Discussion of

Are low interest rates firing back? Interest rate risk in the banking book and bank lending in a rising interest rate

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Introduction

- Does banks' duration gap affect lending responses to rate increases?

    → **Yes.** But why?

- Empirical analysis

    → European Banks during 2021Q1 to 2023Q2

    → Exposure to interest rate risk of each bank – Duration –

        → On + off balance sheet assets and liabilities (nice)

    → Differential lending responses to rates hike

- Main evidence

    → **Lending of banks with higher duration tightens more**

    → This has effects on firms (no perfect substitutability)

My personal view

- Is the paper relevant and timely? Yes

  → Understand the way rate hikes are transmitted to the economy

- Nice database including not easy to include elements

  →E.g. off balance sheet items (maybe exploit them more)

- Some ideas that came to my head – Could we learn more?

  → Why does this happens? – Underlying mechanism -

  → How,what,why etc are banks allowed to assume very sticky

  non maturity deposits?

Just in case you had better things to do

- Low for long is over (at least for now)
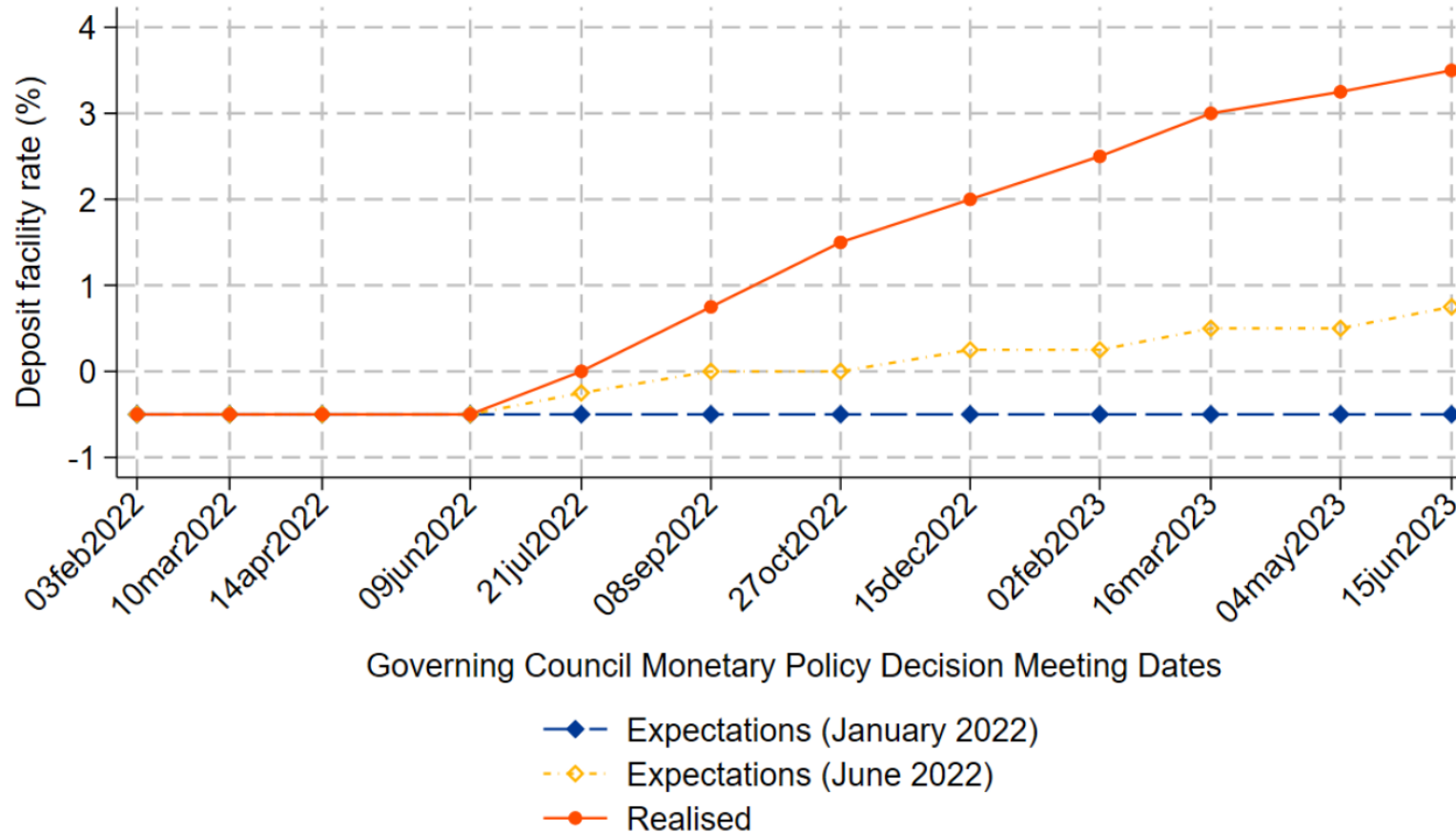
→But not necessarily its consequences

A brief reminder of duration

- Rate hikes can affect the value of an asset / liability

- Modified duration captures change in value due to rate hikes

    → Higher duration higher drop in value when rates increase

- The duration gap is duration assets − duration of liabilities

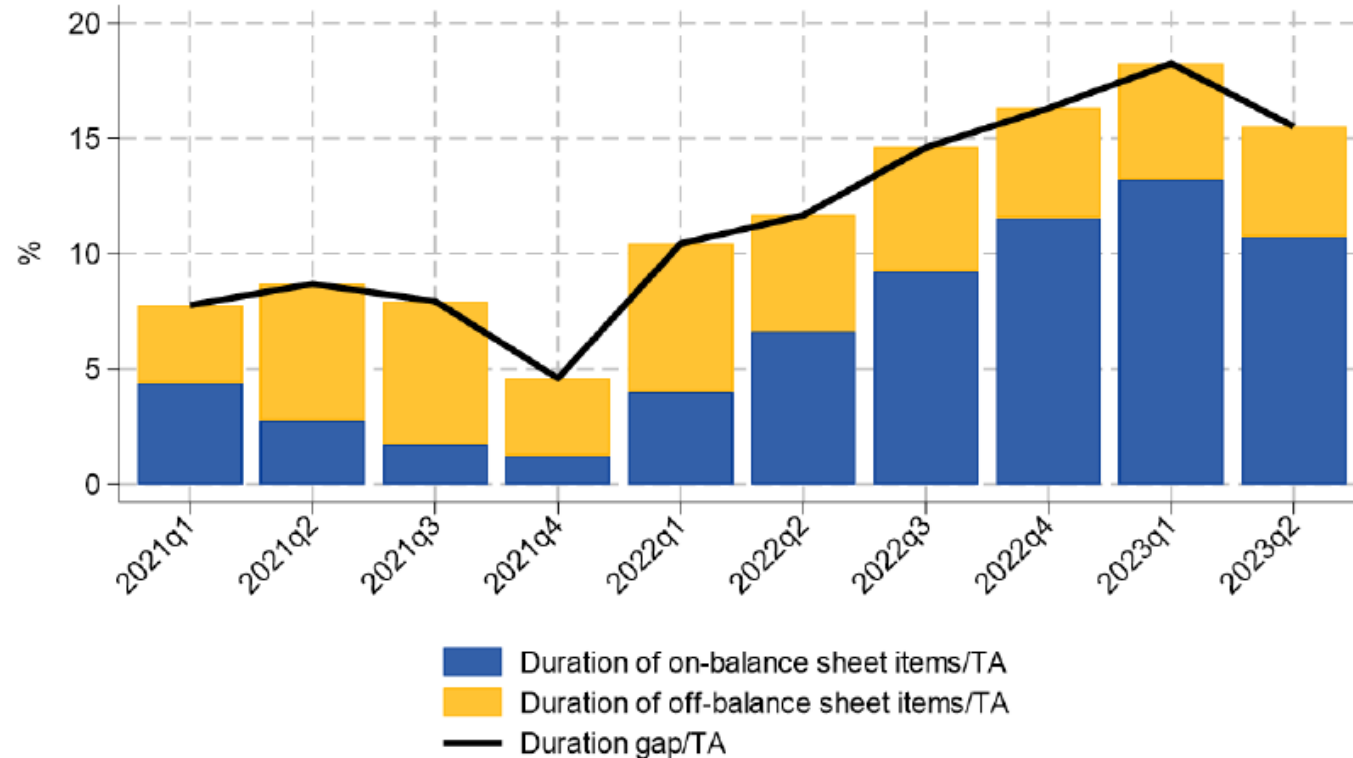$$DurationGap = \sum_{j=1}^{14} \frac{DUR_j}{1+i} \left(\frac{A^j - L^j}{Z} \right)$$

    → 3 year Maturity loans (+++) − 1 year term deposits (+) >0

    → 1 year Maturity loan (+) − 3year term deposits (+++) <0

A brief visual on duration

- There is on average a positive duration gap

  →Banks lend long term and borrow short term

→ Time variation seems to be driven by on balance sheet.

R1 Duration affects lending responses to MP

- Duration is related to differential lending responses to rate hikes

Table 3: Effects on the intensive margin

	Dependent variable: Δ Log (loans)				new loan	
	(1)	(2)	(3)	(4)	(1)	(2)
Duration gap/TA (lag)	0.000144	0.000193*	0.000144	0.000194*	0.000369***	0.000380**
	(1.34)	(1.75)	(1.33)	(1.72)	(2.66)	(2.42)
Duration gap/TA (lag) × Δpolicy rate	-0.0292**	-0.0300***	-0.0294**	-0.0302***	-0.0503**	-0.0603***
	(-2.26)	(-3.04)	(-2.25)	(-3.00)	(-2.23)	(-3.59)
Income gap/TA (lag)		-0.000460		-0.000467		-0.000657
		(-1.61)		(-1.60)		(-1.09)
Income gap/TA (lag) × Δpolicy rate		0.0390*		0.0395*		0.0459
		(1.75)		(1.73)		(0.95)
Log TA (lag)		0.00503**		0.00507**		0.00336
		(2.11)		(2.08)		(0.90)
Log TA (lag) × Δpolicy rate		-0.422**		-0.413**		-1.025***
		(-2.16)		(-2.07)		(-3.21)
Cash/TA (lag)		0.00150***		0.00151***		0.00312***
		(3.19)		(3.22)		(3.52)

- Banks with higher duration gap cut lending relatively more

- Cheap comment:Can you do applications (for new loans –supply)?

R1.1 Effect is not homogeneous

- Higher response

    →For long maturity loans

    →For smaller firms

R1.2 Effect affects firms' borrowing

- Non perfect substitutability of bank finance

  →Firms more exposed to banks with duration suffer higher

  overall decline in borrowing (Q bank debt?)

  →Cheap comment: why not real effects?

  → Don´t expect anything surprising but…

Comment 1 – What is driving the results?

- Duration is an equilibrium variable

    → Not correlated to many (any) bank variables

    → Is it related to low rates? (Not obvious to me from data)

Table 2: Regression of the duration gap on the set of control variables using bank-level data from the pre-tightening period.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				Dependent variable: Duration gap/TA				
Income gap/TA	-0.610 (-1.32)	-0.309 (-0.63)						
Log TA	-2.588 (-1.07)		-1.350 (-0.63)					
Cash/TA	-0.401 (-0.76)			-0.0601 (-0.14)				
ROA	4.80 (0.72)				4.32 (0.68)			
Debt securities/TA	0.254 (0.64)					0.198 (0.73)		
NPL ratio	-1.33 (-0.62)						-0.794 (-0.43)	
Distance to MDA	-0.607 (-0.83)							-0.0549 (-0.11)
Observations	403	418	418	418	418	406	412	418

Note: ***: 0.01,**: 0.05,*: 0.1. Bank-level clustered standard errors are reported in parenthesis. For

Comment 1 – What is driving the results?

- Duration is an equilibrium variable

    → Not correlated to many variables

- What components of duration gap drive the results?

    → Is it off-balance sheet items? – They look stable over time-

    → Is it asset side duration?

    → What about deposit structure? Seems its not! (more later)

    → Suggestion: Decompose the gap to its elements

- But if its is not deposits, what is driving the result?

    → Are banks are subject to market based capital constraints?

    → Are banks subject to heightened regulatory scrutiny?

Comment 1 – What is driving the results?

- Might make sense to try and separate

    → Deposits run out which leads to contraction (seems its not)

    → Banks have market imposed capital requirements

        → Might want to check equity value responses…

    → Banks have to comply with some regulation

        → LCR, stress test, … distance to CET is already accounted

    → Marginal income goes down quantities decrease (simpler)

Comment 1.1 – Positive and negative gap

• Commonly duration gap should be positive

   → Banks borrow short lend long (positive duration gap)

• However on the paper there are multiple negative duration gaps

   → Banks borrowing long and lending short!

   → Or maybe not… (more on this later)

• Are results symmetric on positive vs negative gap

   → Shouldn´t some predictions on lending be opposite?

   → Positive-negative equity gain ➔ lending increase-decrease

   → This might help to disentangle some stories from others

   → Dummy analysis is not enough I think

Comment 2 – Overnight deposit duration

• Only this probably deserves a (couple of) paper(s)

→ Overnight deposits have long maturities

• The contractual maturity of an overnight deposit is 1 day (I think)

→ However banks are allowed to state that they are sticky (…)

→ Which leads to banks having long maturity debt

→ This crucially affects the calculation of the duration gap

• What happens if you run the paper with contractual duration?

→ Maybe the negative gaps disappear…

→ Would help to learn what is driving the results ruling out the

effect of deposit structure (C.1.)

Comment 3 – Overnight deposit duration

• Only this probably deserves a (couple of) paper(s)

→ Overnight deposits have long maturities

• Anyone knows why this (backward stickiness) is allowed?

→ I do not think it is theoretically sound – react to shocks-

→ Is it even empirically sound? I would say it is not (DSS'17)

→ This probably has effects for LCR NSFR stress-tests …

• I would really appreciate if someone explains the rationale for this

→ Hopefully it is not that it benefits banks, or that it is the way

it was done before… I know there is a rationale but cant find it!

Conclusion

- Nice and thought provoking paper on transmission of rate hikes

  → Duration gap is empirically relevant – convinced-

  → But why? Different plausible stories might be at work

- Looking forward to the next version

- Really looking forward to understand overnight long maturity!

– not an assumption of this paper a reality in banking regulation