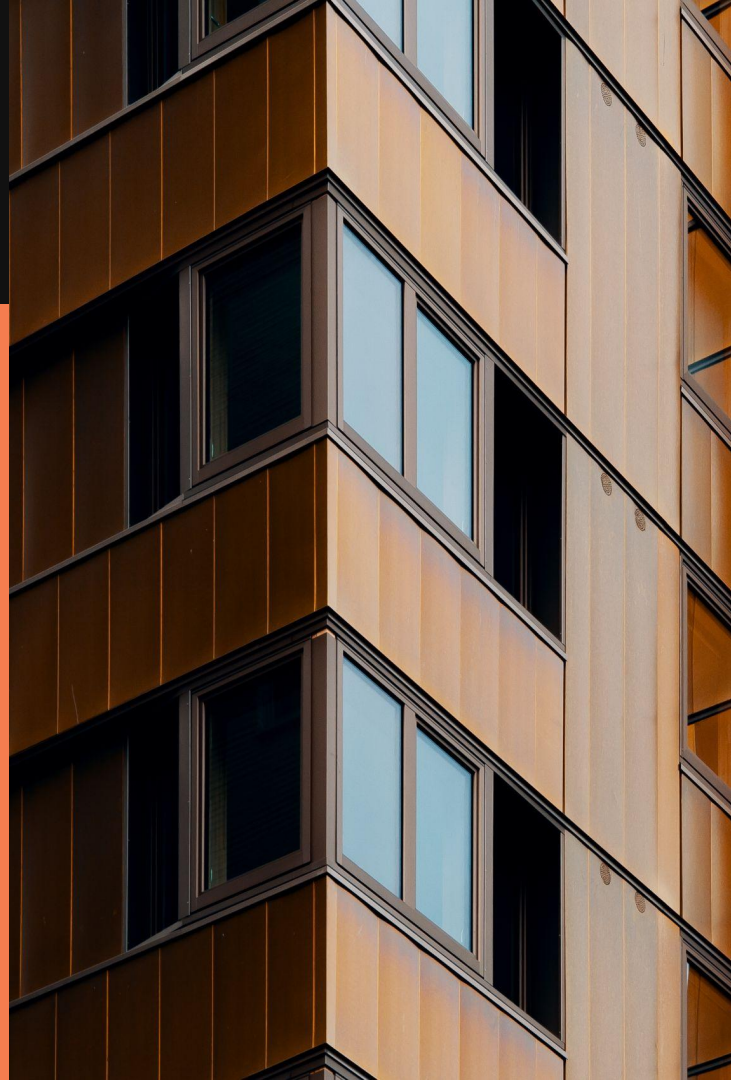




Breaking the silos

—
Integrating IRRBB across
Risk and Finance



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How a 2.0 IRRBB
TOM looks like

1. FTP
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Organisation - Risk

The Traditional Role of IRRBB

Risk owned the models, but not the steering



Risk built the **IRRBB models** (EVE / NII shocks), such as prepayment models, NMD Models, etc.



Risk had an **oversight on:**

- ☐ IRRBB regulatory metrics and monitoring of limits.
- ☐ Liquidity models and policy managed separately (**ILAAP**).
- ☐ Capital models and policy managed separately (**ICAAP**).



But they don't speak much to the business, nor understand how the clients behave.



Risk **does not own** the actual balance sheet actions (hedging, product steering, funding mix), but sets the limits



RAS (Risk Appetite Statements) silo'ed by risk type (Liquidity, IRRBB, Capital)

Organisation - Treasury

The Traditional Role of IRRBB

Treasury executed hedges, but without full visibility

Treasury hedged based on **high-level sensitivities**, and without tenor specific view.

Often relied on **simplified measures** or partial views without a specific tenor view.

The interest rate **exposures were limited** to what they could see booked in their Treasury Risk Management system, leaving them blind to any residual IRRBB risk left in the business lines.

Hedging and ALM actions were not always fully aligned with Risk's official **IRRBB policies**.

Organisation - Lines of Business

The Traditional Role of IRRBB

Finance owned NII, but not IRRBB dynamics

- Finance focused on **NIM and Balance Sheet** planning, budget, and actuals
- Often with **separate assumptions** (pricing, volumes, behavioural) and a more **aggregated** set of products
- **FTP assumptions** often didn't match IRRBB policy to produce Finance Actuals by Line of Business
- **NII forecasting and IRRBB NII shocks** were not consistently aligned, creating a difficult task to explain to investors why numbers move from the Finance NIM. ↳ a stressed NII from ALM

Organisation - Lines of Business

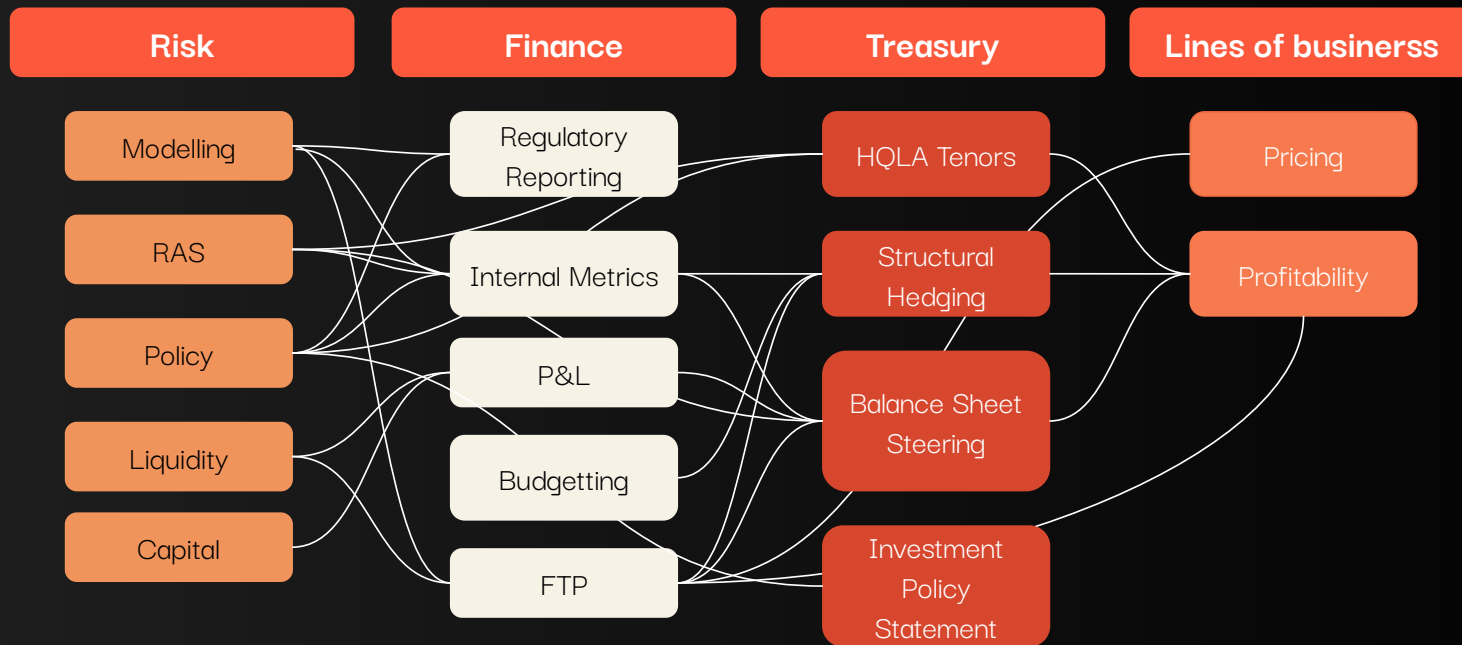
The Traditional Role of IRRBB

The Lines of Business were left out of the loop

- **Profitability** was calculated separately and using aggregated data
- Product pricing decisions were not clearly linked to IRRBB and Liquidity costs
- Relationship managers and product owners often **did not understand their own P&L**
- Performance was measured on outputs (margins) without transparency on inputs (funding cost, liquidity cost, IRRBB cost)

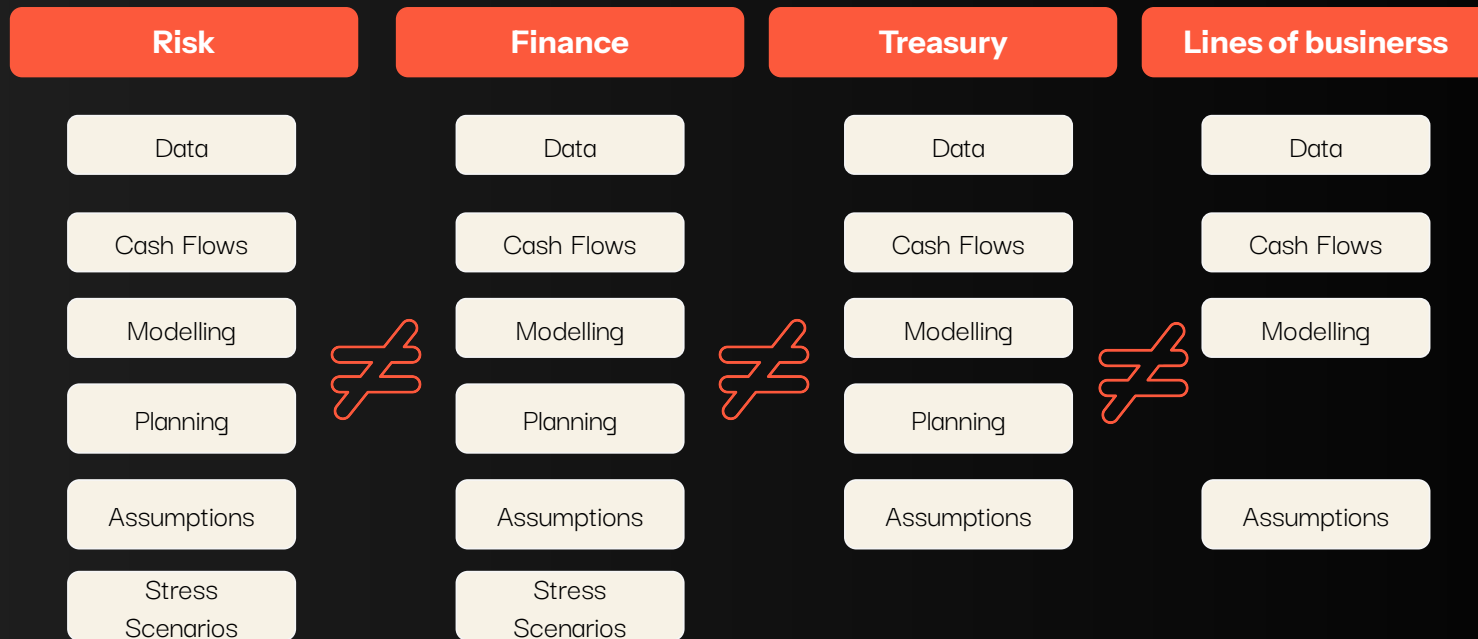
The Traditional Role of IRRBB

IRRBB components scattered and duplicated across Treasury, risk, finance and the business lines.



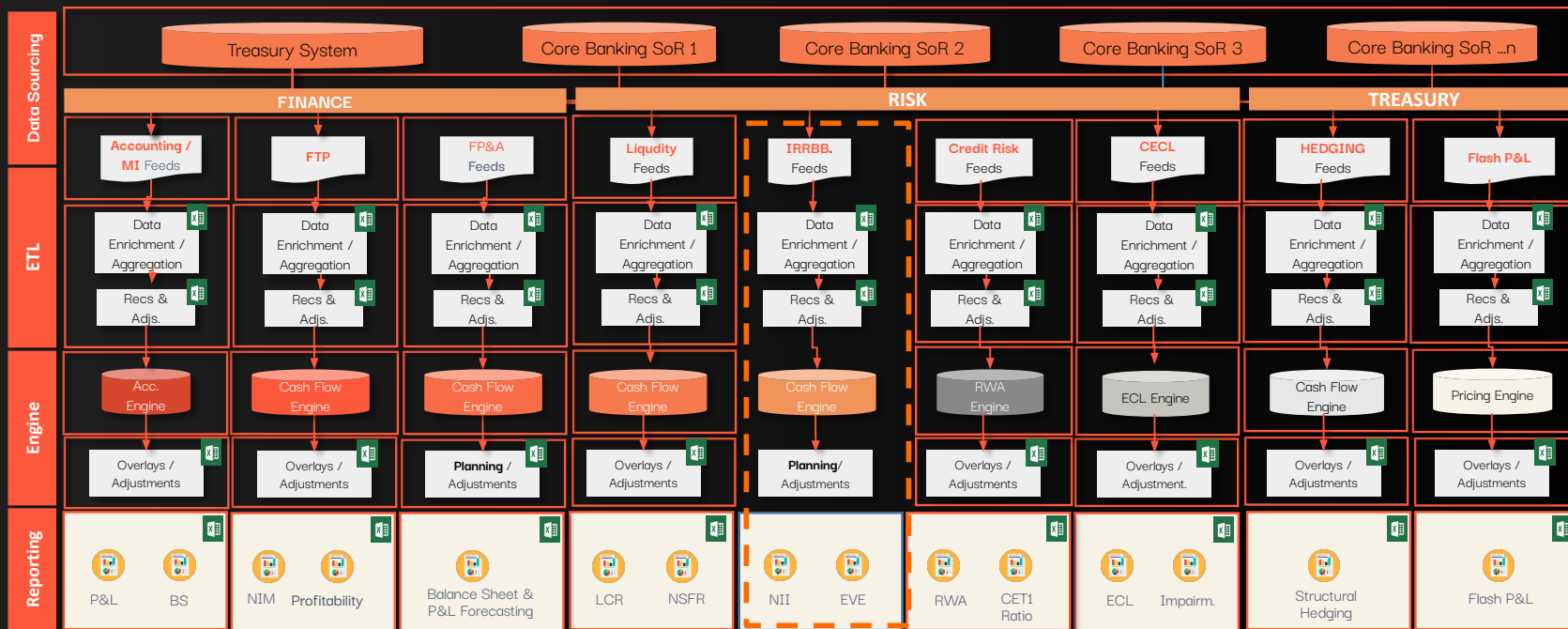
The Traditional Role of IRRBB

What then are the actual functional components duplicated across each area?



The Traditional Role of IRRBB

Typical view of a Silo'd Risk and Finance Architecture



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Key Drivers for
Change

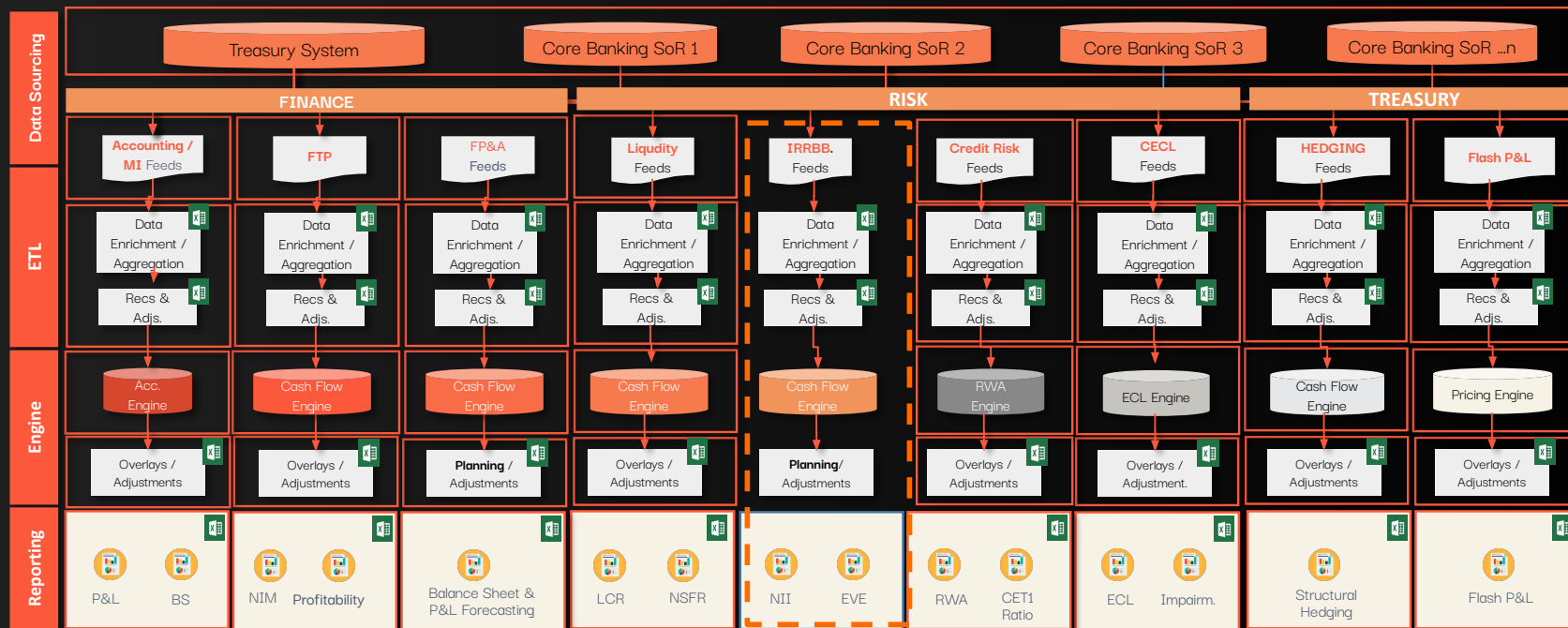
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The Traditional Role of IRRBB

Reducing the cost of ownership, duplications, and inconsistencies

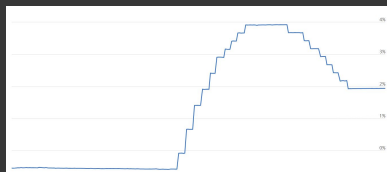


Market Volatility

Key Drivers for Change

C-Suite requires on-demand forward looking tools that provide support for decision making in times of stress

Interest Rate volatility



Need to stabilise NII over the Rate cycles while

- Ensure compliance across regulatory SOTs
- Allow room for short term dynamic hedging

Geopolitical Risks



Need to anticipate market shocks driven by geopolitical risks, and ensure the balance sheet is protected

Liquidity Stress events



Ensure behavioural assumptions remain true across market stressed conditions to adjust for potential overhedging.

Enhanced Stress Testing / Reverse Stress Testing

Key Drivers for Change

There is enough empirical evidence (SVB) to support the need to evaluate the impact of multiple shocks

Liquidity Shocks



Interest Rate Shocks



Credit Shocks



- C-suite and ALCO needs to get information on under what circumstances they can find acceptable that the bank would no longer be able to function and therefore file for chapter 11 (reverse stress testing)
- That requires bringing a combination of shocks across IRRBB, Liquidity and Capital, under the same roof, and identify the situations .

External pressures to increase RoTE / RARoC

Key Drivers for Change

Increase returns without additional risk requires optimising the Product Mix under a common RAS across Treasury



IRBB RAS



Liquidity RAS



Capital RAS

Determining the correct sources of funding that meet your NSFR requirements have an impact to:

- **IRRBB** when determining whether a Floater or a fixed rate self-issued bond should best contribute to the overall bank's interest rate sensitivity
- **Capital** when evaluating whether a covered bond, an AT2 or an AT1 security is best placed for the bank, as it affects your capital base and the overall cost of funding of the bank

When **determining the right structural hedge for IRRBB** has an underlying impact on capital consumption. For example, using HTC&S bonds can trigger a capital increase through Pillar 2 of the Basel Requirements.

Increased Investors Scrutiny on NIM Stability

Key Drivers for Change

The market wants to know whether a bank's margin is structurally resilient or just temporarily benefiting from rates.

NIM nowadays only tells the score while NII sensitivity tells the game plan. Hence, Investors now judge NIM quality, not just NIM level – and NII sensitivities are the clearest test of that quality.



As long the Finance FP&A Forecasting Process and the ALM NII forecasting process are based on different data, calculation engines and assumption → banks struggle to perform a clean attribution analysis.

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IRRBB

Core Functions

ALCO

First Line: Alco y Business Decision Cycle

Hedging strategy

ALCO Packs

EVE y NII Metrics

Gobernance

RAS

Second Line: Independent oversight & control

IRRBB Policy

Limits settings and oversight

Control Framework

Modelling

1

FTP & P&L Steering

Liquidity and IRRBB Rate Stamping

LP and CLC charges

Base Rate charge

Match Funded

Pool Funded

P&L Attribution and Profitability

Funding Center

Risk Buy-In alignment

Product Pricing

FTP Accruals / P&L

2

Integrated Projections

IRRBB & CSRBB

Credit Spread

CSO1

Margin Dynamics

Hedge impacts

Deposit betas / pass-throughs

Product Migrations

Finance

Business Volumes

Client Harvest

Business Pricing

Non NII components

3

Stress Testing Capabilities

On Demand Scenario Analysis

What-if Capabilities

BS Optimisation

Integrated Stress Testing Framework

Regulatory STE

Market Shocks

Cross Metric RAS

Reverse ST

Emerging Scenarios

ESG / Climate

Geopolitical Shocks

CSRBB Stress overlays

4

Cross-Cutting: Behavioural Modelling and Data Foundation

Behavioural Models

Model Risk

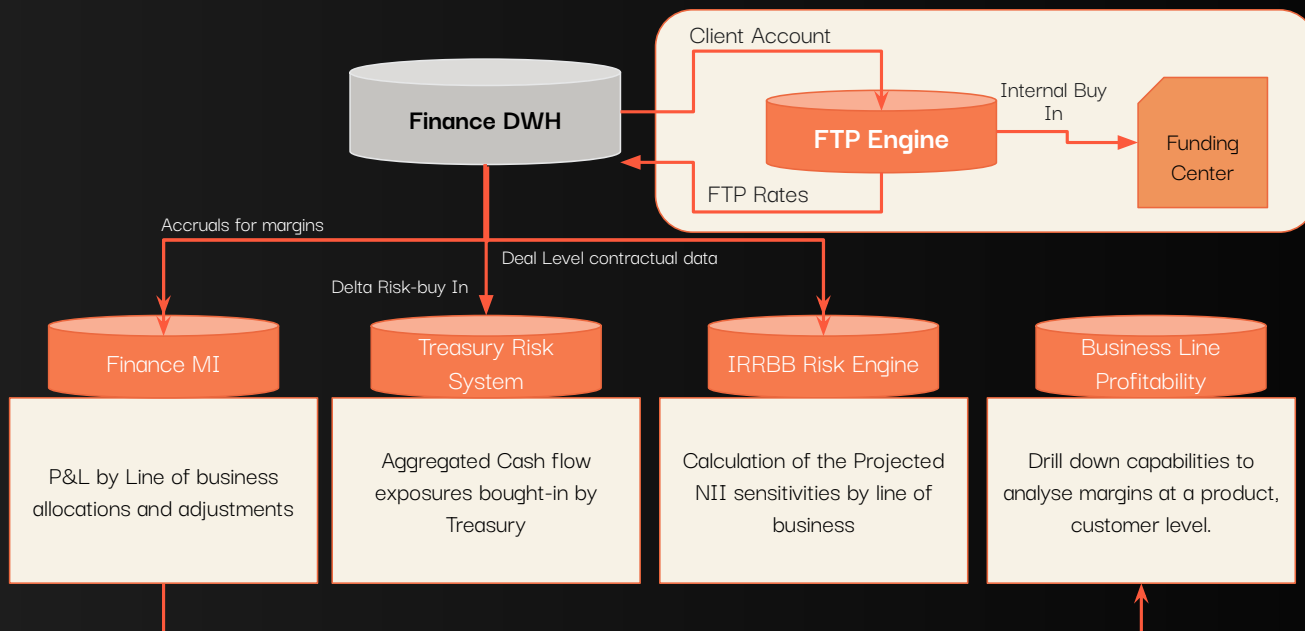
Data Foundation

Infraestructure

FTP & P&L Steering

How Do we break the Silos

There is enough empirical evidence (SVB) to support the need to evaluate the impact of multiple shocks



FTP & P&L Steering

How Do we break the Silos

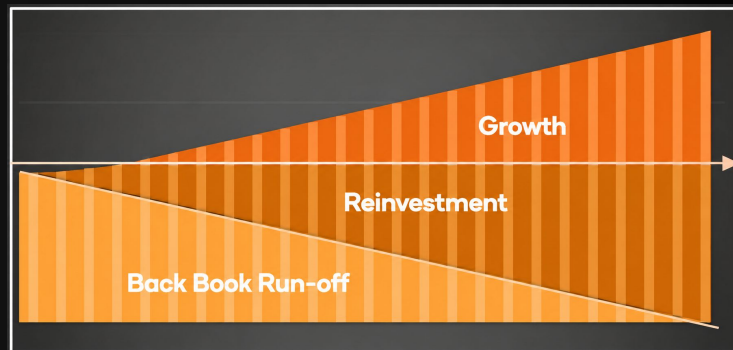
ASSETS				Prev month	LIABILITIES			
	Avg Bal	COF	Rate			Avg Bal	VOF	Rate
Cash	8,862,877	56,577	7,66%	7,75%	Individuals (Int Bearing)	12,485,319	75,781	7,28%
Central Bank Account	229,234	1,342	7,02%	6,98%	Individuals (Non Int Bearing)	41,619,407	253,008	7,29%
Regulatory Deposit	26,841,254	157,185	7,03%	7,01%	Companies (Int Bearing)	21,617,071	127,470	7,08%
Interbank Placements	1,173,085	6,880	7,04%	7,00%	Companies (Non Int Bearing)	31,180,304	184,125	7,09%
O/N Treasury Investment	0	0	0,00%	0,00%	Companies (Executive)	7,981,762	46,742	7,03%
Investment Book	26,871,964	157,381	7,03%	7,00%	CDs	16,209,648	96,332	7,13%
Inv. Book (Value dated trades)	465,435	2,718	7,01%	6,98%	CDs float	678,974	3,972	7,02%
Appropriated Sec & Stock	0	0	7,03%	7,01%	CDs Zero Coupon	39,390,970	232,026	7,07%
Other Bonds	5,232,044	30,827	7,07%	7,07%	CDs (Private Banking)	4,664,226	27,515	7,06%
FOB I & II Notes	0	0	0,00%	0,00%	Sub Debentures O/S	2,051,168	12,012	7,03%
Mortgage (Fixed)	13,232,405	99,860	9,06%	9,07%	MM Funding	-	-	0,00%
Mortgage (Variable)	2,378,593	14,056	7,09%	7,10%	CDs Treasury	3,452,903	20,221	7,03%
Consumer (Fixed)	17,409,917	116,453	8,03%	8,08%	Call Money	418,053	2,456	7,05%
Consumer (Variable)	1,294,870	7,641	7,08%	7,10%	Central Bank Loans	886,425	5,198	7,04%
Consumer (Other)	7,381,570	46,783	7,61%	7,23%	Gvmt Checking	-	-	0,00%
Credit Cards	11,743,528	68,775	7,03%	7,01%	Funding-Govt Supp Program	5,470,725	31,882	6,99%
Commercial (Fixed)	22,778,440	143,208	7,54%	7,59%	Other Liabilities	38,067,902	222,923	7,03%
Commercial (Variable)	25,055,852	148,099	7,09%	7,11%	Foreign Exchange	1,175,193	6,882	7,03%
Rediscounted (Fixed)	3,576,342	24,097	8,09%	8,10%	Equity	16,667,098	103,958	7,48%
Rediscounted (Variable)	4,761,457	24,701	6,23%	6,24%	Liabilities Balancing Account	429,760	2,516	7,13%
AB Secs	29,887,664	176,008	7,07%	7,08%				
Other Loans	104,397	609	7,00%	7,01%				
Non Performing Loans	2,672,971	15,654	7,03%	7,01%				
Loan Loss Provision	-1,667,304	-9,764	7,03%	7,00%				
Other Assets	34,149,501	200,006	7,03%	7,01%				
Prepaid Loans	38,942	3,620						
Funding of Prepaid Loans	-28,130	-253						
Reverse Repos	7,005,821	41,018	7,03%	7,01%	Repos Treasury	8,483,005	49,669	7,03%
Trading Securities	42,549,069	249,808	7,05%	7,03%	Repos Retail	41,504,572	241,576	7,00%
Total Assets (B/S M)	244,446,908	1,492,460	7,39%	7,30%	Total Liabilities & Equity (B/S M)	244,446,908	1,455,918	7,16%
Total Assets (Trading)	49,554,890	290,826	7,04%	7,03%	Total Liabilities & Equity (Trading)	49,987,978	291,644	7,00%
					Net Funding Centre P&L (B/S M)	0	37,442	0,18%

Integrated Projections

How Do we break the Silos

Closing the gaps between NIM and delta NII to increase investor's confidence

1. Share same dataset, attributes and granularity that trigger the same cashflows and run-off profile across the fence
2. Share the same new business pricing and contractual characteristics
3. Use the same business growth assumptions per planning node



Many banks, even applying all the above, fail to project correctly comparable ALM NII forecast due to pushing down balance sheet projections from FP&A high level accounts down to more granular ALM ones

Having both in sync also reduces a lot of complexity when performing regulatory stress testing

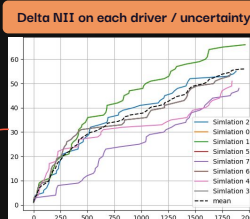
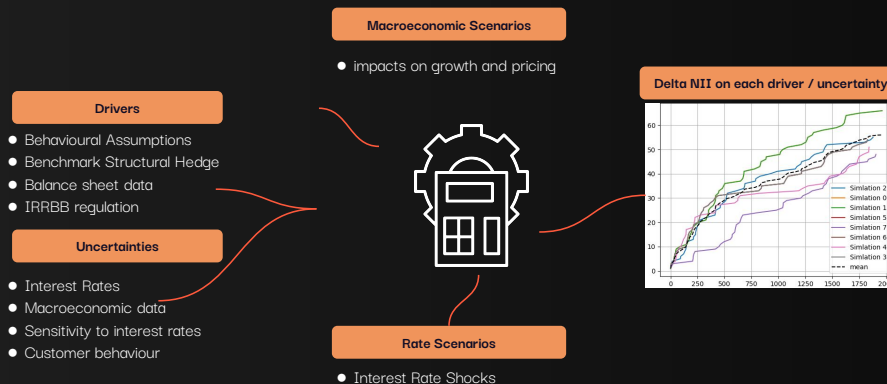
Stress Testing Capabilities

How Do we break the Silos

Become C-Suite strategic advisor supporting management decisions through on-demand what-if scenarios



to be used and configured by the business, that generates fast results and allows for multiple iterations, and it's easy to implement



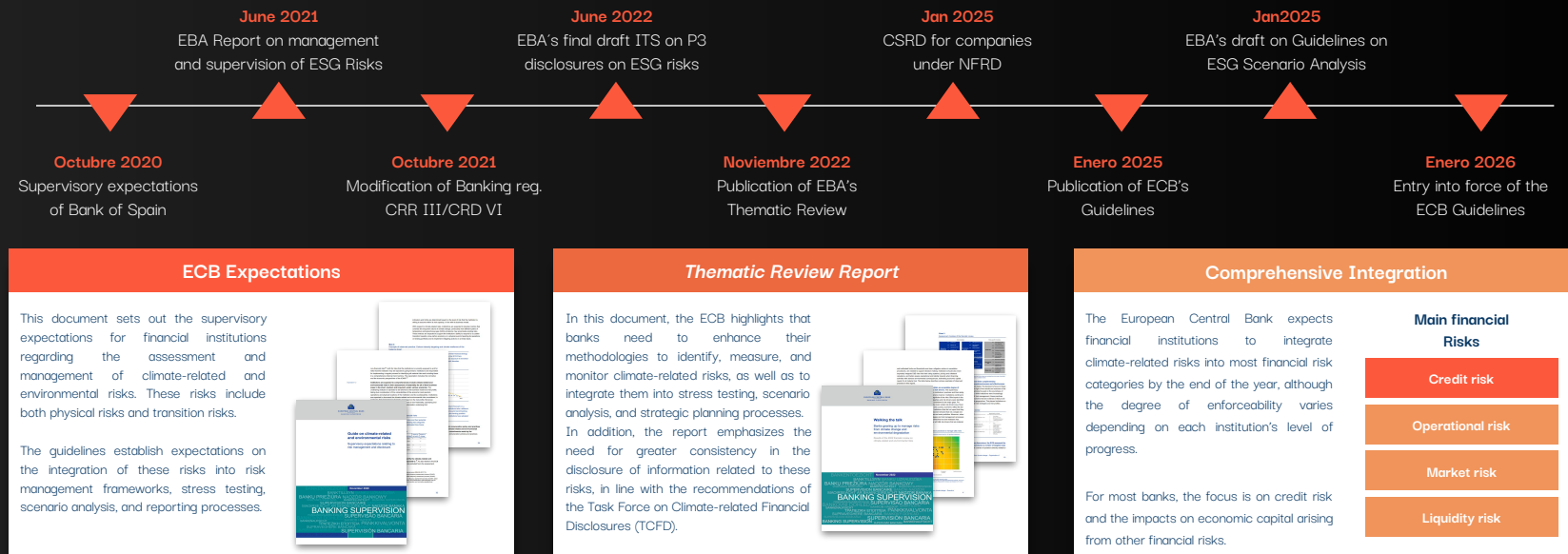
Optimal Benchmark structural Hedge

The ALCO should be able to ask: "what happens if we execute this hedge?", "what if we change our deposit pricing by 20 basis points?", and get an answer in hours, not weeks.

ESG integration to the overall Framework

How Do we break the Silos

Climate and ESG stress scenarios are no longer theoretical. The ECB's supervisory expectations are explicit.

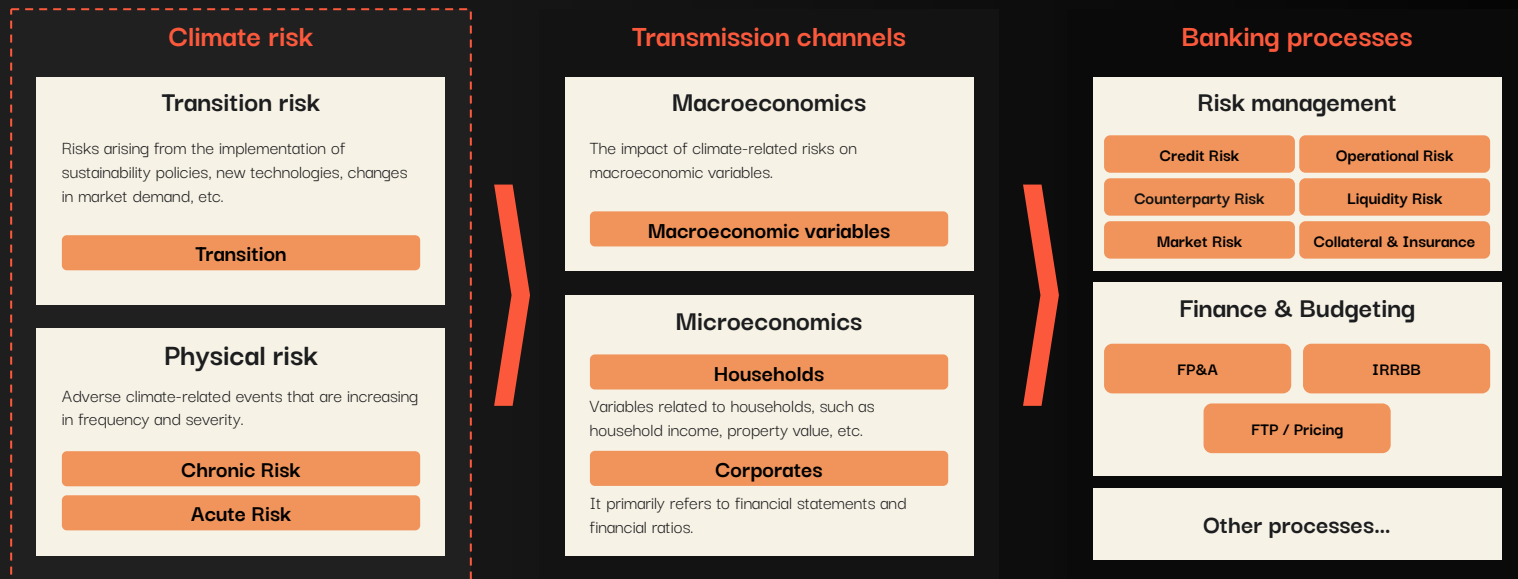


Climate and ESG scenarios act as the common framework to translate supervisory expectations into actionable risk and planning decisions.

ESG integration to the overall Framework

How Do we break the Silos

Overall ESG integration in banking processes requires understanding the impact of the latter in the economy



This is done through the lens of climate scenarios, which provide the potential impacts of climate change, given possible future narratives

ESG integration to the overall Framework

How Do we break the Silos

Measuring Net Zero transition targets across balance sheet projections and price the cost in the FTP framework

Traditional FP&A



ESG as a new driver

Moving from an aggregated financial view to a more disaggregated perspective allows institutions to better understand how portfolio structure drives financial outcomes, beyond simple averages.

FP&A taking into account climate variables



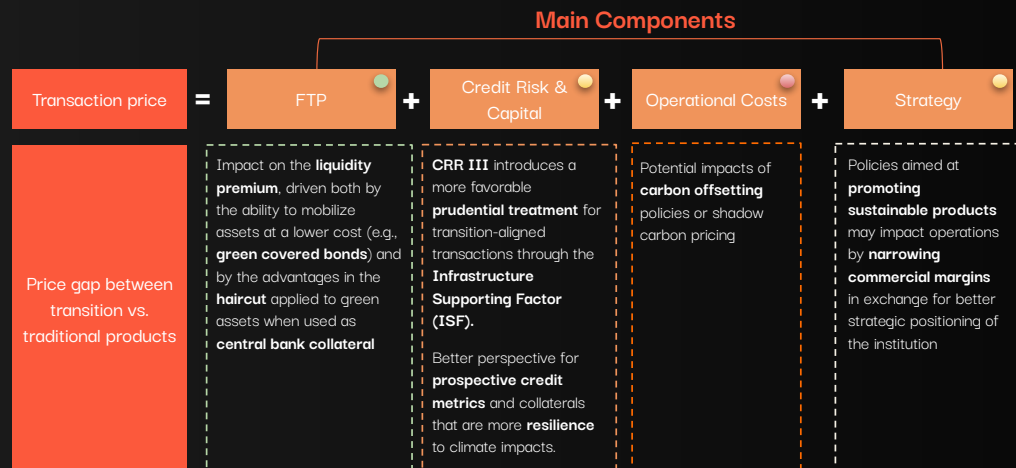
Managing portfolio composition through climate-relevant dimensions makes alignment explicit and reveals its direct impact on profitability and risk metrics.

ESG integration to the overall Framework

How Do we break the Silos

Integrating the ESG profile into transition pricing

- According to the **EBA Guidelines (2020)**, institutions should incorporate **environmental, social, and governance (ESG) factors**, as well as **ESG-related risks and opportunities**, into their risk management policies and their credit granting policies and procedures.
- However, this new sustainability/transition framework does not mean **'more expensive' products**. Both governments and regulators want institutions to incorporate sustainability goals into their **business strategies** and are willing to support this through incentive measures.





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