COLLOQUIUM





Ten years after the start of the crisis: contours of a new normal 14-09-2018 09:00 a.m.

The Belgian Financial Forum and SUERF have the honour of inviting you to a colloquium entitled "Ten years after the start of the crisis: contours of a new normal". Apart from keynote speeches by **Jan Smets**, Governor of the National Bank of Belgium, and **Poul Thomsen**, Director of the IMF's European Department, the conference programme is structured along the lines of three panel discussions.

Conference of the Belgian Financial Forum (BFF) in cooperation with SUERF - The European Money and Finance Forum

Date: Friday 14 September 2018

Venue: National Bank of Belgium Auditorium

Warmoesberg 61 - rue Montagne aux Herbes Potagères 61

1000 Brussels

Programme

08.30 Registration and coffee

09.00 Welcome by **Jean Hilgers**, President of the Belgian Financial Forum, Executive Director at the National Bank of Belgium, and by **Jakob De Haan**, President of SUERF

09.15 **Jan Smets**, Governor of the National Bank of Belgium - Keynote address:

"The future of central banking"

09.45 Panel 1: Scars or scratches: how damaging is the fall-out from the crisis for the real economy and the natural rate of interest?

How strong is the impact of the crisis on potential output? Are hysteresis scars deeper in Europe than in the US? How did the crisis interact with more secular trends such as the productivity slowdown and population ageing? How low is the natural rate in the new normal? How much debt overhang is still there? Where did the crisis leave public finances?

Chair: **Freddy Van den Spiegel**, Vrije Universiteit Brussel and Chairman of the Coordination Committee of the Belgian Financial Forum:

- David Turner, Head of the Macroeconomic Analysis Division, OECD
- William De Vijlder, Group Chief Economist, BNP Paribas
- Eva Ortega, Head of the Modelling Unit, Banco de España
- Cinzia Alcidi, Senior Research Fellow and Head of the Economic Policy Unit of CEPS

11.00 Coffee

11.30 Panel 2: The financial sector and prudential policies in the new normal

Where has the regulation overhaul taken us? Is macroprudential policy effectively addressing systemic risk? How to cope with shifts towards less regulated financial market segments? What are the implications for the profitability, efficiency and business models of financial intermediaries?

Chair: Jo Swyngedouw, Head of Prudential Policy and Financial Stability, National Bank of Belgium

- Mathias Dewatripont, Université Libre de Bruxelles
- Isabelle Vaillant, Director Regulation, European Banking Authority
- Rudi Vander Vennet, Head of Department of Financial Economics Universiteit Gent
- Christine Van Rijsseghem, Chief Risk Officer KBC Group

12.45u Sandwich lunch

14.00 Panel 3: Monetary policy beyond normalisation: objectives and instruments

How should central banks balance price stability and financial stability objectives? Should inflation targets be raised or lowered; should the horizon for the price stability objective be lengthened? Will the central bank's balance sheet become a permanent tool? What is the future of central bank independence? How strong are the interactions with fiscal policy?

Chair: Peter Vanden Houte, Chief Economist ING Belgium

- Maria Demertzis, Deputy Director at Bruegel
- Andrew Filardo, Head of Monetary Policy, Bank for International Settlements
- Natacha Valla, Deputy Director-General Monetary Policy, European Central Bank
- Anders Vredin, Head of the General Secretariat, Sveriges Riksbank

15.15 **Poul Thomsen, Director of the IMF's European Department** - Keynote address: "How much deepening of the Economic and Monetary Union is needed?"

16.00 **End of the conference,** followed by a reception

Please note that the programme is subject to change.

Practical information

Date: Friday 14 September 2018, welcome as from 8.30 a.m., start of colloquium at 9 a.m.

<u>Venue</u>: National Bank of Belgium's Auditorium, Warmoesberg / rue Montagne aux Herbes Potagères 61, Brussels

Language: presentations will be given in English; there will be no simultaneous translation.

<u>Participation fee</u>: Free entrance, free documentation and a copy of the third issue of this years' Revue bancaire et financière/ Bank- en Financiewezen containing the proceedings of the colloquium.

Online registration: Click here

Attendance: a certificate of attendance amounting to 6 units will be delivered by post

Contact:

Belgian Financial Forum c/o National Bank of Belgium de Berlaimontlaan – Bd de Berlaimontlaan 14 1000 Brussels T 02 221 31 70 or 31 65

email: Financialforum@nbb.be

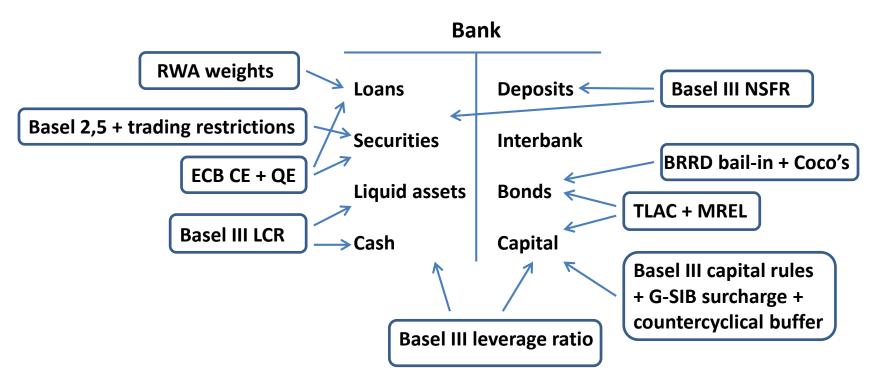
Do not hesitate to mention this event to colleagues who might also be interested in attending. If you would prefer not to receive future invitations, please click <u>here</u>.

Ten years after the crisis: Contours of a new normal Banks: business models in flux

Belgian Financial Forum / SUERF
National Bank of Belgium
14 September 2018
Rudi Vander Vennet, UGent



The new regulatory framework (especially Basel 3) and the macroeconomic environment (ECB unconventional monetary policy) affect bank business models

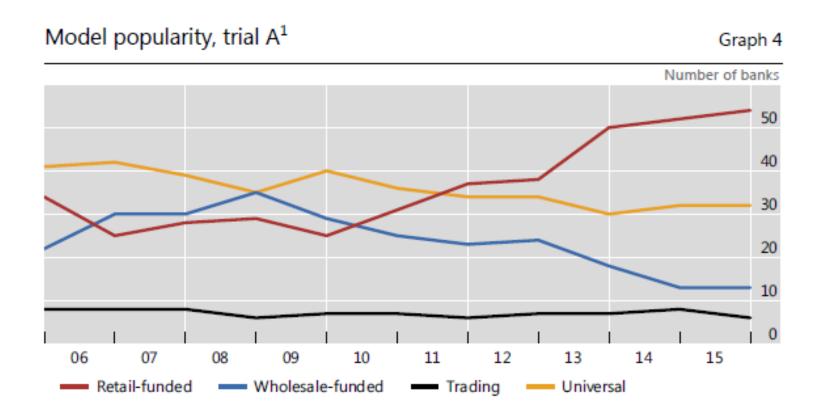




Expectation: banks will fundamentally review their post-crisis business models

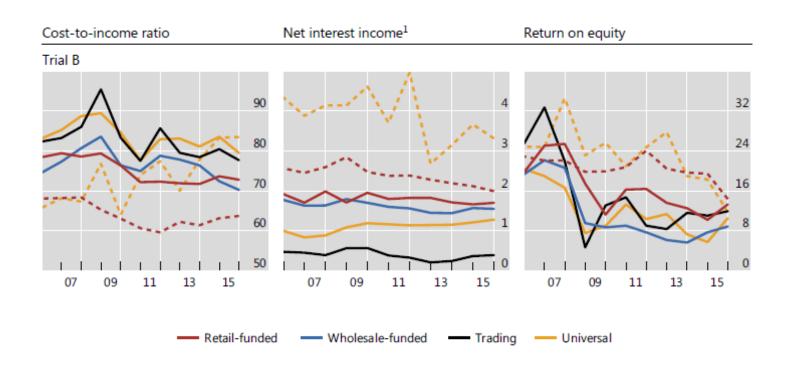
- Banks should make strategic choices:
 - Asset structure and loan quality
 - Funding mix (more deposits, more capital)
 - Revenues: lending margins, fees
 - Geographic and functional scope
- To achieve sustainable profitability
- Question: which business model works best?
- Surge of research on bank business models, both academic and from bank supervisors (BIS, ECB, EBA)
 - Business model migration is slow
 - And weak post-crisis operational performance persists in all business models

No surprise, focus on more retail is a popular option



BIS, Bank business models: popularity and performance (Roengpitya et al. 2017)

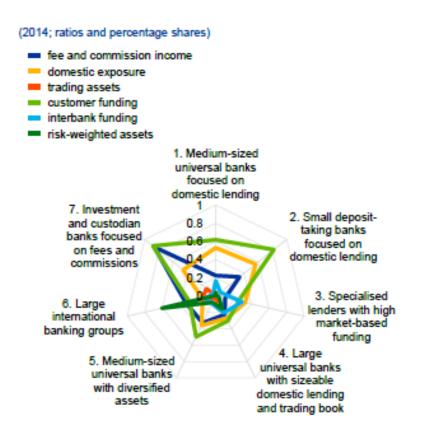
But: a 'great convergence' towards lower ROE 5% - 10% is the 'new normal' across bank types



ECB analysis: Business models are sticky

Business model classification driven by size, internationalisation and funding profile

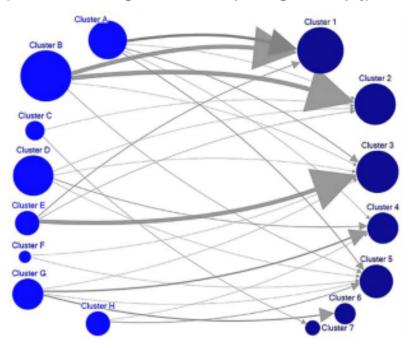
Balance sheet structure of different business models



Banks have mostly remained within the same business model clusters over time

Evolution of business model clusters between 2007 and 2014

(left-hand side: 2007; right-hand side: 2014; percentage of total equity)



Bank business model migration: modest shifts

Retail banks domestic

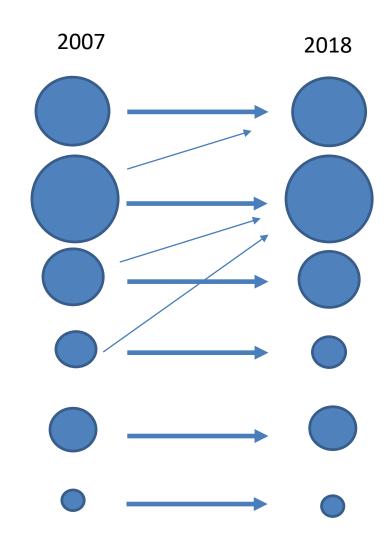
Universal banks domestic

Large universal banks
With diversified assets

International banking groups

Specialized lenders, market funded

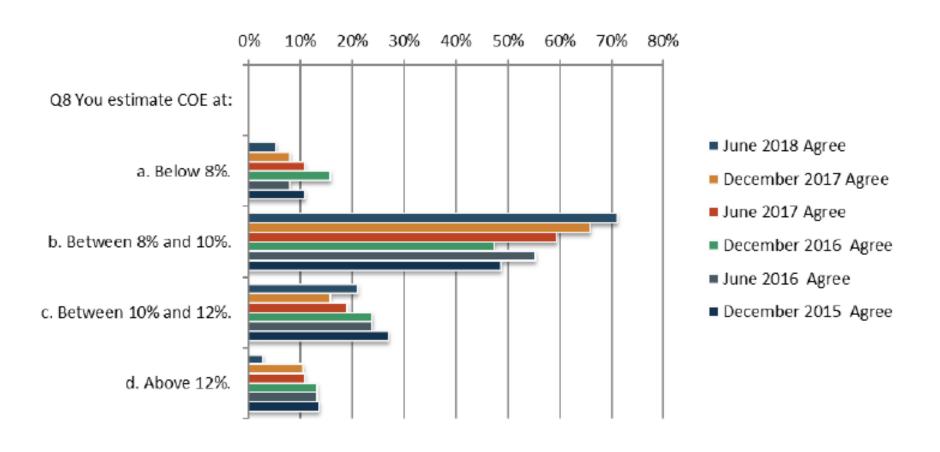
Investment/custodian banks



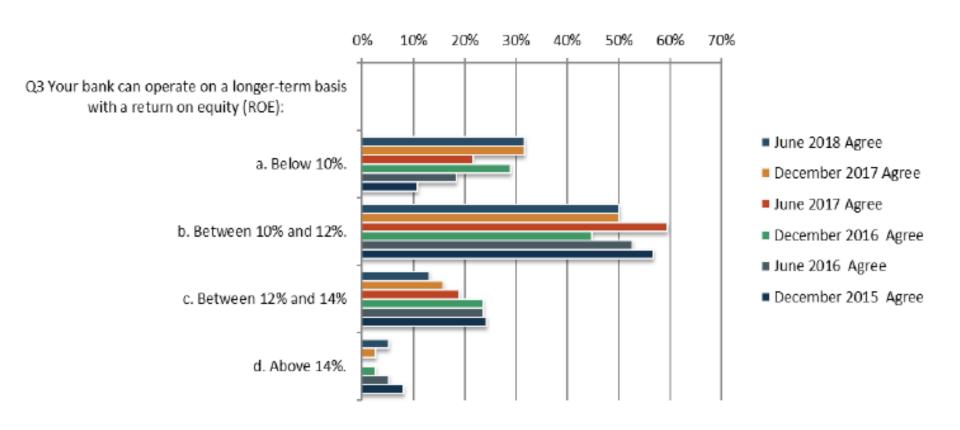
Yet, the pressure is on

- Profit indicators and market assessment demonstrate that not all banks are viable
- Sustainable profitability requires ROE > COE
 - Cost of equity is what shareholders demand
 - Return on equity is what banks deliver for their shareholders
 - For many European banks : ROE < COE</p>
- For listed banks an indicator of soundness and viability is Market Value > Book Value
 - However, M/B is below 1 for many European banks (not all)

EBA bank risk assessment questionnaire 2018 Banks estimate their cost of equity below 10%



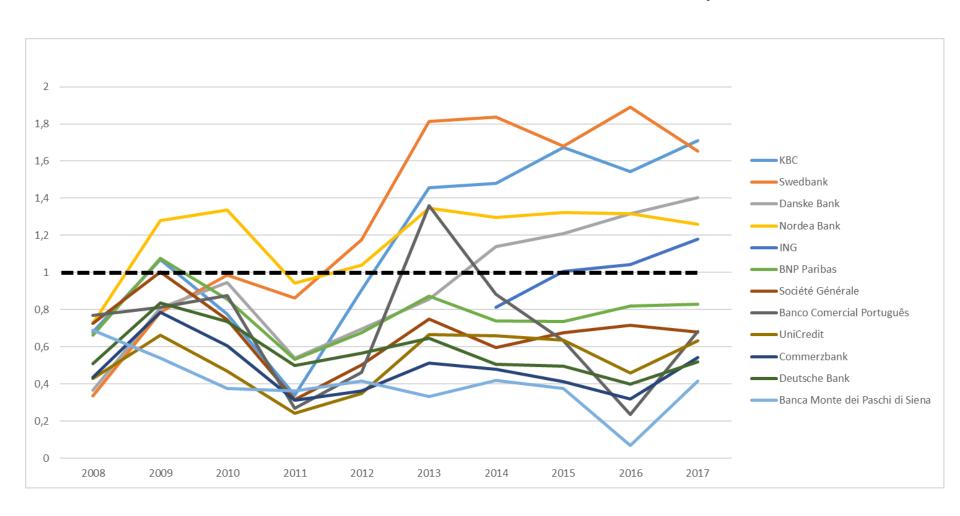
Banks claim they can achieve ROE above 10%



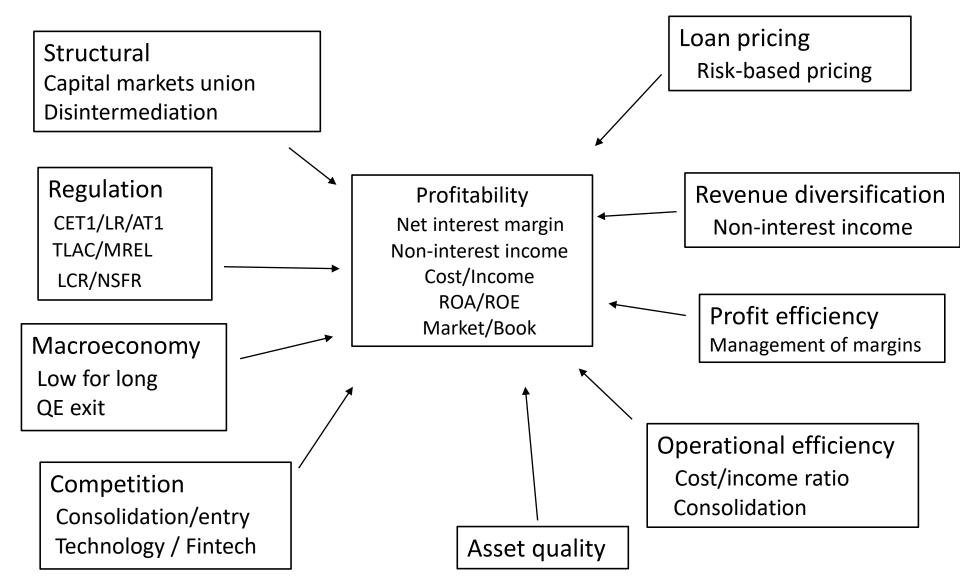
Actual European banks' ROE : Caution required

RI	Threshold	Current vs previous quarters for the worst bucket	201412	201503	201506	201509	201512	201603	201606	201609	201612	201703	201706	201709	201712	201803
Return on equity	>10%	•	5.0%	18.7%	25.2%	23.9%	6.4%	3.1%	6.0%	6.6%	5.3%	11.6%	11.9%	15.1%	12.4%	12.6%
	[6% - 10%]		29.1%	33.1%	45.6%	34.9%	44.5%	42.3%	49.5%	36.9%	40.5%	45.4%	47.7%	48.1%	34.3%	50.7%
	<6%		65.9%	48.3%	29.2%	41.2%	49.1%	54.7%	44.5%	56.5%	54.2%	43.0%	40.5%	36.8%	53.3%	36.7%

Market/book of selected European banks Some have recovered to level >1, many not



How can banks react?

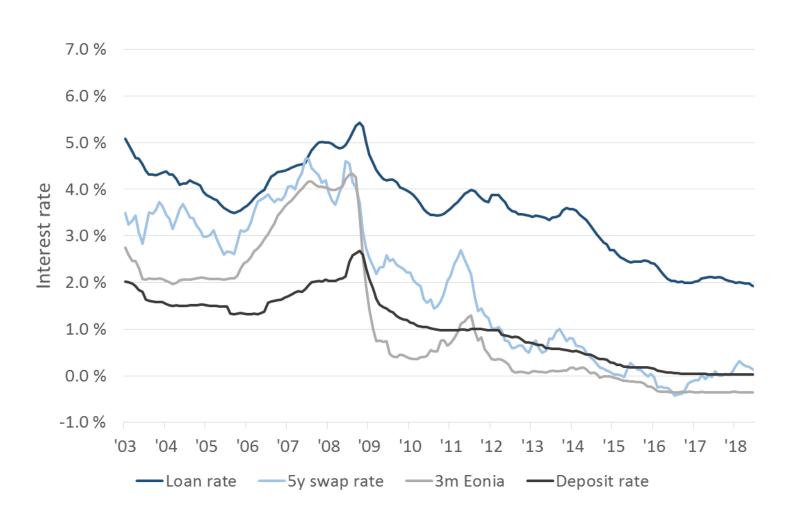




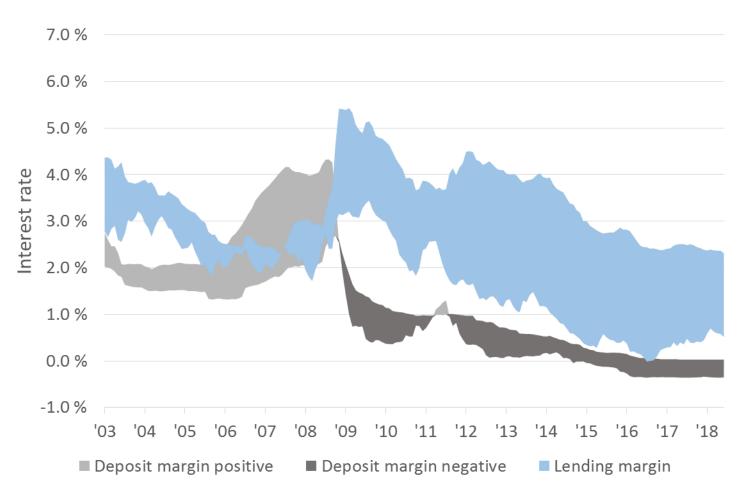
Bank business models

- Risk-based pricing
 - Adequate margins are key to sustainable profitability, not volume
- Operational efficiency
 - No compromises on cost efficiency and productivity
- Revenue diversification (fees, geographic, up-todate services, client segments, distribution channels)
 - Banking instead of banks'

Post-crisis shift from deposit margin to lending margin Here: Belgian bank margins



Post-crisis Belgian banks: higher lending margins, but negative deposit margins



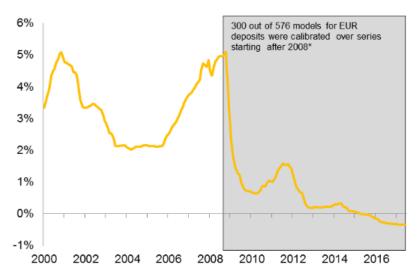
Bank net interest margins at a crossroads

- How will banks manage their loan margins?
 - Risk-based pricing or loosening of lending standards?
 - Default risk, interest rate risk, liquidity risk, capital coverage must be covered
 - Margins are key, not volumes
- How will deposit margins evolve when policy rates increase?
 - Return to pre-crisis deposit margins may be illusory
 - Sensitivity of bank deposit rates to ECB policy rates may be higher and hence pass-through of policy rates faster than captured by standard models

ECB IRRBB stress test 2017

Most deposit models have been calibrated on a period of decreasing interest rates only

Evolution of short-term interest rates (3M Euribor, %)



(*) Figures do not include 76 models for which banks did not reported no reference to time series information

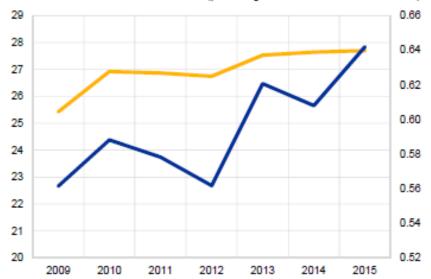
- The majority of deposit models has been calibrated over a period of decreasing interest rates only
- Only 7% out of 4.3 trillion of modelled deposits take into account the possibility that deposit stability may decrease with an increase in IR
- A wrongly modelled stability of deposits – and NII projections as a result - might lead to extensive losses in an increasing rate environment also in relation to lower transaction costs than in the past (online banking)

Diversification to non-interest income is important but no panacea There is no unlimited pool of fees

Fees and commissions have become an increasingly important income source since the financial crisis

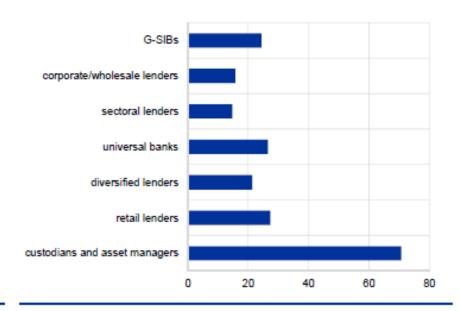
Euro area banks' net fee and commission income as a percentage of total assets and of total operating income (2009-15, percentage share)

net fee and commission income (percentage of total assets, right-hand scale)
 net fee and commission income (percentage of total income, left-hand scale)



The share of fee and commission income in total income differs across bank business models

SSM significant institutions' net fee and commission income as a share of total income broken down by business model (2015, percentage share)



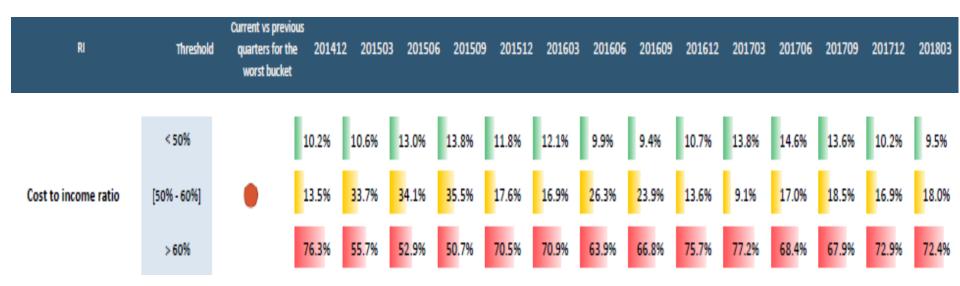
Source: ECB consolidated banking data.

Note: The sample covers most of the euro area banking sector.

Sources: ECB and SNL.

Notes: The sample covers 94 SSM significant institutions. "Universal banks" also include global systemically important banks (G-SIBs) that are universal banks, while "G-SIBs" exclude those banks.

Operational efficiency must be improved (substantially) Simply cutting branches and/or personnel will not do the trick It is about fundamental redesign of bank intermediation



Bank business models going forward

- Restauration of viable profitability requires adequate pricing of loans and funding sources, thereby restoring economically justified interest rate margins.
- Lending margins are key drivers due to zero lower bound on deposit rates.
 Search for asset yield may cause excessive risk-taking,
- Banks will need to *diversify* to non-interest income sources. However, the pool of available fees and commissions is limited. And risk implications need consideration.
- **Cost efficiency is a key driver**. Fintech might help to increase efficiency of processes and offer commoditized products. Branch network rationalizations are unavoidable. Restructuring of personnel composition is inevitable. Consolidation hopefully in a European framework.
- Cyclical recovery may lower loan impairments and provisions. Although lots of cleaning-up necessary in Eurozone periphery.
- Bank will have to elaborate on their *comparative advantages*, e.g. relationship banking, cross-selling, product design, operational excellence.

Eurozone bank sector restructuring is happening, but in (too) slow motion

- Business models under pressure
 - Regulatory overhaul is done
 - Technology drives the pace of innovation
 - New equilibrium banks / non-banks / financial markets
- Bank sector restructuring must accelerate in Europe
 - Consolidation will accelerate, M&A especially cross-border
 - Banking Union must be completed, true single banking market
 - Diversity instead of size. Diverse banking ecosystem should counter systemic risk

PANEL 1: SCARS OR SCRATCHES: HOW DAMAGING IS THE FALL-OUT FROM THE CRISIS FOR THE REAL ECONOMY AND THE NATURAL RATE OF INTEREST?

Eva Ortega Banco de España

BELGIAN FINANCIAL FORUM AND SUERF COLLOQUIUM "TEN YEARS AFTER THE START OF THE CRISIS: CONTOURS OF A NEW NORMAL" NATIONAL BANK OF BELGIUM, BRUSSELS, SEPTEMBER 14, 2018

Panel 1: Scars or scratches: how damaging is the fall-out from the crisis for the real economy and the natural rate of interest?

- How strong is the impact of the crisis on potential output?
- Are hysteresis scars deeper in Europe than in the US?
- How did the crisis interact with more secular trends such as the productivity slowdown and population ageing?
- How low is the natural rate in the new normal?
- How much debt overhang is still there?



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HOW LOW IS THE NATURAL RATE?

The natural rate: equilibrium real interest rate: equilibrium real return on capital, in line with trend growth, demographics, risk aversion → Beyond business cycle. Metric towards which real rate gravitates in the long run.

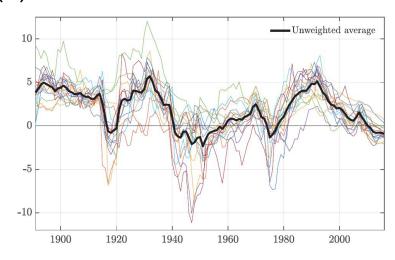
<u>Linking natural rate gaps to business cycle and inflation</u> \rightarrow setting r = r* stabilises output gap and inflation. E.g. Laubach-Williams (2003) model:

 $r^*t = gt$ (related to long-term growth) + zt (related to other factors, including risk aversion) aggregate demand equation: output gap as a function of $r - r^*$ Phillips curve: inflation as a function of output gap



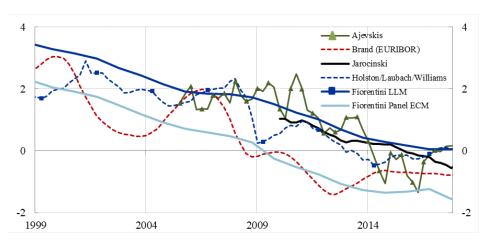
HOW LOW IS THE NATURAL RATE?

Cross-country historical estimates of r* (%)



Fiorentini, G., Galesi, A., Pérez-Quirós, G. and E. Sentana (2018) "The rise and fall of the natural interest rate" Banco de España WP nº 1822

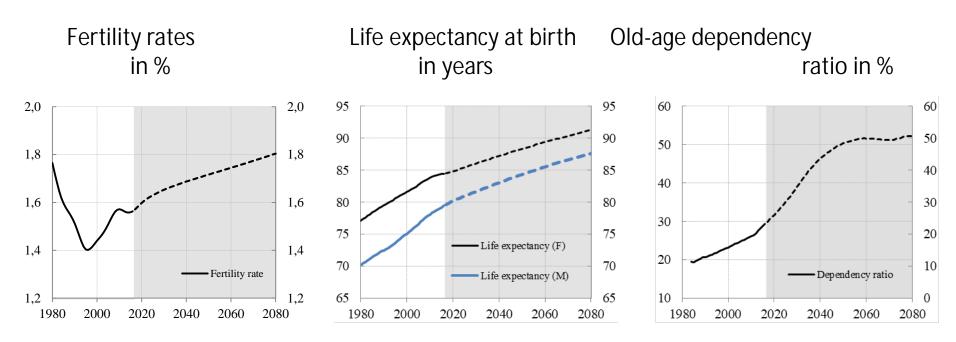
Econometric estimates of r* for euro area (in %)



Brand, C. et al. (2018) "The Natural Rate of Interest: Estimates, Drivers, and Challenges to Monetary Policy", WGEM report and ECB O.P., forthcoming.



THE DETERMINANTS OF THE DECLINE IN R*: DEMOGRAPHY



Euro area. Source: European Commission.



THE DETERMINANTS OF THE DECLINE IN R*: DEMOGRAPHY

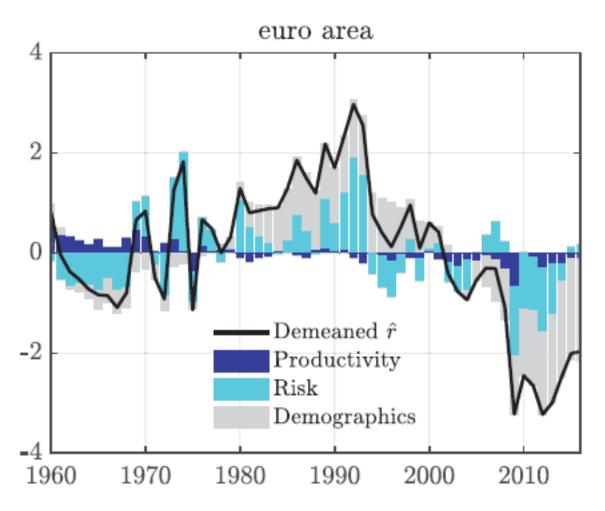
r* equates demand and supply for capital which, in turn, are affected by demographics:

- Lower fertility rates = lower labour input → ↑ capital per worker → ↓ mg product of capital → ↓ investment → ↓ r*
- 2. Higher life expectancy $\rightarrow \uparrow$ saving in anticipation of a longer retirement period $\rightarrow r^* \downarrow$
- 3. Rising proportion of old age, dissavers $\rightarrow \downarrow$ savings $\rightarrow \uparrow r^*$

Literature: #1 and #2 dominate → Ageing → r* ↓



THE DETERMINANTS OF THE DECLINE IN R*: DEMOGRAPHY

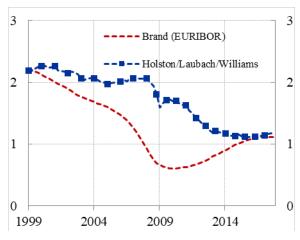


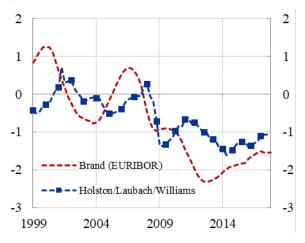
Fiorentini, G., Galesi, A., Pérez-Quirós, G. and E. Sentana (2018) "The rise and fall of the natural interest rate" Banco de España WP nº 1822

THE DETERMINANTS OF THE DECLINE IN R*: NON-GROWTH COMPONENT

growth component of r* (g)

non-growth component of r* (z)

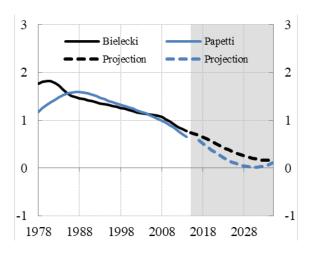




Brand, C. et al. (2018) "The Natural Rate of Interest: Estimates, Drivers, and Challenges to Monetary Policy", WGEM report and ECB Occasional Paper, forthcoming.

LOOKING AHEAD

Demographic trends will continue → lower r* projected using OLG models



Bielecki et al. (2018) "Demographics, monetary policy and the zero lower bound", Nat.Bank of Poland WP Papetti, A. (2018) "Demographics and the natural real interest rate in an OLG New-Keynesian model", ECB

A turn to higher r* could come then from, e.g.:

- lower risk aversion
- technology-driven boost in productivity or growth-promoting structural reforms,
- pension reforms (affecting dependency ratio and saving decisions).



WHAT CAN POLICY DO TO REVERSE THE DECLINING TREND IN R*?

Structural reforms can help support productivity growth and investment

- ➤ Product market reforms → competition → incentives to innovate and invest in human and physical capital
- Institutional reforms towards more efficient public administration
- ➤ Training and education → lower skill mismatches → higher diffusion of technology and growth of more innovative and productive firms
- ➤ In the euro area, completing Banking Union → more efficient allocation of financial resources (→ enhance potential growth) and attenuate flight to safety (→ increase the equilibrium level of the safe rate of interest)



WHAT CAN POLICY DO TO REVERSE THE DECLINING TREND IN R*?

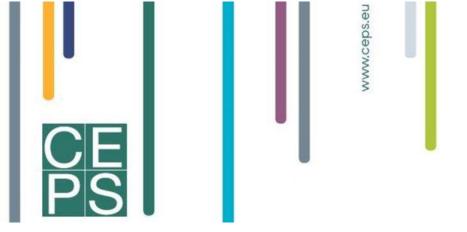
Demographic trends can be affected by policies:

- Increases in the retirement age can mitigate the decrease in r* due to ageing
- Changes in the pension system replacement rates
- Public policies that encourage labor force participation and human capital accumulation
 - → boost investment rates and sustain the productivity of older age cohorts



Thank you for your attention





BFF- SUERF Conference

Ten years after the start of the crisis: contours of the new normal

Panel 1 - Scars or scratches:

How deep is the crisis' fall-out on the real economy and the natural rate of interest?

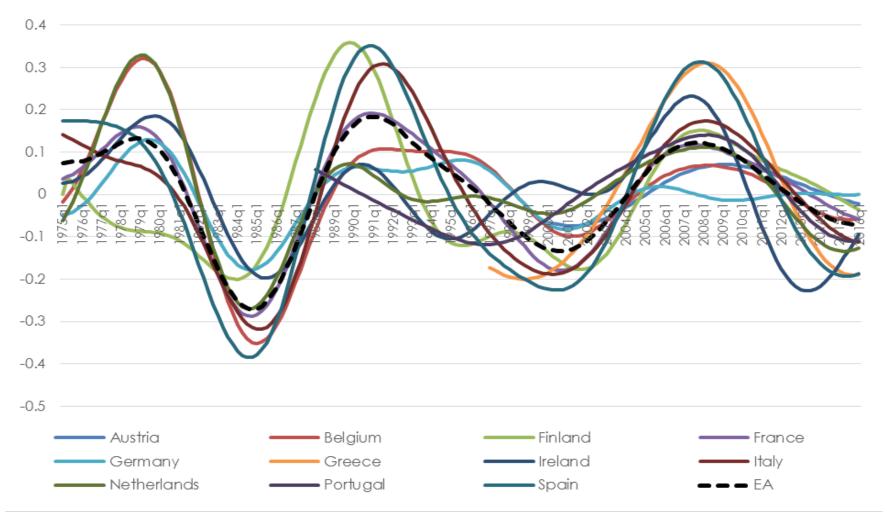
Cinzia Alcidi

Brussels, 14 September, 2018

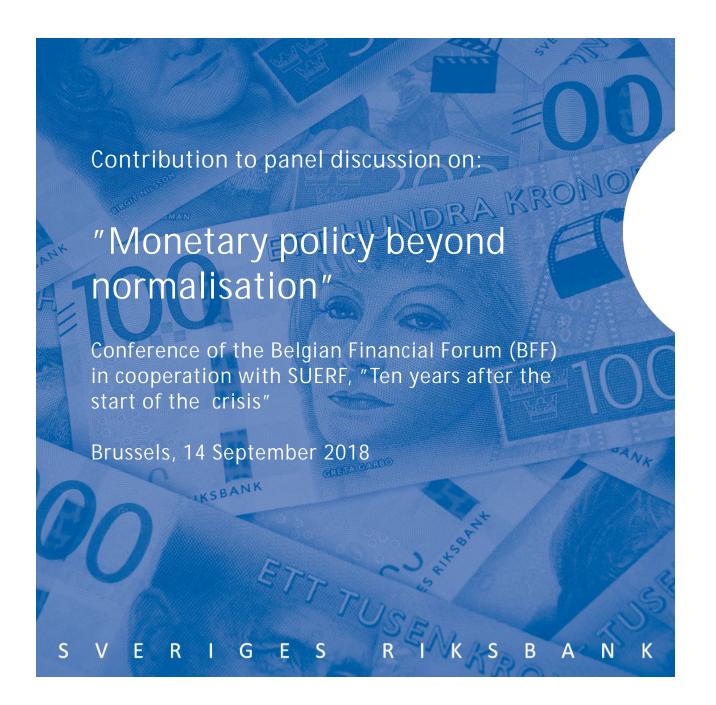


Financial cycle in Euro area Member States





Source: Alcidi (2017)





Anders Vredin Head of the General Secretariat

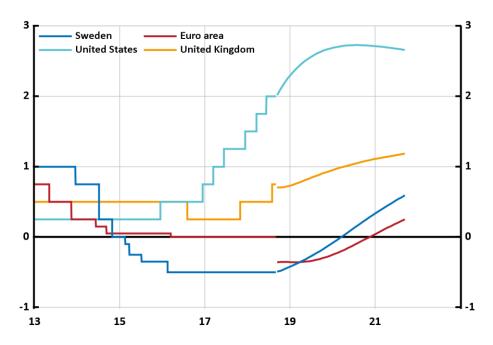
The views expressed here are my own and do not necessarily reflect those of the Executive Board of Sveriges Riksbank.



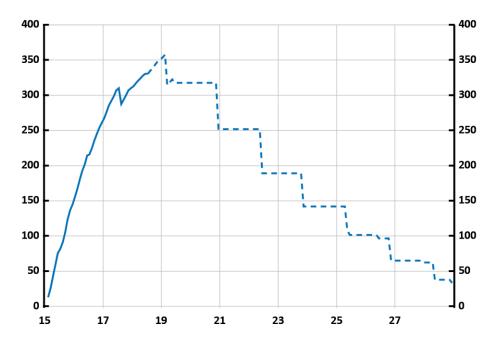
"Unconventional" monetary policy the new normal



Policy rates and expectations according to forward rates



The Riksbank's holdings of Government bonds



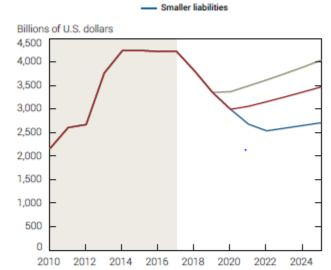
Note. Per cent and nominal amounts, SEK billion. The figure to the right shows a forecast up until June 2019, after that a technical projection under the assumption that no further reinvestments are made. The development of the holdings is also affected by bonds' market prices and by which bonds the Riksbank chooses to reinvest in.

Source: The Riksbank

Forecasts of the Fed's SOMA holdings

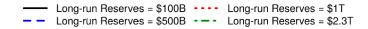


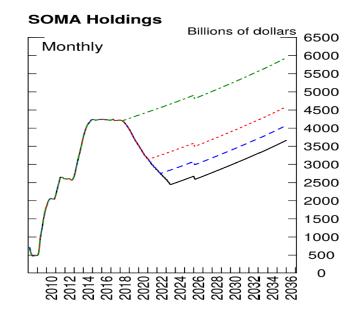




Source: Federal Reserve Bank of New York.

Notes: Figures are as of year-end. Figures for 2010-17 (shaded area) are historical settled holdings. Smaller and larger liabilities are based, respectively, on the 25th percentile and 75th percentile responses to a question about the size and composition of the Federal Reserve's long-run balance sheet in the Federal Reserve Bank of New York's December 2017 Survey of Primary Dealers and Survey of Market Participants. Projected figures are rounded.







Sources: Open Market Operations During 2017, The Federal Reserve Bank of New York and Del Negro, M. et al. (2018) "Fiscal Implications of the Federal Reserve's Balance Sheet Normalization".

Reasons for low policy rates and large balance sheets



- Real interest rates have declined globally
- Financial innovations, increased capital mobility, general "globalization"
- New financial imperfections, new risks, increased risk-taking (Rajan, 2005)

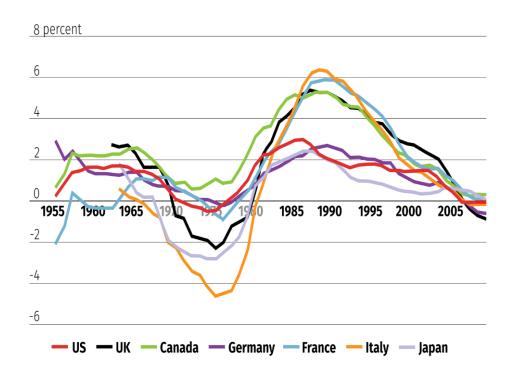
- Policy rates will be lower than prior to the GFC
- Central bank balance sheets will be larger



Negative real interest rates and large central bank balance sheets – not new phenomena

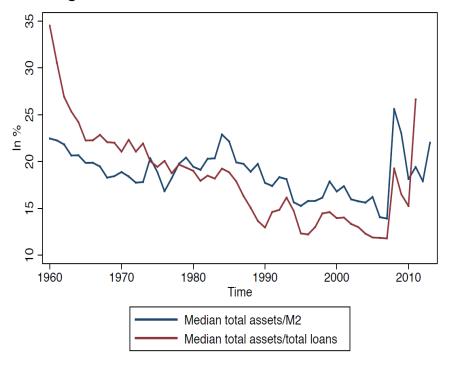


Long-run real interest rates



Note: The left-hand figure shows 11-year centered moving averages. The right-hand figure shows the average for 12 advanced economies: Australia, Canada, Finland, France, Germany, Italy, Japan, Norway, Sweden, Switzerland, the United Kingdom, and the United States.

Balance sheet assets relative to financial sector lending and M2



Sources: Left panel: IMF, Haver and authors' calculations (Yi K-M, Zhang Jing, 2016, "Real Interest Rates over the Long Run". Right panel: Ferguson, N., Schaab, A., Schularick M (2014) "Central bank balance sheets: expansion and reduction since 1990".





Are financial frictions important?

• No:

- A short run interest rate is the only important instrument for monetary policy
- The central bank's asset holdings have no significant effects
- Financial stability should not be an objective for monetary policy

Yes:

- Asset purchases and sales may be both a complement to, and a substitute for, changes in a short term policy rate
- Financial stability should be an objective for monetary policy, in addition to price and real stability
- Can monetary policy remain independent if financial stability becomes an additional objective for monetary policy?



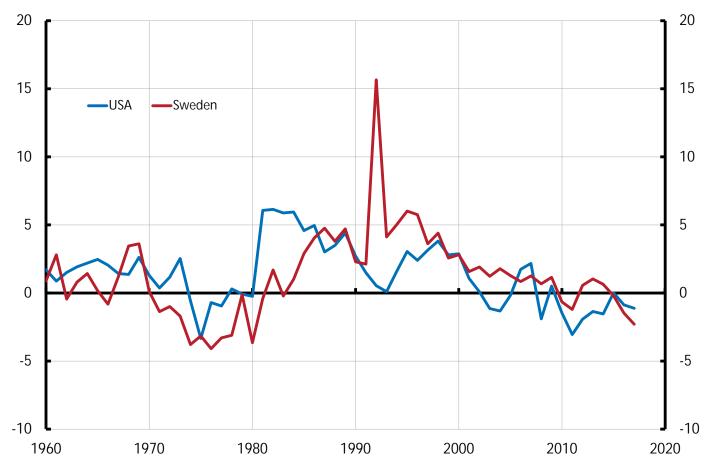


Extras





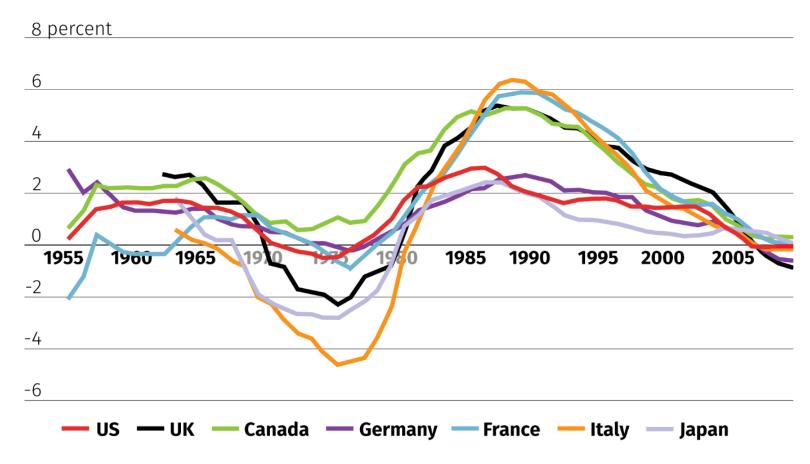
Real policy rates







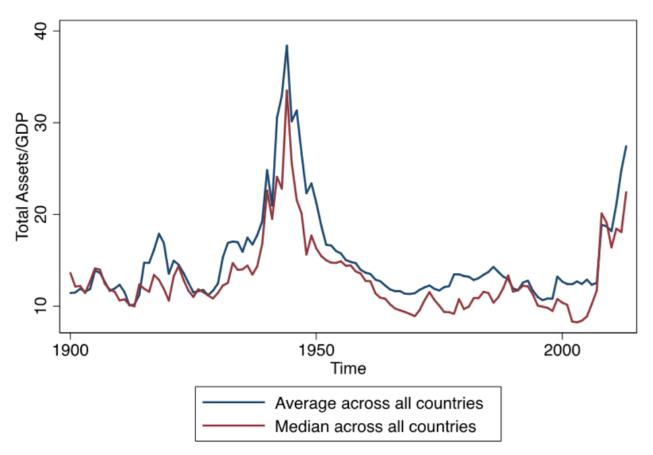
Long-run real interest rates







Central bank balance sheets relative to GDP

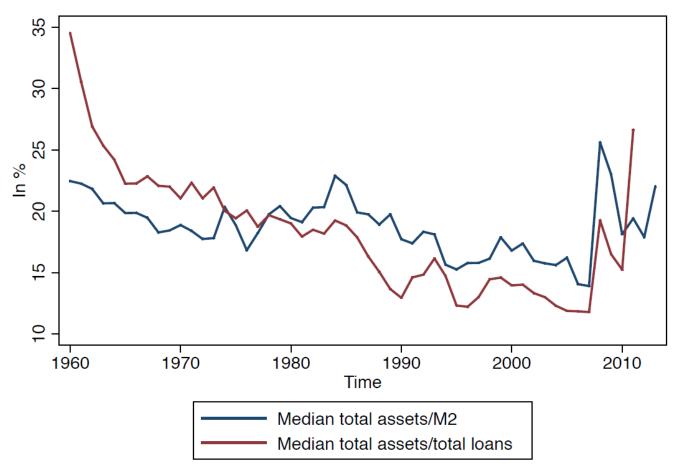




Source: Ferguson, N., Schaab, A., Schukarick M (2014) "Central bank balance sheets: expansion and reduction since 1990".

Balance sheet assets relative to financial sector lending and M2







Narrow versus broad monetary policy frameworks in the 'New Normal'?

Andrew Filardo

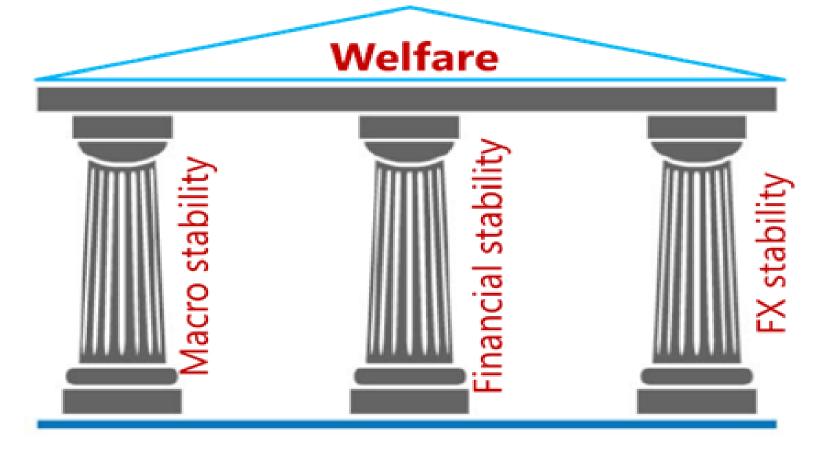
Bank for International Settlements

Prepared for the panel on "Monetary policy beyond normalisation: objectives and instruments" at the BFF-SUERF Conference Colloquium entitled "Ten years after the start of the crisis: contours of a new normal", 14 September 2018, Brussels

The views expressed here are mine, not necessarily those of the Bank for International Settlements.



Stability-oriented monetary policy framework for the future: a three-pillar approach?







Natacha Valla

European Central Bank

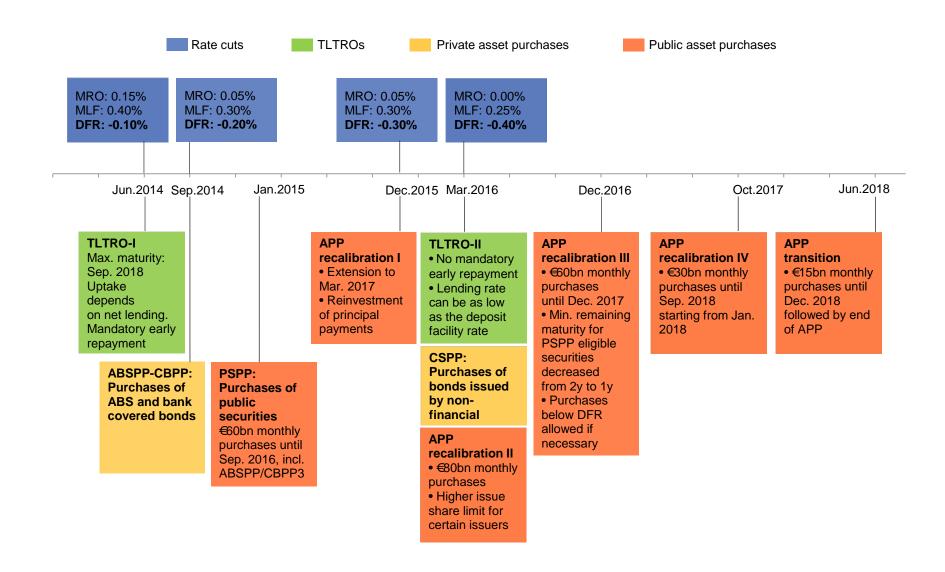
Panel: Monetary policy beyond normalisation: objectives and instruments

Brussels 14 September 2018

- With the crisis, many structural relationships have been redefined
- Agents and policy makers have to "learn" the new ones
- Central banks
 - Proved as creative as they could be
 - Held to their "fixed points": independence and mandate
- Key lesson from the crisis: the importance of operational frameworks
- New fact of life: the toolkit of central banks is manifold

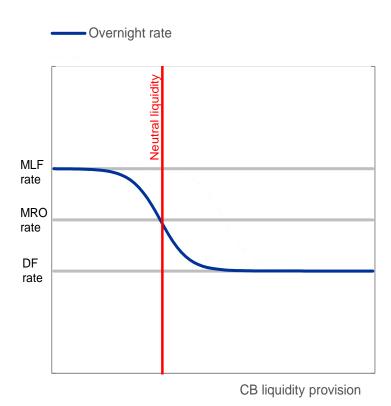
- Focusing on the role of the central bank balance sheet
- Complementarities and rotation across monetary policy instruments
- Perspective of central bank independence
- Back to the basics and interactions with fiscal policy:
 - steering rates, anyway
 - liquidity conditions, anyway
 - Balance sheet expansion, anyway?

The ECB's unconventional measures since June 2014



Steering money market rates with balanced liquidity conditions.

Stylised relationship between money market rates and liquidity



Source: ECB.

Notes: The blue line for the overnight rate illustrates the relationship between the EONIA spread to the MRO and excess liquidity from 2007 and 2012 estimated for a logistic regression: EONIA spread = $\beta_1 + \beta_1/(1 + \exp(\beta_2 \times Excess\ Liquidity))$.

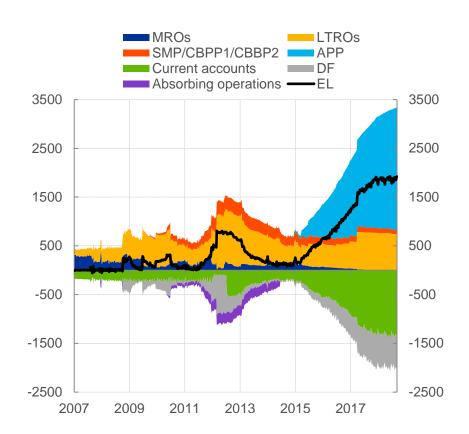
The operational framework in the last ten years

■ Before the crisis, the ECB implemented its monetary policy in a corridor system framework. Money market rates were steered to the middle of the corridor by estimating the banking system's liquidity needs from reserve requirements and autonomous factors such as banknotes, and then satisfying these liquidity needs exactly.

Steering money market rates with balanced liquidity conditions.

Monetary policy positions on the Eurosystem's consolidated balance sheet

(€ bn)



Sources: ECB.

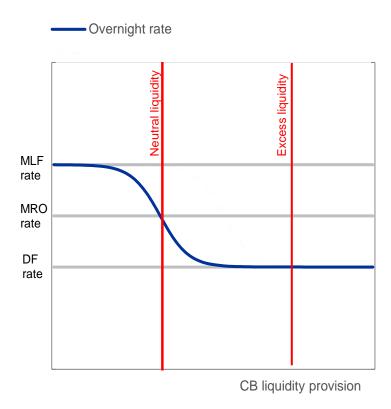
Latest observation: September 2018.

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- Since mid-2014, the non-standard monetary policy measures have significantly expanded the Eurosystem's consolidated balance sheet and injected vast amounts of reserves above and beyond the liquidity needs into the banking system. The banking system is now in a position where it deposits the excess liquidity in the deposit facility.

... and with excess liquidity

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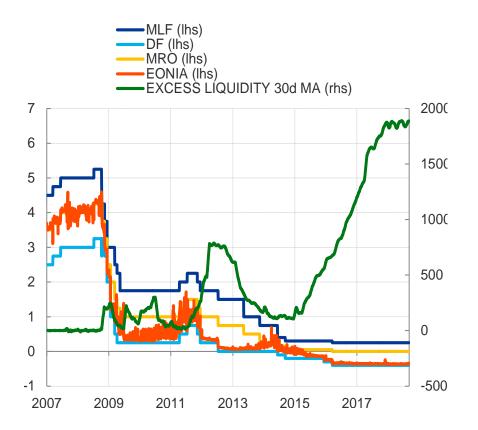
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- As a consequence, money market rates the rates at which banks borrow and lend central bank reserves among each other have been pushed to the level of the deposit facility rate. In effect, this means that the Eurosystem is operating in a floor system today.

... and with excess liquidity

Excess liquidity and key interest rates

(percentage per annum / € bn)



Sources: ECB.

Notes: "MLF" is the rate on the marginal lending facility, "DFR" is the rate on the deposit facility, "MRO" is the rate on the main refinancing operations and "EONIA" is the euro overnight unsecured interbank rate.

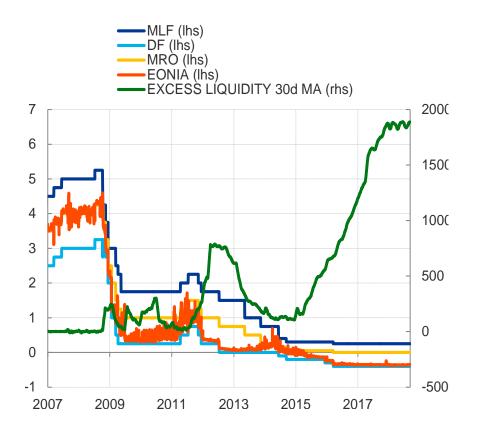
Latest observation : 7 September 2018

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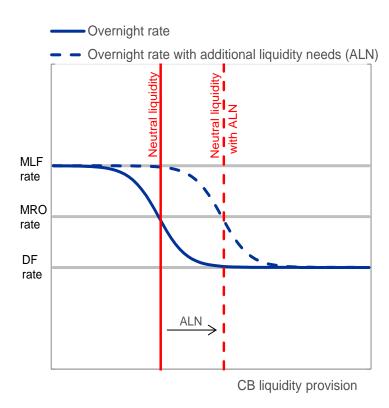
Latest observation : 7 September 2018

Outlook for the future operational framework

- The outstanding TLTROs, the continuing reinvestments of the APP portfolio for an extended period of time and the fixed-rate full allotment policy will ensure that the liquidity supply remains in excess of the banking system's need for some time to come.
- But at some point in the future, the Governing Council will re-assess the liquidity conditions and, taking into account the maturing TLTROs, may choose to recalibrate the reinvestment policy. Such choices will affect the amount of excess liquidity and could eventually lead to a return to balanced liquidity conditions.

... but pre-crisis relationship may have changed...

Stylised relationship between money market rates and liquidity with additional liquidity needs



Source: ECB.

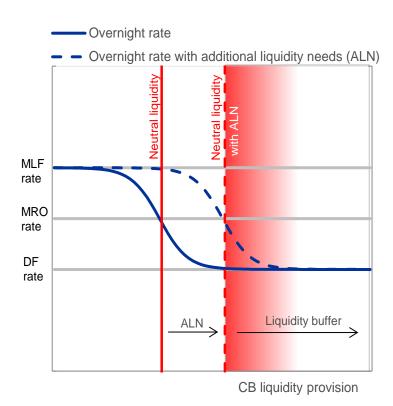
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Outlook for the future operational framework: back to corridor system?

- Several structural changes compared to pre-crisis times may have added additional liquidity needs for the banking system. For instance, regulatory requirements such as the LCR could lead to additional, systematic demand for central bank reserves.
- □ The emergence of additional liquidity needs would mean the "neutral" liquidity supply – at which money market rates lift off the deposit facility rate floor of the corridor – may be higher than it used to.
- ☐ This analysis leads to a number options for the future operational framework and the size of the ECB's balance sheet:
 - ☐ If additional liquidity needs are reasonably stable and forecastable, they could be satisfied within the pre-crisis framework by allotting additional liquidity.

... and could be clouded with additional uncertainty

Stylised relationship between money market rates and liquidity with additional liquidity needs



Source: ECB.

Notes: The blue line for the overnight rate illustrates the relationship between the EONIA spread to the MRO and excess liquidity from 2007 and 2012 estimated for a logistic regression: EONIA spread = $\beta_1 + \beta_1/(1 + \exp(\beta_3 \times Excess\ Liquidity))$.

Outlook for the future operational framework: continue with floor system?

- Several structural changes compared to pre-crisis times may have added additional liquidity needs for the banking system. For instance, regulatory requirements such as the LCR could lead to additional, systematic demand for central bank reserves.
- □ The emergence of additional liquidity needs would mean the "neutral" liquidity supply – at which money market rates lift off the deposit facility rate floor of the corridor – may be higher than it used to.
- ☐ This analysis leads to a number options for the future operational framework and the size of the ECB's balance sheet:
 - ☐ If the additional liquidity needs are uncertain, a floor system with excess liquidity provision and a sufficient liquidity buffer could be more robust, especially if frictions in the interbank market persist.
 - Other objectives, such as the provision of safe assets through the central bank, may have additional implications for the balance sheet.

Key elements of the Fed's and ECB's pre vs. post-crisis operational framework

		Federal Reserve		ECB	
		Before 2007	Today	Before 2007	Today
Overview	Liquidity conditions	Balanced	Excess	Balanced	Excess
	Floor/Corridor system	Corridor	Floor	Corridor	Floor
	Counterparty/collateral frameworks	Narrow	Broad	Broad	Broad
	Required intervention frequency ¹	High	High ¹	Low	Low
	Interbank money market	Active	Inactive	Active	Inactive
Open market operations	Lending operations	Only as backup ²	Expanded, but inactive ³	Yes	Yes
	Outright purchases short-term assets	Yes	Yes	No ⁴	No ⁴
	Outright purchases long-term assets	No	Yes	No ⁴	Yes
Additional tools	Interest on excess reserves/ deposit facility	No	Yes	Yes	Yes
	Reverse repos	No	Yes	No	No
	Securities lending	Yes	Yes	No	Yes

¹ The buffering function from reserve requirements afforded lower intervention frequencies in the euro area, in turn supporting the functioning and liquidity of the money market. While the Fed's operational framework has not changed in this respect, the outstanding excess liquidity mutes this difference.

² The discount window and pre-crisis primary dealer lending operations were not intended to provide the bulk of liquidity to the banking system, in contrast to operations such as the Term Auction Facility (TAF) that were introduced during the crisis to avoid the risk of "stigma" associated with recourse to the discount window.

³ The final TAF operation matured in 2010.

Thank you

Ten years after the start of the crisis: contours of a new normal

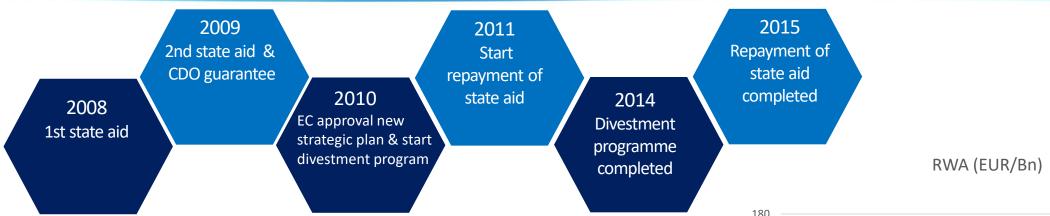
Belgian Financial Forum 14 September, 2018 By Christine Van Rijsseghem



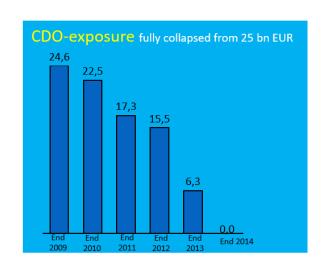
The financial sector had to rebuild trust

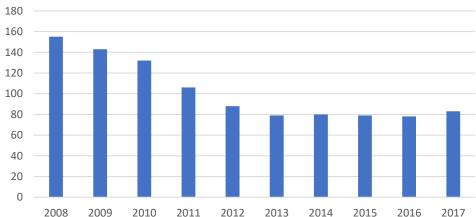


KBC focussed on its core markets, lowered its risk profile and strengthened its capital base



Divestments			
KBC FP Convertible Bonds	KBC Securities Servië		
KBC FP Asian Equity Derivatives	Creditportfolio of foreign branches		
KBC FP Insurance Derivatives	Centea		
KBC FP Reverse Mortgages	Fidea		
KBC Peel Hunt	Warta		
KBC AM in UK	KBL European Private Bankers		
KBC AM in lerland	KBC Autolease Polska		
KBC Securities BIC	KBC Lease Deutschland		
KBC Business Capital	Zagiel		
Secura	NLB		
KBC Concord Taiwan	Kredyt Bank		
KBC Goldstate China	Absolut Bank		
KBC Securities Roemenië	KBC Banka		
Antwerpse Diamantbank	KBC Bank Deutschland		





whilst at the same time strengthened its Risk Management,

A few milestones

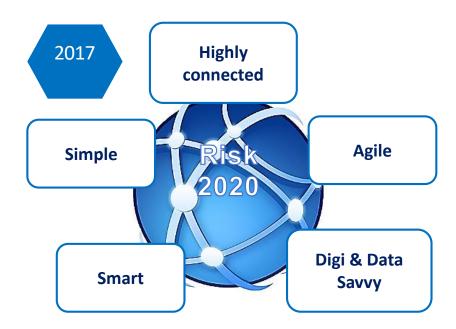
2010 Risk Harbour Strategy

- Independent CROs
- Local risk teams
- G-Risk

2013 KBC mission/vision

We want risk to be in the hearts and minds of everyone, for KBC to create sustainable growth and to deserve its customers' trust





and its corporate and risk culture



Prudential framework had a positive impact on KBC's Governance and Risk Management

Corporate governance

- ✓ Segregation of duties and responsibilities between
 - **Board of Directors**: sets and oversees objectives and strategies incl. risk appetite and risk management policies
 - Risk and Compliance Committee : Challenging the quality of the risk management function
 - Executive Committee : Implementation of risk management
- √ With a stronger oversight role (Risk Appetite, Remuneration,...)

Internal controls

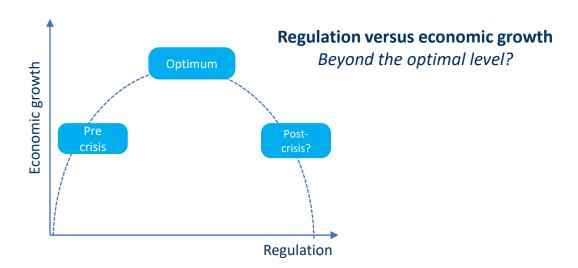
- √ 3 lines of defence
 - Business
 - Risk, Compliance,...
 - Internal Audit
- ✓ Group Key Controls & Internal Control Statement

Risk management

- ✓ Governance : Group CROs, Country CROs and local & group Risk Departments
- ✓ Time-out right CROs
- ✓ Strong frameworks to identify, assess, manage and report on company risks
- ✓ Assisting senior management in the implementation of the Risk Management Framework

KBC's experience with regulation and supervision

- As an integrated bank-insurance group, we face some challenges
 - walls between insurance and banking regulators
 - different attention points for different (local) regulators and supervisors
- Important to avoid over-regulation



 Call for simple, clear and stable regulatory and supervisory requirements taking into account the customer's view

Thank you



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David Turner, OECD

Belgian Financial Forum and SUERF Colloquium

Ten years after the start of the crisis: contours of a new normal

14 September 2018

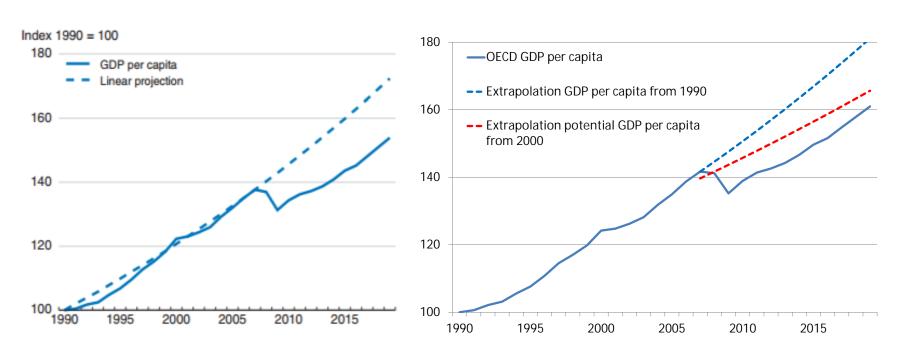




Care is needed in assessing cost of GFC

OECD GDP per capita vs Linear trend

.. vs shorter trend in potential per capita



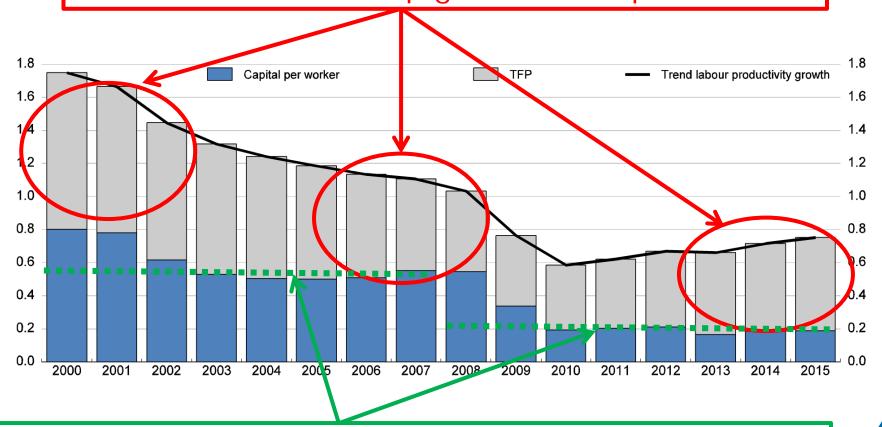
Source: May 2018 OECD Economic Outlook



OECD trend labour productivity growth rate

(percent per annum)

Much of the fall in tfp growth was pre-crisis

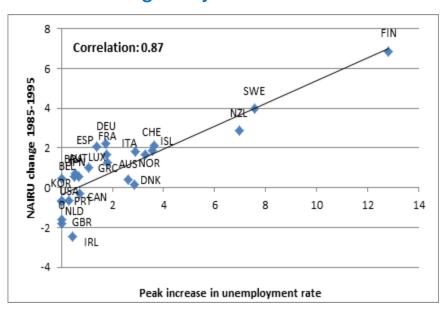


The fall in capital per worker is mostly post-crisis

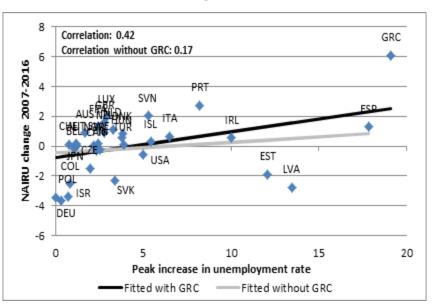


Evidence of unemployment hysteresis is weaker than before

Following early 1990s downturn



Following GFC



Both scatter plots compare the peak change in the unemployment rate from the initial year (1985 or 2007) on the horizontal axis with the change in the estimated equilibrium unemployment over the entire period (1985-95 or 2007-17) on the vertical axis.



Conclusions

- Care needed in assessing costs of GFC
- Productivity slowdown
 - pre-crisis: mostly tfp
 - post-crisis: mostly capital
- Much of capital weakness explained by accelerator
 => hysteresis-like effect
- Labour market effects in many countries scratches rather than scars



Selected references

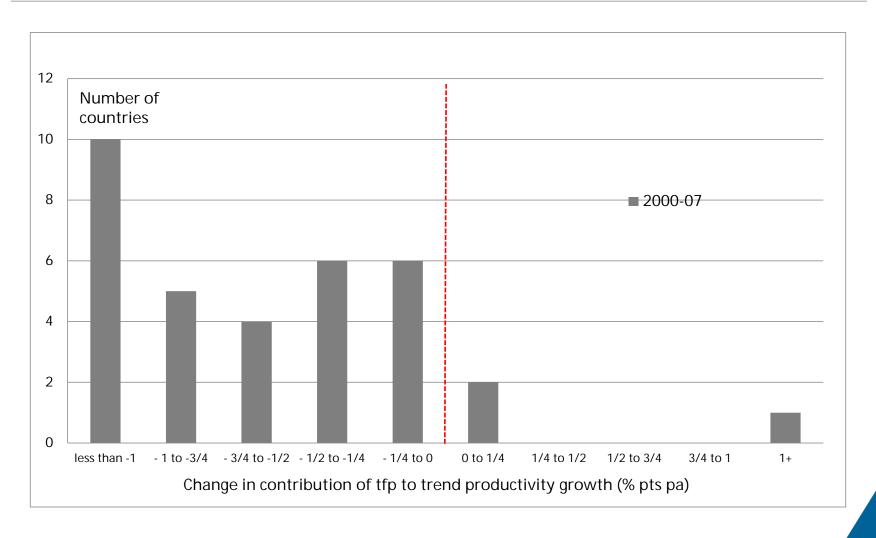
- 1) Ollivaud, P. and D. Turner (2014), "The effect of the global financial crisis on OECD potential output", OECD Economic Studies, Volume 2014.
- 2) Turner, D. et al. (2016), "<u>An investigation into improving the real-time reliability of OECD output gap estimates</u>", *OECD Economics Department Working Papers*, No. 1294.
- 3) Ollivaud, P., Y. Guillemette and D. Turner (2018), "Investment as a transmission mechanism from weak demand to weak supply and the post-crisis productivity slowdown", OECD Economics Department Working Papers, No. 1466, OECD Publishing, Paris.



EXTRA SLIDES

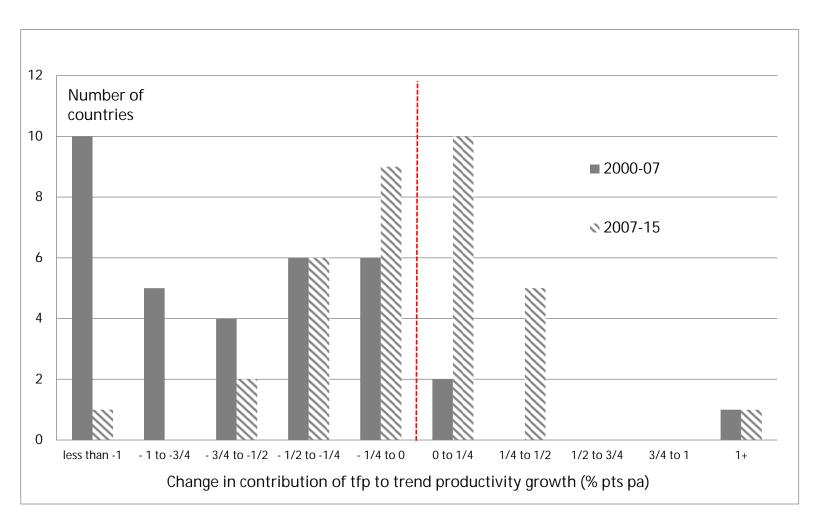


TFP growth fell in most countries, 2000-07



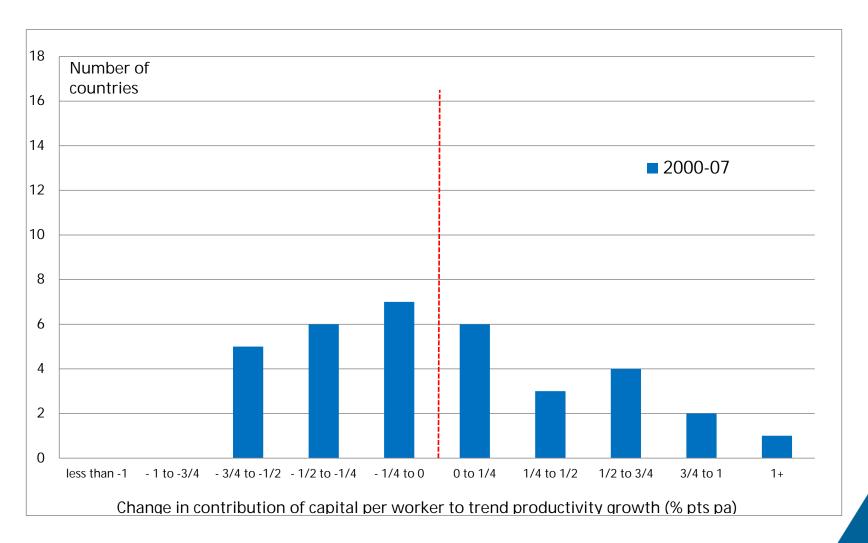


TFP growth remained low in 2007-15



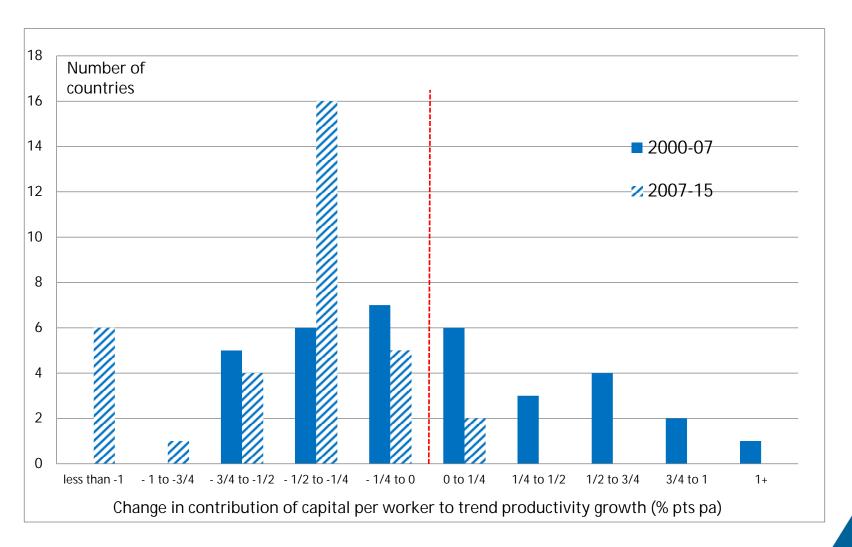


Capital deepening increased in as many countries as it fell over 2000-07





Capital deepening decreased in most OECD countries over 2007-15



Bank Resolution and Bail-in

Mathias Dewatripont

Solvay Brussels School and ECARES
Université Libre de Bruxelles

National Bank of Belgium Conference Brussels – September 14, 2018

Introductory remarks

- Why banks are special: (1) fragility linked to maturity transformation; (2) inability of most bank creditors/depositors to exercise usual discipline on their borrower (see Dewatripont-Tirole 1994, 2012).
- Implications: (1) address *financial instability* (e.g. through deposit insurance); (2) address moral hazard through *capital ratios* and *credible resolution*.
- Easier said than done, but leads to a key general rule: concentrate the pain on investors whose funds are 'stuck in the bank'.

The 2007-8 crisis and re-regulation

- Crisis fed by under-regulation; significantly worsened after fall of Lehman: first big-bank bankruptcy (i.e. disorderly resolution), that triggered « move to another equilibrium » (with bank runs à la Diamond-Dybvig 1983) but for wholesale funding).
- Double response:
 - (i) « no more Lehmans », instead, significant rise of (retail) deposit insurance and *massive bail-outs*;
 - (ii) *re-regulation* (more and better capital, liquidity ratios, recovery and resolution planning, macroprudential regulation).

Assessment of reregulation

- Reform agenda makes sense given previous crisis, even if still largely untested.
- Debate continues on 'excessively low Basel III capital ratios' (e.g. Admati-Hellwig, 2013) versus 'difficulty of finding the money & risks to realeconomy lending'.
- What to think about 'bail-in rather than bailout' trend, in a European landscape plagued by overcapacity and a challenging environment?

Bail-in

- Paradox of the crisis: (i) Basel III stresses quality of capital and micro/macroprudential distinction, while (ii) current « bailout fatigue » has now led to « bailin fashion », with a desire to vastly enlarge set of bank claimholders meant to be « held responsible », and this even under systemic stress.
- Explanation: politicians (rightly) feel that Basel III doesn't require enough capital to protect taxpayers.
- Big concern however: cost of financial instability.
- Relevant both at FSB with TLAC and in the EU, with BRRD and MREL. Focus here on the latter.

Banking Recovery & Resolution Directive (see EC 2014 and Dewatripont, 2014)

- BRRD insists on 8% (non RW) bail-in even under systemic stress, as of January 1, 2016, for access to common resolution fund or even national public money.
- Beyond secured liabilities, it exempts very shortterm interbank debt (up to 7 days).
- It gives *priority to natural persons and SMEs* over other unsecured claims (and within those, priority to deposit insurance fund).
- As of today, *no hard targets yet for bail-inable securities* (MREL). But recent progress (see below).

6

Assessment

- Aversion to bailouts understandable: taxpayer money, moral hazard, ...
- Remember however cost of financial instability: the costliest bank failure for taxpayers in last 10 years was Lehman, despite lack of bail-out, while TARP \$428 billion bailout has been fully repaid.
- Remember also that « orderly » resolution will not prevent depositors from running if they can and feel their money is at risk: idea of « informational contagion », next to « mechanical contagion ».
- Conclusion: in order to avoid bank runs (esp. with volatile wholesale deposits), need 8% junior long-term liabilities for all banks!

Example of bank liabilities

Secured + very short-term liabilities	25
Retail deposits	40
Bail-inable senior liabilities	30
Junior liabilities	1.5
Capital	3.5
Total liabilities	100

- •Losses for senior liabilities before a bailout can be considered: (8 3.5 1.5)/30 = 3/30 = 10%.
- •Conclusion: to avoid bank runs (esp. with volatile wholesale deposits), better to increase junior liabilities to 4.5. Instead, including senior claims in MREL does NOT protect other senior unsecured claimholders!

Assessment (2)

- Useful national solutions, e.g. Germany: make senior bank bonds junior, retroactively; Italy: make depositors senior to bonds and derivatives, retroactively; France: same as Germany, but NOT retroactive, and more granular. Now in EU toolkit: 'non-preferred seniors'.
- Tension today: unwillingness to renegotiate 8% rule but requiring 8% of long-term junior claims to re-assure senior claimholders this would imply a big shock to an already challenged EA banking sector.

Assessment (3)

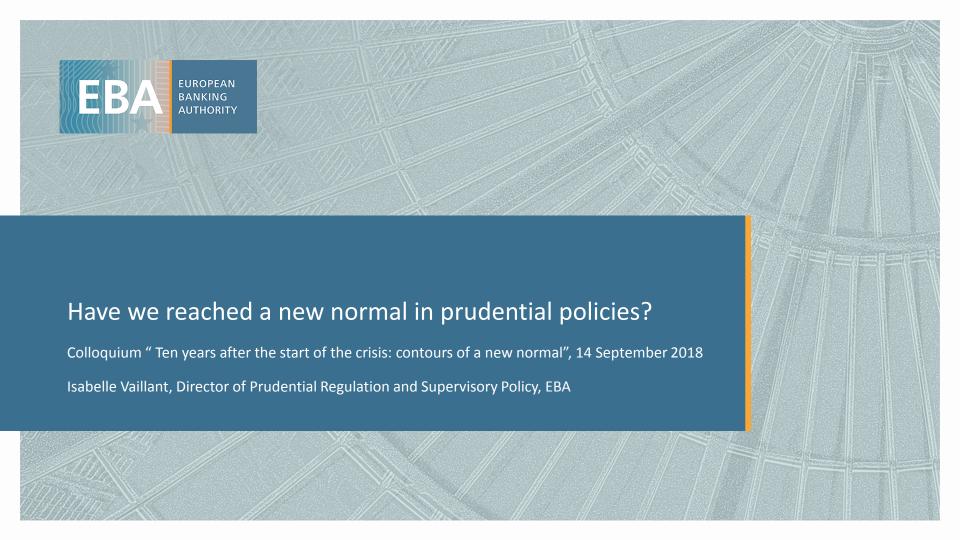
- So chosen 2017 route: 'precautionary recap' + compensation for retail subordinated claimholders. Or even 'national bankruptcy'. Not firstbest.
- Challenge: 'when bailout is out and bail-in is not in, denial is the only option left' ... And procrastination is very costly for growth and thus taxpayers.

References

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References (2)

- Dewatripont, M. & J. Tirole (2012), "Macroeconomic Shocks and Banking Regulation", Journal of Money, Credit & Banking.
- Diamond, D. & P. Dybvig (1983), "Bank Runs, Deposit Insurance, and Liquidity", *Journal of Political Economy*.
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The new financial regulatory framework

EBA EUROPEAN BANKING AUTHORITY

more robust

- Improved quantity and quality of capital (increased equity)
- Revisions to credit risk, market risk, CVA, Op risk
- Revised output floor

broader in scope

- New areas of coverage
 - Leverage
 - Liquidity

more flexible and forward-looking

- Governance (fit and proper, conduct risk, remuneration)
- Resolution regime
- Counter cyclical buffer and other macro prudential aspects







The new financial regulatory framework



Too complex for all





To build safeguards, we need to reject complexity

→ Complexity however is often the result of risk sensitivity and proportionality

Striking the right balance: simplicity versus complexity

e.g. Materiality thresholds per risk category

e.g. Tiered banking sector Business models

One-size fits all

More complex rules

Simpler rules

Business models vs a tiered approach



Regulatory impact

- Assess how different groups of banks might be affected by forthcoming regulation and how they might adapt to incorporate these new rules into their business strategies
- Proportionality, as some business models are also often correlated with size and complexity
- E.g. LCR, NSFR and Leverage ratio reports

Macro level

- Understand at a macro level the various business models, as they determine the types of risks the institutions are exposed to and possible threats to financial stability
- Respond to proportionality issue



Preserve the Single Market deepening







Micro view

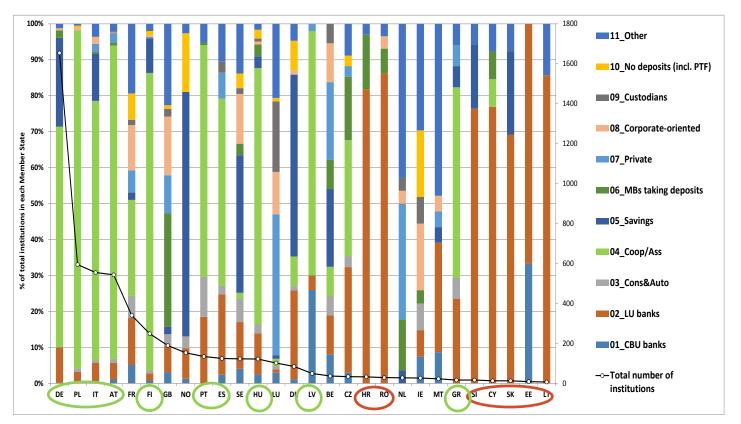
- Specify rules in accordance to business models' risks
- Assess performance and riskiness in relation to its peers
- e.g. SREP guidelin





Business models take into account the differences between countries



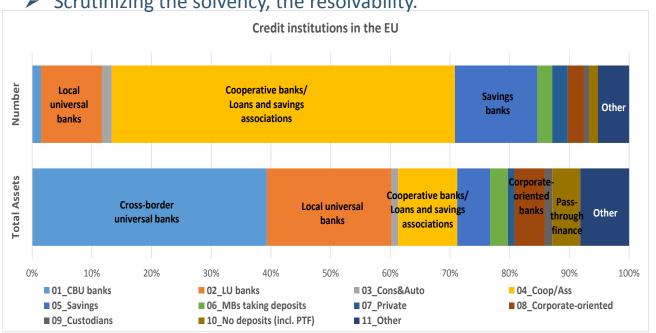


Credit institutions' categorisation in the EU

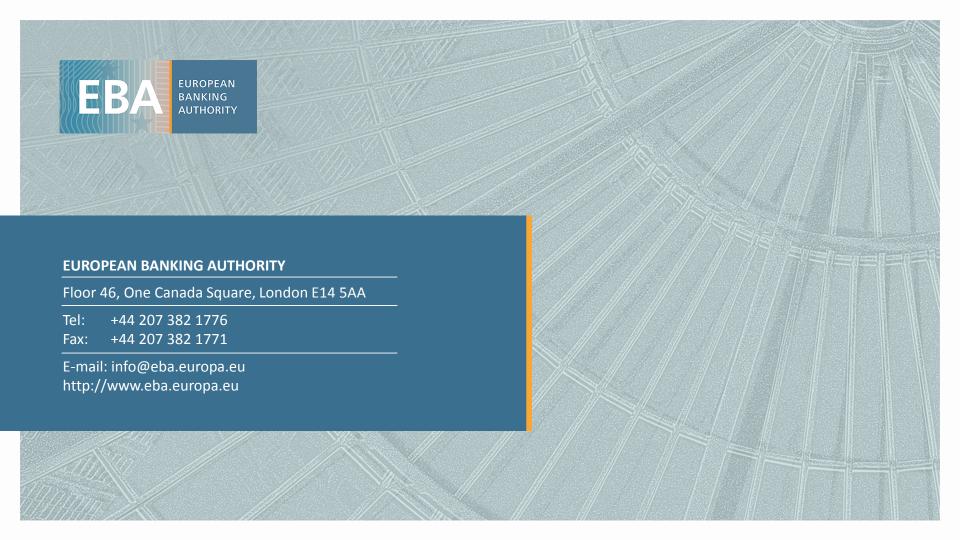
BANKING

Used for:

- Reasoning impacts of new regulation.
- Specify some priorities.
- Scrutinizing the solvency, the resolvability.



- 57.5% are co-operative banks. The next biggest categories are savings banks (13.8% of credit institutions) and local universal banks (10.2%).
- Total assets are concentrated in cross-border universal banks (39.3%) and local universal banks (20.2%), which also reflect more generally their larger average size





Monetary policy beyond normalisation

BFF, SUERF "Ten years after the start of the crisis"

Maria Demertzis

14 September 2018

Introduction

- 1. Monetary policy and financial stability: Targeting financial imbalances?
 - 2. Increasing the inflation target?

 A better way to price stability?
 - 3. Conventional vs unconventional tools are here to stay.

More tools or more risks?

Targeting financial imbalances

 Agur Itai Demertzis (2018) Will macroprudential policy counteract monetary policy's effects on financial stability? Breugel WP No.1.

"...the interest rate affects the regulator's entire possibilities frontier. Both credit supply and bank soundness are affected by monetary policy, and therefore the entire environment in which the regulator operates responds to monetary conditions."

Increasing the inflation target (1)

1.Does aiming for higher inflation avoid periods of disinflation more effectively?

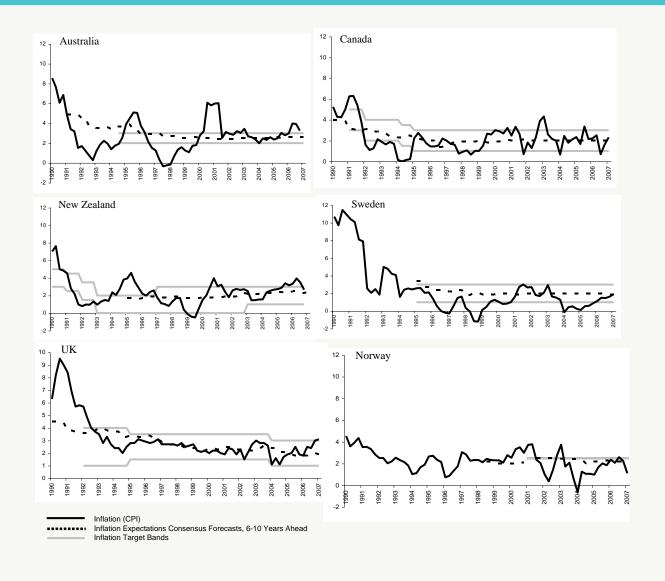
2.Is the objective of price stability better served by such a higher target?

Increasing the inflation target (2)

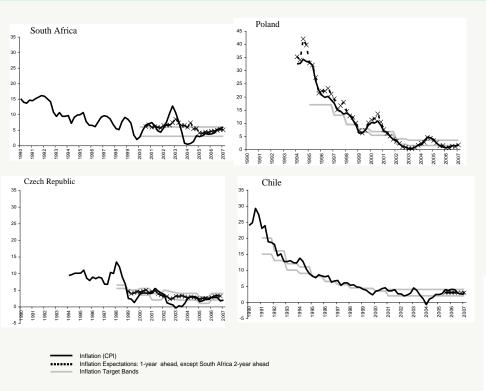
3. Can we manage the transition?

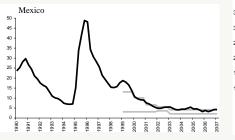
- Canada: target reviewed every 5 years
- UK: target fixed every year, revised in 2003
- Japan changed target in 2012 and 2013
- US only adopted formal target in 2012
- EZ evaluation of strategy in 2003 during which 2pillar strategy was modified and definition of price stability clarified

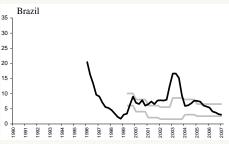
Increasing the inflation target (3)

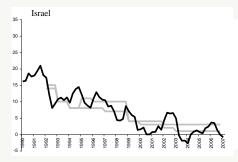


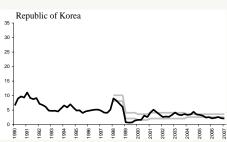
Increasing the inflation target (4)





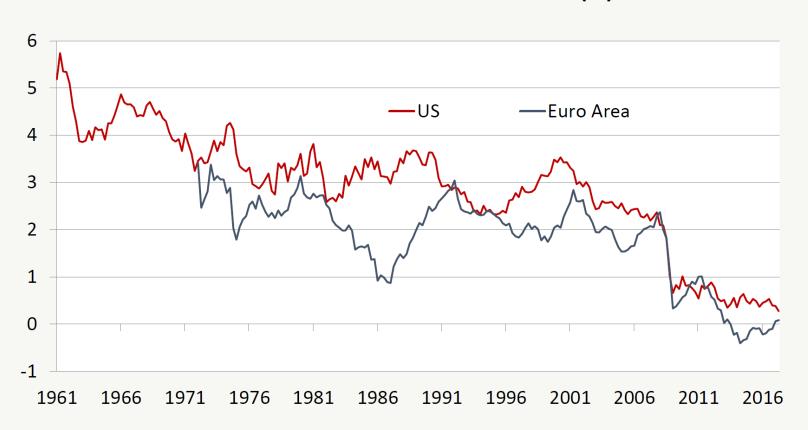






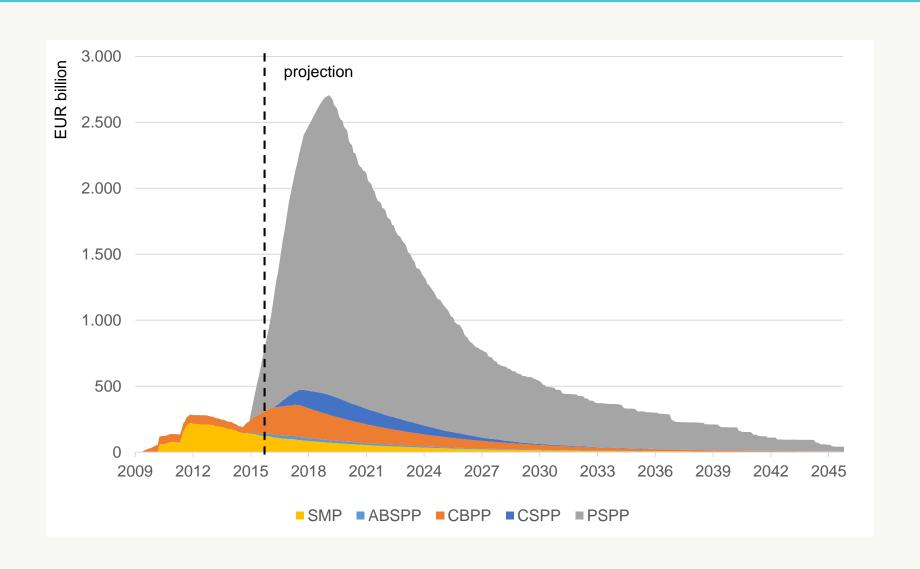
Standard vs non-standard tools (1)

Neutral interest rate estimates r* (%)

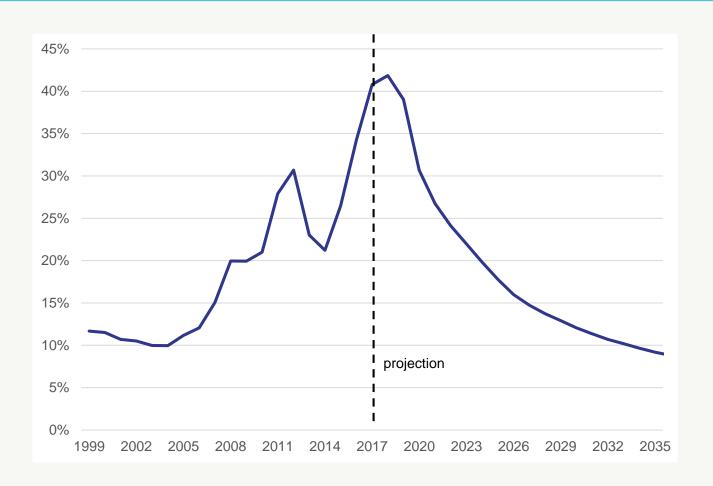


Source: Holston, Laubach, Williams (2016)

Standard vs non-standard tools (1)

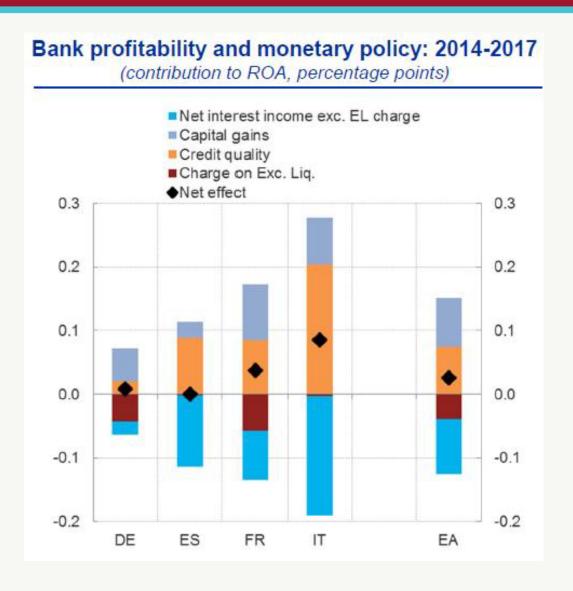


Standard vs non-standard tools (1)



Source: Bruegel based on Bloomberg, ECB, AMECO

Standard vs non-standard tools (2)





Thank you