



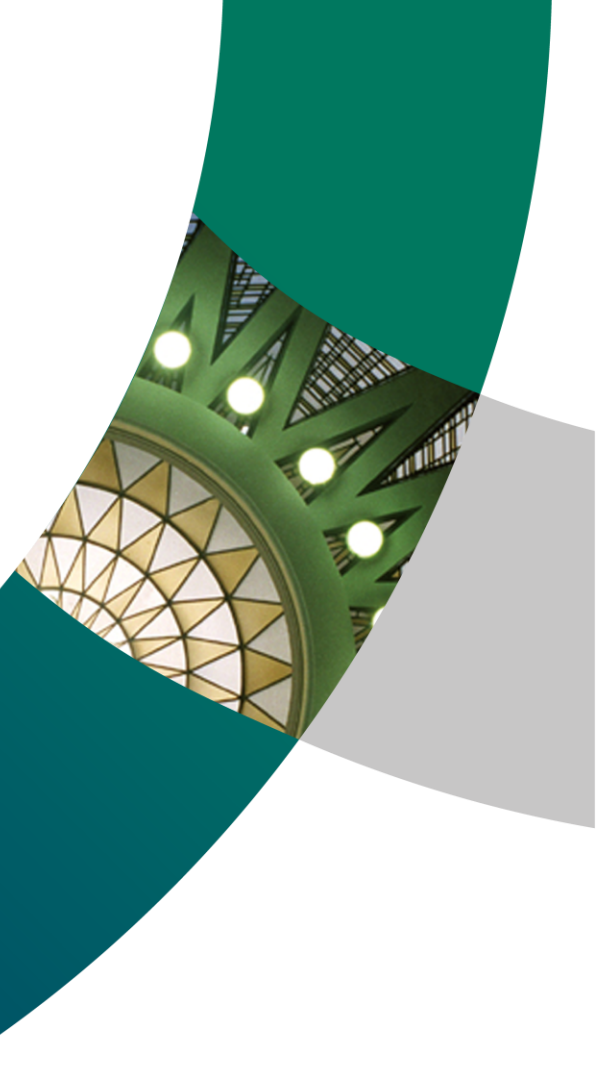
Framework IRRBB-EBA: highlights sui modelli

ABI Eventi - Supervision, Risks & Profitability

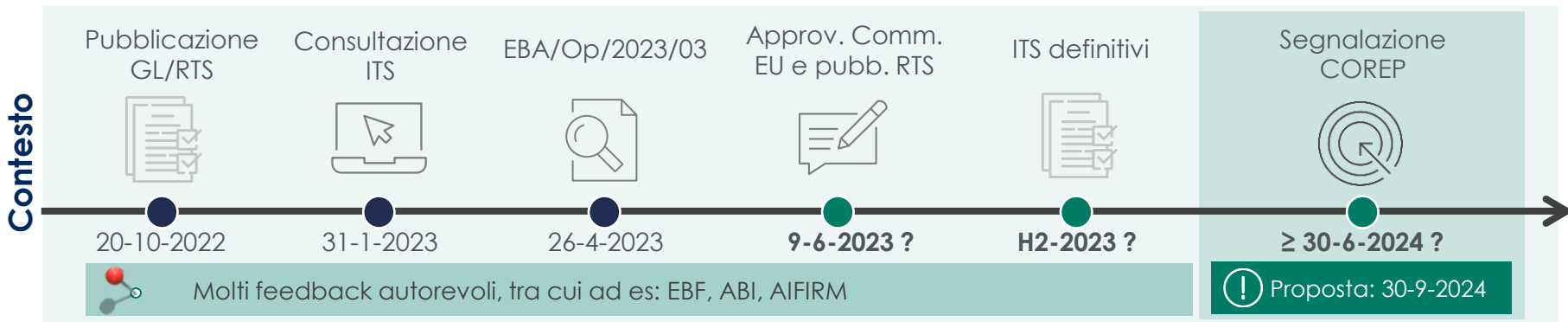
*PARALLEL SESSION 2.2: IRRBB EBA-GL&RTS 2022 PER IL RISCHIO DI
TASSO D'INTERESSE DEL BANKING BOOK*

6 giugno 2023

Alberto Mietto



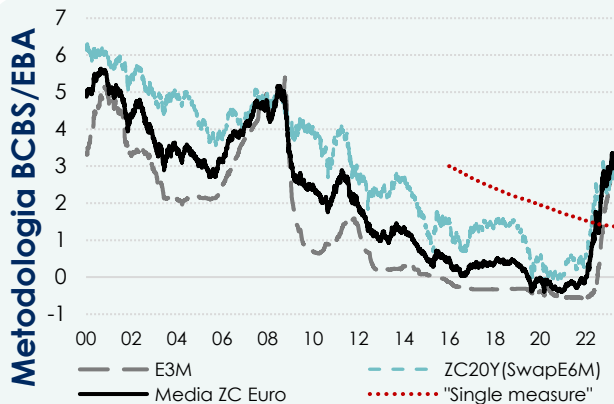
Contesto e spunti di riflessione sui modelli



	Tematica	Rilevanza	Motivazione	Osservazione
Ambito modelli	Ampiezza dello shock	↑↑↑	L'aumento dei tassi ha superato, gradualmente, i 350 punti base	Lo shock parallel regolamentare è adeguato; aggiornare lo ST interno
	Beta NMDs TTC vs PIT	↑↑	L'elasticità osservata finora è inferiore a quella storica	Applicare a fini interni un range di elasticità beta plausibili
	Conditional Cash-flows	↑↑	Calibrati in un contesto di riferimento di tassi negativi	Monitorare e programmare un aggiornamento dei CCFs
	Modelli standardizzati	↑↑↑	Le banche tipicamente hanno «Core» Retail che violano i cap BCBS	Modello standardizzato non adeguato per rappresentare l'IRRBB



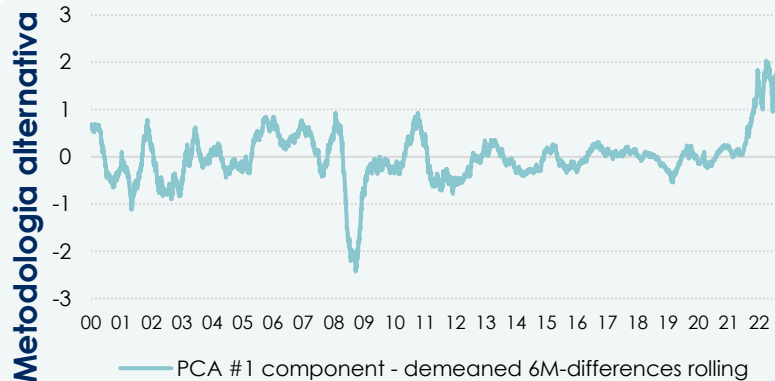
Ampiezza dello shock



Calibration window	Single measure BCBS/EBA	Parallel shock coeff. Alpha	Single measure x Alpha	Parallel shock
16Y - 2000-2015	3,00%		1,80%	2,00%
16Y - 2007/05-2023/04	1,37%	60%	0,82%	1,00%
2Y FWD - 2022-2024	3,08%		1,85%	2,00%

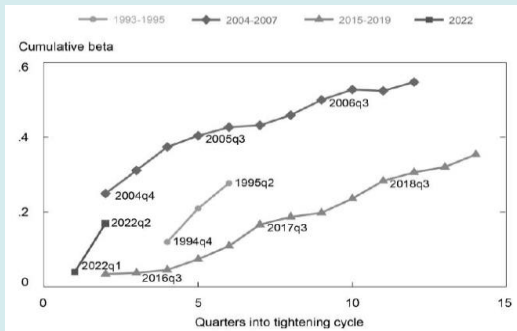
EBA (EBA/GL/2018/02 - Annex III, Note 18): «The EBA may envisage a recalibration in due course» & EBA (EBA/RTS/2022/10 - Article 2(2), per "Currencies not referred to in ANNEX I"): «The calibration [...] should be performed at least every five years»

BCBS (Basel Committee work programme and strategic priorities for 2023/24) «the Committee's work on monitoring and reviewing existing standards and guidance will be limited to a set of targeted initiatives: [...] iv) reviewing the shock scenarios developed in its standard on interest rate risk in the banking book»



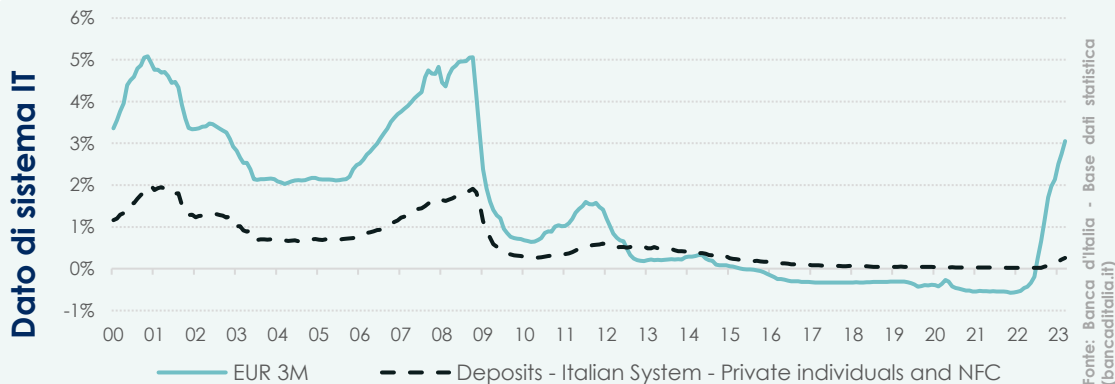
Calibration window	2000-2024/04
Max shock + Shock 99th perc.	2,04%
Shock 1st perc.	-2,00%
Min shock -	-2,43%

⚠ Mantenere lo shock regolamentare parallelo +/-200 bps e aggiornare lo ST interno



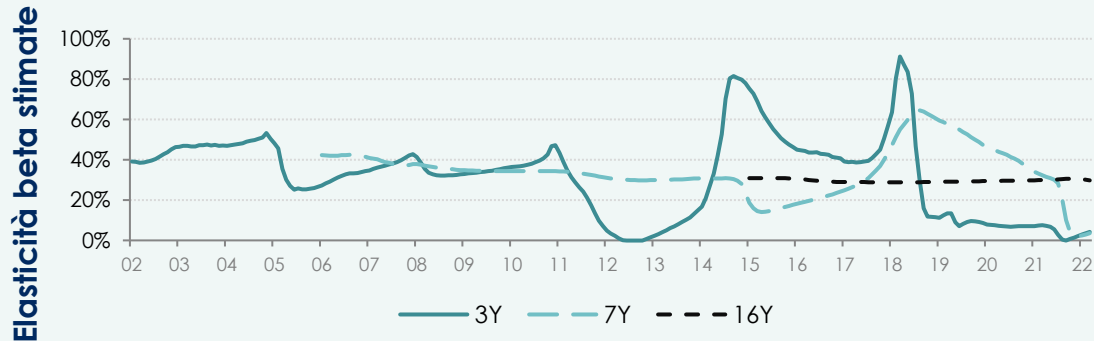
Fonte: FED NY: How do deposit rates respond to monetary policy?

Beta Deposits TTC vs PIT



EBA (EBA/GL/2022/14 - § 112(a)): «[...] deposits whose limited elasticity to interest rate changes could be modelled by banks»

ECB (FSR 2023-05): «The ultimate impact of higher policy rates on banks' net interest income depends, in particular, on the structure of their balance sheets and the sensitivity of their deposit and lending rates to policy rates. [...] Between June 2022 and March 2023 [...] interest rates on overnight deposits increased only modestly, by about 25 basis points»



Stimare le elasticità su orizzonti di through-the-cycle e considerare range plausibili

An interest rate increase would be beneficial for NII, but have a negative EVE impact for most banks

Distribution of changes in NII (1-year horizon) and EVE in parallel-up IR shock (% of banks in the sample)

	Delta EVE > 0	Delta EVE < 0
Delta NII > 0	19%	57%
Delta NII < 0	4%	20%

EVE increase for 23% of banks
EVE decrease for 77% of banks

NII increase for 76% of banks
NII decrease for 24% of banks

- Banks with positive impact on both NII and EVE (19%) are characterized by a large fraction of floating rate loans on their asset side
- Banks with a negative exposure under both profiles (20%) show vulnerabilities related to a hypothetical sudden large IR shock, mostly due to long asset duration (e.g. fixed rate mortgages)

Fonte: 2017 ECB ST on IRRBB

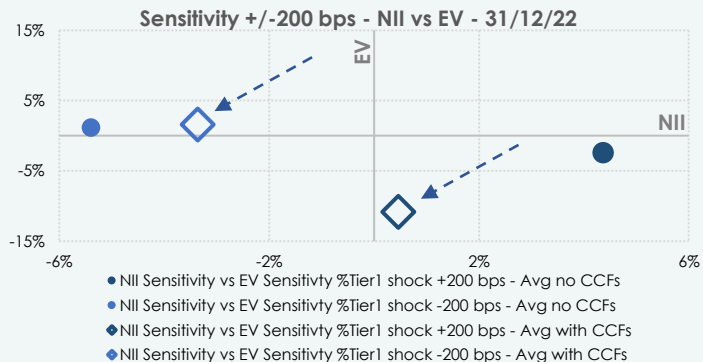
Sensitivity analysis on IRRBB - Stress test 2017 - Final results

13

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Conditional Cash-flows

Forte asimmetria per chi applica CCFs

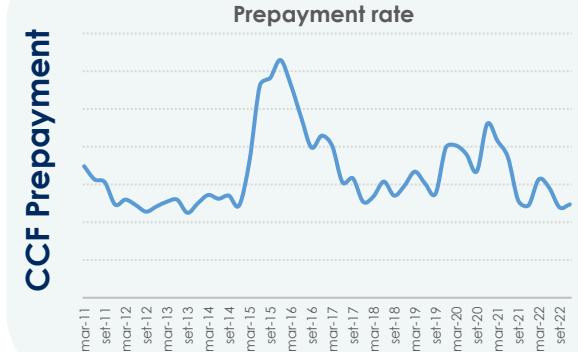
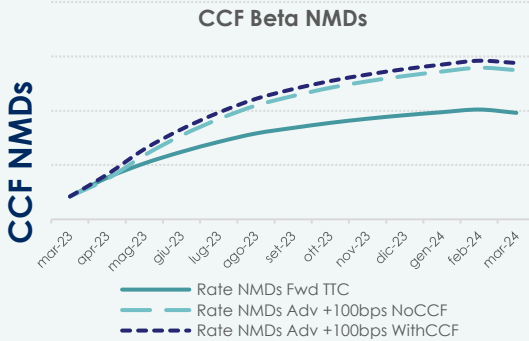


Fonte: Pillar III e stima

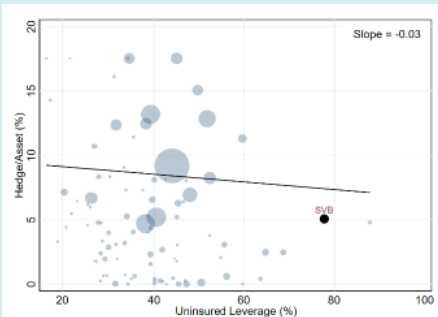
Fonte asimmetria	Origine
Convexity	Livello tassi
Opzioni contrattuali	Contratti
Opzioni implicite	Legge
NMDs conditional	Modello
Prepayment conditional	Modello

EBA (EBA/GL/2022/14 - § 7): «the timing or amount of cash flows is dependent on the specific interest rate scenario»

EBA (EBA/GL/2022/14 - Annex II – Sophistication matrix): «maturity depends on clients' behaviour, is modelled conditional on the interest rate scenario» for Category 1 & 2 institutions



Monitorare e programmare con i nuovi dati un aggiornamento dei CCFs



(a) Hedge/Asset: Uninsured Deposit

Fonte: Jiang et al (2023) «limited Hedging and Gambling for Resurrection by U.S. Banks During the 2022 Monetary Tightening?»

EBA (EBA/GL/2022/14 - § 117): «[CRD4 Article 84(3)] empowers **competent authorities to require an institution to use the standardised methodology [...]** where the **internal systems [...]** are not satisfactory» & (EBA/RTS/2022/09 § (2)): «Established in the **standardised methodology of the Basel Committee**»

ECB (Tuominen "Skilfully sailing through stormy waters"): «The first takeaway is that SVB's board of directors and **management failed to manage the risks the bank was exposed to.** SVB was highly vulnerable, with a highly concentrated business model»

Modelli standardizzati

BCBS - NMDs

Table 2. Caps on core deposits and average maturity by category

	Cap on proportion of core deposits (%)	Cap on average maturity of core deposits (years)
Retail/transactional	90	5
Retail/non-transactional	70	4.5
Wholesale	50	4

EBA/RTS/2022/09 – Article 7 «Non-Maturity Deposits»

BCBS - Prepayment

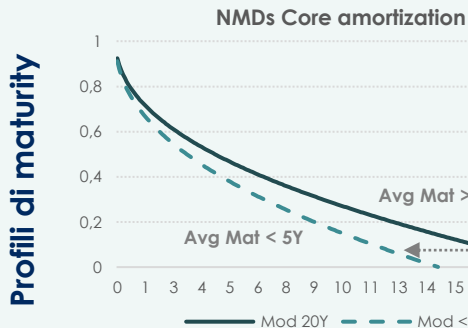
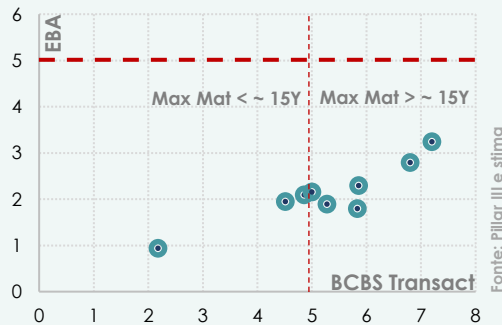
Table 3. CPRs under the shock scenarios

Scenario number (i)	Interest rate shock scenarios	r_i (scenario multiplier)
1	Parallel up	0.8
2	Parallel down	1.2

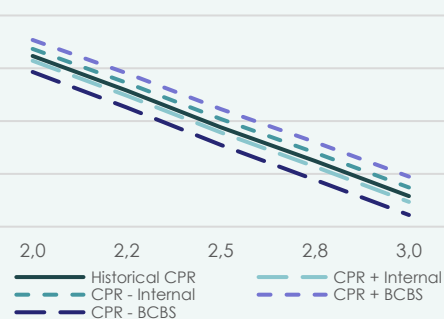
EBA/RTS/2022/09 – Article 8 "Fixed rate loans subject to the risk of early repayment"

Rispetto cap regolamentari su NMDs

Maturity: CoreTransactional(BCBS) vs Overall(EBA) (years)



Extract - Fixed rate amortization



⚠ Attivare monitoraggio, ma il modello standardizzato non rappresenta l'IRRBB

SUPERVISION
RISKS &
PROFITABILITY

6 - 7 giugno
Milano, Auditorium Bezzi
Banco BPM

Grazie

alberto.mietto@bancobpm.it



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risks and
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the future

SUPERVISION,
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PROFITABILITY 2023

6 - 7 giugno
Milano, Auditorium Bezzi
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