

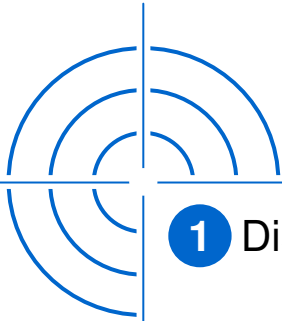
Funds' Transfer Pricing for Banks – Impact on CPM Approach



New York
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Goals of the workshop

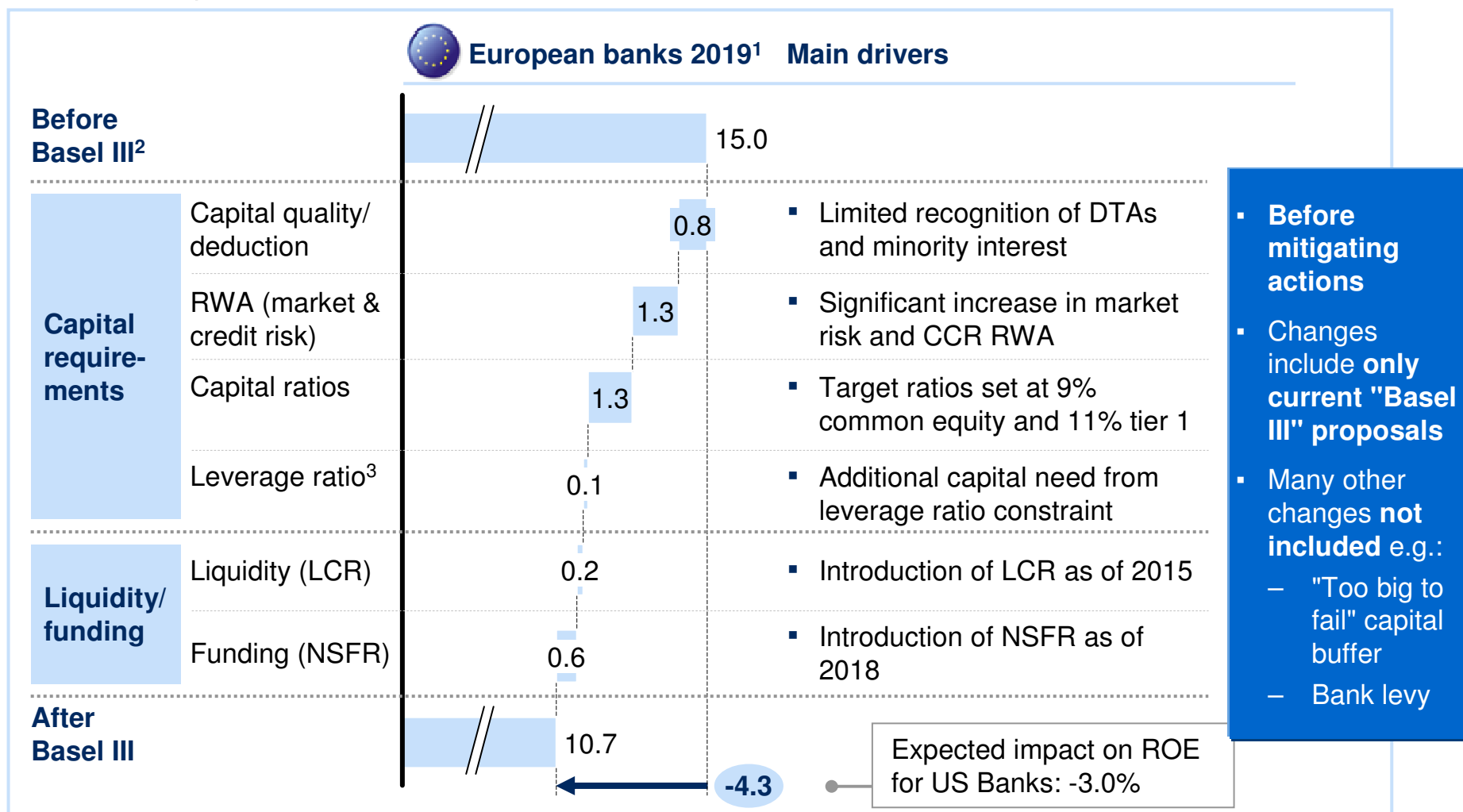


- 1 Discussion on potential approaches to FTP
- 2 Fundamental approach and principles
- 3 Implications of improved product design on competitiveness and margins
- 4 Implications for CPM units

Basel III requirements could result in a ROE reduction of European Banks by 4 pp in 2019...

ESTIMATES

Pre-tax ROE, percent



1 Sample includes ~ 45 banks across Europe

2 Based on 2004 - 07 ROE for individual banks scaled down to average 1980 - 2008 levels across EU

3 Only additional capital need (after increase of minimum capital ratio and capital deductions) considered

...and will have significant impact on product costs...

ESTIMATES

bps

■ Reduced liquidity cost due to increased long-term funding ■ Cost increase over 50bp

Products	Δ Capital cost ¹	Δ Liquidity cost ²	Δ Funding cost ³	Δ Total	
Retail banking	ST Retail loans	50	10	-15	70
	Residential mortgages < 35% risk weight	20	10	-10	25
	Other mortgages	25	10	-15	45
Corporate banking	ST Corporate loans	30	15	-5	45
	LT Corporate loans	30	10	-20	50
	Specialized lending	60	0	-10	60
Trading book securities	Government bonds	15			15
	Corporate or covered bonds > AA-	15			15
	Corporate or covered bonds <=AA- and > A-	30		10	40
	Bonds < A- (or unrated)	15	30	-35	70
	Financial Institution bonds	25	35	-30	80
	OTC derivatives (relative to market value/current exposure)	55	30	-5	85
Off-balance sheet	Corporate credit lines (non-FI)	15	-5		10
	Corporate liquidity lines (non-FI)	15	60		75
	FI credit and liquidity lines	25	60		85

1 Assuming target Tier 1 ratio of 8% under Basel II and 11% under Basel III; in addition, 20% increase to account for capital quality and deductions measures

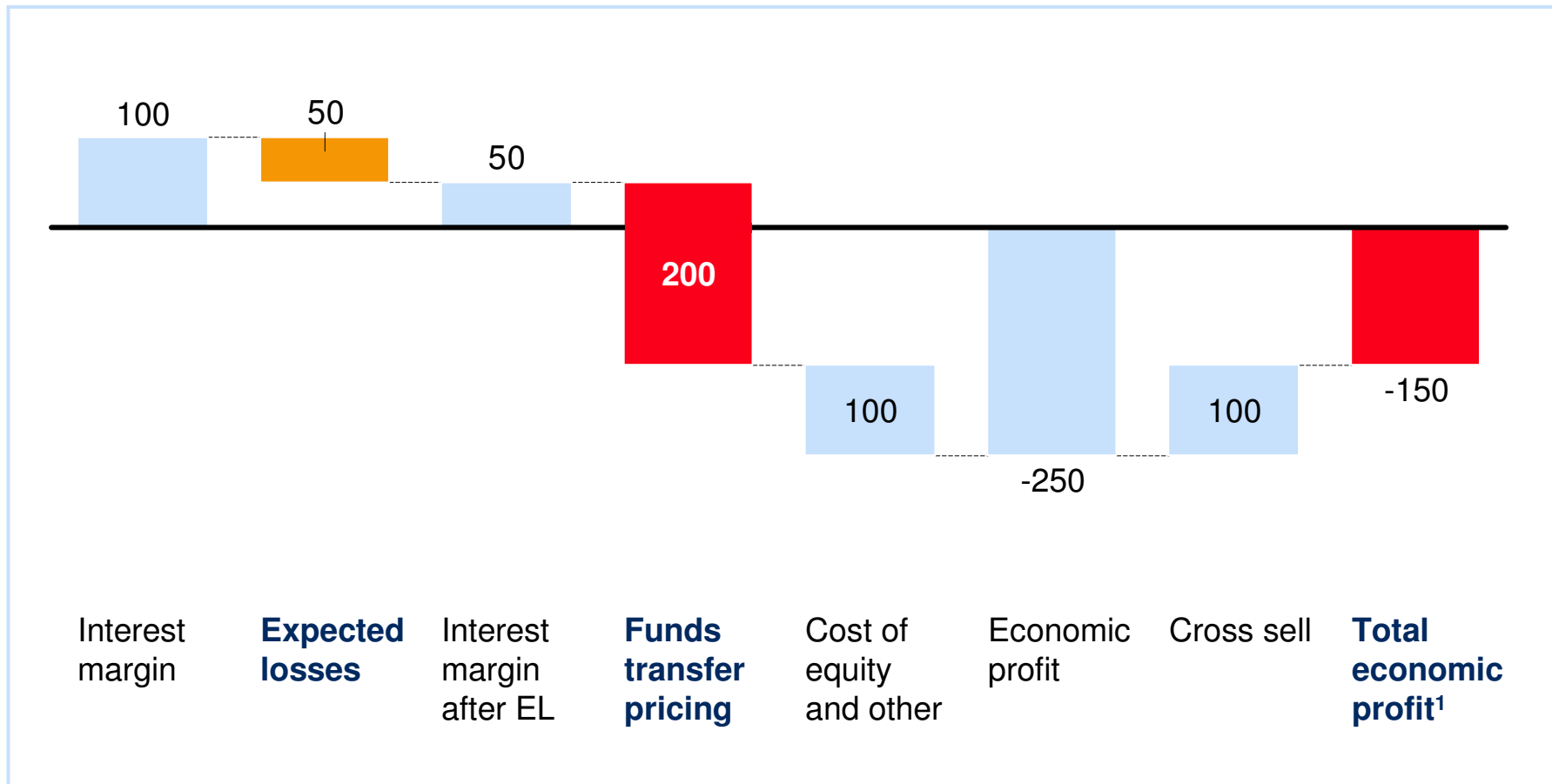
2 Introduction of LCR in 2014; assuming current liability structure and 7% liquidity holding per product under Basel II and 105% LCR target ratio under Basel III

3 Introduction of NSFR in 2019; assuming 105% NSFR target ratio

...which are already leading banks to a situation where FTP is the largest single cost component

DISGUISED CLIENT EXAMPLE

Indexed



¹ Represents economic profit before opex and a proxy for marginal economic profit (assuming that opex to generate an additional loan is fixed)

Objectives and guiding lines of a fund transfer pricing system

Objectives

- Allow proper **decision making** and support **risk culture**, through accurate pricing of risks and proper product pricing, in particular “**aligning the risk-taking incentives** of individual business lines **with the liquidity risk exposures their activities create** for the bank as a whole” ¹
- Achieve **transparency** of returns obtained and risk taken by different business units by properly **accounting for the returns component linked to interest rate risk and liquidity risk**
- Achieve centralized internal **ownership** of interest rate risk and liquidity risk as their management is not left to commercial business units but is **delegated to clearly identified noncommercial units**

Guiding lines

- **Interest rate risk component** is generally represented by an interest rate swap curve
- **Liquidity risk is segmented** into two different types:
 - **Mismatch liquidity risk** depends on current balance sheet structure, in more detail on the **risk of not being able to renew liabilities at current funding costs** (i.e., rollover risk, funding liquidity risk) and is normally represented by the funding spread of the bank on senior unsecured debt vs. the swap curve or Euribor rate ²
 - **Contingency liquidity risk** depends on the **risk of not being able to meet unexpected cash outflows** and is represented by the cost of **keeping a buffer** of liquid unencumbered eligible securities to face such an event
- FTP determination has to involve both **technical considerations** (i.e., pricing of risk) and **business considerations** (e.g., impact of FTP on competitiveness of products and BUs)
- Objectives are fully achieved when at managerial accounting level interest rate risk and liquidity risk are accounted into **separate P&Ls**

¹ BIS, principles for sound liquidity risk management and supervision

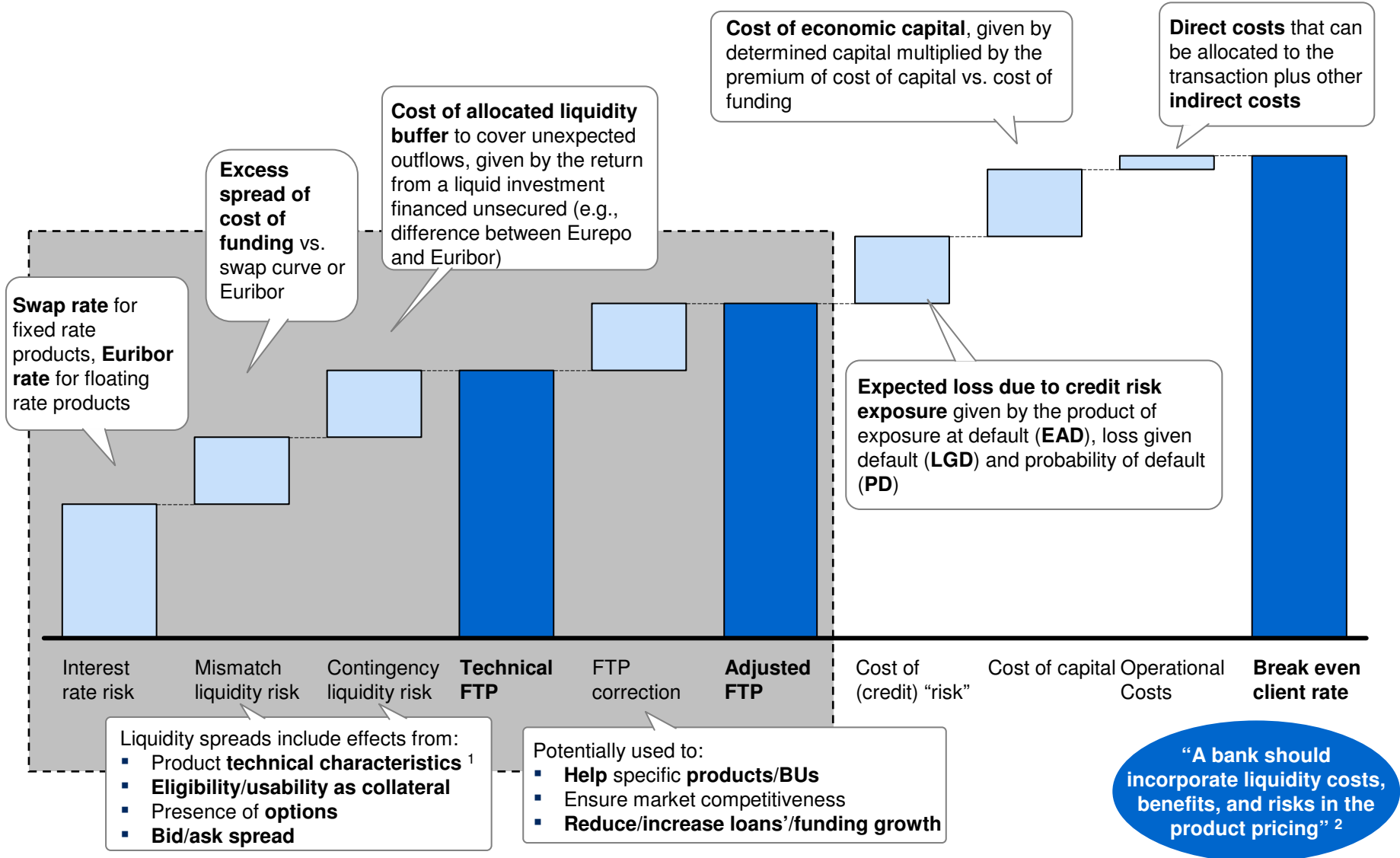
² Depending if the issue is fixed or floating

Core prerequisites for liquidity management and FTP

- A** **Professional treasury setup:** especially removing issues around incentives of Treasury and separating true performance of treasury vs. FTP/structural performance drivers
- B** **Full transparency on group internal flows:** ability to measure who is contributing to bank's liquidity position and ensuring full accountability for customer funding position
- C** **State-of-the-art risk modeling and reporting:** ability both model current balance sheet position as well as forward-looking projection and in addition precise cash forecasting

Creating transparency

■ Topic of this document



¹ Including tenure (eventually determined by using behavioral models) and parameterization to market/economic indices
² BIS, principles for sound liquidity risk management, and supervision

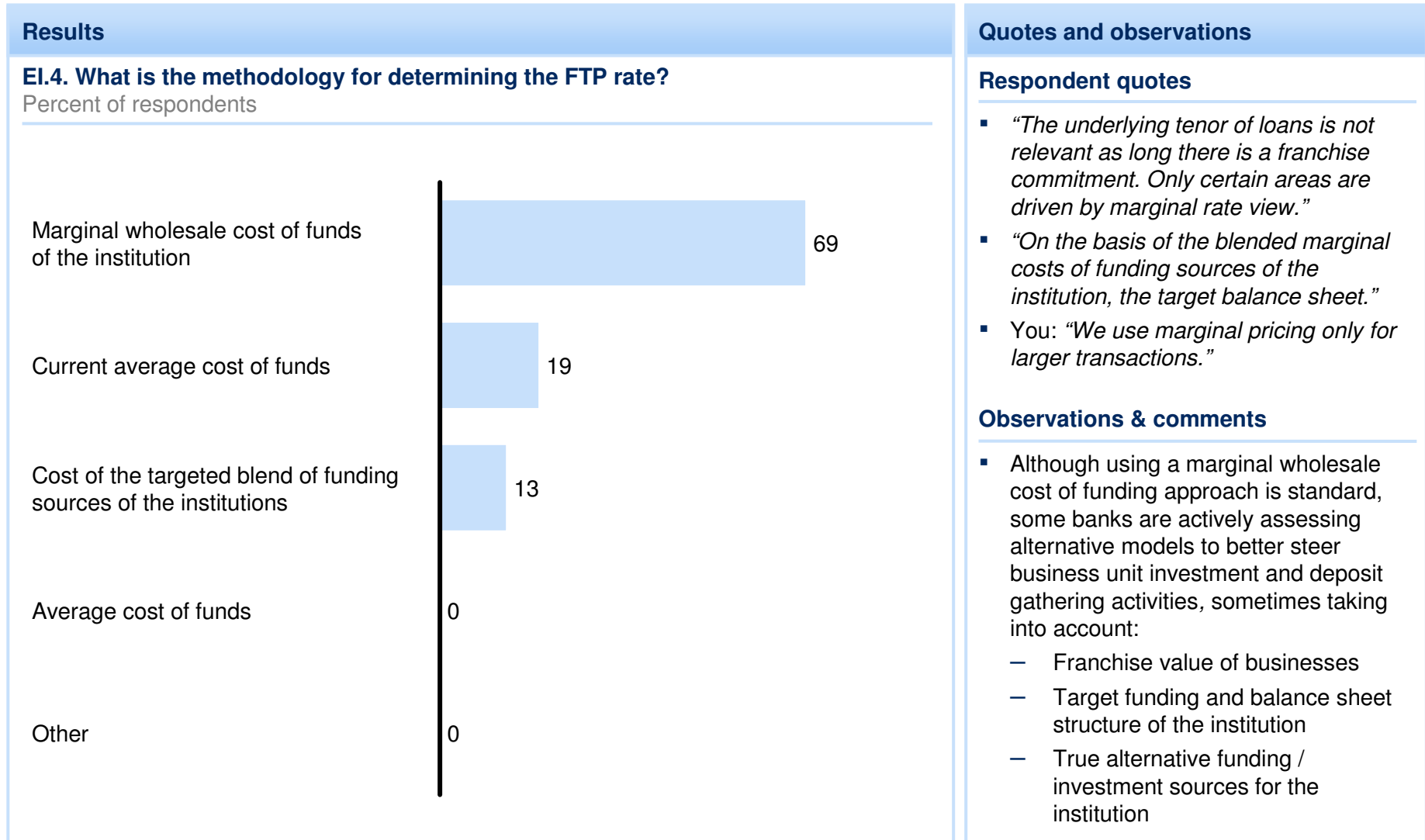
Liquidity transfer pricing has to be adapted to the bank's specific requirements

EXAMPLES FOR DESIGN QUESTIONS RE: TRANSFER PRICES

	Standard model: marginal costs	Average costs	Targeted costs
Description	<ul style="list-style-type: none"> Loans are calculated against marginal wholesale funding costs by duration Deposits are calculated based on models; wholesale funding defines opportunity costs 	<ul style="list-style-type: none"> Average funding costs based on duration/maturity transformations Deposits either "Cost center" or based on fair duration/maturity transfer pricing 	<ul style="list-style-type: none"> Bank calculates targeted costs on the basis of targeted rating and expected market development Products are priced on the basis of the target state – difference between current and future costs as restructuring costs
Implications			
BUs	<ul style="list-style-type: none"> Pricing in new business varies with market variations 	<ul style="list-style-type: none"> Relatively stable pricing in new business 	<ul style="list-style-type: none"> Stable pricing in new business due to targeted costs
Treasury	<ul style="list-style-type: none"> Treasury with P&L due to timing and duration mismatch 	<ul style="list-style-type: none"> No Treasury P&L 	<ul style="list-style-type: none"> Treasury with negative P&L – allocation of negative P&L to be decided
Reasons	<ul style="list-style-type: none"> Ensures full pass-through of funding costs to customers Good proxy for true funding costs Standard approach 	<ul style="list-style-type: none"> Ensures that no P&L lands in Treasury Easy to implement – prevents necessity of distributing historical funding costs to legacy portfolios Most common approach for new launch of FTP 	<ul style="list-style-type: none"> Ensures competitiveness in new business – in expectation of lower funding costs in the future Model is used by banks in restructuring

ALM survey - FTP rate typically based on marginal wholesale cost of funds with some leadings banks moving to cost of targeted funding sources

MCKINSEY ALM SURVEY



In addition, some fundamental questions regarding selection of funding cost curves

EXAMPLES FOR DESIGN QUESTIONS RE: TRANSFER PRICES

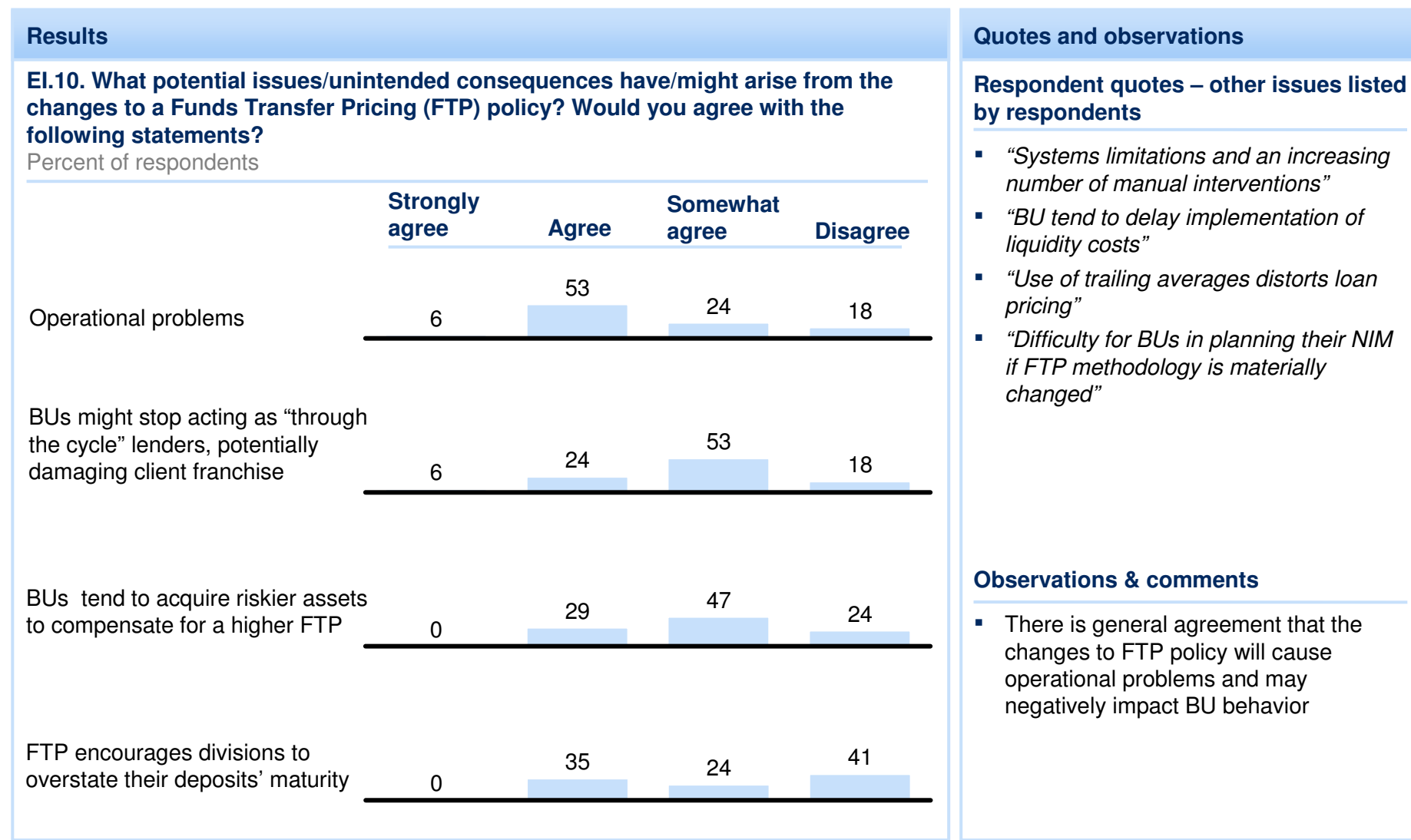
	Standard curves for business units	Different curves for business units	Different funding costs for customers with deposits vs. without
Description	<ul style="list-style-type: none"> Standard curves for all business units (core bank, workout/turnaround, and Restructuring Unit) 	<ul style="list-style-type: none"> Use of higher funding costs for Restructuring Unit (esp. prolongations) Reduction of funding costs in core bank 	<ul style="list-style-type: none"> Separation of funding costs for customers with deposits and without Calculating/allocating the customer advantage for deposit generation beyond current deposit incentives
Implications			
BU's	<ul style="list-style-type: none"> Securing standard management incentives – new business vs. reduction in Restructuring Unit 	<ul style="list-style-type: none"> Relatively stable pricing in new business 	<ul style="list-style-type: none"> Additional incentives to generate customer deposits
Treasury	<ul style="list-style-type: none"> Standard liquidity allocation to all areas / business units 	<ul style="list-style-type: none"> Separate pricing of costs to business units/demand for redistribution 	<ul style="list-style-type: none"> Separate curves create high administrative effort Unclear boundary lines (e.g., when subtracting/removing customer deposit)
Reasons	<ul style="list-style-type: none"> Standard pricing of liquidity independent from “use”/origin of the liquidity consumption 	<ul style="list-style-type: none"> “Management” of liquidity use, higher incentive for reduction (due to higher funding costs) – from this, evaluation of P&L and reduction costs in the aggregate 	<ul style="list-style-type: none"> Additional bonuses for deposits through separate funding curve (alongside bonuses for deposits in the current system)

FTP approach driven by specific bank objectives

	Case example 1: "Standard model"	Case example 2: Retail focus	Case example 3: Illiquid market
Situation	<ul style="list-style-type: none"> Large universal Bank with overall higher amount of loans vs. deposits Treasury reporting to CFO – MM desk delegated to IB to ensure effective CM access Funding consisting of deposits and wholesale funding 	<ul style="list-style-type: none"> Retail focused Bank with overall balanced/surplus deposits vs. loan book Limited issuance of wholesale funds (covered bonds) to ensure market access in stress Treasury as profit center managing funding and reinvestment of excess deposits in securities portfolio 	<ul style="list-style-type: none"> Bank with overall funding shortfall Bank operating under high liquidity cost due to high country rating and negative investor sentiment Currently limited ability to raise funding in adequate terms
FTP approach	<ul style="list-style-type: none"> Standard FTP established using marginal cost of funds (symmetric application) Modeling of all positions regarding IR sensitivity and liquidity for risk reporting/liquidity forecasting and FTP Liquidity Clearing house established to create transparency on profits from maturity transformation 	<ul style="list-style-type: none"> Different FTP established Asset side with FTP matching competitor cost of wholesale funding to ensure proper pricing on assets Deposits priced vs. pure IR curve/reinvestment return on securities taking into account modeling Joint optimization between TR and product management 	<ul style="list-style-type: none"> FTP on assets set to reflect blended funding cost (mix of wholesale and marginal retail funds including profit margin for deposit gatherer) FTP on deposits set on „customer relation products“ (non price sensitive, sticky) – marginal deposits treated as wholesale funds and pricing set to match funding requirements

ALM survey - most participants see some operational problems with their FTP implementation, with misaligned incentives the most common issue

MCKINSEY ALM SURVEY

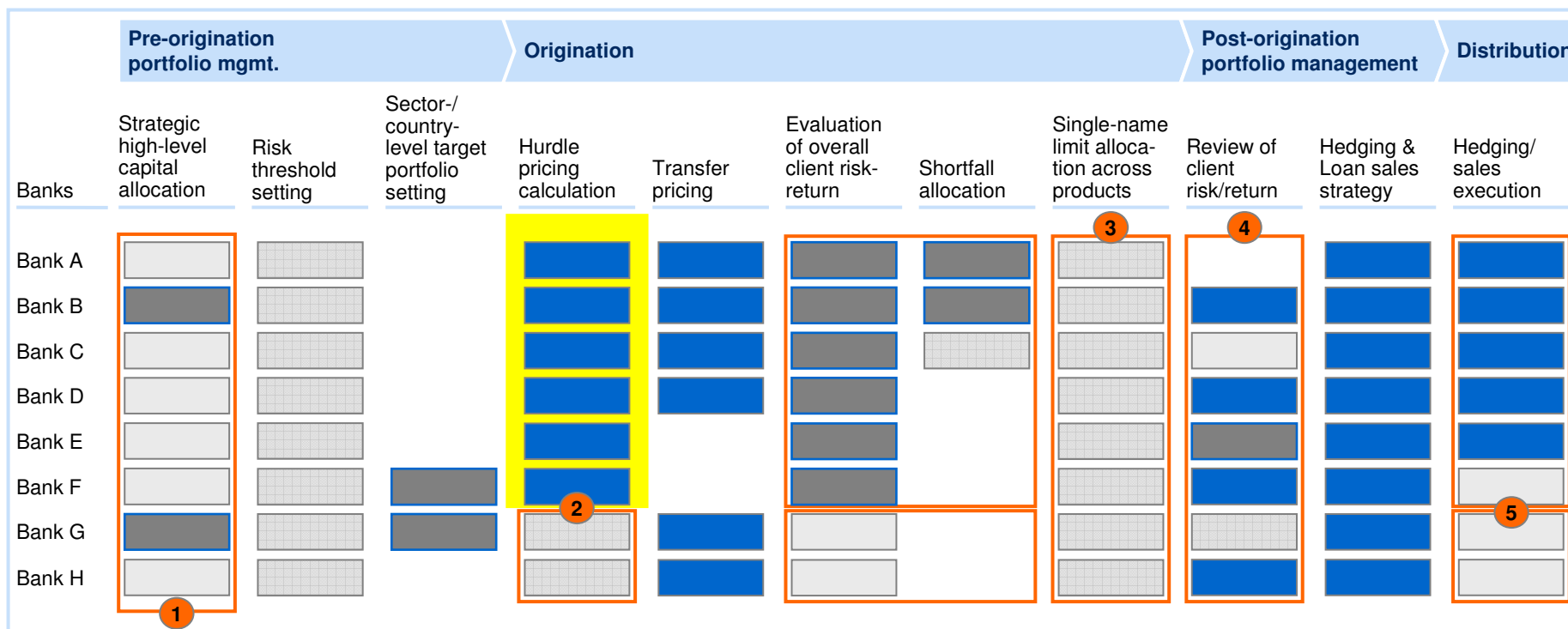


CPM can help design optimised product set by correctly assessing liquidity/costs to optimise risk/return

	Common approach/potential issues	Alternative solution
Assets	A Trading portfolio/ desks <ul style="list-style-type: none"> Trading portfolio is generally financed at a short term rate (e.g., Eonia). Traders are, therefore, incentivized to take on liquidity risk by investing in illiquid securities as they are not paying for the risk they are taking 	<ul style="list-style-type: none"> To avoid others overpaying, add a liquidity spread to the short term rates which takes who account of the portfolio liquidity (liquidation profile and repoability)
	B Corporate term loans <ul style="list-style-type: none"> Terms loans are generally financed using as liquidity tenure the loan's maturity. Effective liquidity tenure is lower if the loans can be used as collateral either by repos or by issuing collateral bonds 	<ul style="list-style-type: none"> Reduce the liquidity spread by taking into account of the portfolio portion that can be used as collateral to obtain new financing on the market and therefore, has a lower liquidity tenure
	C Corporate revolving loans <ul style="list-style-type: none"> Revolving loans are generally financed at a short term rate (e.g., Euribor). Given the revolving nature of these commitments, effective liquidity tenure is long term for a significant portion of the portfolio causing liquidity mispricing 	<ul style="list-style-type: none"> Add a liquidity spread which takes into account of the expected maturity of the loans portfolio thanks to the use of behavioral models
	D Retail mortgages <ul style="list-style-type: none"> Retail mortgages are generally financed at their contractual maturity even when prepayment options are available 	<ul style="list-style-type: none"> Use a liquidity spread which takes into account of potential exercise of prepayment options thanks to the use of option/behavioral modeling
Liabilities	E Retail deposits <ul style="list-style-type: none"> Retail deposits are generally transferred at a short term rate (e.g., Euribor) even though they are one of the most stable source of funding 	<ul style="list-style-type: none"> Add a liquidity spread by taking into account of effective deposits maturity. This could be done by building a "replicating portfolio," which considers deposits as a portfolio of fixed term bonds issued on the wholesale market
Off balance sheet	F Undrawn commitments and personal guarantees <ul style="list-style-type: none"> Undrawn commitments/personal guarantees are not generally charged liquidity costs to cover contingency liquidity the bank has to keep a costly buffer of unencumbered eligible securities 	<ul style="list-style-type: none"> Charge the cost of keeping a buffer of unencumbered eligible securities to products generating contingency liquidity risk

And while nearly all top-tier banks CPM unit is involved in pricing...

CPM (multiple units)
 Committee w/CPM
 Other



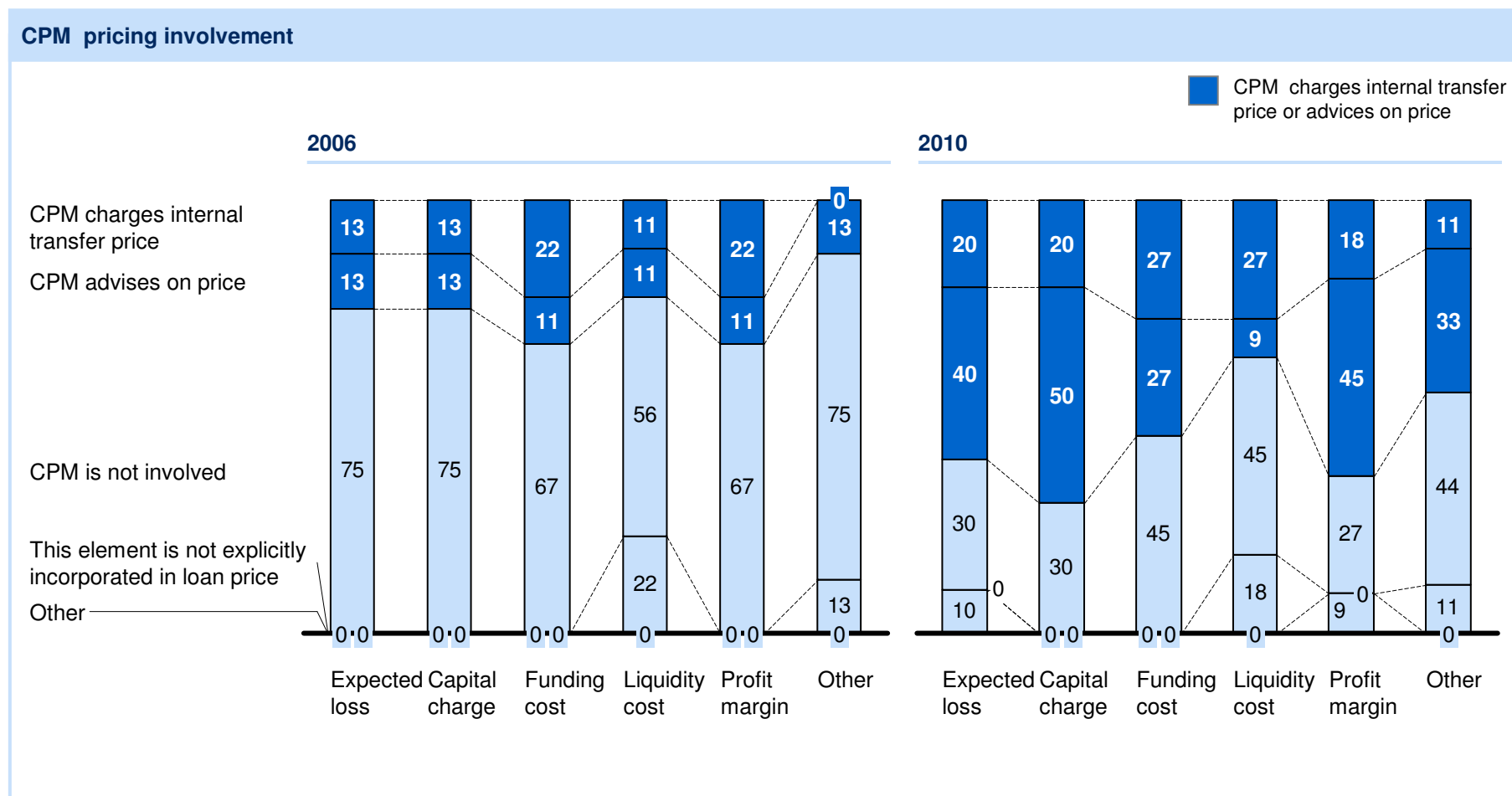
Key insights

- 1 Few top players involve CPM into strategic portfolio definition
- 2 **Decision-taking in origination comes in 2 ways**
 - **CPM with veto authority** in the risk-return evaluation of clients and often with influence on pricing
 - CPM has **no say in the origination process**
- 3 CPM has **no involvement** in the assignment of single-name **utilization to products**
- 4 **CPM often provides input and monitors client profitability reviews**, but coverage plays leading role in enforcing shortfall accountability
- 5 **No observable pattern**; CPM often with own executive capability based on how it handles private/public separation

1 Other may include a desk in capital markets, committees without CPM involvement, etc.

But at end of 2010, not everyone was....have things changed?

% of respondents



Some questions for CPM leaders

- What is the role of CPM in the transfer pricing debate?
- What can CPM do to improve pricing discipline within the institution?
- Impact on capital allocation?
- What are the key blockers?
- ???

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Basel III imposes new ratios measuring short-term and long-term liquidity needs

