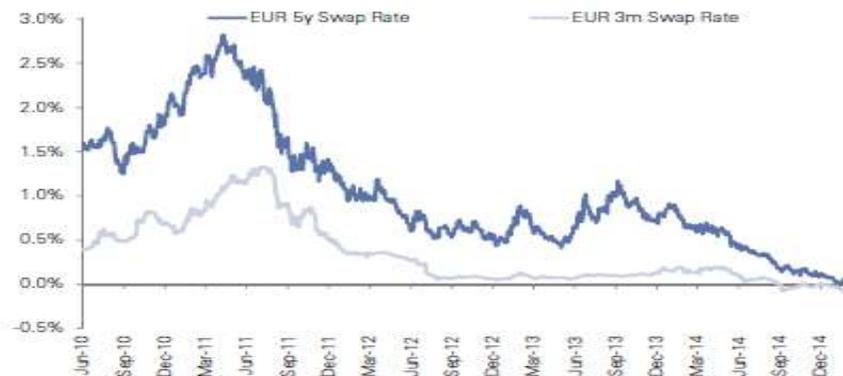
### Banks: Initial gain, longer-term NIM challenge ...

QE will compress NIM across the Eurozone. In the core, we expect this process to be particularly acute (Sell Commerzbank). On the periphery, the initial impact of asset yield compression could be offset, owing to a fall in liability spreads. Longer term, however, we expect the margin compression (especially through ALM revenue reduction) to offset this benefit.

We see Intesa (CL-Buy) as a relative beneficiary in a Euro banks context, while we see Commerzbank (Sell) as exposed to NIM pressure from the onset.

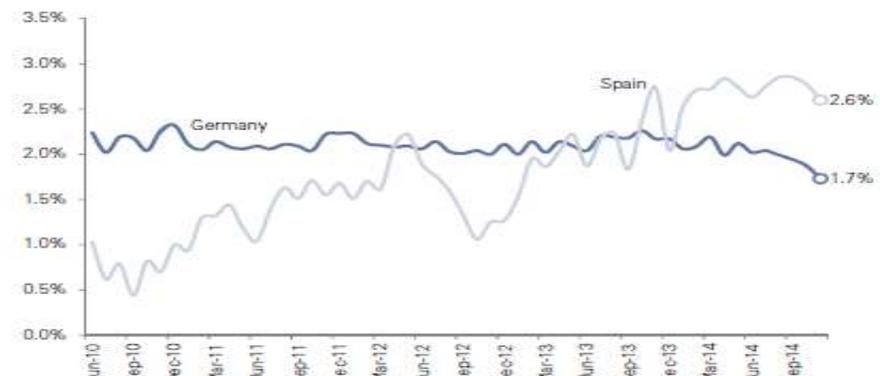
QE should result in: (1) compression in sovereign yields across the Eurozone, thus (2) reducing funding costs for the peripheral banks, (3) and (further) lowering re-investment yields. We expect the medium-term effect of margin compression to be most visible in the core, where the liability cost reduction does not act as an offset. Peripheral banks, therefore, should find the medium-term impacts more manageable, in our view.

**Exhibit 3: As interest rate expectations have continued to fall...**  
EUR 5y swap rate and EUR 3m swap rate, %



Source: Datastream

**Exhibit 4: ...margins in the core have compressed, with margins in the periphery still somewhat above that level**  
Margins on corporate lending (new business funded by corporate deposits)



Source: ECB, Goldman Sachs Global Investment Research



## Eurozone banks and QE

In addition to margin compression, there are several other impacts on the European banking sector:

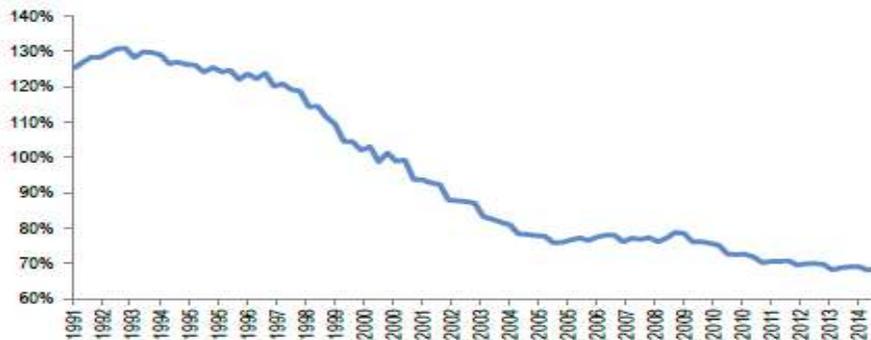
- **Pressure of ALM revenues (carry trades).** Many banks with significant holdings of Eurozone periphery sovereign debt in their ALM portfolios are likely to experience a one-time benefit from the upward revaluation of these assets, should QE lead to a reduction in yields. Although only a one-time impact, it would still count as CET1 under end-point CRD IV regulation, hence a small positive for thinly-capitalised banks. That said, the re-investment risk will have risen.
- **Positive gearing to increasing valuations of real assets.** Rising equity values could provide some offset, boosting the revenues of banks with significant Private Banking, Asset Management (both equity and FICC) or cash-equity exposed businesses.
- **GDP effects.** If, following QE, Eurozone economic growth improves, this would be a longer-term positive for European banks, as it would improve asset quality and provisioning. This impact would be particularly positive for banks with larger legacy portfolios, whose asset valuations may see an improvement.

Source: Goldman Sachs (2015)



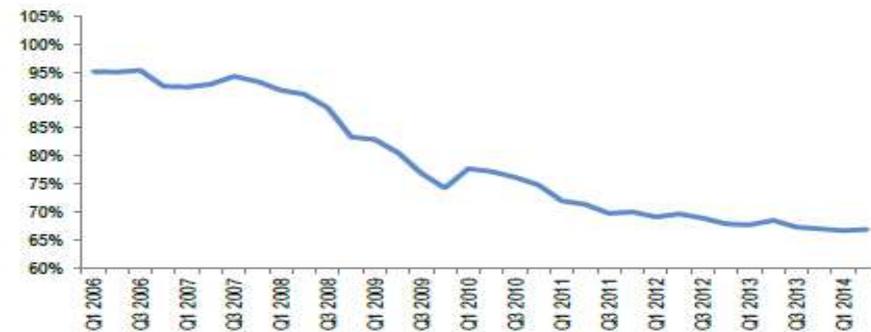
...and B/S deleveraging driving L/D ratio moving to excess funding position as in Japan leading to NIM pressure...

**Japanese banks: Prolonged period of deleveraging reflected in material decline in loan to deposit ratios**



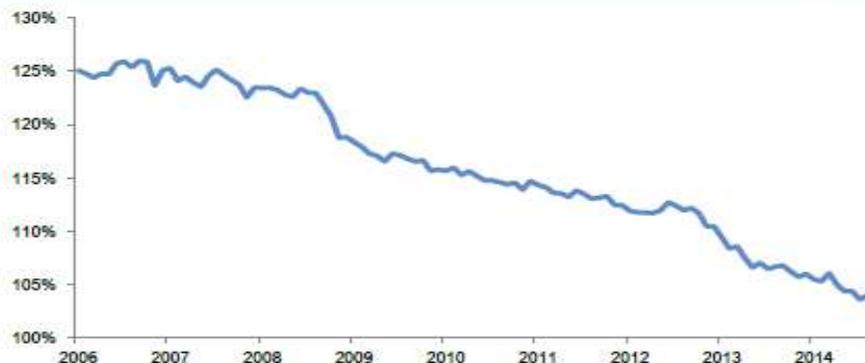
Source: Bloomberg

**US Banks declining loan to deposit ratio post crisis since 2006 – Capital markets funding much more developed than Europe**



Source: FDIC, J.P. Morgan estimates

**Euro Area banks: loan to deposit ratios continue to decline since crisis but still above 100% - Banks continue to be the dominant funding source**



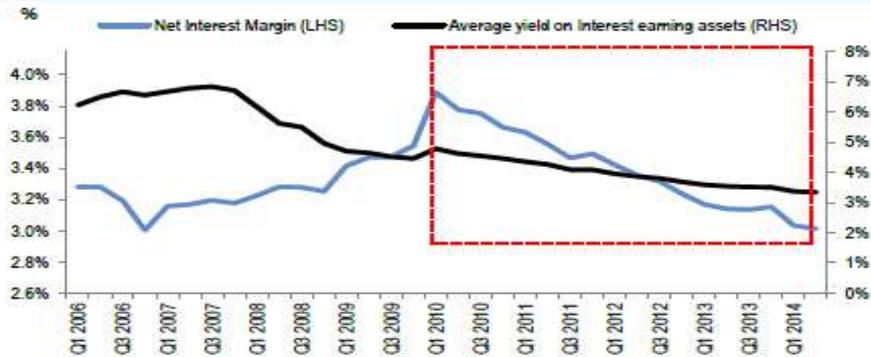
- Loan to deposit ratio for Japanese banks declined materially from 125% in 1991 to c.70% now.
- Looking at U.S. banks, we see a similar picture with loan to deposit ratios declining from c.95% pre-crisis to c.67% now.
- Hence we find it hard to envisage a different scenario for European banks, where loan to deposit ratios continue to be above 100% although declining materially from peak levels of 125% pre-crisis.
- We note, European corporates till now have been more dependent on banks for their borrowing needs, unlike U.S. which is more capital markets driven, hence we do not expect loan to deposit ratios to fall as quickly and to the same levels.

Source: JP Morgan Cazenove (2015)



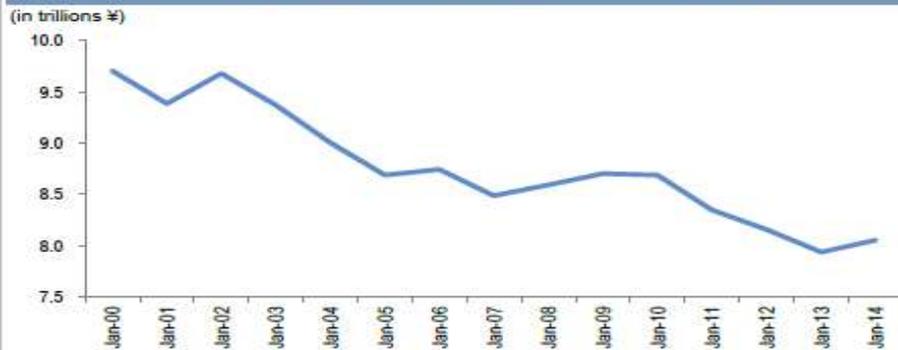
...in addition, NIM remain under pressure with asset margins feeling the pain - U.S. banks tell similar story...

**FDIC insured institutions : Net interest Margin declined due to asset spreads pressure post crisis**



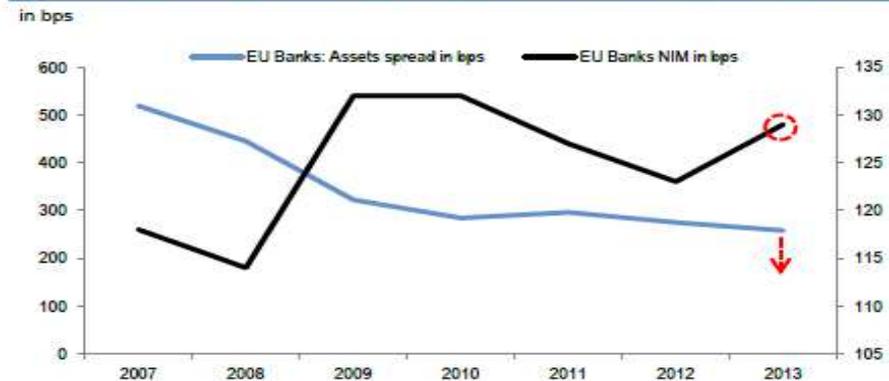
Source: FDIC. Note: FDIC insured institution with asset more than \$10bn

**Japanese Banks: NII under pressure post crisis (in trillions ¥)**



Source: Japanese Bankers Association, Bank of Japan

**EU Banks: first signs of asset spread pressure, to build pressure on NIM**



Source: ECB

- NPL improvement and loan growth picked up in US in 2010 post crisis. Net Interest Margins as well as yield on interest earning assets for U.S. banks, as represented by the FDIC insured institutions, started to decline in 2010.
- While European banks are not showing any loan growth currently, NIM has been protected by declining funding costs. However we have started to see some signs of pressure on the asset margins with Q3 results of Spanish and Italian banks. Hence we find it hard to envisage a different scenario for European banks and expect NIM to be under pressure even potentially in a higher loan growth environment.



## Conclusions

- Increasing academic interest in the impact of QE and alternative monetary policy but little work on banks too date
- Academics typically focusing on country specific issues whereas analysts are more interested in international comparisons
  - Alternative policy appears to have a substantial impact on yield curves and financial markets
  - Less impact on macro indicators
  - Modest influence on bank lending (although evidence here is somewhat limited)
- Recent analyst work focuses on margin pressures; and also notes lower volatilities, but as far as I am aware little work done in this area. There is some evidence that bank profits were positively impacted by early US Fed asset purchases but this has not yet been confirmed.



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