McKinsey&Company

McKinsey Working Papers on Risk, Number 38

Capital management

Banking's new imperative

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November 2012

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Capital management: Banking's new imperative

Executive summary

With banks' capital needs growing, and sources of capital ever more elusive, the 2012 edition of McKinsey's capital-management survey of European banks has produced some timely findings:

- Regulatory capital (RegCap) remains the dominant capital metric, as it has been since the crisis hit in 2008. Its use for bank steering and management has grown from 70 percent of banks to 90 percent over the past two years.

- The use of another metric, economic capital (ECap), has grown even more, with about 70 percent of banks now using an ECap model as a complement to RegCap, mainly to meet regulatory requirements for an internal capital-adequacy-assessment program.

- However, few banks are fully exploiting the insights produced by ECap models:

  — Only about 35 percent use ECap to size capital buffers and set limits.

  — Very few institutions fully align RegCap and ECap in an effort to reduce complexity for management decisions.

- Almost all respondents (80 percent) have estimated the impact of Basel III on their bank. But many fewer have taken steps to mitigate that impact, though more than 50 percent say they have plans in place.

- In the wake of Basel II, most institutions have run programs to make calculations of risk-weighted assets (RWAs) more accurate and boost capital efficiency, with substantial reductions in RWAs of 5 to 15 percent on average. Banks strongly agree that there are significant additional opportunities for RWA optimization, especially in counterparty credit risk, market risk, and operational risk.

- RWA optimization programs are not yet sufficiently embedded in banks' management. Initiatives to optimize RWAs sometimes run behind schedule and often fall short of the total opportunity because they are not managed holistically and do not take leverage and liquidity/funding requirements into account.

- A majority of banks (60 percent) have already begun to adapt their business models to Basel III, beginning with some operational, "hands-on" improvements such as greater collateralization of banking business and a more capital-efficient product mix.

- In capital markets businesses, banks are accelerating a wind-down or restructuring of capital-inefficient trades and even entire businesses; eventually, banks say, this and other moves will release up to 30 percent of Basel III RWAs. But some strategic opportunities to develop capital-focused business models have not yet been fully explored. As a result, overall capital productivity (returns/RWAs) is widely variable, ranging from about 4 percent at some banks to 8 percent at others.

- Most banks (about 80 percent) effectively use a well-defined risk appetite rather than simple risk-bearing capacity to derive limits and the capital available for allocation. In keeping with that, a risk-adjusted performance-measurement system based on economic value is used by most banks. But the actual allocation is still done as part of the yearly budgeting process, with few banks taking a through-the-cycle perspective.

- Most banks have dedicated centralized decision bodies and process ownership for capital management. Usually this body is a committee—45 percent of banks refer these topics to their asset-liability committee. Final decisions on capital are made by the management board at 80 percent of banks.

Introduction

Capital management has probably never been more important for banks than it is today. Worldwide, and especially in Europe, the industry is confronting a severe capital shortage, driven primarily by new regulations and the increased volatility of financial markets.

Basel II.5 and Basel III will raise the quality of capital, making some forms of capital ineligible for regulatory purposes; and they will add higher capital charges for market risk, counterparty credit risk, and securitizations.[1] Many are expecting stricter enforcement of Basel II's Pillar 2 requirement for an internal capital-adequacy-assessment process (ICAAP) to put capital against risks not covered by Pillar 1, which will lead to significantly higher capital requirements.[2]

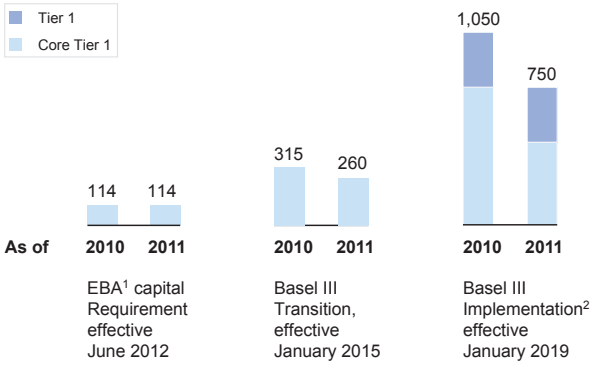
Other regulations will also boost capital requirements. In June 2012, the European Banking Authority put in place short-term requirements to increase core Tier 1 capital ratios to at least 9 percent, after adjustment for exposure to several troubled European economies. National regulators in Austria, Sweden, Switzerland, and the United Kingdom have also weighed in, and banks based in these countries will be subject to yet higher capital requirements. Finally, those banks that qualify as systemically important financial institutions (SIFIs) will be subject to a capital surcharge.

Another force is also at work. Even with the higher capital requirements imposed by regulation, rating agencies and many investors, in particular bondholders, want banks to carry a stronger capital buffer, over and above regulatory minimums. But they remain concerned about the difficulty of raising more capital in the currently depressed markets; investors are also concerned about the further dilution of their shares.

Put it all together and European banks are facing a series of serious capital shortfalls over the coming years (Exhibit 1). The scale of the problem may be unparalleled in modern banking history. All told, even after their efforts of recent years, European banks alone must come up with more than €750 billion in additional capital, from the markets, retained earnings, or by shrinking their balance sheets.[3]

Exhibit 1 Despite some progress since 2010, European banks continue to face significant capital shortfalls.

Additional capital needed by Europe's banks to meet new regulations
€ billion



1 European Banking Authority.
2 Estimates assume regulatory ratio of 4.5% for core Tier 1 capital with additional 2.5% conservation buffer and a cushion above minimum regulatory requirements of 2.0 to 2.5%; higher ratios assumed for Switzerland and the United Kingdom.

Source: European Banking Authority; McKinsey analysis

Banks will pursue all these approaches. And they will also seek to manage their current capital stocks better than before. To understand the leading practices in capital management, McKinsey conducts a capital-management survey. More than 25 European banks participated in the recent survey or interviews. All are fully subject to Basel II, II.5, and III regulations; many are also exposed to the other regulations mentioned above; and all are public firms subject to rating-agency and investor scrutiny.

1 *McKinsey Working Papers on Risk*, Number 26: "Basel III and European banking: Its impact, how banks might respond, and the challenges of implementation," November 2010 (mckinsey.com).
2 *McKinsey Working Papers on Risk*, Number 27: "Mastering ICAAP: Achieving excellence in the new world of scarce capital," May 2011 (mckinsey.com).
3 In November 2010, we estimated European banks' Tier 1 capital shortfall at €1.1 trillion (see *McKinsey Working Papers on Risk*, Number 26, op cit.) Since that time, banks have raised some capital and have deleveraged.

The results of the survey show interesting new dynamics in capital management and point up some significant opportunities for banks. Key findings include the following:

- **Unwanted complexity stymies capital management.** Banks increasingly struggle with management complexities stemming from simultaneous use of two metrics for management decisions: regulatory capital and economic capital. Ninety percent use regulatory capital,[4] and 75 percent use economic capital; a good portion (about two-thirds) use both. Thirty-three percent of all banks we surveyed use both in parallel for different purposes at the corporate level. At other banks, the doubling up is less organized: some business units and corporate-center groups favor one model, some use the other. But only 10 percent of banks fully align the two systems; the rest confess that the difficulties are currently too great (though with the emergence of "going concern" capital-management models some banks say they are making headway). Capital management has become even more complex recently, as economic capital models had a comeback over the past two years; 75 percent of banks use them now, while less than 40 percent did two years ago. But few banks agree that they fully capture insights from economic capital models, such as guidance on the sizing of capital buffers.

- **Capital optimization can yield more.** Although most banks (more than 65 percent) say they have conducted meaningful programs to optimize risk-weighted assets (RWAs) and have seen 5 to 15 percent RWA savings, survey participants also say they see some large outstanding RWA optimization opportunities from improving data quality, risk methodologies, and processes. In a word, they see opportunity to achieve capital savings by being more precise in measuring true risk. Banks also report that they are worried that their insufficiently detailed understanding of capital figures may result in poor decisions about business strategy.

- **New opportunities emerge to go "capital focused."** The majority of banks have started to adapt their business models to the new environment and have typically started with some of the more obvious improvements, such as increasing collateralization or winding down capital-intense but noncore businesses. Banks concede that the more challenging strategic opportunities from shifts in product mix, innovative outplacement models, and repricing are not yet fully explored. Hence, banks' regulatory capital productivity varies significantly; after adjusting for risk costs, top-performing banks use their regulatory capital more than twice as productively as an average bank.

- **Capital-allocation processes are stuck in the past.** Few banks use an active, consistent, and forward-looking approach to allocate capital and other resources. Instead capital allocation is still done primarily through traditional bottom-up budgeting processes that focus on one year rather than the full economic cycle; interestingly, regulators have recently started to push banks toward multiyear capital allocation and planning.[5]

The survey produced a number of other insights. For example, while banks have improved their capital position in the past few years, most have not addressed the question of capital efficiency across their legal-entity structure and as a result are subject to unnecessary capital deductions. One piece of good news is that governance models are stable. Most banks have dedicated centralized bodies such as asset-liability committees to oversee capital management. But the most important findings are the four listed above, which we explore below in greater detail.

4 All figures from the capital-management survey have been rounded to the nearest 5 percent.
5 For example, the German regulator BaFin recently released its new Minimum Requirements for Risk Management accord, which calls for multiyear capital planning, and Basel II's internal capital-adequacy-assessment provision asks banks to establish multiyear capital plans and to take a dynamic view on capital structures that can accommodate stresses and other deviations from these plans.

Unwanted complexity

Regulatory capital (RegCap) is banks' preferred capital metric, as it has been since the fall of 2008 and the onset of the financial crisis. The use of RegCap has grown from 70 to 90 percent over the past two years. Banks use RegCap both for capital management and for the related tasks of allocating capital and other resources and performance management. However, economic capital (ECap) use is making a comeback; 70 percent of banks today say they use an ECap model as a parallel or complementary model to RegCap, for management and steering purposes, up from less than 40 percent two years ago. Regulators' new emphasis on ICAAP is responsible for the surge in some regions.

Two capital metrics favored by rating agencies, adjusted common equity and adjusted tangible equity, have gained in importance. Usage increased from roughly 30 percent in 2009 to 45 percent in 2011. Even at that level, however, these metrics are clearly less important than economic capital.

While more and more banks are using ECap models, not all of them are gleaning the insights from them that they might. Only 35 percent of banks use ECap results to help them determine the right size of their capital buffers. Although banks agree that ECap models help to understand concentration risks—that is, to industries, single names, or risk factors that might affect several business sectors—very few banks use ECap results to set limits on exposure to business segments (55 percent), industry (18 percent), or single names (27 percent).

The simultaneous use of ECap and RegCap causes problems. Ninety percent of banks use RegCap to manage capital adequacy at the group level, but only 40 percent allocate RegCap figures to business units and trading desks. Instead, at many banks (65 percent), business units and some desks use ECap models for their own purposes.

This triggers unwanted management complexity. Primarily, RegCap and ECap models can give contradictory messages, making it difficult to make business decisions such as determining the bank's risk-bearing capacity or assessing the profitability of certain trades and transactions. At the banks we surveyed, economic capital figures can range from 90 to 120 percent of regulatory capital as calculated under Basel II—and this does not include some outliers that were much further apart.[6] As a matter of practicality, most banks that use both capital metrics switch between them, and management decisions are thus heavily influenced by the constraints of the chosen metric and of the model in which the metric is embedded. (See "Pros and cons of various going-concern capital models" on page 5.)

Only a very few institutions align RegCap and ECap. Some institutions try to align RegC and ECap through a scale, that is, they introduce an "exchange rate" to convert economic capital to regulatory capital. This approach can be effective, for example, by helping achieve alignment on how much discretionary capital is available for allocation to the businesses. But it ensures that the scarcer of the two kinds of capital is binding, and it does not resolve discrepancies in the two metrics' with respect to the profitability of businesses.

A few banks (less than one out of ten) have established a full alignment of RegCap and ECap through "going concern" capital-management tools. The underlying idea of these tools is intuitive and simple, and it gets around one of the biggest shortcomings of ECap models. Today's ECap models measure the capital that needs to be held to avoid a default, given a specific confidence level; but in reality, management teams need to manage businesses against a larger set of more likely and relevant events, for example, the risk of failing to keep regulatory capital ratios or the risk that the bank will be unable to pay dividends. Going-concern models capture this idea by taking regulatory required capital and adding a capital buffer as a safety cushion, to reduce the risk of touching various trigger points (such as falling below regulatory capital requirements) to an acceptable level. The

6 For a more detailed description of the differences between economic and regulatory capital, see *McKinsey Working Papers on Risk*, Number 27: "Mastering ICAAP," op cit, pp. 7–10.

acceptable level of this risk is determined by management and describes the bank's risk appetite. The size of the capital buffer is determined by the going-concern capital model and is based on the risk appetite input and the bank's loss distribution.

Going-concern capital models not only merge ECap and RegCap into one capital figure, thus reducing complexity, but they also measure capital requirements against events that really matter for managers. Developing and adopting these models represents a big opportunity for European banks to reduce complexity in bank management and steering.

Pros and cons of various going-concern capital models

Banks can integrate economic and regulatory capital requirements into one capital model to monitor the bank's fiscal health as a "going concern." Many banks do this effectively by either using the maximum of Pillar 1 and Pillar 2 capital requirements, or by scaling economic capital to regulatory capital requirements, that is, introducing an "exchange rate" between the different capital measures. A more sophisticated method is to develop an integrated going-concern capital model. Exhibit A summarizes these and other options banks are using to align RegCap and ECap.

The core idea of such a model is to consider more probable and management-oriented triggers of risk that might threaten the bank as a going concern, such as the risk of failing to meet minimum regulatory capital requirements; the simpler approaches described above only consider events that would trigger an actual default. In the integrated model, risks are measured as their contribution to the risk of the bank violating its regulatory minimum requirements plus any additional trigger points the management considers to put relevant limits on its risk appetite (for example, the risk of not being able to pay its dividend or the risk of losses in certain business lines exceeding certain threshholds).

In all the models, the risk of exceeding the threshold is quantified in certain confidence levels. However, while the default risk is typically considered at confidence levels of 99.97 percent, the much more likely risk of missing a dividend or falling below minimum regulatory capital thresholds is measured at a much lower confidence level; in so doing, the bank is, mathematically speaking, moving into the center of the loss distribution curve.

Exhibit A Banks align regulatory and economic capital management in several ways.

Typical approaches to integrated capital management

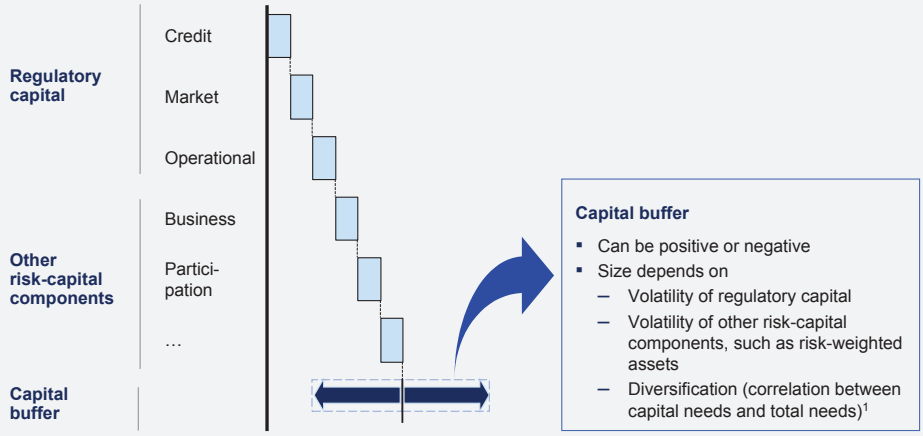
Industry practice

		Description
Pure regulatory-capital steering		Based exclusively on regulatory capital (RegCap); economic capital (ECap) is not calculated
Management based on economic capital alone		Based on ECap; conversion or trigger points are calculated to ensure compliance with regulatory minimums
Scaling economic capital to regulatory capital		Based on ECap, but to ensure that there is always sufficient regulatory capital, ECap is scaled to RegCap
Regulatory capital as a constraint	Portfolio level	ECap is the main metric, and the system provides that there is sufficient RegCap at portfolio level
	Transaction level	ECap is the main metric, and the system provides that there is sufficient RegCap for every transaction
Integrated going-concern model		Capital requirement is defined as RegCap plus a buffer; buffer is determined by the risk of breaching Tier 1 minimum capital targets

Exhibit B The integrated model ensures that appropriate regulatory capital is reserved for every transaction.

CONCEPTUAL

Schematic plan of the integrated going-concern capital model



1 In the event of strong diversification effect, capital burden on single transaction below regulatory minimum capital requirements possible.

Effectively, the integrated model measures economic risk not as the risk of default but as a more likely event on the loss distribution curve. To do that well, the model requires a more granular measurement of capital needs, not only to capture the more probable risk indicators of interest to managers but also to include risk-mitigating factors, such as an increase in interest margins and interest income during economic downturns.

To do this in a practical way, banks would allocate regulatory (Pillar 1) capital requirements to all assets or portfolios and assign additional going-concern capital buffers, in proportion, to assets or portfolios that contribute additional risk of violating regulatory capital requirements. For some assets that are used to diversify or hedge other risk-weighted assets, these capital buffers can be negative. Exhibit B summarizes this approach.

Although the integrated approach may be more intuitive and accurate than the simpler approaches, it comes at some cost. It requires a more accurate measurement of economic risk, especially of the "natural" diversification benefits that must be captured to avoid excessive estimates of economic risk. One example of these benefits is the increase in interest margins often seen in economic downturns, which partially offsets higher credit risk.

Scaling economic capital to regulatory capital is much simpler to implement. However, it provides less insight into the bank's risks, and it does not quantify the capital buffer banks need on top of the regulatory minimum. And, because it considers only the risk of default, what one might call profit-and-loss (P&L) risk, the approach is vulnerable. As we saw over the past year, volatility in RWAs can force banks below the minimum regulatory capital requirements, even while P&Ls are mostly stable.

Some banks try to reduce the complexity that the integrated model entails by using economic capital on the transaction level and introducing regulatory minimum solvency boundaries only at the group level. While this is indeed easier, such an approach requires banks to hold rather large capital buffers at the group level

Capital and RWA optimization: More opportunity awaits

Most institutions say they have conducted programs to optimize capital and RWAs, with an average RWA savings of 5 to 15 percent. Note that RWA optimization does not mean arbitrary adjustments to processes or models, or any kind of regulatory arbitrage, but rather steps to improve the coverage and granularity of risk models, the quality of data entered into models, the eligibility of collateral, and improvements in RWA-relevant processes. In absolute terms, the largest savings has been achieved in reducing credit risk in the banking book (some banks have reduced these RWAs by 20 percent or more). In relative terms, banks say that the biggest opportunity was in the trading book, where some banks say they were able to reduce RWAs by up to 37 percent. For many, mitigation of the significant increase in trading-book capital requirements (to account for market risk and counterparty credit risk) found in Basel II.5 and III is a priority and is crucial to the viability of some of their businesses.

Banks also largely agree that they see significant additional RWA optimization opportunities in four particular areas. First, they see more opportunity to increase RWA efficiency in the banking book. Improvements in modeling (especially in loss-given-default (LGD) and probability-of-default (PD) models, and in collateral allocation) as well as improvements in data quality (that is, collateral recognition, loan classification as committed and uncommitted) are perceived as the biggest opportunities that have been captured by less than half of banks—in some cases by fewer than one out of five. Banks also say that their models can be extended, or new ones built, to better cover their lending portfolios; they'd like to get better at recognizing collateral and also at classifying credit lines as committed or uncommitted.

Second, banks see opportunity to reduce counterparty credit risk in the trading book, especially with respect to data quality. Here they say they can be more accurate in matching the various legs of a trade, such that exposures are appropriately netted and classified. Collateral and risk factors are another type of data whose quality can be improved; often a small number of risk factors accounts for a large part of RWAs, such that data-quality improvements quickly pay off. Likewise, a good share of Basel III's new credit-valuation adjustment (CVA), which imposes a charge for counterparty risk exposure in derivatives, can be mitigated.

Market risk presents a third big opportunity. Banks can reduce RWAs further by optimizing the implementation of new Basel II.5 rules such as the stressed value-at-risk calculation and three related charges covering default risk: incremental risk charge, the comprehensive risk measure (CRM), and securitization charges. These rules alter the treatment of market risk, and many banks are contending with increases in capital requirements for market risk of between 200 and 300 percent. Banks can improve the way they calculate these charges, the way they map assets to models (for example, correlation risks that cannot be classified in a way that makes them eligible for the CRM may face capital requirements under securitization rules that are up to ten times higher), and the quality of the data that go into those calculations.

Finally, operational risk represents a big opportunity for banks to reduce RWAs and also to improve P&L. In fact, the optimization of advanced-measurement-approach models (featuring scenario analysis, key risk indicators, and so on), the improvement of data quality (for both internal and external data), and the exploitation of an effective insurance strategy can lead to substantial savings of up to 30 percent of the total operational-risk capital charge. At the same time, many players have also recently launched initiatives to mitigate operational losses (which can typically absorb up to 5 percent of gross income), boosting the P&L by cutting operational losses by as much as 50 percent). Such programs typically require deep transparency on operational losses and analysis of root causes (by event type, geographies, and so on) to identify mitigating actions and the creation of organizational enablers (such as a stronger reporting system, better incentives, and so on).

As banks go after the remaining opportunities, they recognize that their processes are not as fully institutionalized as they might be. (See "Key success factors for reducing capital wastage" below.) As a result, they capture

savings later than they should and often fail to grasp the total opportunity. The banks we surveyed say they have used between 9 and 45 percent of the available RWA optimization levers. Banks should deploy more of these tools, as appropriate to their circumstances, both for capital reasons and to improve their risk-management capabilities. And they should improve the way they use them, as a foundation for a culture of capital effectiveness and to avoid management decisions based on unnecessarily inflated RWAs. To start, they should continually monitor their capital productivity. And they should run their RWA optimization projects with support from regular data-quality reports (showing, for example, the biggest RWA drivers per segment/unit, the biggest unrated or uncollateralized exposures, and so on). These kinds of practices will help banks establish an incentive for their teams to keep coming up with capital-reduction ideas.

Key success factors for reducing capital wastage

Successful searches for inefficient uses of capital have several characteristics in common[7]:

- **Establish an RWA baseline.** Banks should do this for businesses, portfolios (that is, Basel II/III segmentations), and subportfolios (that is, profit centers). A good baseline will enable plausibility checks and benchmarking with peers, and will help banks follow their business sense while looking for RWA-optimization opportunities. With a solid baseline in place, banks can also conduct accurate scenario planning to gauge the effect of future regulatory change on RWAs.

- **Institutionalize RWA management.** This should be done as an ongoing practice rather than a series of one-off programs. Conceiving of RWA work as a permanent activity helps banks avoid the costs associated with, say, doing a data scrub that meets an immediate need but because it is done without also defining changes in IT, infrastructure, and process, has to be done again. Two good ways to institutionalize RWA management are to set up a systematic RWA-monitoring process and to establish a permanent working group with reporting links to senior management.

- **Establish a clear and broad mandate.** Successful programs engage all the bank's technical experts, of course, but also directly involve the front line as the "owner" of RWAs. The best programs also involve top management to ensure prioritization, adequate resourcing (across business and infrastructure units), timely implementation, and alignment with related initiatives to optimize liquidity, funding, and leverage. And they balance their energies between the projects driven from the center and the workstreams that have been distributed to others.

- **Draw on a broad arsenal.** The savings from capital-waste-reduction programs are typically gleaned not from one or two levers but rather 20 to 25. Successful programs screen the entire portfolio for potential savings and prioritize accordingly. In our experience, advanced internal-ratings-based (IRB) banks have more than 250 levers across credit risk in trading and banking books, market risk, and operational risk with which to build a successful program (exhibit).

Most RWA optimization levers depend on more accurate risk measurement, which can pay off in many ways:

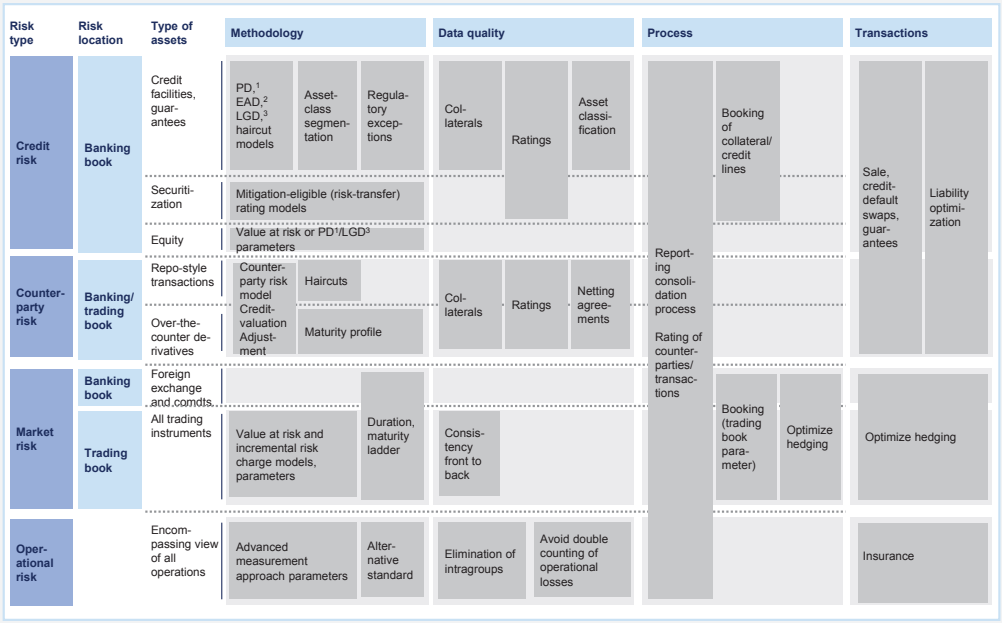
- *Improved data quality.* Banks can take advantage by making sure their available collateral qualifies under Basel rules, ensuring the proper classification of collateral, and creating RWA "engines" that can accurately process collateral.

- *Enhanced risk methodologies.* Capturing extra detail on risk means risk models can better reflect business models, and make better use of the business's capital. For example, many LGD models

7 For a more detailed description of capital-optimization opportunities, see Erik Lüders, Max Neukirchen, and Sebastian Schneider, "Hidden in plain sight: The hunt for banking capital," *McKinsey on Corporate and Investment Banking*, Number 9, 2009, pp. 26–35.

Exhibit Our comprehensive risk-weighted-asset framework spans over 260 optimization levers.

SAMPLE



1 Probability of default.
2 Exposure at default.
3 Loss given default.

use plain-vanilla regressions. But with more detail on risk, market-segmentation techniques such as chi-squared automatic interaction detectors or LGD trees can be a better choice. These approaches produce more precise estimates of LGD by taking into account the factors that drive differences in the recovery value of collateral, such as geography or size. And they optimize RWA-relevant processes for capital efficiency. For example, effective credit monitoring and early-warning processes not only reduce credit risk but also reduce risk parameters, improving the capital efficiency of the entire performing book.

— *Evaluate accurately specific transactions.* For example, with more detail on risk, banks can make a better call on outplacing a given risk; they can also step into the market to buy securities that are discounted too heavily.

- **Look for low-cost business levers.** Banks should look for different processes and product adjustments that can be easily addressed as banks get on with the main work of RWA optimization.

- **Apply stringent project management.** This should be done when carrying out RWA optimizations. One important technique is to use a clear "funnel" logic, and then tackle the most promising opportunities first, as judged by RWA impact, implementation effort and costs, and regulatory challenges. Good programs leave the least promising opportunities—the narrow end of the funnel—for last. They are systematic throughout, and iterative, coming back occasionally to revisit earlier work and make sure that no stone has been left unturned.

The approach for reducing capital wastage laid out above typically yields 12 to 20 percent RWA savings—sometimes even more—for advanced-IRB banks, and 10 to 15 percent for foundation-IRB banks.

Capital-focused strategies

McKinsey has assessed the impact of regulatory changes on retail banking and capital markets businesses, and the effects are substantial and severe. Return on equity (ROE) in the four biggest retail-banking markets in Europe is expected to fall from about 10 percent in 2010 to 6 percent.[8] In November 2011, we said that capital markets businesses at the top 13 institutions could expect a reduction in ROE from about 20 percent to about 7 percent[9]; recent quarterly results from these banks suggest that actual ROE is already lower than that. In both cases, these effects can only be mitigated through a combination of the technical RWA optimization levers discussed above, and a shift toward businesses and business models that use less capital.

Developing capital-efficient business models requires a detailed understanding of business-by-business profitability in the new regulatory environment. Findings from the survey indicate a big opportunity. Almost all respondents (over 80 percent) have estimated the impact of Basel III for their bank; they have done this at the corporate level, to guide their effort to reach the target capital ratios imposed by Basel III or the European Banking Authority. However, only about 40 percent of banks have carried out a detailed regulatory-impact assessment at the business unit level.

Most banks are placing their initial focus on capital markets businesses, where they expect the most severe impact; about half of all banks surveyed plan to adjust business strategies for capital markets, or have already done so. These adjustments range from modest (reduction of proprietary trading, setting up dedicated CVA desks) to radical (exit from marginal business lines that will become unprofitable past Basel III.)

Although capital markets businesses will see the biggest impact from most recent regulatory changes, most capital in the industry is consumed by retail and corporate banking, especially by credit businesses held in the banking book. However, adjustments in these more traditional businesses so far have been limited to just a few hands-on measures, such as improvements in collateralization; few retail and corporate banks have made significant adjustments to their business models.

As a result, capital productivity (measured as revenues/RWA) remains highly varied among the banks we surveyed, from less than 4 percent to about 8 percent. Significant differences are also found in returns on capital before and after risk costs (that is, loan-loss provisions).

Significant improvement potential

Almost all participants see significant scope to make their business models more capital efficient. As a prerequisite to these changes, banks agree that greater collaboration between business units and the risk and finance teams is essential.

In corporate banking and structured finance, banks are looking at several ideas:

- **Establishing a capital-based threshold at which banks retain a client's business.** Analysis can show which clients are unprofitable after costs of capital.

- **Improving collateralization.** This can be done, for example, by seeking more collateral, pushing for more favorable collateral from an RWA standpoint, adding covenants to loans that help the bank react to "rating drifts," and so on. Short of measuring relationship managers' performance on actual ROE, instead of ROE

8 *McKinsey Working Papers on Risk*, Number 36 "Day of reckoning for European retail banking," July 2012, mckinsey.com. The calculation assumes that all the effects of new regulation that will be phased in over the next several years are realized immediately.

9 *McKinsey Working Papers on Risk*, Number 29, "Day of reckoning: New regulation and its impact on capital markets businesses," November 2011, mckinsey.com.

at origination, this is the next-best step to mitigate capital inefficiencies, as it forces relationship managers to get back to customers more frequently to renegotiate terms and conditions. While this takes more time than purely technical optimization techniques and is more prominent because it is visible to the client, it is highly effective in allowing the bank to structure transactions at competitive prices and is clearly state-of-the-art for all those banks that have already completed their basic "housekeeping."

One new capital-efficient business model

A new example of capital efficiency is provided by a few leading banks that are now moving to provide optimized structured-finance solutions, especially involving commercial real estate but also including renewable energy and infrastructure finance, to life insurers and pension funds.

These banks have historically invested in long-dated sovereign and institutional bonds, whose tenor (sometimes up to 30 years, or even more) matched their liabilities or long-term commitments to their customers, and which carried little or no credit risk. Today, however, nearly all firms are concerned by the low yields these bonds return, or they are anxious about the newly apparent credit risks. These concerns are accentuated for many by their obligation to provide a guaranteed return to insureds, at rates that are presently difficult to achieve.

In light of these problems, insurers and pension funds are currently investing in short-term government notes and bills, with the idea of limiting their credit-risk exposure and staying flexible in case interest rates start to head higher. But the resulting maturity mismatch will be penalized under Solvency II, and these strategies will not allow them to meet return promises to their customers in the current low-interest environment. For example, minimum interest guarantees to German life-insurance customers are currently about 1.75 percent, and some older contracts are well above that rate—promises that are hard to achieve with 0 percent return on short- to midterm German sovereign notes and bills. On a related note, capital charges for investments in private-property funds, another favorite investment, will increase.

Thus, these firms are looking for high-quality, high-yield, long-dated investments. Structured-finance vehicles, to finance commercial real estate, for example, could fit the bill. But there are barriers for banks looking to enter this business. Commercial real estate and other assets that are in vogue—wind energy, to name one—are notoriously tricky asset classes, with a highly varied risk profile and a great deal of volatility. Moreover, the business requires experienced people and well-established processes, such as credit analysis and underwriting, credit monitoring, and restructuring and workout—prerequisites that are typically found in banks.

Nonetheless, banks with the right skills can find success. We see several capital-focused opportunities for partnership with insurers and pension funds, including the securitization and sale of existing portfolios, a "pipeline" model in which the bank provides underwriting and origination services, and a full-partnership model in which the two sides jointly develop deals and share risks, leveraging the bank's experience. In a full partnership, banks would primarily originate assets that are attractive for investors and structure them in packages that deliver the best combination of Solvency II and economic benefits for life insurers or pension funds. Other banks with a strong asset-management business might target other investors, such as loan funds, by originating transactions that can help them extend their asset-management offering.

- **Optimizing the product portfolio for capital consumption.** For example, banks can steer customers toward receivables-based financing rather than working-capital financing. New regulation gives banks an incentive to simplify products.

- **Repricing certain products.** Banks' ability to reprice will, of course, be severely limited, and they will have only limited leeway to reprice any product to recover the full costs of new regulation. However, for certain combinations of market/product/bank's own circumstances, repricing may be possible.

- **Creating new outplacement models.** Institutional investors such as insurance companies see certain banking assets with long tenor, high ratings, fixed-income flows, and low levels of complexity as ideal investments. That said, no one transfer mechanism will fit all assets and buyers; a detailed assessment of the various parties' interests is necessary to identify optimal asset classes to divest.

In capital markets, banks are also considering a slate of changes to business models that might release up to 30 percent of Basel III RWAs:

- One change would be to optimize portfolios and trading strategies for capital consumption. Banks are looking to conduct a systematic analysis of profitability for costs imposed by new regulation, especially Basel II.5's changes for trading-book assets and securitizations, and Basel III's CVA charge for counterparty risk in derivatives.

- Another possibility under consideration is taking capital consumption into account for hedging decisions.

- Prioritizing counterparties according to RWA rules, and especially to expected CVA effects, is also an option. Banks should select counterparies by their profitability after CVA charges, taking all other exposures with a prospective counterparty into consideration.

- Improving their netting and collateral management is another consideration.

- Restructuring or winding down unprofitable products that are not core to customer franchise could be a helpful change to a bank's business model.

- Making better use of central counterparties to reduce credit risk is another option. Banks can also shed counterparty credit risk through innovative compensation plans for employees. For example, employees at one large bank recently agreed to accept some of their "own" counterparty credit risk as part of their compensation scheme, giving them a powerful incentive to manage this risk. Counterparty credit risk can also be securitized and sold to institutional investors.

The next frontier in capital and other resource allocation

Banks in the survey allocate capital through their yearly budgeting process; they allocate balance-sheet capital and assign cost-of-capital or hurdle rates to meet next year's P&L target. Done this way, capital gets allocated at a very high level (divisions rather than businesses within divisions). Allocations tend to be negotiated solutions, compromises worked out between bottom-up demand and top-down imposition of capital ratios. Banks also concede that they make poor use of external data such as GDP growth and other macroeconomic information in their allocations; their budgeting processes are not designed to take a through-the-cycle perspective.

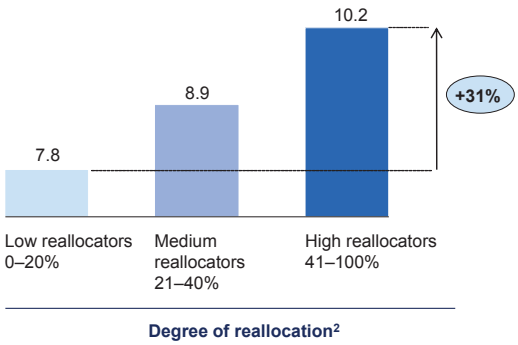
Another big flaw in banks' capital allocation is the way they set hurdle rates for businesses. Fifty-five percent of banks use the same threshold for every business. But new McKinsey research suggests that this approach holds

some businesses back, as their cost of capital is set too high, and favors others with low-cost capital that they do not need or deserve.[10]

One piece of good news for banks is that most are fairly advanced in making capital decisions a top management priority. Most, however, do not prioritize the allocation of other resources in a consistent way.

All of that is unfortunate, as evidence from nonbanking industries suggests that companies that frequently and in a meaningful way reallocate capital achieve significantly higher total returns to shareholders than other companies (Exhibit 2).

Exhibit 2 Dynamic reallocators of capital and other resources generate a 40% higher total return to shareholders than others.



1 Compound annual growth rate.
2 Measures the share of capex that shifted among business units over 16 years; there are 533 low reallocators, 533 medium reallocators, and 550 high reallocators; standard deviations: low reallocators = 19.0, medium reallocators = 16.7, high reallocators = 15.0.

Source: Compustat; Corporate Strategy service line

Effective, dynamic, and forward-looking allocation of scarce resources (capital, liquidity/funding, personnel, IT budgets, and so on) requires a clear commitment and a consistent approach. Leading institutions use simple metrics but apply them in detail to portfolios and subportfolios, often two levels below a traditional divisional view, in order to rank businesses in an objective way. They also factor in the portfolio's expected through-the-cycle performance, and they use allocation decisions as top-down inputs to budgeting.

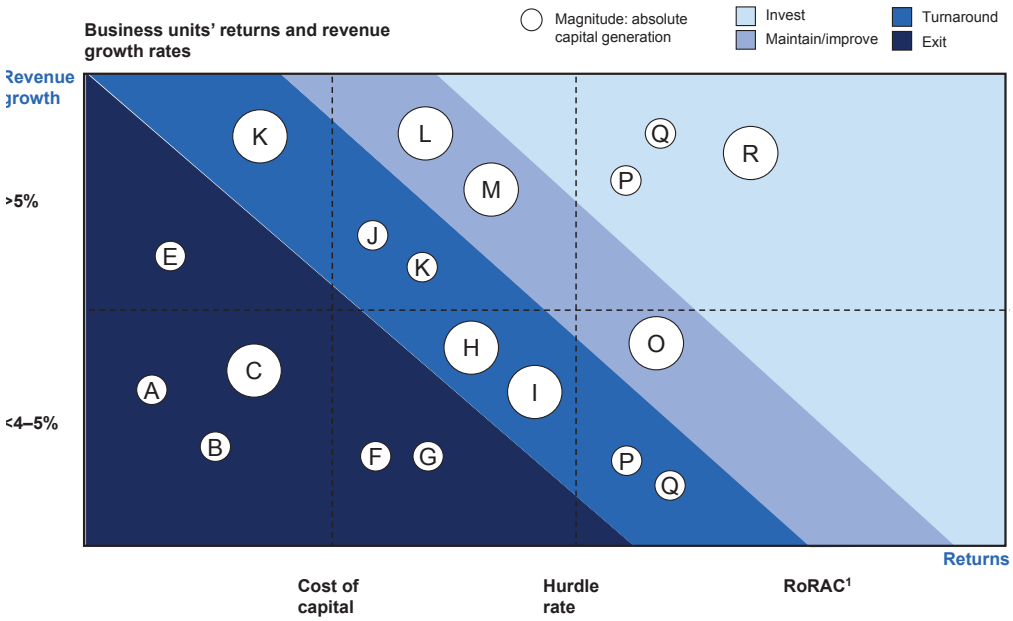
Consistency in all resource-allocation decisions is important to enable business-line managers to deliver against targets (what we call "allocate to win"). For example, getting more capital to grow a business will not work without also getting approvals for additional head count and managing-director promotion slots, greater bonus-pool allocation, and prioritization in credit-limit allocations. Likewise, businesses in turnaround mode certainly need access to the budgeting process, to change underlying IT and operating models.

One simple way to rank businesses is laid out in Exhibit 3. The approach assumes proper asset-liability management and funds-transfer pricing and relies on three fundamental metrics: risk-adjusted return on capital, revenue growth, and size of businesses. Risk-adjusted returns on capital are fundamental to understanding whether businesses earn their cost of capital, which differs greatly; for example, stand-alone retail banking requires a different cost of capital (and different profit expectations, or hurdle rate) than a stand-alone capital markets business. Businesses that achieve a level of profitability through the business cycle above their cost of capital but below their hurdle rate contribute to capital generation for the bank and might finance other business lines with higher profitability and stronger growth. Such businesses would typically be good candidates to keep in the portfolio but not to invest in. If they are also growing quickly, then investment might be warranted. Likewise, businesses that do not earn their cost of capital should either be sold or (if possible) turned around, depending on revenue growth and size. Of course, businesses with profits above their hurdle rates are clear cases for further investment, especially if they can produce big revenues or grow substantially.

The process can be made dynamic by establishing a rule that businesses need to return 3 to 5 percent of their capital allocated to the corporate center, to create a meaningful pool of discretionary capital that is available for reallocation. As one survey participant described it, such a rule would function "pretty much like a share buyback."

10 "Not enough comps for valuation? Try statistical modeling," *McKinsey on Corporate Finance*, August 2012 (mckinseyquarterly.com).

Exhibit 3 With resources scarce, units must pass several tests to warrant further investment.



1 Return on risk-adjusted capital.

Several enablers underpin the approach. First and foremost is an operating baseline. Banks must have a clear understanding of current and expected performance of business lines, and of their risk taking, through a few thoughtful key performance indicators (KPIs), and they need a granular view of business portfolios. Clearly this needs to be more granular than budgeting processes, which are usually aggregated at the divisional level. A more detailed view of the business is needed to fully understand capital requirements and return on capital throughout the cycle and vis-à-vis the bank's peers, and to understand which other scarce resources must be committed in order to make a business successful. If the bank doesn't have a business-level view of capital usage, it is forced to average performance across the division; the inefficient businesses will drag the efficient ones down, and the bank won't know which is which. On the other hand, the bank does need a comprehensive view of the implications for the group, and it needs to fully account for interdependencies (for example, among liquidity/funding, capital, and leverage).

Most banks (about 80 percent) are fairly advanced with respect to operating baseline. They make the grade primarily because they effectively compare risk appetite and risk-bearing capacity to derive limits and the capital available for allocation. Many have also established clear metrics for performance management (such as return on risk-adjusted capital or economic value added). But there is considerable room for improvement. KPI sets are still complex and lack a clear hierarchy; their often contradictory indications can leave banks puzzled about what to do next.

Three other enablers are also important. External data should be added to the process to provide a solid outlook on potential scenarios for the future, the potential direction of business-performance drivers, and the effects on available profit pools. The reallocation model also needs criteria to rank businesses for resource allocation. And good governance is essential; banks need alignment among senior management to reallocate resources, to make capital reallocation a binding input to budgeting and financial-planning processes, and to allocate other scarce resources in a way that is consistent with capital.

□□□

As capital is already scarce and will remain so for the foreseeable future—in Asia because of expected strong growth, and in the rest of the world due to new regulation and market volatility—capital management is now uppermost in managers' minds. Winners will be those who both take care of their housekeeping with a program of technical optimization and move toward capital-focused business models with a dynamic resource-reallocation process. Market leaders are already moving in this direction.

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