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INTERNATIONAL ASSOCIATION OF  
CREDIT PORTFOLIO MANAGERS

# FINANCIAL RESOURCE MANAGEMENT

BALANCING COMPLEX AND COMPETING CONSTRAINTS ON  
CAPITAL, LIQUIDITY AND FUNDING

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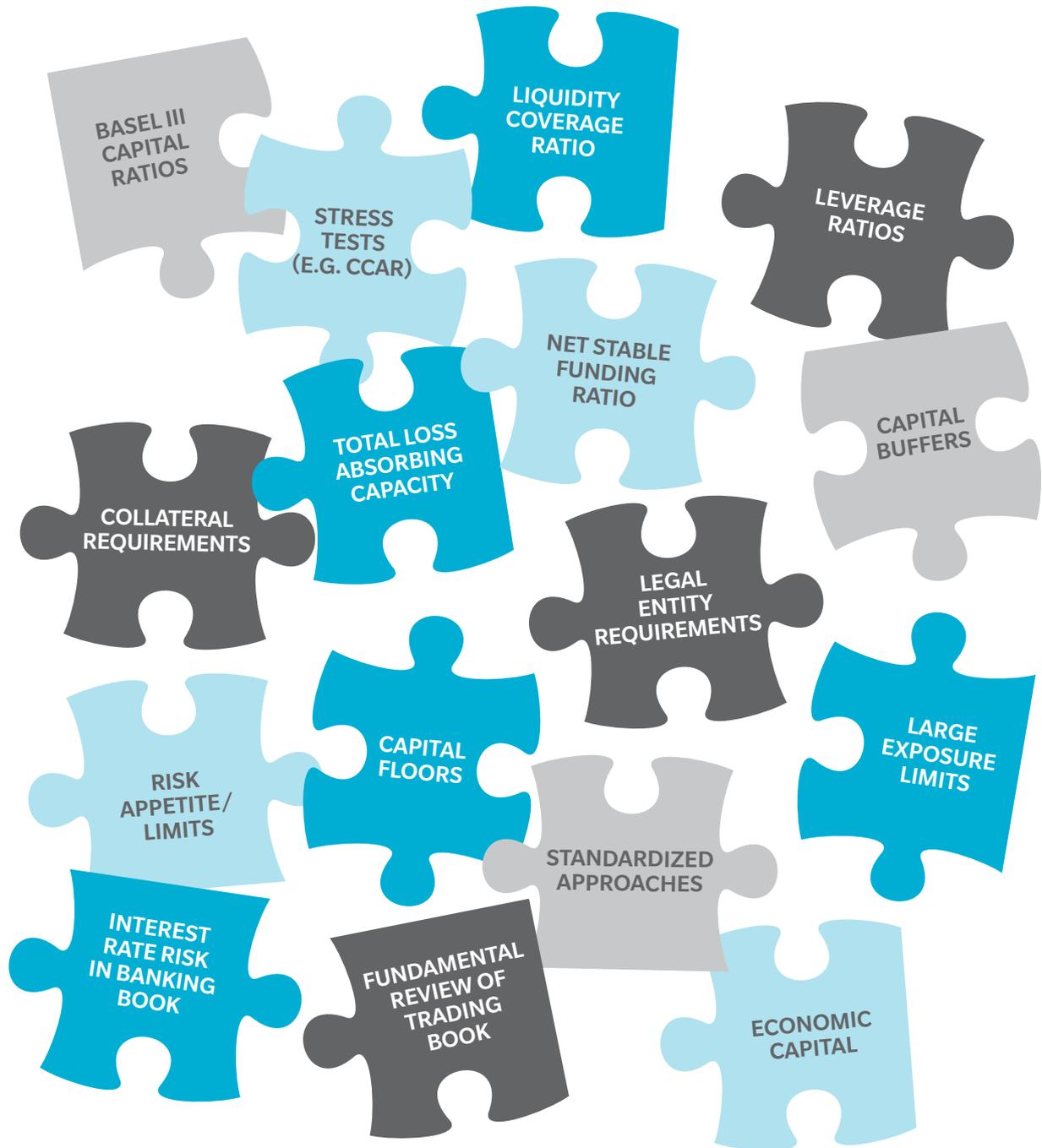
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# THE FINANCIAL RESOURCE MANAGEMENT PUZZLE

*What happened to ROE?*



# TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
1 INTRODUCTION	6
2 CURRENT STATE OF FRM	8
3 KEY FRM CHALLENGES	15
4 THE WAY FORWARD	17
4.1 CONCEPTUAL FRAMEWORK FOR FRM	17
4.2 ORGANIZATIONAL MODEL	21
5 CLOSING THOUGHTS	25

# EXECUTIVE SUMMARY

*In the second half of 2016, the International Association of Credit Portfolio Managers (IACPM) and Oliver Wyman jointly conducted a survey on Financial Resource Management (FRM) practices with 48 leading banks around the world. This paper reflects the survey findings and follow-up conversations with a subset of surveyed institutions, along with our views on the way forward.*

Effectively managing financial resources has always been crucial to bank economics. Before the financial crisis, the exercise was simpler: The universe of financial constraints was more limited, and the consequences of any sub-optimal decisions were less severe; capital, and especially liquidity, was readily available and in retrospect, relatively cheap.

In the post-crisis environment, managing financial resources has become exponentially more difficult for banks:

- A multitude of spot and scenario-based financial constraints have been introduced;
- The commercial impact of these new constraints is complex and often not easily understood;
- Regulatory minimum ratios, rather than internally-defined metrics, are now virtually always the most binding factors on resource usage; and
- Regulators have assigned different levels and definitions of financial resource constraints across jurisdictions, creating interrelated and overlapping layers of constraints for global financial institutions

However, getting the answer “right” on FRM is nonetheless essential to having an accurate view of a bank’s best use of limited resources and a thorough understanding of both absolute and relative performance of banking activities and products, and in turn, to enabling overall bank success.

## PARTIAL SOLUTIONS, FITS AND STARTS

While many banks have recognized the new challenges, progress on developing sustainable and holistic FRM has been limited in recent years. The IACPM/Oliver Wyman survey confirmed that there is still a wide range of FRM approaches being deployed in the new constraint environment, with no clear industry standard having yet emerged. Moreover, while institutions have reported developments on framework, infrastructure, organization and commercial shifts, there is at least as much to do ahead for the industry as has been done already.

To date, banks have adapted to the new exigencies for FRM through both conceptual and tactical solutions. Many institutions have altered their methodologies to reflect some of the new constraints; and there are numerous examples of banks reflecting the new FRM considerations in their business decisions via ad hoc, pragmatic approaches. Despite the challenges in defining the new conceptual FRM framework, banks have already been making significant changes in their risk profiles and strategies that reflect the new constraints. These changes range from broad strategic actions such as moving and/or exiting certain businesses, products and/or geographies to tactical changes in pricing and underwriting.

## THE MAIN CHALLENGES FOR FINANCIAL RESOURCE MANAGEMENT NOW

The obstacles to effective FRM in the post-crisis era are numerous and varied across banks. Nevertheless, several recurring themes are apparent across the surveyed firms:

- **Process coordination:** Many different businesses and functional areas now need to be actively involved in FRM, and their involvement requires complex coordination rather than just bilateral interactions
- **Conceptual framework:** The conceptual framework for incorporating all of the new constraints into FRM processes has not yet been fully established at most firms
- **Data and infrastructure:** The still evolving data infrastructure doesn't always allow FRM-related business decisions to be made in a timely manner, particularly at lower levels of granularity, such as for business- or client-level decisions
- **Governance:** Given that FRM has implications throughout the bank, governance and decision making present significant and broad-ranging challenges for FRM – impacting coordination, institutional buy-in, and implementation

## THOUGHTS ON THE WAY FORWARD

In managing financial resources, banks make decisions across a range of tactical and strategic priorities as well as at all levels of the enterprise. Banks will need to link their FRM approaches to these business processes. Two components of effective FRM will be critical for addressing these business needs:

- **Conceptual framework and operationalization:** It is critical for banks to decide which of the multitude of constraints matter in managing financial resources and how those constraints should be incorporated in the FRM framework. The relevant constraints will be influenced by business model and geography, among other considerations. Approaches attempting to take multiple constraints into account will differ and there will not be a one-size-fits-all solution. Furthermore, the relevant metrics for FRM and their calibration will differ depending on both the business purpose and the time horizon for resource deployment, as binding constraints may evolve over time. Finally, many of the regulatory constraints are articulated over multiple types of financial resources, which often have different cost structures; the different cost implications for different resource types also must be incorporated in the approach.

- **Organizational model:** Given the inter-related impacts of multiple contemporaneous financial constraints, some of which may even be sending conflicting signals for decision making, it is imperative for banks to have a dedicated central coordinating function for FRM. Core activities for this function would include defining a bank's FRM objectives and identifying trade-offs, coordinating the development of a holistic set of metrics to drive incentives toward those objectives, and providing enterprise-level perspectives for process optimization and content dissemination.

However, FRM in the post-crisis era touches on the whole bank. Making changes to the conceptual framework and organizational model alone are not enough to establish strong FRM, but they are necessary steps. As the survey results indicate, there are many additional and significant challenges to be worked through, such as evolving the data environment and infrastructure to effectively support FRM in its requirements for timeliness and granularity of information. FRM should drive incentives and motivate good decision making throughout the firm – focusing on people, education, transparency, and behavior is also critical. Furthermore, the supervisory expectations are bound to evolve, in important ways. In addition to meeting minimum requirements on financial resource levels, Supervisors will want to know that banks have a coherent, sensible, and firm-wide approach to FRM, and they will want to understand the implications of the particular approach for the business decisions the bank will make. For example, the sustainability of a firm's business model has become a key part of assessments by European regulators. Regulators recognize that one of the underlying causes of the financial crisis were incentives to do the wrong business at the wrong price, driven in significant part by capital pricing and allocation and funds transfer pricing (FTP).

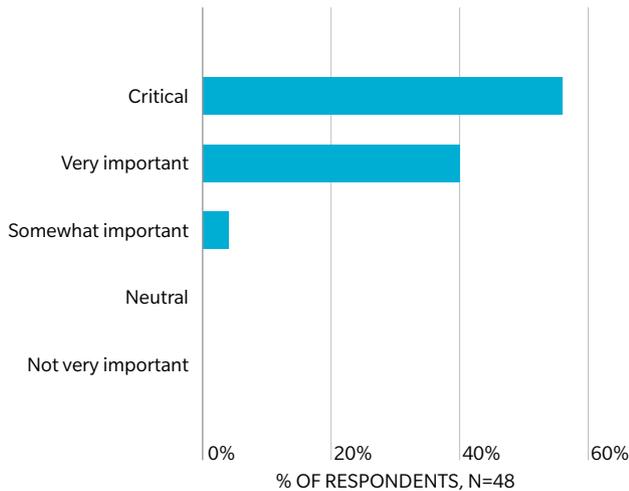
Regardless of the exact evolution of banks and their regulation, successful FRM will require a comprehensive undertaking to transform the FRM framework to fully reflect the new financial constraints and transmit those constraints in a consistent manner throughout the bank; and to adapt the organization to effectively support FRM.

# 1. INTRODUCTION

Effectively managing financial resources has always been crucial to bank economics. Before the financial crisis, the exercise was simpler: The universe of financial constraints was more limited, and the consequences of any sub-optimal decisions were less severe; capital, and especially liquidity, was readily available and in retrospect, relatively cheap. Responses by regulators and markets to the lessons of the crisis have added much complexity. The new operational landscape of greater, more complex, and more stringent constraints requires a more comprehensive, tightly-coordinated approach to FRM.

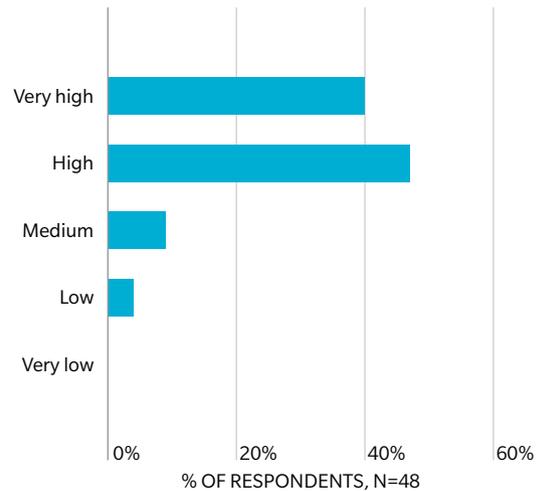
Getting the answer “right” on FRM is essential to having an accurate view of a bank’s best use of limited resources and a thorough understanding of both absolute and relative performance of banking activities and products, and in turn, to enabling overall bank success. Banks already recognize the importance of effective FRM, with over 95% of survey respondents indicating that FRM is “Critical” or “Very Important” to meeting their firm’s objectives (Exhibit 1). Similarly, FRM has also generated significant interest from firms’ Boards of Directors. Nearly 90% of survey participants indicated that their Directors have been involved in FRM to a “Very High” or “High” degree (Exhibit 2).

Exhibit 1: Importance of comprehensive FRM\*



\* Oliver Wyman/IACPM FRM Survey: How important do you consider a comprehensive FRM framework [one that incorporates the various financial constraints your firm faces and transmits them to the users through a unified framework] to be in order to meet your firm’s performance objectives?  
Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

Exhibit 2: Level of involvement from the Board of Directors on management of financial resource constraints\*



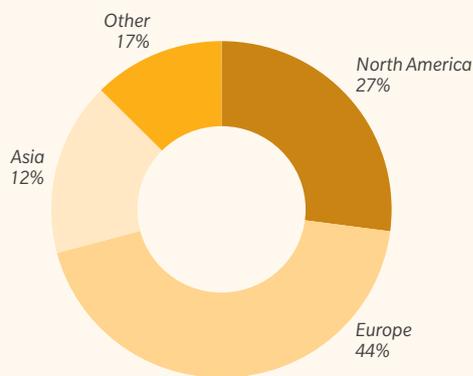
\* Oliver Wyman/IACPM FRM Survey: What has been the Board of Directors level of focus/involvement as it pertains to financial resource constraints?  
Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

Along with FRM having grown in importance since the crisis, the challenges for banks to implement effective and parsimonious FRM frameworks are high. These challenges include both conceptual issues around how to manage multiple competing and overlapping constraints as well as practical issues around organizational design, processes, and systems to support FRM.

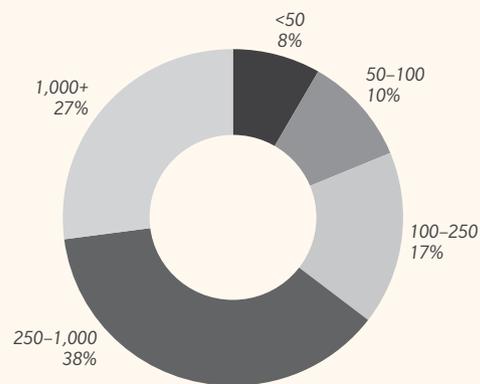
## IACPM/OLIVER WYMAN FINANCIAL RESOURCE MANAGEMENT SURVEY, 2016

Exhibit 3: Profile of firms participating in the survey\*

### HOME COUNTRY COMPOSITION



### SIZE OF PARTICIPATING FIRMS, US \$BN



\* "Other" segment includes remaining regions (South America, Africa) as well development banks (irrespective of region)

Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

In the second half of 2016, the International Association of Credit Portfolio Managers (IACPM) and Oliver Wyman jointly conducted a survey on FRM practices. 48 financial institutions participated in the survey, representing many of the world's largest banks across North America, Europe and Asia-Pacific.

The objective of the 100-question survey was to better understand banks' current and future planned practices for FRM, along the following dimensions:

- The relative significance and impact of various regulatory-driven financial resource constraints
- The impact that these constraints have had on banking institutions thus far
- The outlook for incorporating these constraints into select activities such as
  - Ex ante performance assessment

- Transmission mechanisms such as capital allocation, funding and liquidity charging
- Credit portfolio management and origination decisions
- Product pricing
- Strategic planning and performance management processes

This paper reflects the survey findings and follow-up conversations with a subset of surveyed institutions, along with our views on the way forward. Detailed survey results have been provided separately to the survey participants. Throughout this document, "surveyed institutions" and "survey respondents" refers to this survey.

Prior to this survey, Oliver Wyman published two related Points of View; see "Towards Sustainable Resource Management" and "Adding 5% to ROE".<sup>1</sup>

<sup>1</sup> Oliver Wyman Insights "Towards Sustainable Resource Management", Clarke et al., April 2014 and "Adding 5% to ROE", Cooper, August 2012

## 2. CURRENT STATE OF FINANCIAL RESOURCE MANAGEMENT

### THE CONSTRAINT LANDSCAPE

Banks have always sought to optimize business decisions in order to maximize return for a given set of financial constraints. Traditionally, there have been two key mechanisms used to drive business optimization in light of financial constraints and financial resource costs: Capital Allocation and Funds Transfer Pricing.

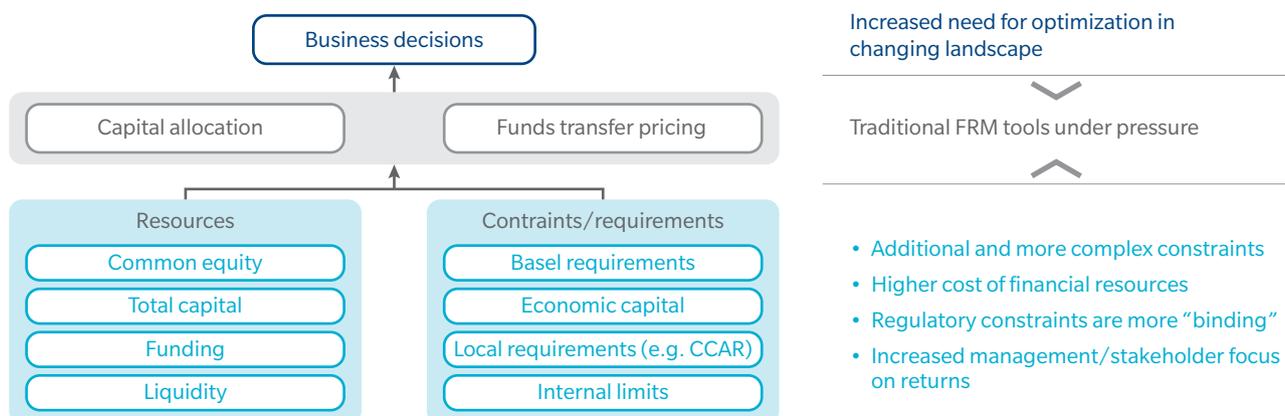
Capital Allocation, using Economic Capital, was widely adopted starting in the 1990's. Economic Capital was developed as a tool to probabilistically measure the amount of "risk" capital that banks required to cover their exposures to various forms of risk. Economic Capital initially focused on credit risk and then expanded to cover other areas such as market risk and operational risk. In the pre-crisis era, Regulatory Capital was rarely the binding constraint on commercial banks, as the regulatory requirements were set very low, and traditional investment banks were not even subject to consolidated regulatory capital requirements until shortly before the financial crisis. Therefore, Economic Capital was typically the "binding" constraint of the day. However, this constraint was rarely binding in the sense of necessarily inhibiting or strongly discouraging business, but rather was used as a mechanism to differentiate among potential opportunities.

Funds Transfer Pricing (FTP), a direct charging methodology – that is, costs from the FTP are directly included in the profit and loss of a particular desk or business – is used by banks to estimate the cash cost incurred to finance a particular activity. FTP allowed banks to allocate profits between activities that generated cheap sources of funding and the asset intensive businesses that used this funding. This internal allocation creates a view on the performance of the activity in relative isolation from interest rate risk taking.

Both Capital Allocation and FTP attribute the costs of financial resources (capital needs and funding needs) back to the businesses, products, and transactions that generate the need for these resources. This then allows banks to incorporate the financial resource costs in decision making, such as setting the strategy of the bank, measuring and optimizing risk adjusted performance across business lines, and pricing products based on risk.

## Exhibit 4: Traditional FRM framework and emerging pressures

### TRADITIONAL FINANCIAL RESOURCE MANAGEMENT



Source: Oliver Wyman

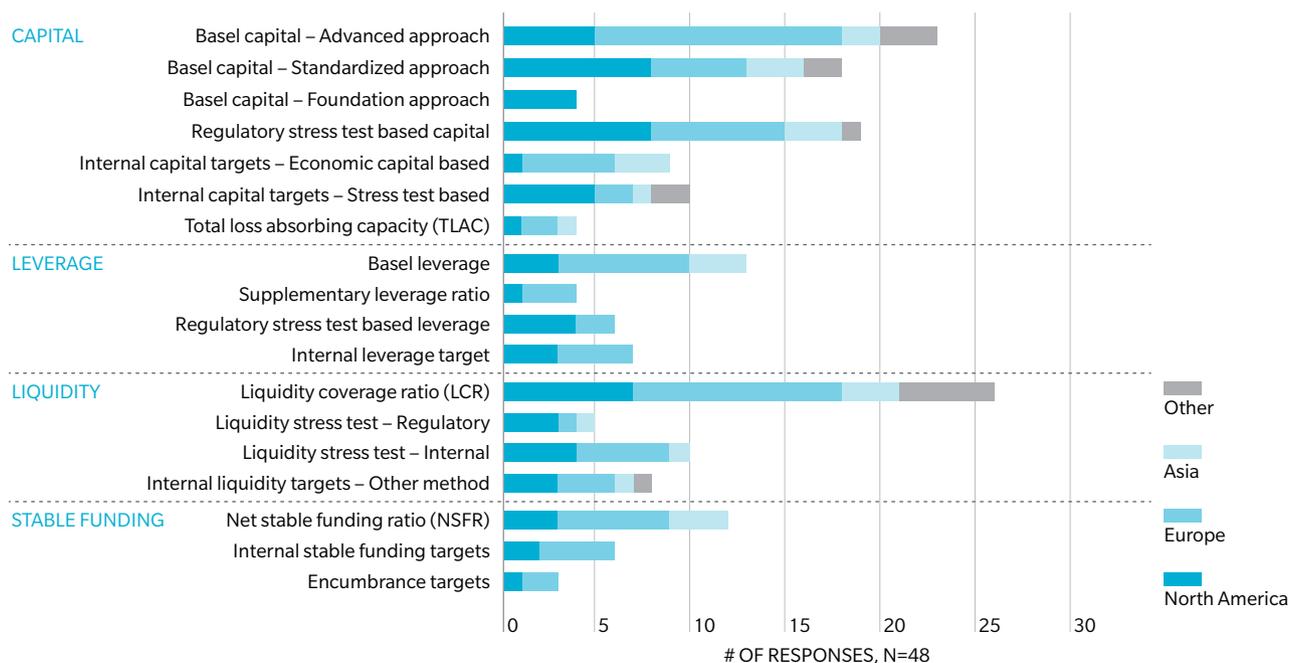
The post-crisis operating environment for banks has changed dramatically due to many factors, the most prominent of which is the increase in the scale and scope of regulatory requirements that banks face. Elliott et. al (2016)<sup>2</sup> provides a summary of the many new and revised global standards for capital and liquidity and a review of the literature discussing the impacts of these new standards on the industry and its customers. The multitude of new and revised regulations that have come to pass since the financial crisis has significantly increased the total capital needs and imposed new requirements on leverage, liquidity, and stable funding. To add further complexity, the impact of the new and revised regulations often differs across geographies. The literature review in Elliott et. al. (2016) shows a significant increase in the gross cost of funding caused by new capital and liquidity requirements since 2010, driving lower bank performance, huge pressure to cut costs and increase prices for services, and in some instances, strategic shifts usually in the form of business or product exits. This is on top of costs (e.g. capital raising) related to increases from the beginning of the crisis to the end of 2010. Banks now find themselves in a position where regulatory driven financial resource constraints truly are binding, unlike before the financial crisis.

The financial constraints facing banks are not just more binding today, they are also more complex. Survey respondents noted that the most significant constraints they face are in regulatory driven capital and liquidity requirements (Exhibit 5). In particular:

- Capital requirements based on Risk-Weighted Assets (RWA) using Basel’s Advanced modeling approach
- Capital requirements based on RWA using Basel’s Standardized approach
- Capital requirements based on regulatory stress tests, especially true for US banks
- Liquidity requirements based on the Liquidity Coverage Ratio

<sup>2</sup> Oliver Wyman Insights “Interaction, Coherence and Overall Calibration of Post Crisis Basel Reforms”, Elliott et.al., August 2016

## Exhibit 5: Top three most binding constraints\*



\* Oliver Wyman/IACPM FRM Survey: For a select list of Capital, Leverage, Liquidity, and Stable Funding related constraints, indicate the top three most binding constraints  
 Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

These survey results both highlight the multitude of financial resource requirements now in play and also confirm that regulatory driven requirements are now the dominant constraints. These constraints have overlapping implications for financial resources, including various definitions of capital (Common Equity Tier 1, Tier 1 Common, Tier 1, Total Risk-Based Capital, Long-term funding, High Quality Liquid Assets), and can cut across both current ratios as well as forecast ratios. The most binding constraint can differ within an organization across businesses, geographies, legal entities, products or specific exposures.

This complex network of requirements has impacted not only overall performance, but also the relative performance of different products and activities. Examples of changes in relative return on capital include:

- Reduced performance of low risk/high balance activities due to leverage constraints
  - Repo/reverse repo and securities lending
  - Investment of deposits in liquid/low risk securities
- Increased attractiveness of fee-based activities
- Performance differentials due to differences across home country capital rules
  - CCAR requirements for US institutions versus non-US stress tests
  - Differences in Basel implementation across US/Europe
  - Difference in leverage requirements
- Increased cost for contingent liquidity
  - Reduced value of “non-sticky” deposits
  - Greater financial costs for lines of credit

In this context, a key challenge for banks is the management of the implications of these changes in relative performance. Banks must adjust their business activities, product structures, and exposure profiles in light of these changes.

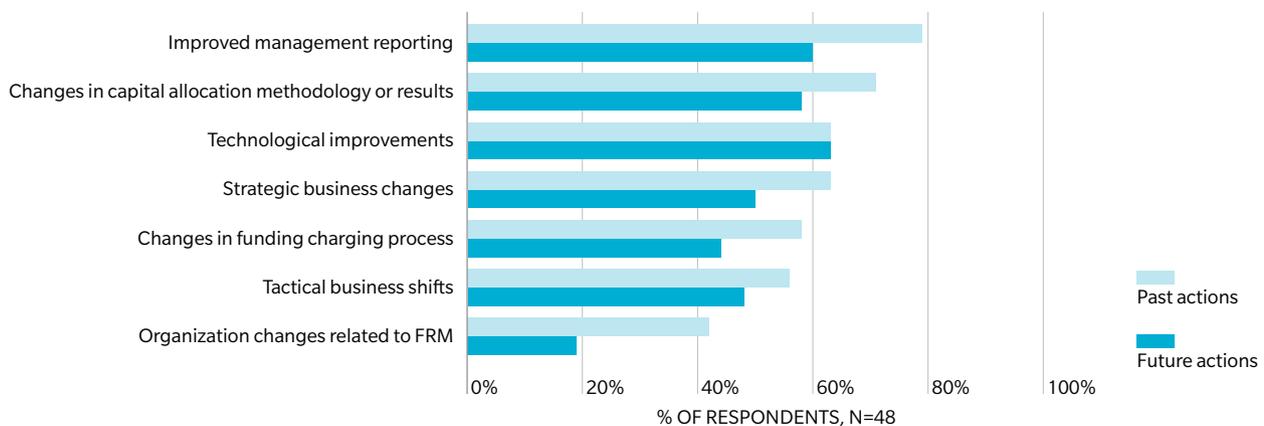
Capital Allocation and FTP processes are the starting point for adjusting incentives and impacting business decisions. The success of the bank depends on the portfolio decisions that result from each firm’s resource allocation. Promising businesses and activities should receive more resources, and more troubled ones should be shrunk or restructured, unless there are synergies and benefits for client relationships. However, these tools were traditionally used to manage a far simpler landscape of constraints. Capital allocation approaches generally allocate a single measure of equity requirements; FTP addresses funding needs by focusing on funding term. These tools and the associated processes and organizations at financial institutions, in their original construct, struggle to accommodate multiple constraints and multiple forms of financial resources.

## BANK RESPONSES THUS FAR

While many banks have recognized the new challenges, progress on developing sustainable and holistic FRM has been limited in recent years. The IACPM/Oliver Wyman survey confirmed that there is still a wide range of FRM approaches being deployed in the new constraint environment, with no clear industry standard having yet emerged. Moreover, while institutions have reported developments on framework, infrastructure, organization and commercial shifts, there is at least as much to do ahead for the industry as has been done already.

To date, banks have adapted to the new exigencies for FRM through both conceptual and tactical solutions. Actions taken include changes to functional capabilities around evaluating and managing constraints as well as changes to commercial strategy to adjust business profiles in light of the new constraints (Exhibit 6). Similar actions are also planned for the future, suggesting a long road ahead for many banks.

Exhibit 6: Actions taken to date and anticipated in next 1-2 years in response to new financial resource constraints\*



\* Oliver Wyman/IACPM FRM Survey: Which types of actions have been undertaken to date as a result of the changing financial resource constraint landscape? Which types of actions do you anticipate taking in the next 1-2 years as a result of the changing financial resource constraint landscape?

Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

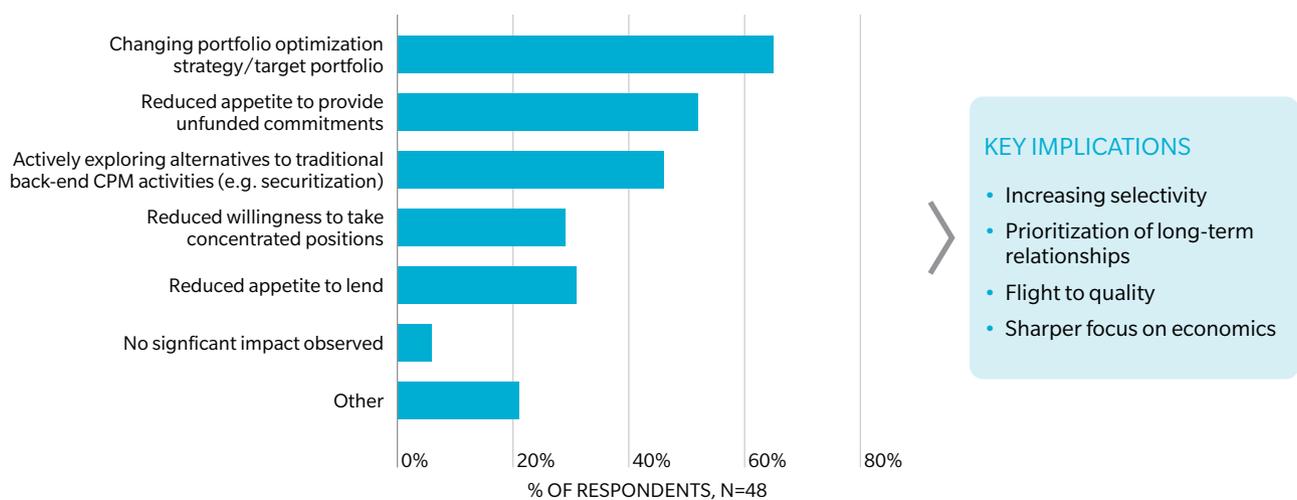
As noted earlier, the pre-crisis approaches to guiding financial resource consumption are proving inadequate against the complexity of new constraints. To address the gaps, many institutions have altered their methodologies to reflect some, yet not all, of the new constraints; and there are numerous examples of banks reflecting the new FRM considerations in their business decisions via ad hoc, pragmatic approaches. Furthermore, despite the challenges in defining the new conceptual FRM framework, banks have already been making significant changes in their risk profiles and strategies that reflect the new constraints. These changes range from broad strategic actions such as moving and/or exiting certain businesses and geographies to tactical changes in pricing and underwriting.

Approximately half of survey participants reported that the conceptual framework for allocation of financial resource costs is not fully developed at their firms. Currently, there is little academic or established professional work of direct relevance to FRM in this new, more complex environment, and best practice approaches have yet to be identified. Despite the challenges in the conceptual framework for FRM, banks nevertheless have been making significant changes in their risk profiles and strategies in the years since the crisis. Selected examples include:

- Exiting businesses that are balance sheet intensive
- Exiting specific geographies
- Moving exposures off-shore
- Increasing risk, moving “down-market” to optimize return on use of balance sheet
- Refusing cheap sources of deposits
- Increasing focus on fee-based businesses

In terms of Credit Portfolio Management (CPM) activities, institutions have taken a sharper focus on relationship economics (Exhibit 7).

Exhibit 7: Implications of changing FRM landscape on credit portfolio decisions\*



\* Oliver Wyman/IACPM FRM Survey: What have been the commercial implications resulting from the evolving/increased financial constraints?  
 Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

The survey indicated that in many instances, however, Credit Portfolio Management activities use ad hoc approaches to reflect financial resource constraints into business decisions (Exhibit 8).

Exhibit 8: Use of ad hoc approaches to incorporate financial resource constraints in CPM\*

CONSTRAINTS INCORPORATED INTO CREDIT PORTFOLIO MANAGEMENT DECISIONS OUTSIDE OF CAPITAL ALLOCATION AND FUNDING CHARGING MECHANISMS (# INSTITUTIONS)

	UNSTRESSED CAPITAL RATIOS	STRESSED CAPITAL RATIOS	LEVERAGE RATIO	LIQUIDITY/ FUNDING REQUIREMENTS	LARGE EXPOSURE STANDARD
Performance management/ profitability analysis	11	11	10	10	8
Product pricing/costing	1	6	10	5	9
Individual loan origination decisions	9	13	14	5	21
Asset sales/purchases	13	10	9	11	12
Product structuring	14	4	10	7	10
Securitization	8	9	8	8	11
Hedging	3	5	4	10	11

\* Oliver Wyman/IACPM FRM Survey: Please indicate which financial resource constraints are factored into the applications (# of responses citing "Quantitatively incorporated outside of capital allocation or funds transfer pricing" or "Qualitatively considered in decision making")

Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

Our survey follow-up discussions with banks provided additional insight on areas where ad hoc approaches are being used to incorporate FRM considerations into business decisions. Selected examples include:

- **Most binding constraint:** The most binding constraint naturally gets the most attention, especially at those institutions where the financial resources did not meet, or barely met, an increased regulatory minimum as a result of new regulation. For example, new leverage ratios pushed those banks that are leverage constrained to shrink their balance sheets.
- **Leverage ratio:** For many institutions, leverage ratio requirements may not be fully incorporated into capital management, as the leverage ratio may not be the currently most binding constraint or simply because it is not very sensitive to the risk profile of an institution's exposures. However, banks must nonetheless monitor and manage their leverage to ensure they remain within regulatory requirements. For example, at one institution, corporate and institutional clients typically increase their deposits at quarter-end in anticipation of their quarterly financial statements. To limit the systematic deterioration of their leverage ratio, the bank's business managers proactively work with their clients to limit such quarter-end deposits.

- **Credit portfolio management:** Regulatory driven measures of risk and capital requirements are often insufficiently nuanced to guide CPM decisions. For example, hedging transactions may not lower regulatory capital but nonetheless reduce economic risk. Similarly, pricing decisions take into account more granular views of risk than may be captured in regulatory capital requirements – particularly when regulatory capital is based on Standardized RWA measures.
- **Stress testing:** While stress test based capital requirements are often a binding constraint for US institutions, in many cases they are not embedded in capital allocation processes. As a result, institutions incorporate these requirements into business planning, balance sheet management and strategic planning outside of the capital allocation mechanism. Simplified representations of stress requirements are used, for example, in the assessment of alternative business plans. There are a few banks, however, that have specifically incorporated CCAR results into capital allocation.
- **Host country capital:** Formal capital allocation processes are commonly based on capital requirements at the consolidated level of the organization rather than using local, geography-specific capital rules. Consolidated requirements are a more appropriate indicator of the capital costs to external shareholders. However, institutions also consider local capital rules to assess local needs, understand “trapped capital”, and potentially assess performance relative to local peers.

All the above actions are being taken despite the lack of clarity on the “right” approach to measuring financial resource constraints and, more critically, uncertainty on the target state for regulatory requirements. Furthermore, for the various ad hoc approaches, business decisions are often led by the most relevant business units or functional areas; this opens the possibility for each area to do its own calculation of financial resource costs and implications. Within a complex, distributed organization, business and functional areas may end up working towards different objectives. For example, central capital management teams may be working to strengthen the balance sheet and capital base in the context of increasing regulatory requirements such as Basel IV, whereas business line managers may be looking to take on more risk in light of excess risk taking capacity based on current allocated capital measures.

Going forward, developing approaches to integrating the various constraints as well as developing a robust supporting infrastructure will be critical to driving effective decision making, both in the front line business and at a group-wide strategic and tactical level.

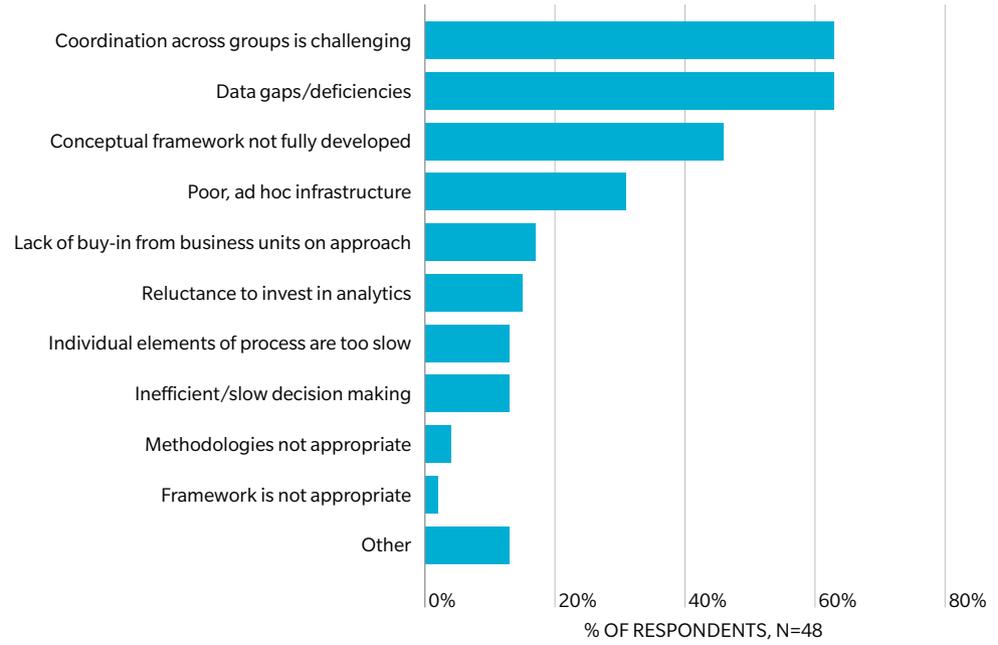
### 3. KEY FINANCIAL RESOURCE MANAGEMENT CHALLENGES

The obstacles to effective FRM in the post-crisis era are numerous and varied across banks. Nevertheless, across the surveyed firms, several recurring themes are apparent:

- **Process coordination:** Many different businesses and functional areas now need to be actively involved in FRM, and their involvement requires complex coordination rather than just bilateral interactions. The number of internal processes impacted by FRM is great, including strategic planning, budgeting, capital allocation, funds transfer pricing, performance management, and other processes. Businesses and functional areas within large financial institutions could be working towards different FRM objectives and developing their own unique views on the constraints and trade-offs – unless there is a strong coordinating function involved.
- **Conceptual framework:** The conceptual framework for how to incorporate new constraints into FRM processes has not yet been fully established at many firms, and a best-practice industry approach has yet to emerge. For example, should return on capital consider current spot Basel capital ratios, economic capital ratios or stress testing based views? Alternatively, should various measures be blended to provide a single metric? The landscape is complex and uncertain as new rules are still emerging but clear standards are needed to ensure coherence and understanding across the organization.
- **Data and infrastructure:** There are often challenges with providing sufficient and timely information to allow FRM-related business decisions to be made, particularly at lower levels of granularity, such as for business- or client-level decisions. For example, many firms may not have the approaches and data to assess the contribution of individual exposures to certain financial resource constraints such as stress test based requirements. Even where information exists, it may not be readily available to the end users in the lines of business.
- **Governance:** The survey results also suggest that governance is a significant challenge in developing a robust FRM framework. In addition to process coordination (discussed above), challenges such as lack of buy-in and inefficient decision making also point to an underlying issue with developing effective governance for FRM.

The figure on the following page shows the challenges highlighted by survey participants.

Exhibit 9: Challenge in developing robust FRM framework\*



\* Oliver Wyman/IACPM FRM Survey: What do you consider to be the biggest challenges in developing a robust FRM framework at your firm?  
Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

## 4. THE WAY FORWARD

In managing financial resources, banks make decisions across a range of tactical and strategic priorities as well as at various levels of the enterprise and business units – illustrated in the figure below.

Exhibit 10: Illustration of a bank's decision making landscape



Source: Oliver Wyman

In the pre-crisis environment, capital allocation and funds transfer pricing were effective mechanisms for ensuring that a bank's various businesses and functional areas pursued a consistent strategy; the framework for understanding FRM and the coordination required to achieve a bank's goals were comparatively simple and straightforward. Going forward, two key components of effective FRM will be transforming the conceptual framework for FRM and adapting the organizational model for the new operational requirements.

### 4.1. CONCEPTUAL FRAMEWORK FOR FINANCIAL RESOURCE MANAGEMENT

It is critical for each bank to develop a tailored approach for FRM since banks have different binding constraints, business models and more importantly governance, culture, transaction booking models, and MIS capabilities; there is no one-size-fits-all solution.

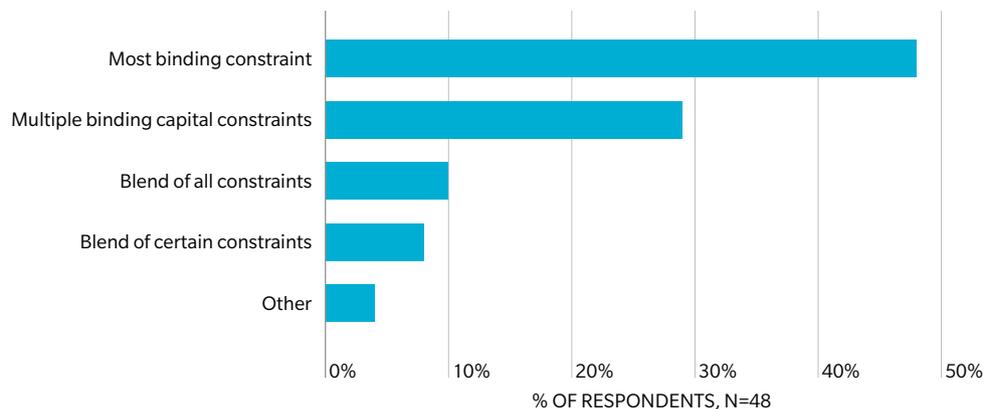
Banks will need to identify and prioritize which of the multitude of constraints matter in managing financial resources today, as well as in the bank's contemplated future under multiple macro scenarios, and determine how those constraints should be incorporated into the FRM framework. The relevant constraints for a particular bank will be driven by the availability of capital, liquidity, and collateral relative to the needs of their business models,

jurisdictions, and legal entities, among other considerations. Furthermore, the relevant metrics for FRM and their calibration may differ depending on both the business purpose (e.g. marginal growth decision versus performance management) and the time horizon (e.g. shorter time horizon for sales and trading activities versus longer time horizon for new product growth in retail) for resource deployment. Finally, many of the regulatory minimum constraints are articulated over multiple types of financial resources, which often have different cost structures (e.g. capital versus liquidity); understanding the cost implications also needs to be tackled.

## IDENTIFYING AND PRIORITIZING CONSTRAINTS

Institutions recognize that in many cases, there are multiple constraints on the same financial resources that can be considered in decision-making. However, banks are divided over how to consider multiple financial constraints within their FRM frameworks and within decision making frameworks. Approximately half of survey participants focus primarily on the most binding financial resource constraint. This is expected for marginal decisions, especially if the most binding constraint requires the bank to make decisions on marginal growth or marginal shrinkage. About a quarter of firms incorporate and manage across multiple constraints (these tend to be the larger institutions), and a minority of firms are implementing approaches for blending constraints into aggregated metrics. These more balanced approaches are needed for performance measurement.

Exhibit 11: Framework for incorporating the range of capital constraints\*



\* Oliver Wyman/IACPM FRM Survey: How does your firm's framework incorporate the range of constraints on Capital and Leverage?  
Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

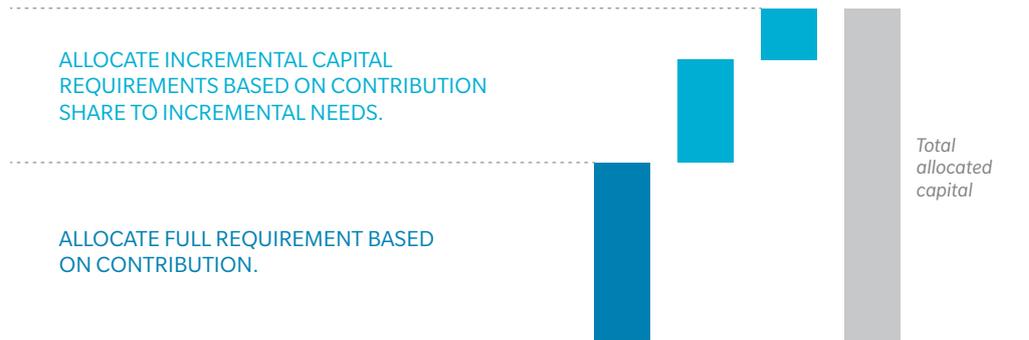
Some of the differences in which measures are considered and how they are prioritized are clearly the result of differing underlying circumstances. For example, as a result of new regulatory constraints, a bank might discover that the leverage ratio is their most binding constraint and that they need to de-leverage immediately. In contrast, an LCR constrained and capital rich bank might just focus on their HQLA portfolio in their FRM approach. A megabank with a wide array of commercial and investment banking activities and subject to tougher regulatory requirements due to its G-SIB status may reasonably find any of a variety of capital and liquidity constraints to be critically binding in the future. Therefore, such a firm needs to monitor and carefully allocate resources taking into account multiple constraints. On the other hand, a bank with a more traditional focus on loans funded by deposits and which is not subject to G-SIB requirements may simply need to track and allocate capital according to Basel RWA only.

While the circumstances in the examples above are quite different, we also see considerable dispersion in approaches across banks whose situations are relatively similar. Among the largest institutions, some have elected to use a blended metric of capital requirements while others either focus on a single metric or continue to look at multiple metrics in parallel. This divergence reflects different choices on the trade-off between the complexities of managing to multiple metrics versus the potential inaccuracies and incentive misalignments of combining constraints into a single metric.

For large and complex financial institutions, it is unlikely that they will be able to make all their FRM decisions based on a simplified representation of financial resource costs such as blended equity allocations. However, such metrics can serve to simplify specific business processes, such as performance management, to give a clear and comparable view of performance across business areas. We see three main analytical approaches for aggregation:

- **Measure performance with respect to multiple constraints:** Risk-adjusted performance is often a ratio of risk-adjusted returns to equity. It is not uncommon to review risk-adjusted performance with both an Advanced RWA based denominator as well as a Leverage ratio driven approach at most investment banks. In this case, the decision makers can evaluate performance with both metrics and assess the appropriate balance between them.
- **Weighting approach:** This approach combines multiple measures of equity requirements into a single measure through weightings; for example, equal weights of 25% each for Advanced and Standardized approaches, leverage ratio and CCAR for capital allocation. Firms may determine the weights based on how binding constraints are today, as well as in the future, statically or dynamically. Other factors, including the firm's FRM related objectives may factor into the decisions on weights.
- **Constraint nesting:** A nesting approach takes into account multiple levels of binding constraints by allocating equity requirements sequentially starting with the most risk sensitive requirements. Incremental capital needs due to less risk sensitive constraints (e.g. leverage) are then allocated proportionally to the exposures generating the additional need. This approach preserves some risk sensitivity in capital allocation even where the most binding constraint is not risk sensitive and penalizes exposures more where they have large impacts across multiple constraints. This approach also mitigates the instability in allocated capital that could result from the firm's most binding constraint changing to a different metric.

Exhibit 12: Illustration of constraint nesting approach



Source: Oliver Wyman

## DECISION TIME HORIZON

In the current environment, institutions often face a single, clear binding constraint as a result of their business model and changes to prudential requirements. For example, institutions with low risk balance sheets, significant off balance sheet exposures, and/or large fee based business models are often constrained by the supplementary leverage ratio. US regionals predominantly face CCAR based binding constraints, and European institutions are often constrained by Basel Advanced RWA measures (and corresponding floors). Over time, however, institutions may adjust their book of business and exposure profile to take advantage of unused capacity with respect to particular financial constraints. If the cross calibration of regulatory requirements across binding ratios is not consistent with a firm's business model, there could be unintended system-wide consequences for that model. For example, with shareholder pressure, structurally leverage constrained institutions may take on greater risk as the marginal capital requirements may be low. Moreover, over the long-term, we may expect that firms will find ways to make the most use of capacity across all constraints to most efficiently deploy resources. When all constraints are binding or near-binding, their relative importance becomes more equal.

The conceptual framework for FRM needs to factor in a range of decisions, including both long-term strategic decisions on which products and markets to operate in as well as short-term tactical decisions on how to employ unused risk capacity.

Just as airlines use a different calculus for deciding which routes to travel than for pricing of a marginal open seat, financial institutions could take a different lens to decisions on near-term deployment of financial resources than for long-term strategic decisions. In making decisions today that will impact the firm over a long time horizon, managers should step back from narrow views on the current binding constraint. Long-term decisions should give greater weight to the firm's advantages and strengths relative to peers, the outlook across

business segments, and the flexibility afforded by various business profiles. With respect to financial resource related costs, a range of constraints should be considered without overweighing any individual constraint.

## ASSESSING CONSTRAINTS THAT IMPACT MULTIPLE TYPES OF FINANCIAL RESOURCES

Regulatory constraints on financial resources are articulated in complex forms that may span multiple types of financial resources with different costs, making the estimation of the cost implications more challenging. For example, TLAC requirements (MREL for European institutions)<sup>3</sup> can be met through capital or long-term debt issued out of a top-tier holding company. However, these financial resources are treated very differently in most FRM processes. Funding costs are generally charged back directly to activities generating funding needs whereas equity requirements are incorporated into the denominator of return on equity performance measures. Similar issues arise in evaluating constraints that apply to various types of capital measures. Constraints on Total Risk-Based Capital may be met through Common Equity Tier 1 capital or hybrid instruments that may have lower costs.

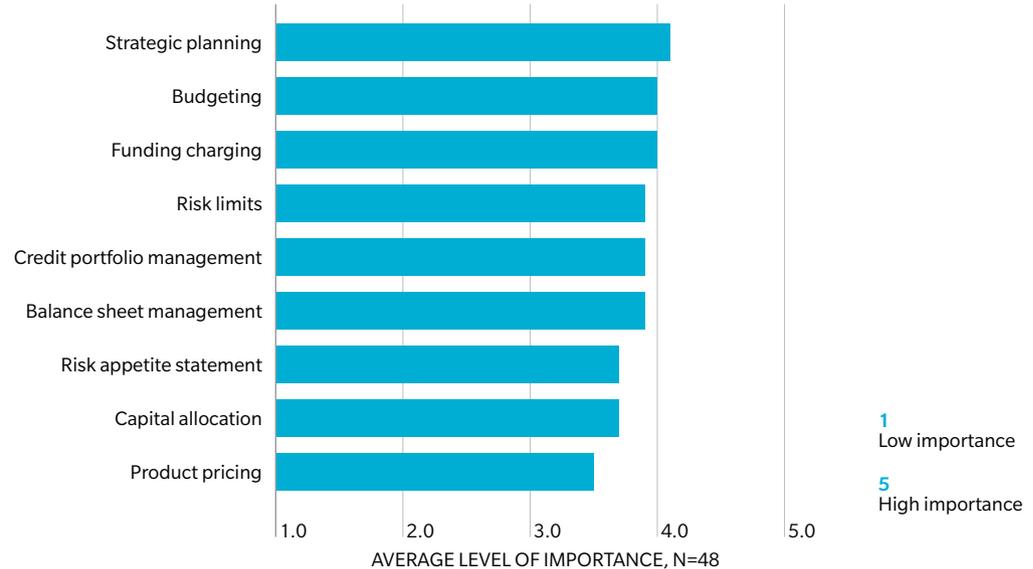
For each constraint, FRM approaches should decompose the constraint across the various types of financial resources – allocating first to the resources with the lowest marginal costs. For example, TLAC needs can first be allocated to CET1 capital up to the level of capital already required from other prudential requirements. Beyond this amount, incremental needs must be met through long-term debt (LTD minimums are also applicable). The incremental LTD requirements and corresponding costs can then be allocated back to exposures generating the overall TLAC need.

## 4.2. ORGANIZATIONAL AND GOVERNANCE MODEL

Financial institutions employ a broad range of processes to drive business decision making across the firm. These processes span the organization, including the corporate center as well as lines of business and more granular segments. They also cover long-term, strategic decisions and more tactical decisions. In order to embed financial resource constraints and costs into business decisions, the constraints must be integrated into these processes on an ongoing basis. Survey respondents confirmed that these many processes are indeed used to manage financial resource constraints (Exhibit 13).

<sup>3</sup> Total Loss Absorbing Capacity (TLAC) and Minimum Requirements for Own Funds and Eligible Liabilities (MREL)

Exhibit 13: Framework and processes used to manage financial resource constraints\*

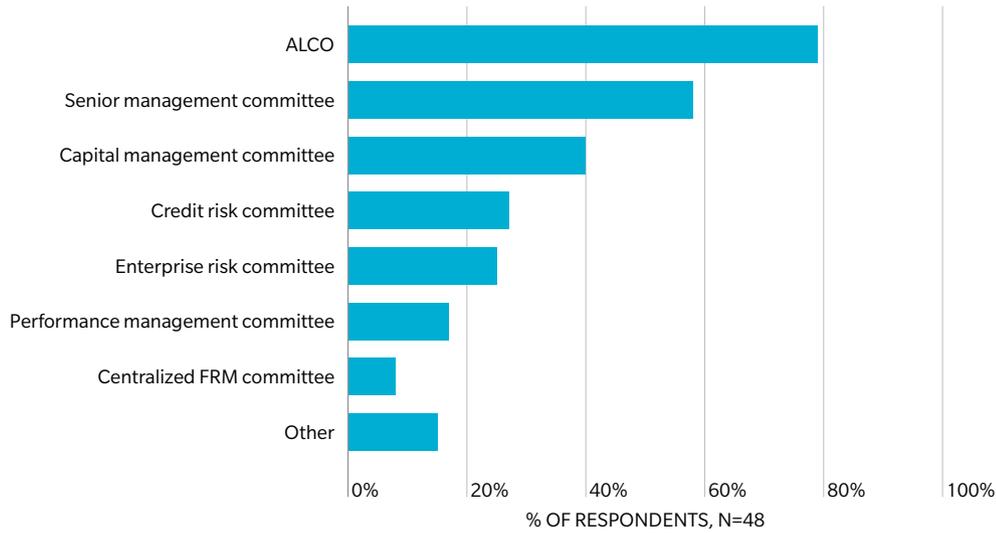


\* Oliver Wyman/IACPM FRM Survey: Please indicate the framework and/or processes that your firm currently uses to manage the impact of financial resource constraints and the level of importance of each (1 Low – 5 High).  
Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

In the traditional approach, the Risk, Finance and Treasury teams focused on Capital Allocation and FTP would provide capital and funding cost measures that would be consumed in these various business management processes. Coordination across business processes and the functional areas responsible for them was achieved largely through use of a common set of metrics describing the costs of financial resource constraints. As the financial resource constraints have become more complex, the traditional Capital Allocation and FTP approaches are no longer sufficient mechanisms. Firms are finding that in order to optimize resource usage, they must take into account constraints that may not be captured fully (or at all) in the traditional FTP and Capital Allocation approaches. This resulting lack of a single metric of financial resource costs has created challenges for coordination within the bank.

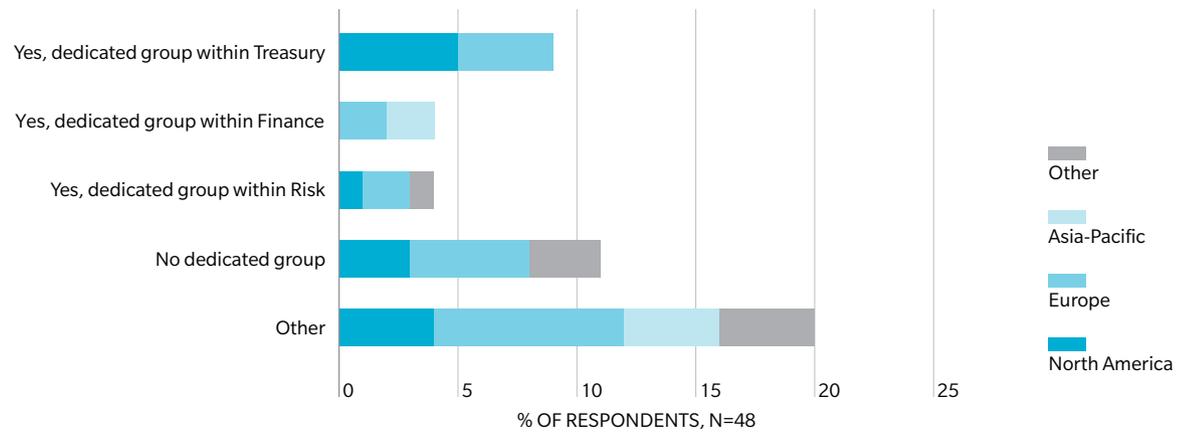
We asked survey participants how they are organized to implement FRM. While the majority of respondents indicate that the Asset-Liability Committee (ALCO) oversees FRM, there are often overlapping responsibilities and/or lack of clarity in FRM governance, and many respondents selected multiple committees responsible for FRM (Exhibit 14). Furthermore, regarding the actual execution of FRM-related tasks, less than half of the respondents have a single group holistically responsible for FRM (Exhibit 15; note that most of the “Other” responses indicated distributed ownership for FRM issues).

Exhibit 14: Which committee(s) is responsible for overseeing FRM?\*



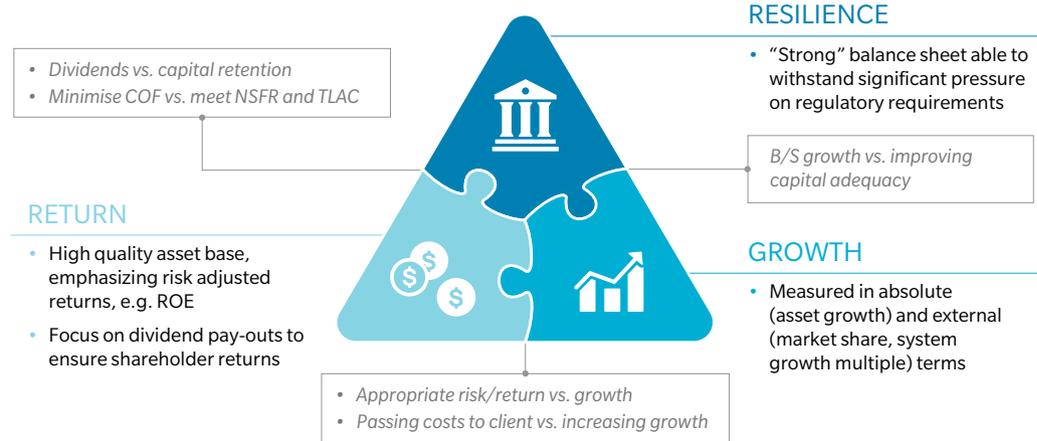
\* Oliver Wyman/IACPM FRM Survey: Which committee(s) is responsible for overseeing FRM?  
 Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

Exhibit 15: Does your firm have a dedicated group tasked with FRM oversight?\*



\* Oliver Wyman/IACPM FRM Survey: Does your firm have a dedicated group that looks comprehensively across your firm's financial resources?  
 Source: IACPM/Oliver Wyman Financial Resource Management Survey, 2016

## Exhibit 16: Top of the house FRM objectives and trade-offs



Source: Oliver Wyman

In our view, this lack of central organization of FRM is a contributing factor to the process and coordination challenges that firms have experienced. In the absence of a strong central function, recognized as a center of expertise, defining the firm’s FRM objectives and providing a holistic set of metrics to drive incentives towards those objectives, business managers are left trying to coordinate across a web of other business and functional areas. This type of cross coordination is inefficient for individual managers and the firm and increases the chances of inconsistency of approach across the firm.

Given the inter-related impacts of multiple contemporaneous financial constraints, some of which may even be sending conflicting signals for decision making, it is imperative for banks to have a dedicated central coordinating function for FRM. Core activities for this function would include:

- **Defining the objectives and trade-offs:** Banks face a set of competing FRM related objectives. Profit maximization, financial resilience and business growth can push the organization towards different decisions. For example, managers must trade off these objectives in capital actions: retention of capital can be used to either drive growth of the balance sheet or increase financial resilience; limiting balance sheet growth can allow firms to return capital or increase capital ratios, and additional capital at risk can be used to enhance profitability or drive volume growth. All of the objectives cannot be concurrently maximized. These trade-offs occur at the more granular levels as well: underwriting decisions can focus differently on profitability, growth and resilience. A central FRM focused unit can bring senior management through the process of defining, communicating and educating the firm’s FRM related objectives in order to drive a common approach across the firm.
- **Coordinating the development of capital, funding and other FRM metrics:** Existing metrics used for FRM are insufficient. Allocated capital and FTP often do not capture the range of constraints applicable to institutions. At the same time, firms should avoid the complexity involved in having too many FRM related measures as these can lead to decision paralysis or require complex approaches to trade off the different measures. A central FRM team can bridge the gap between business and central teams responsible

for decision making (e.g. CPM, pricing, performance management, budgeting/ planning) and the Risk, Finance and Treasury teams who understand the costs of the financial resources. Working with these groups, an FRM team can define the required set of metrics, drive the process for production of these metrics and serve as a center of excellence to educate the organization on these constraints.

- **Driving organizational changes to cover FRM activities:** As FRM activities are often distributed throughout various business and central functions, institutions should ensure the distribution of responsibilities is rational and in line with the broader mandates of different areas of the bank. For example, the risk function may be responsible for setting up limits on diverse financial resource constraints while business and finance functions may use capital allocation and FTP to drive optimization using a more narrow set of constraints. A central function can help ensure there is clarity of role of each area within the broad FRM set of objectives.
- **Driving optimization processes:** Current organizational areas responsible for various business optimization processes such as budgeting, portfolio optimization, balance sheet management and strategic planning may not be comprehensively covering the set of optimization opportunities. For example, recent work at US institutions on resolution planning (i.e. living wills) has, in some cases, highlighted additional uses of financial resources that were not fully optimized in the past. Demands on liquidity in the lead-up to a resolution scenario may increase due to additional requirements from financial market utilities, as well as further drawdowns by affiliates throughout a banking group. There are opportunities for optimization of the potential needs that currently often do not have a clear owner in the organization. An FRM unit may take the lead in such cases where opportunities otherwise may fall through the cracks. In addition to comprehensive coverage of the optimization opportunities, it will be critical for FRM teams to have capable tools that allow timely aggregation and calculation of key FRM related metrics, and also allow these metrics to be tested through sensitivity/scenario analysis in order to understand a range of potential outcomes for planning and risk management purposes.

## 5. CLOSING THOUGHTS

Through our survey, we have exposed the new landscape for FRM and the current state of the industry in addressing it. The industry has experienced a series of complex financial requirements that have put in stark relief the deficiencies of the existing frameworks, capabilities, and organization to measure financial needs and pass them through to decision making. But the solutions to this are not revolutionary in our view – rather they are significant, and often difficult step changes to manage the increased complexity. The specific step changes must be tailored to the specific financial, functional and organizational constraints for each institution. Your bank’s commitment, capabilities and culture will then dictate the speed at which you solve your version of the FRM puzzle.

## ABOUT IACPM

The IACPM is an industry association established to further the practice of credit exposure management by providing an active forum for its member institutions to exchange ideas on topics of common interest. Founded in 2001, the Association represents its members before regulatory and administrative bodies in the US and internationally, holds bi-annual conferences and regional meetings, conducts research on the credit portfolio management field, and works with other organizations on issues of mutual interest relating to the measurement and management of portfolio risk.

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