

SECULAR STAGNATION IN THE EUROZONE

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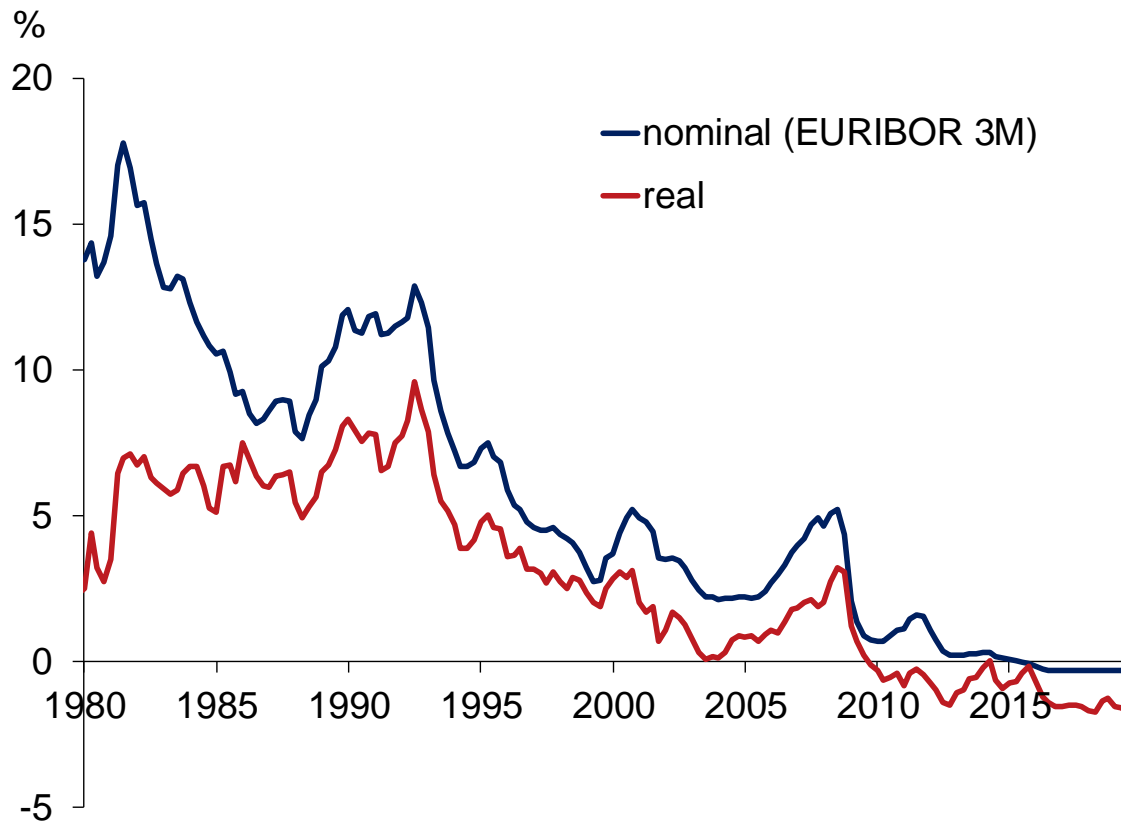
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Interest rates have been falling for decades

Eurozone: Short-term market interest rates



Source : Oxford Economics/ECB/Haver Analytics

Big picture questions

1. **Why are interest rates so low?**
2. **When will they rise again?**
3. **Is the eurozone in a secular stagnation?**
4. **What are the implications for the financial sector and what can policymakers do about it?**

Low interest rates and secular stagnation

- **The real neutral interest rate, r^***
 - **Equilibrium short-term real interest rate**
 - **Consistent with closed output gap and inflation at target**
- **Secular stagnation**
 - **Secular forces cause demand deficiency & supply weakness**
 - **Negative neutral rates**
 - **Policy rates at effective lower bounds**
 - **Below-target (core) inflation**
- **We estimate r^* , quantify the secular forces that drove it down, and compute what it needs for r^* to return to normal levels again.**
- **A way to structure our thinking!**

We extend Eggertsson, Mehrotra, Robbins (2019)

American Economic Journal: Macroeconomics 2019, 11(1): 1–48
<https://doi.org/10.1257/mac.20170367>

A Model of Secular Stagnation: Theory and Quantitative Evaluation

By GAUTI B. EGGERTSSON, NEIL R. MEHROTRA, AND JACOB A. ROBBINS

This paper formalizes and quantifies the secular stagnation hypothesis, defined as a persistently low or negative natural rate of interest leading to a chronically binding zero lower bound (ZLB). Output-inflation dynamics and policy prescriptions are fundamentally different from those in the standard New Keynesian framework. Using a 56-period quantitative life cycle model, a standard calibration to US data delivers a natural rate ranging from -1.5 percent to -2 percent, implying an elevated risk of ZLB episodes for the foreseeable future. We decompose the contribution of demographic and technological factors to the decline in interest rates since 1970 and quantify changes required to restore higher rates. (JEL E12, E23, E31, E32, E43, E52)

The zero lower bound (ZLB) on the short-term nominal interest rate became a binding constraint in the United States in 2008 in the midst of the financial crisis. Accordingly, low interest rates are often tied to that event, and it may seem natural to presume that as the crisis of 2008 moves into the rear view mirror so too will the low interest rate environment. This perspective seems vindicated by the recent interest rate increases by the Federal Reserve in the fourth quarter of 2016. However, as shown in [Figure 1](#), the low interest rate in 2008 was not just an anomaly that arose solely because of the financial crisis. Instead, it is the culmination of a 25-year trend across major industrial economies. In Japan, rates have been zero since the mid-1990s and remain there today. Furthermore, while recent increases in the Federal Funds rate may give rise to optimism in the United States, rates remain at zero in Europe as of this writing. The fact that rates remain so low should raise

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[†] Go to <https://doi.org/10.1257/mac.20170367> to visit the article page for additional materials and author disclosure statement(s) or to comment in the online discussion forum.

- AEJ Macro, Best paper award 2020
- They study the US until 2015
- We transfer to EZ until 2018
- We extend by two secular forces
 - Global savings glut
 - Quantitative easing (QE)
 - A total of nine macro drivers

<https://doi.org/10.1257/mac.20170367>

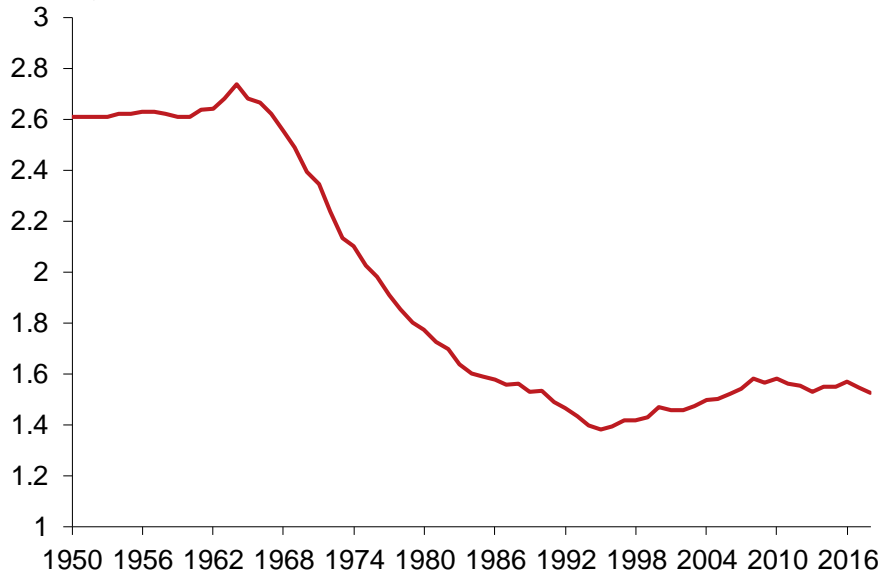
The making of a secular stagnation

- Ageing population and other secular forces
 - oversupply of savings
 - r^* falls
- Liquidity trap: central bank hits the effective lower bound
 - Cannot stimulate demand
- Real interest rate too high ($r > r^*$)
 - Firms reduce investment
 - Households save even more
 - Deficient aggregate demand
- Deficient demand + nominal wage rigidities
 - Supply weakness: lower potential output growth
- Output gap can close, but with
 - neutral rate below zero
 - policy rates chronically at their effective lower bounds
 - inflation persistently below target

Secular forces I: plunging fertility, rising longevity

Eurozone: Total fertility rate

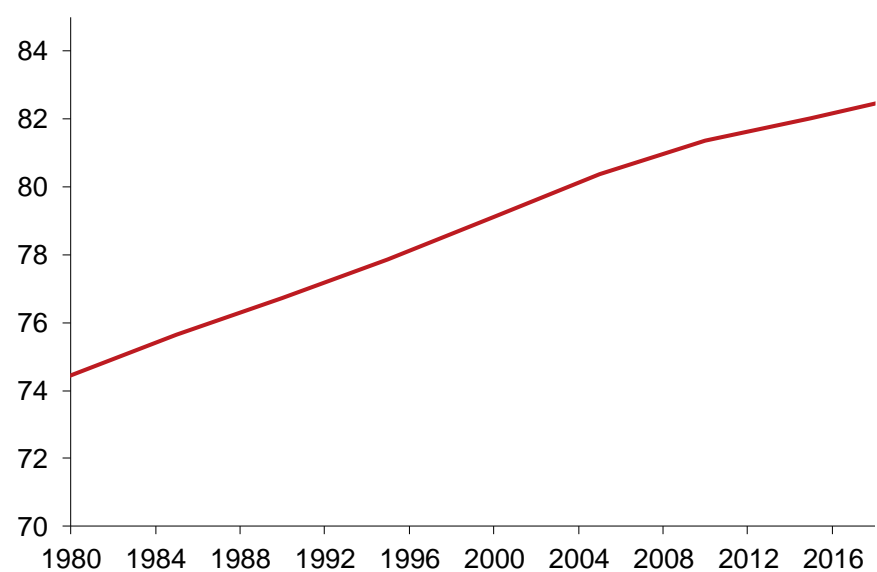
average number of children / woman



Source : Oxford Economics/Haver Analytics

European Union (15): Life expectancy

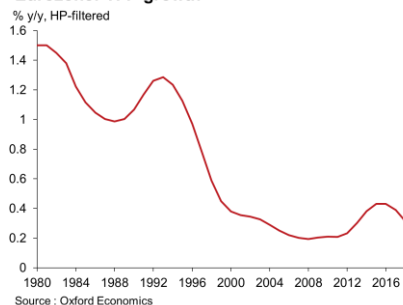
years



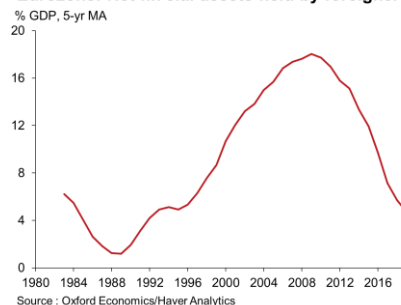
Source : Oxford Economics/United Nations Population Division

Development of the other secular forces

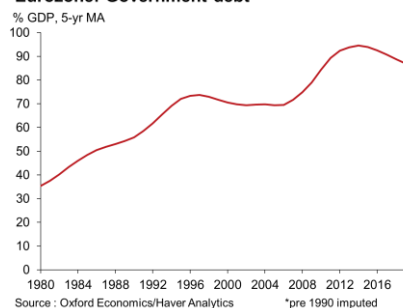
Eurozone: TFP growth



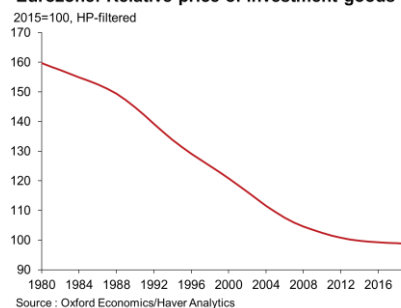
Eurozone: Net financial assets held by foreigners



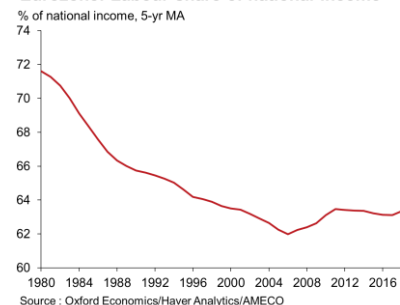
Eurozone: Government debt



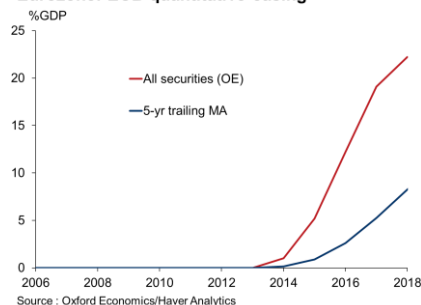
Eurozone: Relative price of investment goods



Eurozone: Labour share of national income



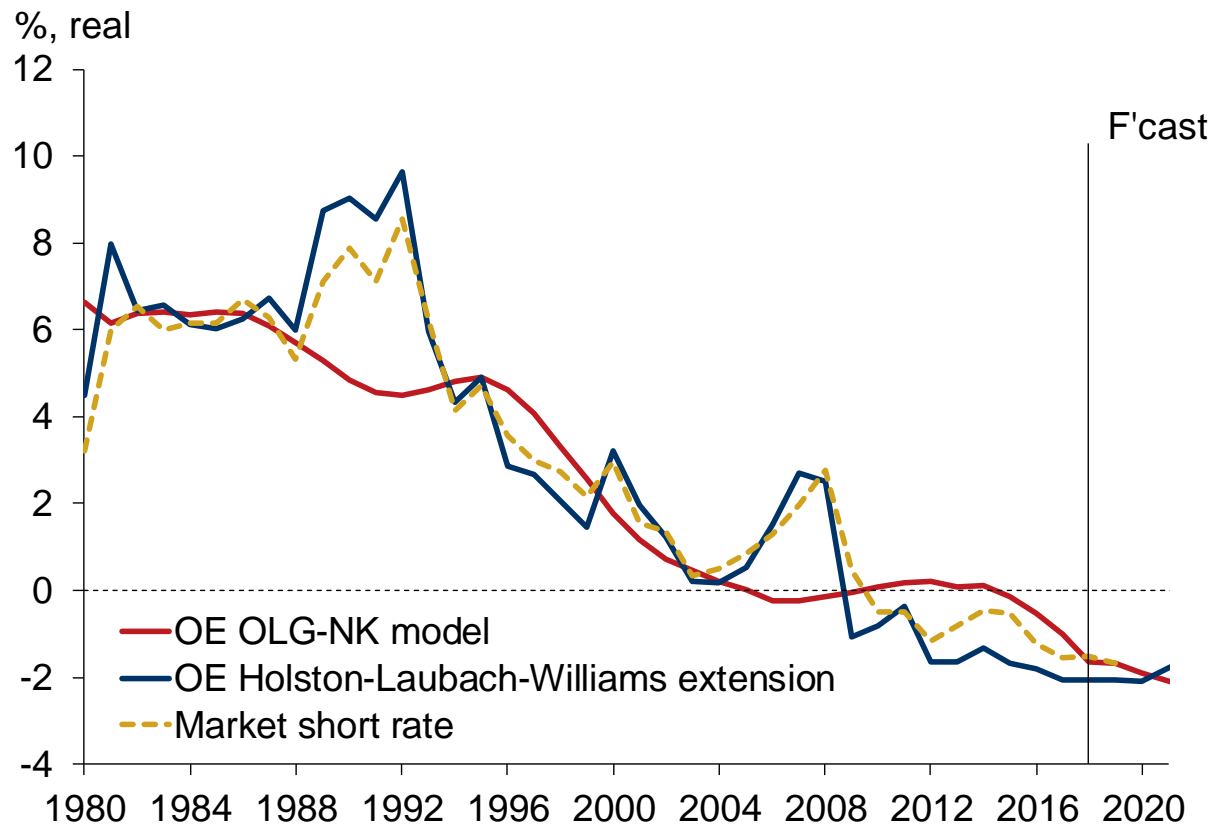
Eurozone: ECB quantitative easing



- Productivity slowdown
- Global savings glut (new)
- Rising government debt
- Cheaper investment goods
- Lower labour share of national income
- Quantitative easing (new)
- Consumer credit (not shown)

Our two modelling approaches put r^* in 2018 at -2%

Eurozone: OE real neutral rate estimates



Source : Oxford Economics/Haver Analytics

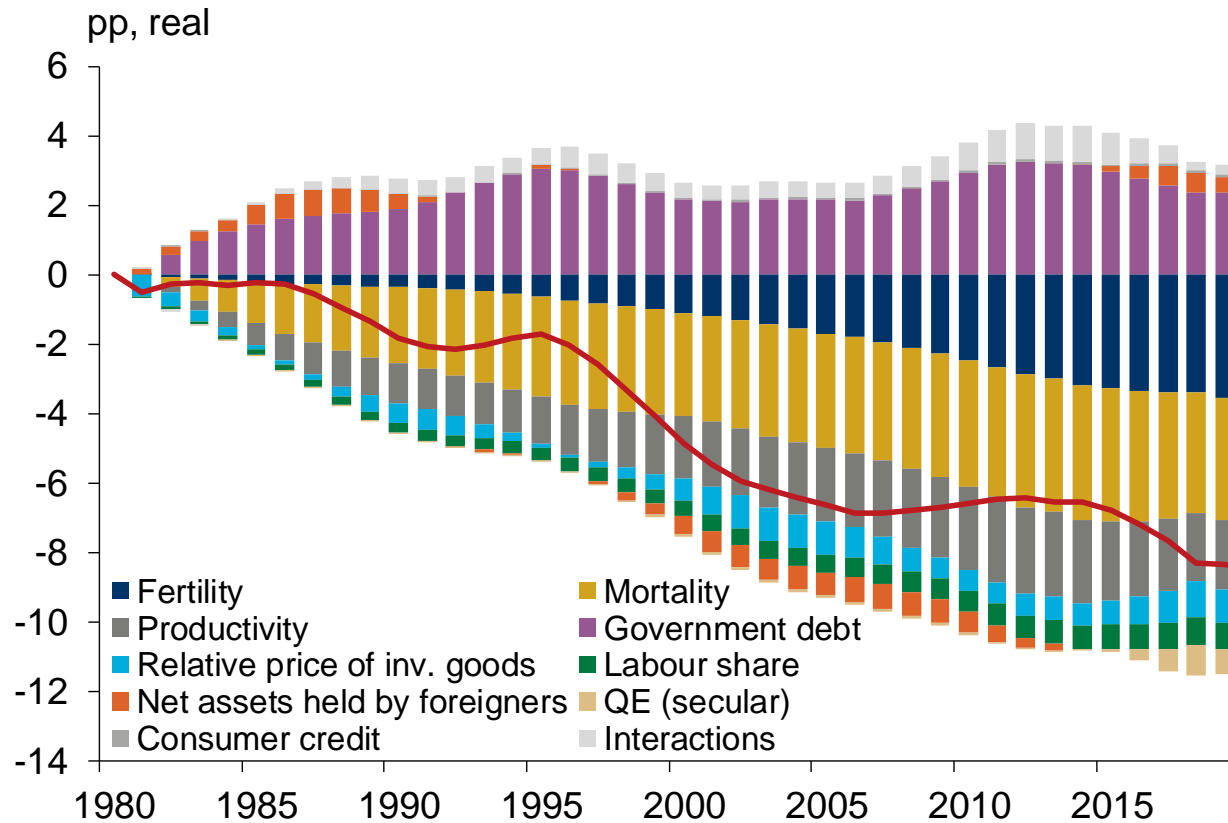
Demographic change made the biggest contribution

Decomposition of macro drivers, 1980 - 2018		
Total change in real neutral rate	-8.7pp	100%
<i>due to change in:</i>		
Fertility	-3.9pp	44%
Mortality	-3.5pp	40%
Productivity	-2.0pp	23%
Relative price of investment goods	-1.1pp	13%
Labour share	-0.7pp	8%
QE (secular)	-0.6pp	7%
Consumer credit	0.1pp	-1%
Net assets held by foreigners	0.3pp	-4%
Government debt	2.3pp	-27%
<i>Interactions</i>	<i>0.3pp</i>	<i>-4%</i>

Source: Oxford Economics

Baby boomers' impact delayed but long-lasting

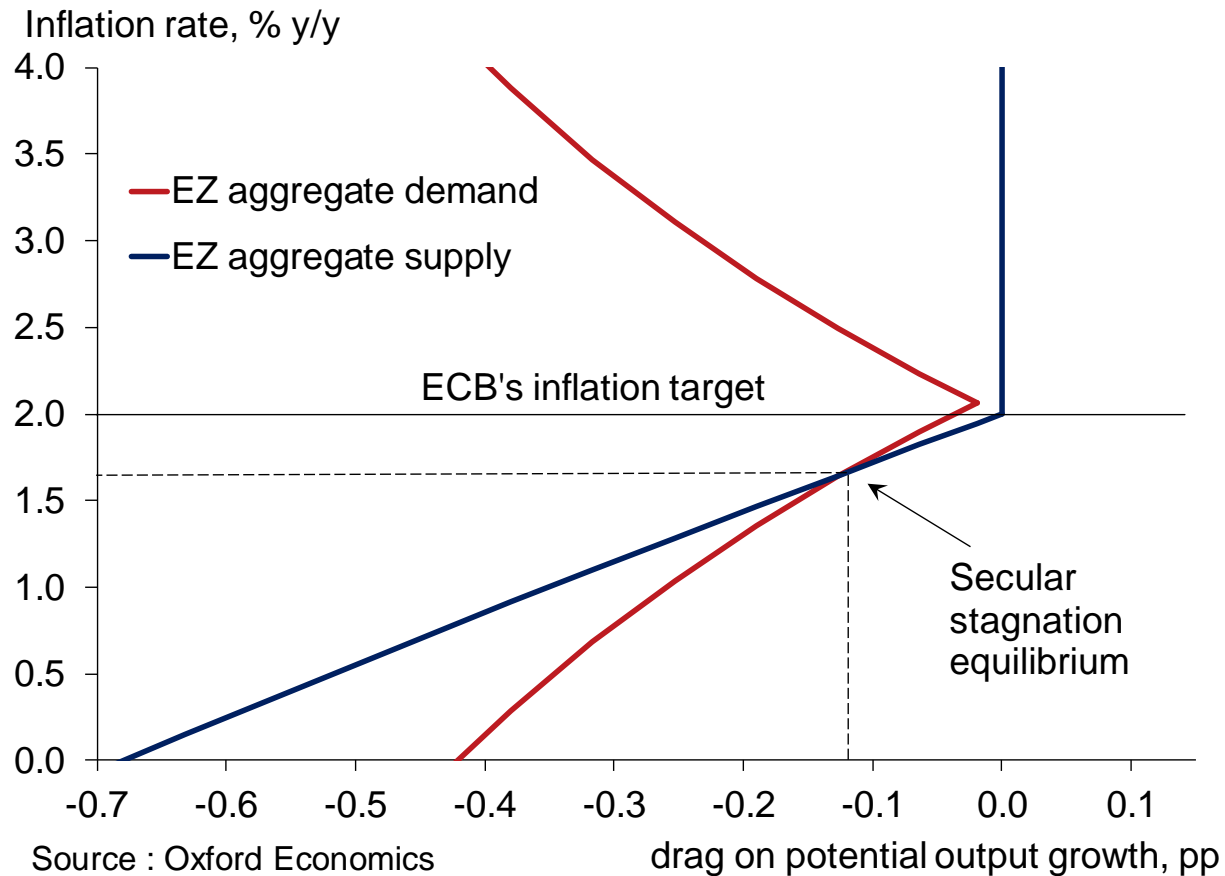
Contributions to change in the neutral rate



Source : Oxford Economics/Haver Analytics/United Nations/World Bank/ECB

The EZ is in secular stagnation, though a mild one

Eurozone: A mild secular stagnation



Staggering change is needed to boost interest rates

Change needed to achieve real neutral rate of -1% and 1%			
	2018 value	-1.0%	1.0%
Fertility (children / woman)	1.5	1.8	2.4
Productivity growth (y/y)	0.3%	1.0%	2.1%
Government debt (% GDP)	88.8%	111.9%	152.6%
Net assets held by foreign (% GDP)	6.0%	-17.2%	-60.8%
Relative price of investment goods	100.0	167.4	396.5
Consumer credit (% GDP)	5.7%	59.2%	137.0%

Source: Oxford Economics

Implications for financial sector and monetary policy

- **Medium-term forecast: r^* may not rise much**
- **Banking:**
 - **Profitability will remain low → cut costs, raise efficiency**
 - **Low growth → more bad loans?**
 - **Consolidation and more EU banking integration?**
 - **Less loan demand from firms (sec stag) & from HHs (ageing)**
 - **EZ “savings glut”, NFA set to increase moderately**
 - **Liquidity trap → capital buffers to absorb shocks**
- **Insurance:**
 - **Double blow to health and retirement schemes: ageing + low r**
- **Monetary policy:**
 - **Higher inflation target**
 - **Dual rates via TLTROs**
 - **QE to remain relevant stabilization tool, with elevated stock**



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