OLIVER WYMAN

VOLUME 4 | 2014

THE OLIVER WYMAN

RISK JOURNAL

PERSPECTIVES ON THE RISKS THAT WILL DETERMINE YOUR COMPANY'S FUTURE

INTRODUCTION

Throughout our history, Oliver Wyman has advised clients on ways to improve and grow their businesses. In 2014, organizations were forced to respond to a broad range of interconnected risks. The economic challenges, international conflicts, cyberattacks, and extreme weather events that dominated the headlines this year were a challenge.

With this in mind, it is our pleasure to share with you the fourth edition of the *Oliver Wyman Risk Journal*. This collection of perspectives represents the latest thinking on the topic of risk from across our firm.

Scott McDonald
Chief Executive Officer
Oliver Wyman Group

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EMERGING RISKS

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- Making the Most of Market Uncertainty

GLOBAL RISKS

BUSINESS LEADERS NEED TO PREPARE FOR THE BIGGEST RISKS OVER THE NEXT DECADE – NOW

JOHN DRZIK

When executives think about risk, they often focus on sudden shocks, such as financial market crashes, pandemics, and political upheaval. But there are potentially even more important slow-moving threats that develop over time before emerging as full-blown crises – when it is too late to prevent them.

This is why, for the past nine years, our firm, together with the World Economic Forum (WEF) and other partners, has examined which risks pose the biggest threats to global economic development over the next decade in a report issued in conjunction with the annual WEF meeting in Davos, Switzerland. Based on a survey of more than 700 industry leaders and experts, our *Global Risks 2014* report analyzes 31 evolving and interconnected risks that cut across national boundaries, economies, technology, societies, and the environment. (See Exhibit 1.)

This year's research reveals that demographic and societal trends may increasingly shape the risk environment over our report's 10-year time horizon. Economic threats such as severe income disparity and fiscal crises, environmental risks, chronic unemployment, and technological threats rank among the top five risks that are the most likely and most impactful long-term dangers to countries and companies. (See Exhibit 2.)

EXHIBIT 1: TEN GLOBAL RISKS OF HIGHEST CONCERN IN 2014


Fiscal crises in key economies


Structurally high unemployment/ underemployment


Water crises


Severe income disparity


Failure of climate change mitigation and adaptation


Greater incidence of extreme weather events


Global governance failure


Food crises


Failure of a major financial mechanism/institution


Profound political and social instability

Source: *Global Risks 2014, Ninth edition*
Note: From a list of 31 risks, survey respondents were asked to identify the five they are most concerned about

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SLOW-MOVING THREATS

Today's fractured geopolitical environment threatens to undermine our ability to deal with global issues

In *Global Risks 2014*, we present three "risk cases." One risk case, titled "Digital Disintegration," explores how cyberspace could become severely compromised by the growing strength of attacks and dwindling levels of trust, at a huge cost to economies and societies. Another, called "Generation Lost?" offers insight into how high rates of youth unemployment risk stoking social unrest and squandering the human and economic potential of an entire generation. Today, more than half of young people in some developed markets are unemployed or underemployed.

But the key risk case from our perspective this year is titled, "Instabilities in an Increasingly Multipolar World." It focuses on how today's fractured geopolitical environment threatens to undermine our ability to deal with global issues. The world needs coordinated governance to counter the many complex risks that stretch across national boundaries. Unfortunately, a new world disorder is developing that could impede progress in industries critical to global economic development, such as financial services, health care, and energy.

Banks are exiting markets and repatriating trillions of dollars to escape new national regulatory regimes that are ring-fencing their capital. International pharmaceutical companies are struggling to take new technologies into different markets as governments apply pressure to lower pricing in their countries. At the same time, the shifting geopolitics surrounding energy supply is creating uncertainties among investors – when nearly $27 trillion in investment is needed to respond to escalating global demand for electricity alone.

National self-interest is becoming the overriding priority as developed nations focus on finding solutions to their weak fiscal positions and emerging countries make greater efforts to meet the rising expectations of their growing middle class. As a result, multilateral institutions struggle to build consensus across countries, and the international community is unable to take concerted action on critical global challenges like climate change, Internet governance, and illicit trade.

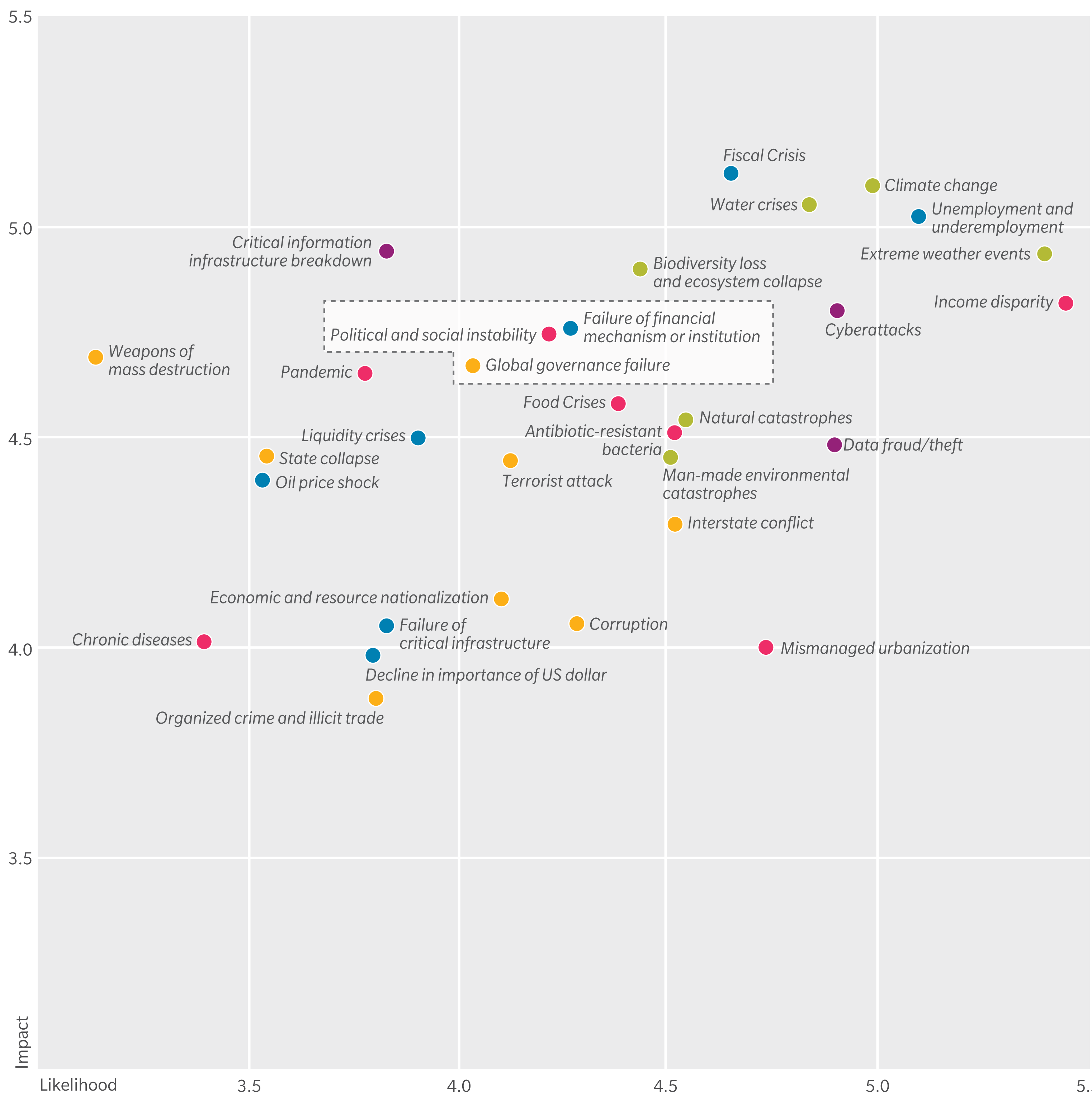
In the near term, domestic pressures are likely to grow – leading to an even more insular focus. Millions of people have taken to the streets in the Ukraine, Argentina, Turkey, Egypt, and Brazil to protest against

EXHIBIT 2: GLOBAL RISKS LANDSCAPE 2014

THE POTENTIAL IMPACT AND LIKELIHOOD OF GLOBAL RISKS OVER THE NEXT 10 YEARS

For the Global Risks 2014 report (published by the World Economic Forum in collaboration with a group of partner organizations, including Marsh & McLennan Companies), more than 700 leaders and decision makers from the World Economic Forum's global community were asked to select, out of a group of 31 global risks, the ones that will be of greatest concern over the next 10 years. These pages summarize the results.

Below lies the full gamut of risks. Note that respondents think that the cluster of risks – political and social instability, failure of financial mechanism or institution, and global governance failure – would have both great impact and are likely to occur.



Source: *Global Risks 2014*: Ninth edition, World Economic Forum and partners, including Marsh & McLennan Companies
Oliver Wyman is a subsidiary of Marsh & McLennan Companies

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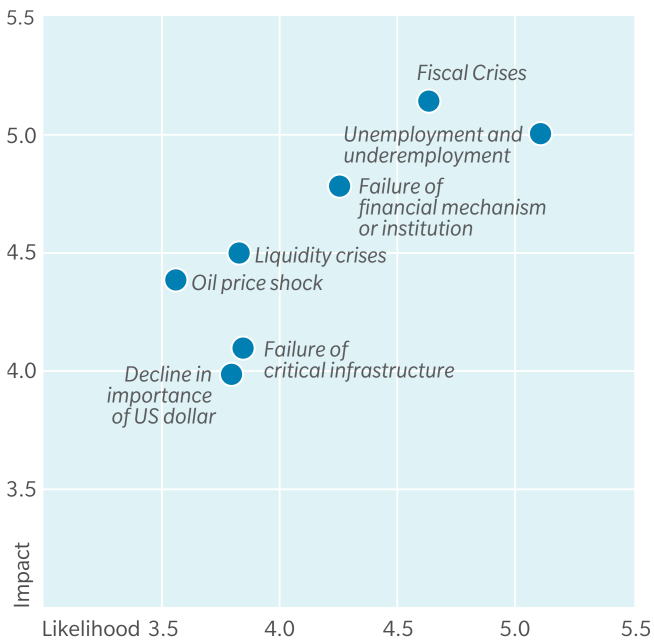
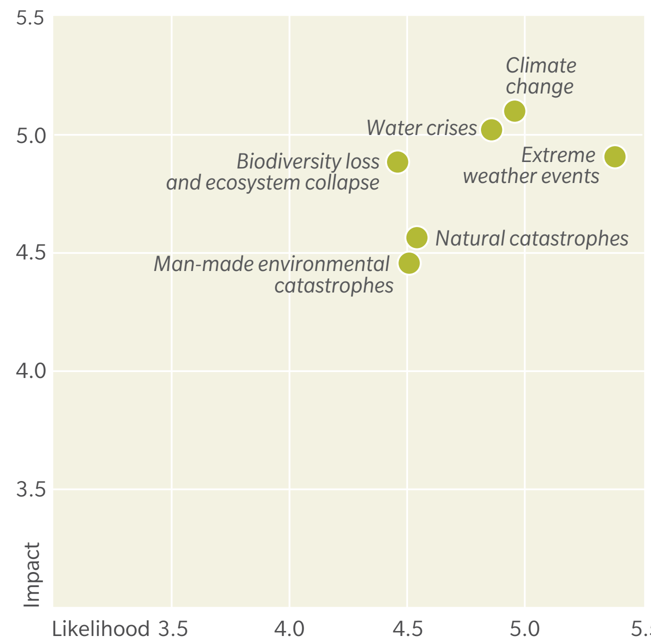
EXHIBIT 3: GLOBAL RISKS LANDSCAPE 2014
GLOBAL RISKS BY CATEGORY

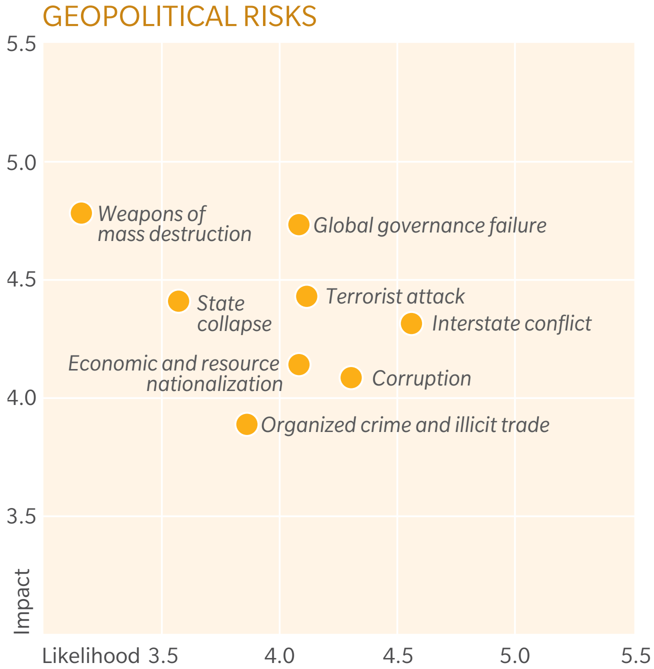
ECONOMIC RISKS



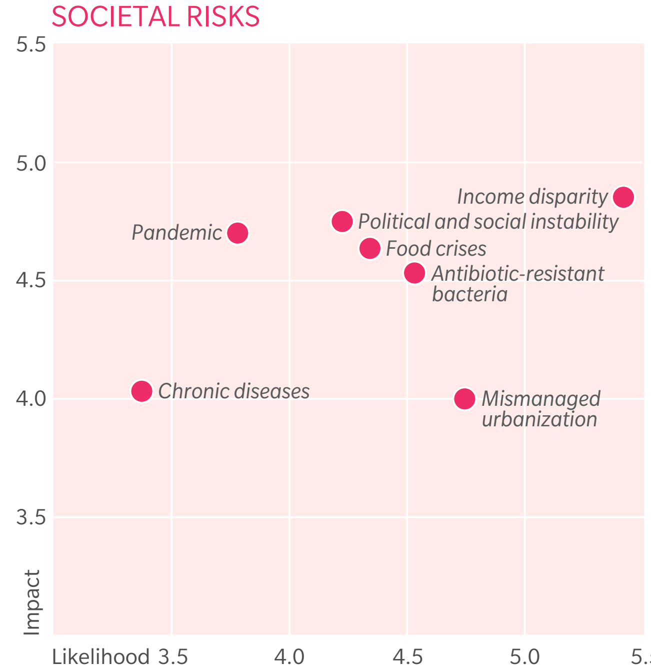
ENVIRONMENTAL RISKS



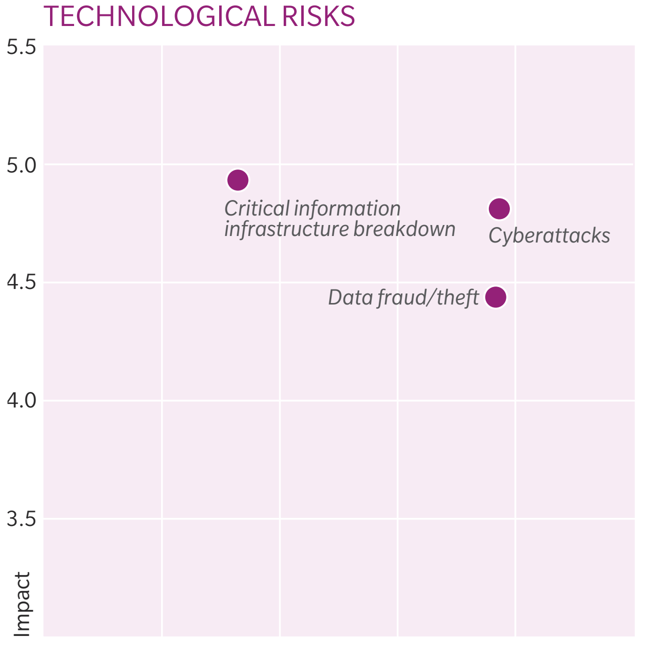
GEOPOLITICAL RISKS



SOCIETAL RISKS



TECHNOLOGICAL RISKS



- Economic Risks
- Environmental Risks
- Geopolitical Risks
- Societal Risks
- Technological Risks

Source: *Global Risks 2014*: Ninth edition, World Economic Forum and partners, including Marsh & McLennan Companies
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everything from their nation's leadership to a five-cent increase in bus fares. In this unstable geopolitical climate, interstate friction is likely to sharpen, and the global business landscape could be significantly altered.

0.5%

The percentage annual uplift in GDP that Asia could experience by 2020 with a more integrated financial system

CREATIVE PARTNERSHIPS

So what can companies do in such a fractured environment? We recommend following two parallel tracks. Business leaders should work with political leaders to mitigate emerging risks through multilateral institutions and networks. At the same time, they should adapt their strategies to capitalize on new opportunities created by the changing geopolitical outlook. This could mean forging new cross-border partnerships that span the interests of both the public and private sectors.

GOVERNMENTS

Governments and companies should take a page from the Global Alliance for Vaccines and Immunization (GAVI) coalition, which was formed by the Bill & Melinda Gates Foundation, nonprofit organizations, governments, and the pharmaceutical industry to immunize 250 million children and save 4 million lives globally by 2015. Creative partnerships could also halt rising medical costs if systematically applied toward developing solutions to such challenges as Alzheimer's and championing a global movement to promote low-cost health care models that reward health care providers based on their ability to maintain patient wellness rather than on the number of procedures they perform.

FINANCIAL SECTOR

In the financial sector, global banks should work with regulators across countries to overcome the current balkanization of domestic reforms, which is creating both cost and capital inefficiencies that work against long-term economic growth. New forms of public-private cooperation could also stimulate development. For example, we estimate that a

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more coordinated and integrated Asian financial system could generate an incremental GDP uplift of more than 0.5 percent on an annualized basis by 2020 and transform the sector from a bank-dominated model to a more balanced structure with deeper and wider capital markets.

ENERGY SECTOR

Finally, in the energy sector, companies will need to consider new partnerships as more widely available hydrocarbon resources around the world introduce multiple geopolitical and economic uncertainties. The deep interconnection between geopolitics and business is already taking a new turn due to major shifts in both supply (such as shale gas discoveries in North America) and demand (in rapidly growing markets such as those in Asia). Looking ahead, national oil companies will expand their reach, using the political and financial backing of their home governments, and energy companies will need to consider new partnerships with them, as the involvement of national oil companies in the market escalates.

CONCLUSION

Rapidly evolving changes will lead to growth opportunities for some players, such as companies with sophisticated trading platforms that can acquire and reroute cargoes for commercial advantage. Interstate supply dependencies will also create heightened demand for energy efficiency in all countries – an area where joint ventures and other multi-stakeholder partnerships could be beneficial.

National retrenchment is more likely to increase global risks, rather than mitigate them. Succeeding in a fractured geopolitical environment will require flexibility, foresight, and fresh thinking about risk management. In the face of this emerging context, business and political leaders can improve the resilience of their companies and countries by diversifying their risk exposures and seeking out new partners. The agile and adaptable are most likely to thrive. But companies and countries need to prepare for the biggest risks over the next decade caused by a fractured geopolitical environment now.

John Drzik is the president of Global Risk and Specialties at Marsh. Marsh, like Oliver Wyman, is a subsidiary of Marsh & McLennan Companies, which contributed to the World Economic Forum's *Global Risks 2014* report.

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GUIDELINES FOR GOVERNING CRITICAL RISKS

GOVERNMENTS AND BUSINESSES MUST PARTNER MORE EFFECTIVELY

RICHARD SMITH-BINGHAM • ALEX WITTENBERG

The *Global Risks 2014* report highlights the need for coordinated action between different countries and sectors to mitigate threats and avert potential crises. This imperative is strongly emphasized in a formal *Recommendation on the Governance of Critical Risks* that was developed by the Organisation for Economic Cooperation and Development (OECD) with Oliver Wyman input and approved by the OECD Council of Ministers in May.

The *Recommendation* sets out five principles to help countries strengthen resilience to sudden-onset events such as earthquakes, industrial accidents, and terrorist attacks; gradual-onset events such as pandemics; and steady-state risks such as illicit trade and organized crime. All of these potential occurrences threaten infrastructure critical for sectors vital to economic activities, lead to widespread damages and losses, degrade key environmental assets, negatively impact public finances, and erode public trust in government.

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These principles emphasize the importance of developing a national strategy that adopts an all-hazards approach to resilience and has clear goals for each stage of a risk management cycle. They state that strong foresight analysis, risk assessments, and financing frameworks are critical for prevention, mitigation, and preparedness. So, too, is the effective mobilization of households, businesses, and international bodies. Crisis management capacities also need to be highly adaptive and flexible to cope with novel, unforeseen, and complex events. Finally, transparency and accountability are fundamental to good risk-related decision making, as is a willingness to learn from experience and new scientific knowledge.

What's clear from the research underpinning this *Recommendation* is that while policymakers must exercise leadership on these issues, they cannot address these risks alone. Businesses play an essential role in ensuring human safety and ongoing economic activity – both in forestalling unwelcome scenarios and in responding to crises. This is not just due to their control over critical infrastructure in many countries, but also due to their more broad-based engagement with business continuity and the welfare of their employees.

There is clear scope for governments and business to partner more effectively with each other. By better exchanging intelligence on trends in critical risks, for example, it is often possible to redress informational asymmetries between organizations and sectors without breaching national security or commercial confidentiality. Huge opportunities also exist for more strategic interaction. Through clear policy goals, regulatory backing, and occasional research and development support, governments can stimulate investment into highly valuable solutions, such as infrastructure, technology, and services. A rebalancing of responsibilities within an appropriate framework of incentives can spur the achievement of greater resilience for the good of all.

Richard Smith-Bingham is the London-based director of the Marsh & McLennan Companies Global Risk Center.
Alex Wittenberg is the New York-based executive director of the Marsh & McLennan Companies Global Risk Center.

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POLITICAL RISK IN EMERGING MARKETS

TURBO CAPITALISM TURNS TO POLITICAL CRISIS

BARRIE WILKINSON

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Oliver Wyman's 2011 report, *The Financial Crisis of 2015: An Avoidable History,* predicted a crisis centered on emerging market economies. As emerging market economies have now begun to slow, we look at what such a crisis might mean for the future of these developing nations. Will they be able to weather the storm and make strides toward becoming "developed economies?" Or will the next crisis unveil weaknesses that send these economies back in time?

Though some developing economies will surely succeed in closing the gap, others will likely stumble. The reason for our pessimism is not the direct economic effects of an upcoming downturn, but rather the political instability that will follow. So it is time for analysts to put the financial ratios to one side for a moment and look at the threats posed by emerging market politics.

POLITICAL HEAT RISES AS THE ECONOMY COOLS

Many of the largest emerging markets, such as China, Brazil, Russia, and Turkey, have achieved a measure of political stability in recent years. As their economies boomed – creating profits for businesses and opportunities and jobs for citizens – political leaders have enjoyed great popularity.

Although these economies continue to grow, they are slowing from the extraordinary rates of growth observed in recent years. This is in part a natural consequence of success, which drives up labor costs, thus reducing whatever advantages they might have had over developed market producers. The commodities cycle, which until recently fueled growth, has now turned down, leaving many emerging economies greatly exposed as prices fall. Any hope of continued growth in emerging markets is now heavily reliant on interest rates remaining low in developed market economies. The bad news is that 2015 looks likely to be the year when central banks in developed markets finally start to tighten monetary policy.

If those trends play out as expected, the governments of emerging economies will struggle to avoid major currency devaluations and inflation. Moreover, the standard reaction of governments, which is to allow interest rates to rise so as to stem capital flight, risks inducing widespread credit defaults and a deflationary debt crisis.

25%
The percentage decline in productivity that South Africa suffered after strikes in the first quarter of 2014

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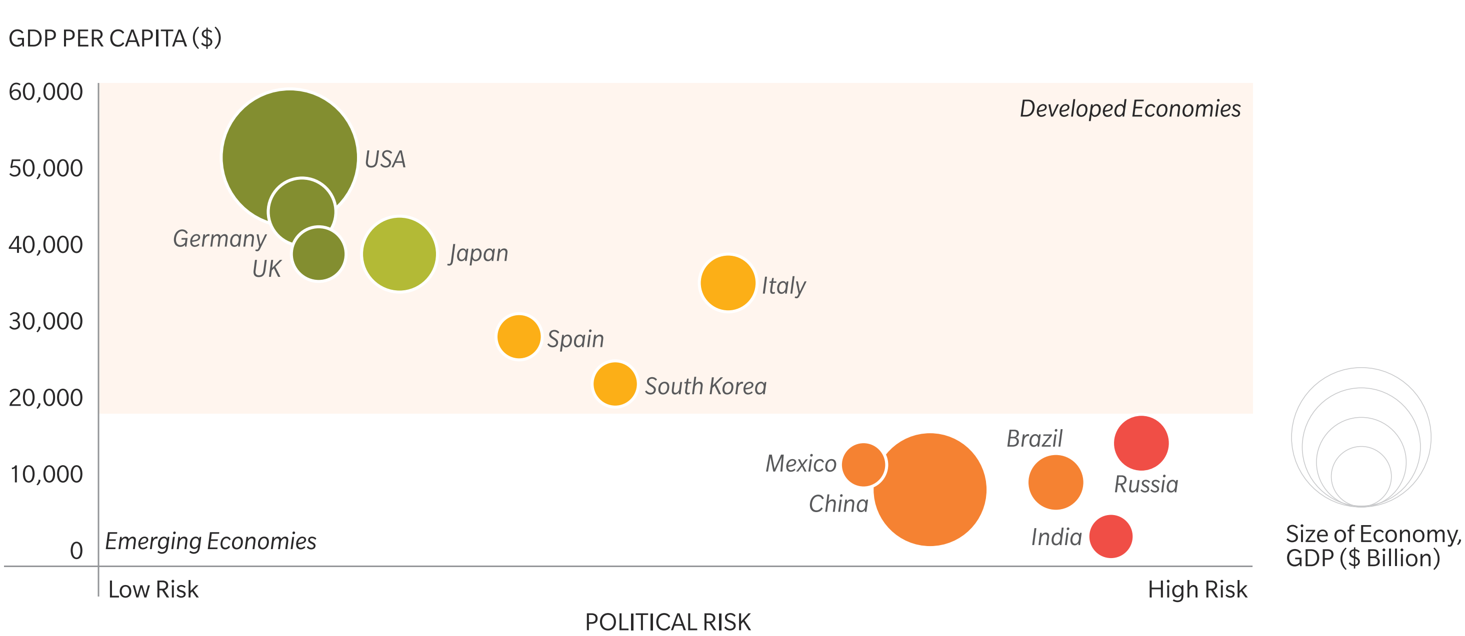
Events may not quite unfold as dramatically as our original crisis prediction from 2011. But even the moderate slowdown in growth now taking place is exposing the high level of political risk in emerging economies. While each developing country has its own unique set of political challenges, there are some common threads that are emerging: waning popularity of political leaders, a rise in nationalist sentiment, and a sense that many were left out of the boom times, now gone.

As Exhibit 1 illustrates, political risk is typically viewed as being higher in those economies with the lowest GDP per capita, reflecting the fact that mass poverty is an important source of political instability. As countries break through into the developed category, their susceptibility to political crisis tends to diminish.

LESSONS FROM THE FINANCIAL CRISIS IN THE WEST

If the recent financial crisis in the developed world is an indicator, few of the current political leaders of emerging economies will survive a major crisis in their domestic economies. During the recent crisis in the West, there was a sense that not only politicians, but the entire establishment had failed. This loss of faith has created a power vacuum which is being filled in the West with new political forces. We have just witnessed several right-wing nationalist parties sweep to victory in the recent European elections – and, in Greece, a far-left nationalist party.

EXHIBIT 1: POLITICAL RISK HEAT MAP



Source: Oxford Economics Political Stability Risk Rating, IMF economic data, Oliver Wyman analysis

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Similar patterns now seem to be emerging in the developing world. Voters are losing patience with leaders and accusations of cronyism and corruption are widespread. Political change appears inevitable. The question is how great these changes turn out to be and how drastic their consequences.

> Democratic principles endorsed during the boom period will be put to the test as unpopular leaders try to hold on to power

POLITICAL TAIL RISKS

We cannot predict how things will play out in the various emerging markets. But as risk managers, we must remain aware of some of the more unpleasant paths that might lie ahead and prepare our businesses accordingly.

Ethnic tensions and nationalistic sentiments are quick to rise during economic downturns, as people look to blame their problems on external factors. Fingers are pointed not only at foreign countries, but also at elements of the domestic population, with fractures often forming along religious or ethnic lines. Such tensions can lead to the victimization or expulsion of economically important sub-groups, to partitions, to civil war, or even to conflict with neighboring countries.

Troubled governments are also often tempted to confiscate foreign assets and default on debt to foreigners. Such populist polices can come at a heavy price, provoking international trade sanctions and capital markets isolation.

Most emerging economies have young and growing populations. This is generally one of their major advantages over developed economies. However, as unemployment and wage stagnation sets in during a slowdown, it can be a source of instability. Youth unemployment is an important cause of civil uprisings as angry young people take to the streets.

Tensions around employment in emerging economies can be exacerbated by heavy reliance on particular sectors, such as energy or minerals. For example, falling commodities prices are now leading to labor unrest in South Africa's mining sector. Strikes in the first quarter of 2014 led to a 25 percent year-on-year decline in activity, enough to cause the South African economy to contract. This mining sector has also been plagued by a rash of accidents, some of them fatal, which are blamed on aggressive cost-cutting measures. To many observers, the miners' problems symbolize the growing gap between a rich elite and poor workers.

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NEW DEMOCRACIES

Most emerging economies are new democracies, with fragile legal institutions. Transitions of leadership during an economic crisis are unlikely to be as smooth as they are in Europe and in the United States. Democratic principles endorsed during the boom period will be put to the test as unpopular leaders try to hold on to power. The rise of social media adds an interesting twist to this dynamic. In countries such as China and Russia, which are spread across vast geographical areas, protests historically have been disorganized regional affairs, with anger vented at local politicians. Social media makes it easier to coordinate and mobilize protest across an entire nation, as witnessed in the Middle East.

Many of the political developments can lead to negative feedback on a country's economic situation, and a vicious circle of economic and political problems can quickly ensue. That is why a minor slowdown can quickly escalate into a major economic crisis and why soft landings are rare in emerging-market economies.

We are not predicting widespread impending doom for emerging economies, or even an imminent end to their growth. Risk management is not a matter of predicting the future, but of being aware of the threats posed by potential scenarios. It is fair to say that the early warning indicators are now flashing in some emerging economies, which suggests it's a good time to be alert and take a closer look at your exposure to these markets.

AFTER THE STORM

On the bright side, some emerging economies will have taken advantage of the recent period of prosperity to push through structural reforms, making investments in education, innovation, and in infrastructure that in turn can lead to sustainable increases in economic output. They have a better chance of emerging from the next crisis in a position to follow in the footsteps of countries such as South Korea and Taiwan that have successfully moved from developing to developed economies. However, even for these ultimately successful economies, the journey is likely to be a bumpy ride.

Barrie Wilkinson is a London-based partner and co-head of Oliver Wyman's Finance & Risk practice in Europe, Middle East, and Africa.

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COMBATING CYBER RISK

HOW TO ATTACK A GROWING THREAT

RAJ BECTOR
DAVID X MARTIN

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Advances in electronic connectivity and data storage have made the exchange of large quantities of information, even over vast distances, cheaper and quicker than anyone could have imagined possible 30 years ago. The gains in efficiency to businesses and benefits to consumers have been extraordinary.

However, opportunities for crime have also expanded. The new informational openness on the part of enterprises is being used to subvert their operations and to steal their intellectual property and the "identities" of their customers.

The losses can be large – be they in the form of compensation to customers, disruption of business, reputational damage, or, even, in the payment of ransom to have "captured data" from computer systems returned. Since 2010, the number of registered cyberattacks around the world has been growing at a rate of 23 percent per annum and now stands at 116 every day. The average annual cost of cyberattacks to affected businesses is $9 million.

The natural response to the threat of defense is to erect barriers: high walls and moats, with drawbridges that are lowered only for clearly identified "friends." This has been the traditional approach to cybersecurity. Access was granted only to users and computers meeting narrowly defined specifications and able to pass rigorous identity tests.

But this old-fashioned line of defense is untenable today. The business models of many firms now depend on their computer systems and data being open to thousands or even millions of other computers, potentially anywhere in the world. Making it difficult for outsiders to "get in" – to send you emails or search your site or buy something from it – is not an option. Customers would rapidly defect to competitors who made access easy.

Instead, firms must learn to manage cyber risk while keeping their borders open. For most firms, cyber risk is an unavoidable part of doing business, in the way that credit risk is a natural part of the banking business. They must manage cyber risk in the same way that they manage more familiar operational risks.

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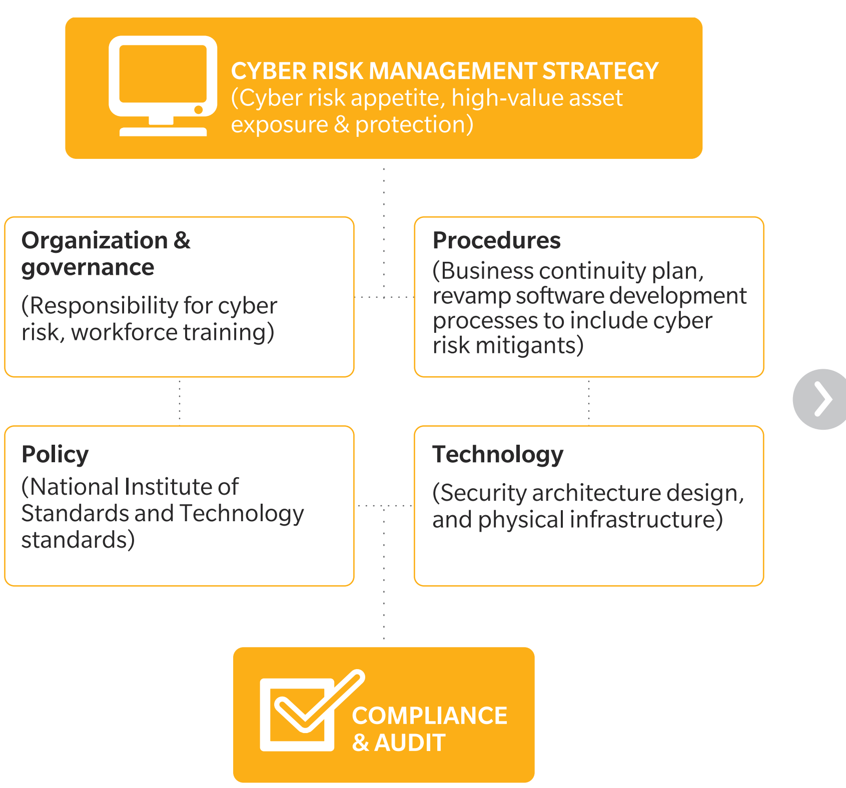
A QUANTITATIVE APPROACH

The first step to implementing this new methodology is to put a price on cyber risk. If you don't know what something costs, you can't know if it is worth the benefits it delivers or how much it is worth spending to reduce it.

Firms can now insure themselves against cyberattacks. The premiums provide firms with a cost for the cyber risk they are taking. When evaluating the returns of any product, line of business, or proposed venture, such premiums should be added to the accounting. If an apparently profitable venture becomes unprofitable once these insurance premiums and other items are added, then it may not be worth the risk it entails.

Cyber risk mitigation efforts can be valued in the same way. A new cybersecurity feature is worthwhile only if it costs less than the net present value of the resulting reduction in cybersecurity insurance premiums.

EXHIBIT 1: AN ENTERPRISE-WIDE CYBER RISK MANAGEMENT FRAMEWORK



- An overarching **cyber risk strategy** is created, based on risk appetite, environment, and capabilities
- **Governance** structures are installed to control cyber risk and security throughout the organization
- **Security policies** are derived to bring the cyber risk strategy and compliance up to industry standards (PCI, ISO, FISMA)
- **Suitable personnel** are selected and trained. Risk culture is established
- **Security processes** are aligned to the cybersecurity strategy and security policies (war gaming, threat modeling, access control, background screening, secure development, pen testing, business continuity)
- **Technology infrastructure** is deployed to support security processes (information security architecture, systems integrity, monitoring/detection tools, network redundancy)
- **Physical infrastructure** is designed and installed with access controls, surveillance, and crisis management to provide a secure foundation for processes and IT infrastructure
- **Regular audits** are conducted to ensure compliance and performance with defined processes

Source: Oliver Wyman analysis

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This logic applies even when the cyber risks aren't insured, either because insurance is unavailable or because the firm prefers to self-insure by holding capital against these risks. If the cost of the required capital tips a venture into the red, then it entails too much risk.

Putting a monetary value on cyber risks is difficult for the same reason that it is problematic for many operational risks. Because the serious risks – the causes of very large losses – are such rare events, their probability cannot be determined from historic data. Moreover, an operational risk event, such as a cyberattack or internal fraud at a bank, changes the probability of other such events. People now know that it can be done. This encourages both copycatting and preventative measures.

For this reason, many operational risks, including cyber risks, are best evaluated using scenario analysis rather than historical data. In this case, cybersecurity experts work with commercial managers to estimate the likelihood of various kinds of attacks and how much they would cost the enterprise.

Though not based directly on historic data, this approach is informed by it. For example, estimates of losses from attacks that would require market notification can be guided by the observed devaluations of firms that have made such notifications. And cyber risk experts will be directed by information about the frequency of various kinds of attacks occurring around the world.

Scenario analysis not only helps to quantify the risk. It also helps to reduce it. Most importantly, it assists firms with identifying "tripwires" – events which signal to the firm that it may be under attack and trigger preventative action. Law enforcement agencies often employ these techniques to counter terrorist attacks. Precursor actions, such as the purchase of certain chemicals are identified for a given incident. When potential criminals take those actions, they set off the tripwire, alerting authorities.

116
The number of registered cyberattacks around the world every day

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CONTAINING CYBER RISK ACROSS AN ENTERPRISE

How much cyber risk should firms accept, and how much resources should be expended toward its mitigation? These are strategic issues that require input not just from the information technology department but also from risk, finance, business lines, and ultimately, the company's chief executive officer and board of directors. Again, there is nothing unusual about this. It's how operational risks are normally addressed.

Some firms recognize the enterprise-wide significance of cybersecurity. (See Exhibit 1.) And regulatory initiatives such as the National Institute of Standards and Technology are forcing executives outside the IT department to pay attention. Nevertheless, few firms have yet to establish an enterprise-wide framework for managing cyber risk.

Cyber risk poses entirely new challenges to firms. Yet the key to managing it is recognizing that it is simply a new variant of a familiar problem. Cyber risk is just another operational risk. The approaches to measuring and managing operational risk that have been developed over recent decades can be applied to cybersecurity.

Of course, cyber risk involves a level of complexity and a pace of change that exceed most other operational risks. As a result, new skills and some dedicated staff are required. But this does not mean that cybersecurity must be left to these specialists. It is a job for the entire enterprise, starting with leadership from the senior management team.

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MAKING THE MOST OF MARKET UNCERTAINTY

COMPANIES NEED TO IMPROVE THEIR ABILITY TO RECOGNIZE WHEN RISKS PRESENT OPPORTUNITIES

ALEX WITTENBERG

When confronted with an uncertain future, many executives often revert to past practices or closely follow their industry peers in an attempt to insulate their organizations from undue volatility. But for those who choose to take calculated risks, the uncertain nature of the current business environment presents a unique opportunity to improve their strategic position and financial performance.

As global markets, national economies, and industries search for innovative and efficient solutions to fundamental issues, and new technologies disrupt the status quo, there is an unprecedented chance for companies to revamp their business models and create long-term shareholder value. There is also a disproportionate downside in failing to recognize and meet these challenges, causing companies to recede into irrelevance from once unassailable positions.

Across a wide range of industries, unconventional players are displacing traditional leaders by seizing new opportunities created by shifting industry landscapes. In financial services, for example, non-banks such as insurers and pension funds are capturing market share from traditional banks in a rapidly growing shadow banking system. In the energy sector, over the next 30 years natural gas could overtake coal as the second-most used energy source after oil. In health and life sciences, innovative health care providers are challenging the pervasive inflation in medical delivery by pioneering new models for providing better health care at lower cost.

Our research shows that chief financial officers and treasurers recognize that uncertainty is rising in the current business environment. (See Exhibit 1.) In a survey of more than 500 senior financial professionals, the majority said their companies are exposed to the same or greater earnings volatility compared to previous years. Eighty-six percent anticipate they will have as much, if not more, difficulty in forecasting critical risks to their businesses over the next three years.

The current uncertain business environment is creating an unprecedented opportunity for companies to build long-term shareholder value

IMPROVING STRATEGIC DECISIONS

Finance executives seem to be less sure about how to determine the best course for their companies. Organizations are launching various initiatives to counter current and emerging business risks. Some of the most common actions include focusing more on risk culture and awareness within their companies and investing more in information technology.

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EXHIBIT 1: A TAXONOMY OF EARNINGS UNCERTAINTY

For the *2014 AFP Risk Survey* (published by the Association for Financial Professionals in collaboration with the Marsh & McLennan Companies Global Risk Center), more than 500 senior financial professionals were asked to share their views of their company's ability to forecast risks to earnings. These pages summarize some of the results.

Four years after the "Great Recession," companies anticipate that it will only become more difficult to anticipate risks to earnings. In addition to external factors, one reason for this predicament could be that risk management and financial planning and analysis teams generally do not work closely together, even though most executive management teams consider risk assessment important.

Source: Oliver Wyman analysis

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However welcome these steps may be, many companies are missing a fundamental requirement for realizing the strategic rewards that will differentiate them from their competitors. Companies must integrate risk analysis and financial forecasting seamlessly into their evaluations of strategic opportunities in order to take advantage of new prospects. Otherwise, they will be unable to identify quickly and thoroughly those opportunities that offer the greatest short and long-term rewards.

CONCLUSION

Many companies are now moving away from defensive tactics to proactive initiatives such as launching new products and services, entering new geographic markets, and increasing their capital expenditures. But four years after the "Great Recession," most senior financial professionals believe their companies' financial planning and analysis teams have only a low-to-moderate level of cooperation with risk management.

If this status quo continues, there is a real danger that companies will be unable to respond rapidly to opportunities presented by external events, in part because they will have to wade through excessive data and inconsistent inputs from business units. Companies need to continue to improve how they integrate risk and forecasting analysis into strategic decisions if they hope to keep up with the speed at which new risks are reshaping the business landscape.

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REVAMPING BUSINESS MODELS

- Stress Testing and Scenario Planning
- Whatever Happened to Big Oil?
- The Missing Links in Investment Analysis
- The Real Risk for Property and Casualty Insurers
- Sustainable Retail

STRESS TESTING AND SCENARIO PLANNING

THE FUTURE IS NOT OURS TO SEE – THE FUTURE IS OURS TO STRESS TEST

DOV HASELKORN
ANDY MCGEE
DYLAN ROBERTS

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"Que sera, sera. Whatever will be, will be. The future's not ours to see. Que sera, sera."

So sang Doris Day in 1956. She was right. We cannot know the future with certainty. Those lyrics went on to recommend an attitude of quiet equanimity to whatever may come our way.

Alas, business leaders cannot afford to take Ms. Day's philosophical attitude towards the future. Their strategic plans, and the fortunes of their shareholders, are based on expectations about what will be.

If the chief executive officer of a car manufacturer expects the prices of gasoline and of diesel to diverge radically in the coming years, that will influence his plans. If a banker expects house prices to collapse, that will affect her plans. If a fashion designer expects orange to become the "new black," that will affect his.

The success of a plan usually depends on future events that the planner cannot control. How should she respond to the fact that she also cannot be certain what these events will be? "Que sera, sera" won't cut it with shareholders.

The most dramatic recent failure to see what was coming occurred in the banking sector. North American and European banks were highly leveraged and heavily exposed to property markets in the United States and Europe. Their plans assumed that property prices would not tank. But they did – in Nevada and Florida and Spain and other parts of the US and Europe. Many banks in the US and Europe collapsed or were bailed out with taxpayers' money.

In the new, postcrisis banking regime, regulators demand that banks' solvency be tested against several adverse "scenarios." Things might turn sour in all sorts of ways. Given a bank's exposures, and the actions it would take, how much would it lose in each of these scenarios, and would the bank remain solvent?

This "stress testing" has become highly sophisticated, estimating the effects of multifaceted macroeconomic scenarios on balance sheet and profit-and-loss line items. However, the full value of stress testing has yet to be captured by banks. The analysis can be used for much more than simply complying with prudent regulations. It can provide the foundation for rational strategic planning in a world where the future is uncertain.

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THE HISTORY OF SCENARIO PLANNING

The challenge of making plans for an uncertain future is neither new nor unique to banking.

In the 1850s, the general staff of the Prussian army adopted scenario planning. Recognizing that military campaigns rarely proceed as anticipated, they decided it would be useful to have plans for the various scenarios that might unfold. This idea was revived a century later, by Herman Kahn at the RAND Corp.; he used it to devise scenarios and strategies at the height of the Cold War in the 1950s. It was not until the 1970s that scenario planning was adopted in the private sector, when Pierre Wack introduced it at Royal Dutch Shell.

In the 40 years since, a handful of corporations have adopted scenario planning. They seek to answer questions such as: What will we do differently if energy prices spike? Or how will we prepare for a reduction in emerging markets demand? But scenarios and their implications for the firm's balance sheet are painted only in broad brushstrokes. To date, their scenario analysis has involved little detail or numeric precision.

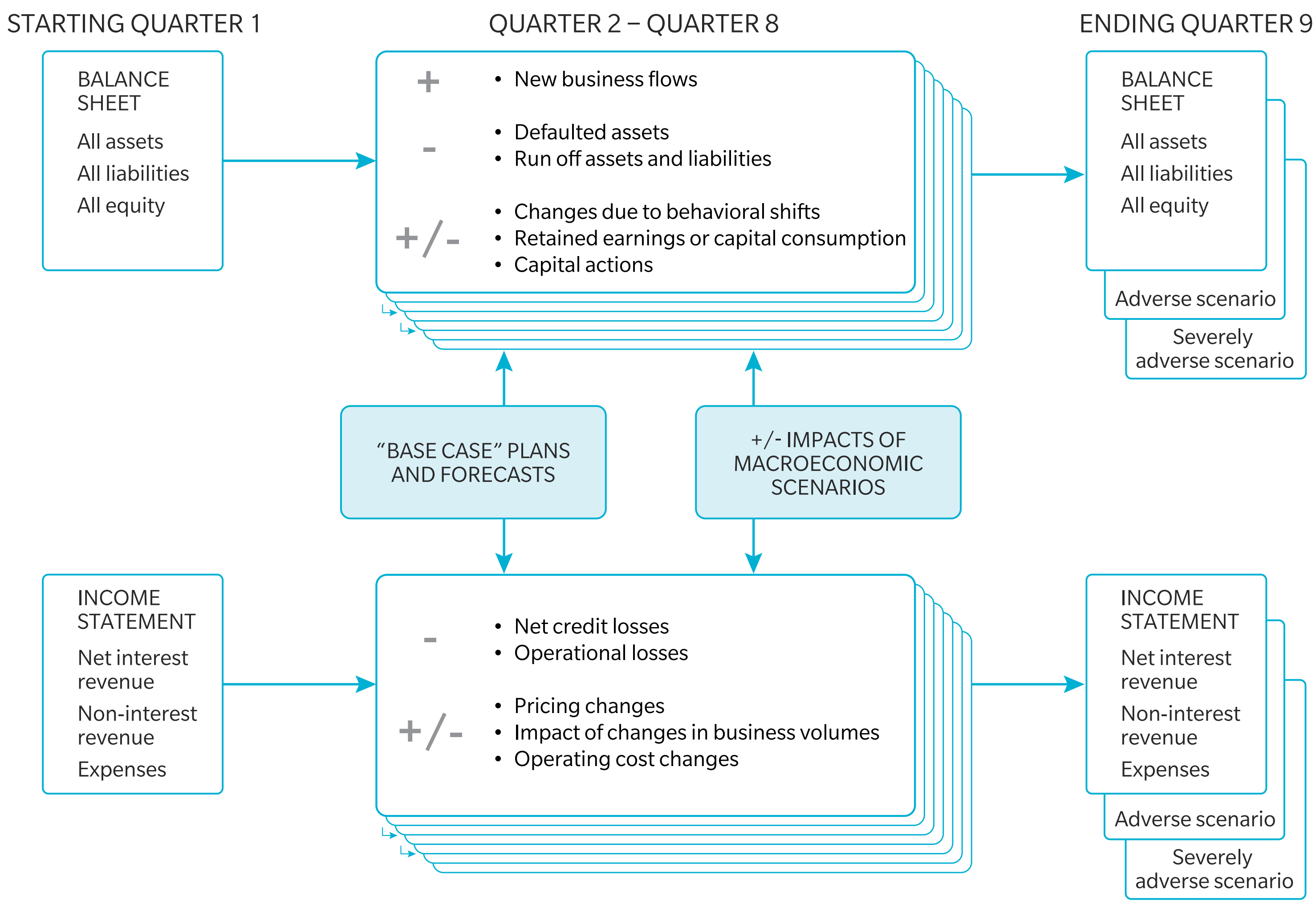
The global financial crisis, however, has prompted a great leap forward in scenario analysis at banks.

From 2007, unemployment in the US began to rise, house prices fell, and homeowners defaulted on their mortgages. Many banks began to run out of capital. Several ultimately became insolvent or survived only because they were bailed out with taxpayers' money.

Regulators recognized that, while it is useful to require banks to hold a certain level of capital during good times, it would be even more useful to understand how much capital banks will be left with if things go wrong – which can happen in so many different ways.

So, in 2009, the Federal Reserve launched the Supervisory Capital Assessment Program (SCAP), which later morphed into the Comprehensive Capital Analysis and Review program (CCAR). These programs, known as "stress tests," require banks to forecast how every element of their balance sheets and income statements would behave over the next eight quarters, given a range of macroeconomic scenarios. These stress tests have taken scenario analysis to a whole new level of detail and precision. (See Exhibit 1.)

EXHIBIT 1: STRESS TESTING DATA FLOWS



Source: Oliver Wyman analysis

This advance in stress testing or scenario analysis is a significant achievement. But more progress must be made. Banks can conduct stress tests more efficiently. And they can make better use of stress tests in their planning.

THE FUTURE OF FINANCE INFRASTRUCTURE

Stress testing's data and analytical requirements are awe-inspiring: extremely granular balance sheet and income statement forecasts, across multiple quarters, with dozens of interconnected models estimating the impact of macroeconomic factors. Stress tests are methodologically challenging, time-consuming, and costly.

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In the US, banks' initial efforts required extensive manual data gathering and a proliferation of spreadsheet modeling. They are now aiming to build sustainable, robust stress testing infrastructures.

The major elements of required infrastructure are:

- **Comprehensive balance sheet.** A consolidated data source of record for granular, comprehensive balance sheet information.
- **Comprehensive income statement.** A consolidated, granular source of record for profit and loss information.
- **Scenario-generation tools and processes.** A means of identifying and articulating key macroeconomic and idiosyncratic risks, and formulating them as scenarios.
- **Suites of analytical and forecasting models.** Complex institutions usually require dozens of models to forecast "base case" results and how the results will be changed by various macroeconomic scenarios.
- **Data management tools.** An "input-output" layer which manages procurement and delivery of data from sources to analytical models, time stamps inputs and outputs, implements change controls, and establishes data lineages from outputs back to sources.
- **Synthesis tool.** A tool for aggregating analytical results to produce consolidated future balance sheets and income statements.
- **Robust model governance.** A management process for ensuring the validation, maintenance, and documentation of the dozens of models that comprise a bank's stress testing machinery.

Unfortunately, neither a data warehouse nor an asset-and-liability management platform nor one of the stress test systems introduced in recent years is likely to meet all of these requirements.

The ultimate solution for most institutions will be an intelligent combination of these components in a well-controlled, tightly integrated architecture. Crafting a robust architecture that meets these needs, while continuing to meet current execution challenges, will be difficult and expensive.

But it is worth the effort and money, because the upside is not just regulatory compliance. Advanced scenario analysis can significantly improve banks' strategic planning and, therefore, their financial performance.

SCENARIO-BASED STRATEGIC PLANNING

Strategic planning at banks suffers from characteristic shortcomings for which scenario analysis can provide a remedy:

- **Unrealistic expectations.** Plans used to justify investments often show "hockey stick" profit projections, with low current profits imagined to take off at some point in the future. Scenario analysis can show that such optimistic base-case expectations are vulnerable to a series of events that are well within the realm of the possible. This reduces risk-adjusted expected returns and thus encourages more prudent investment.
- **Inconsistent expectations.** One business unit may plan on an expectation that consumers will face financial pressure and switch to lower-priced products while another unit may ask for funding to introduce higher-priced luxury items. When such inconsistencies occur, the overall plan cannot be optimal. Such inconsistencies can be avoided by using the same set of scenarios in all expectations-based decisions, such as allocating investment and setting performance targets.
- **Insensitivity to market conditions.** Plans often pay little heed to market conditions and do not specify adjustments in response to variations in them. By thinking through the financial impact of various scenarios, banks can make contingency plans. This typically makes banks reluctant to "overcommit." Planners who can see the downside of various scenarios will favor strategies that allow the bank to change direction quickly.

Besides these uses in strategic planning, stress tests can improve the measurement and reward of management performance. Like any other firm, a bank can do well (or poorly) not because of good management but simply because of an improving or, conversely, a worsening commercial environment. To evaluate the contribution of management, you need

Banks can improve their profits by systematizing the production of stress tests

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to know how much results would have improved (or worsened) in the circumstances that unfolded, given some benchmark for managerial performance. Only with advanced stress testing can you evaluate management's real contribution to the bank's results and avoid paying bonuses on the basis of macroeconomic luck.

BANKING ON STRESS

No industry has shown more clearly than banking that business people cannot know the future with certainty. And no industry has responded with more intellectual rigor to this challenge to risk management.

The initial impetus for this progress has been the demands of regulators. But if banks can systematize the production of stress tests and build their outputs into their strategic planning, the long-term justification will be improved profits. Banks will not only reduce their losses and their capital costs; they will improve their investment decisions and their performance management.

Doris Day was right: Whatever will be, will be. But we do not know exactly what *will* be. The best a business strategist or planner can do is know what *might* be. The future is not ours to see. The future is ours to stress test.

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WHATEVER HAPPENED TO BIG OIL?

OIL MAJORS NEED A NEW PLAN TO OUTPERFORM OIL PRICES

FRANCOIS AUSTIN
FERGUS MACLEOD
ROLAND RECHTSTEINER

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Oil prices have quadrupled since 2001. But many of the world's largest international oil companies have not kept pace. Instead, their operating cash flows have only doubled over the same period. And most of their stock market valuations have trailed even further behind, underperforming the broader stock market as a group by about 65 percent. (See Exhibit 1.)

There's an important lesson for oil and gas firms here – but it may not be what you think. Even before the recent downturn in the oil market, most international oil companies were no longer capturing the value of rising commodity prices for shareholders, especially oil prices. That new development alone should set off alarms in the executive suites of international oil majors, since it potentially undermines the reason why most investors want to own stakes in them.

But the bigger lesson is that oil and gas firms urgently need either to break apart or become more vertically integrated. Those are two key ways they can deliver value to their shareholders commensurate with rising commodity prices, and remain the leaders of their industry going forward. Business models that straddle the middle ground don't seem to be working.

MIGRATING VALUE

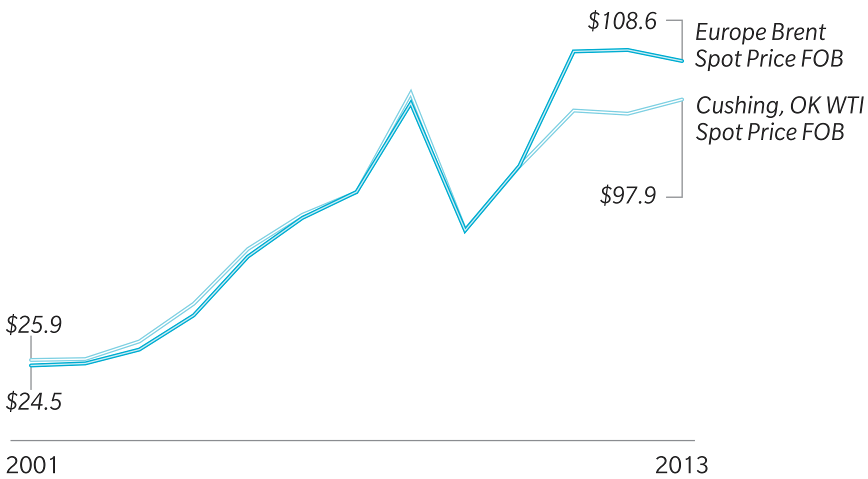
The value created from oil field development is migrating to oil field services companies. At the same time, volume, which has been the favorite measure of growth for international oil companies, is becoming an unreliable indicator of growth in value for shareholders. The traditional correlation between the market valuations of most of the international oil companies and volume is breaking down as more natural gas is traded at a discount to oil prices, fewer petroleum supply agreements are structured around oil prices, and the amount of capital required to renew a unit of production continues to expand.

The relationship between depreciation and capital expenditures is also fundamentally changing, making historic earnings almost meaningless. Until 2000, international oil companies expended roughly as much capital as their assets depreciated. But since then, their capital expenditures have increased by five times, while depreciation has risen by only half as much. (See Exhibit 2.)

EXHIBIT 1: THE OIL MAJORS’ DILEMMA

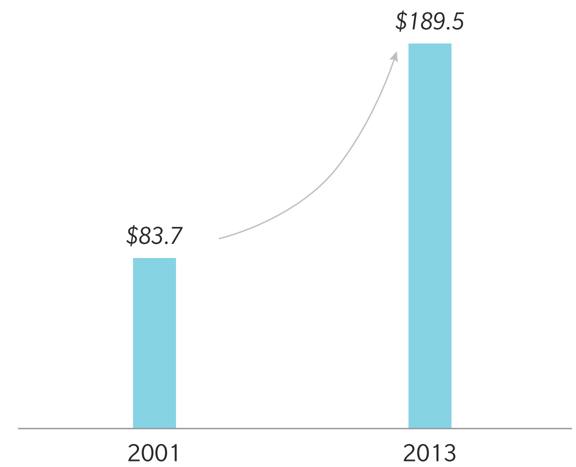
OIL PRICES HAVE QUADRUPLED ...

$ PER BARREL



... BUT OIL MAJORS' OPERATING CASH FLOWS HAVE BARELY DOUBLED ...

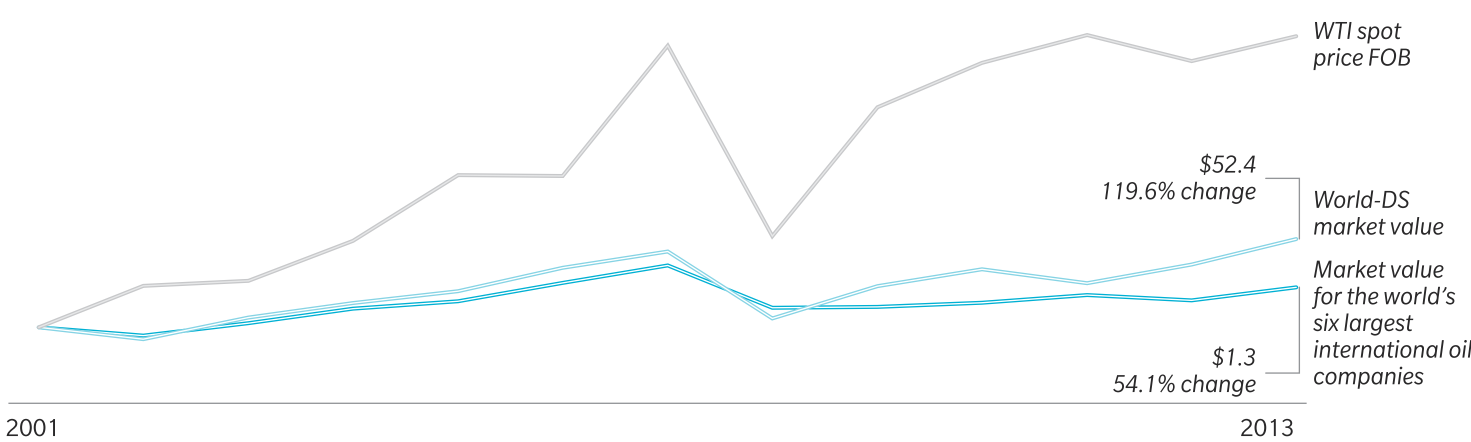
$ BILLIONS



Source: Thomson Reuters: Datastream, Oliver Wyman analysis. Calculations reflect the world's six largest international oil companies

... AND THEIR STOCK MARKET VALUATIONS HAVE LAGGED THE BROADER STOCK MARKET

$ TRILLIONS



Source: Thomson Reuters: Datastream, Oliver Wyman analysis

Sooner or later, all that extra capital will have to be depreciated, a factor that is creating a potential new moral hazard for an industry that has been issuing distributions to shareholders based on historic earnings. Many oil majors have paid dividends to shareholders that have met or exceeded their combined cash flow remaining after capital spending – or free cash flow.

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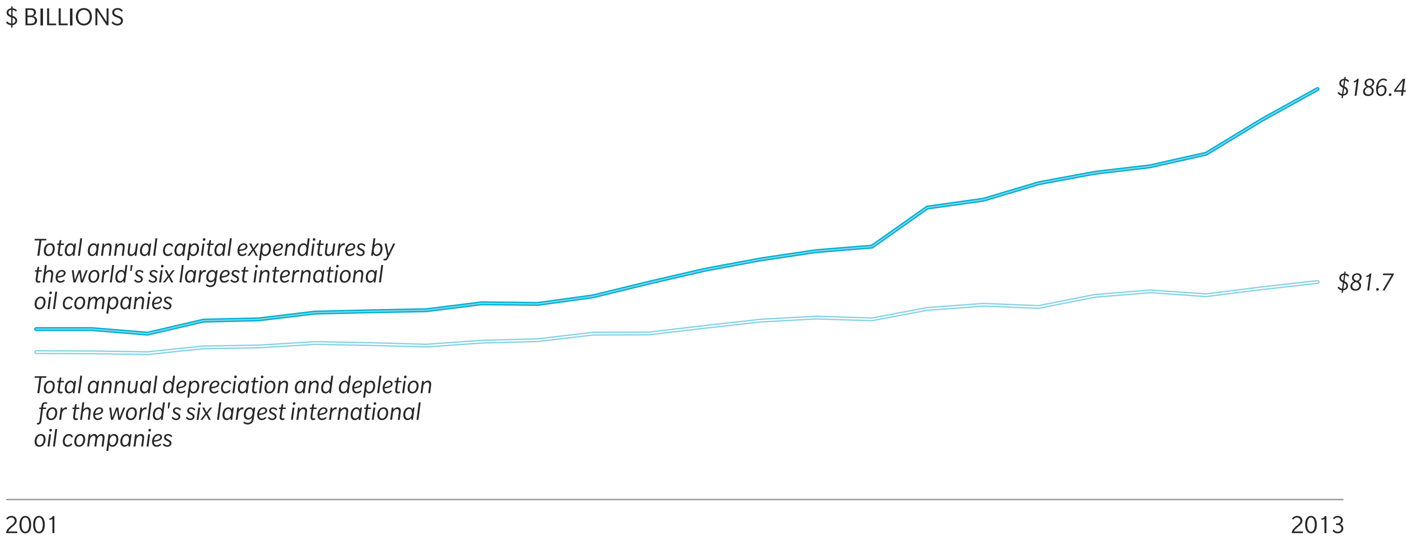
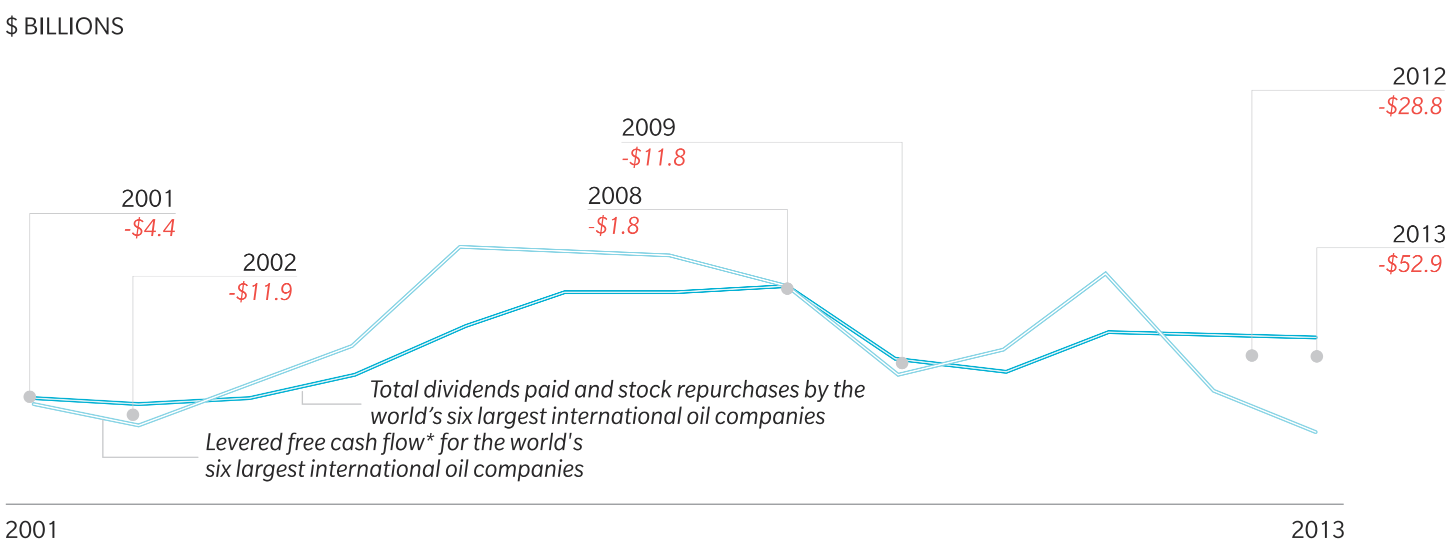
EXHIBIT 2: THE OIL MAJORS' DILEMMA

THE RELATIONSHIP BETWEEN CAPITAL EXPENDITURES AND DEPRECIATION FOR MOST INTERNATIONAL OIL COMPANIES HAS FUNDAMENTALLY CHANGED ...



Source: Thomson Reuters: Datastream, Oliver Wyman analysis

...AND MANY ARE PAYING DIVIDENDS TO SHAREHOLDERS THAT MEET OR EXCEED THEIR FREE CASH FLOW



Sources: Thomson Reuters: Datastream, Oliver Wyman analysis
* Levered free cash flow is defined as the amount of cash left over for stockholders and for investments after all obligations are covered

So what steps should the supermajors take?

INTEGRATE...

First, they should divert cash flow from capital spending and direct it back to shareholders. Due to the false signal of rising oil prices over the years, capital spending has spun out of control. More capital is being committed to high-stakes projects. But the hurdle rates to achieve returns on these megaprojects are higher than is generally recognized when adjusted for their greater inherent risks (including cost overruns

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and delivery delays), especially in today's increasingly fractured geopolitical environment. These projects may also suffer from a higher failure rate than in the past, in part because the chronic hollowing out of experienced workers and managers has made it more difficult for oil and gas firms to oversee contractors.

Supermajors should also seriously consider investing in a wide array of assets from which they can create value, ranging from oil exploration projects to oil field services. Doing so will require oil majors to forge new paths to make intra-business investment decisions, now that oil exploration projects may no longer deliver the highest returns. In the past, an oil exploration investment would not be compared to other types of investments. But in the future, they may need to be.

...OR DISINTEGRATE

Finally, international oil companies could divide up their business portfolios and put some of their assets up for sale. As more oil and gas firms attempt to expand their reach into more types of businesses, they are driving up the valuations of everything from gasoline stations to oil field service equipment. It may make sense for some supermajors to unlock value by selling some assets that do not work together or that could realize greater value by being combined with others to achieve economies of scale.

There is a historical precedent for following such a strategy. Seventeen years after the Standard Oil Company was dissolved in 1911, the total market value of the 30 surviving companies of the 33 that were divested had market valuations that were more than five times higher than the original company.

As the business landscape for oil and gas firms radically shifts, supermajors face difficult choices. But they are not impossible, and many companies are already taking action. The industry is in the throes of extreme change – and that calls for extreme measures. The sooner the Big Six can make the profound strategic and operational changes that will enable them to create greater value in a higher-stakes world, the better.

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THE MISSING LINKS IN INVESTMENT ANALYSIS

A PORTFOLIO MANAGEMENT STRATEGY TO MAKE INVESTMENTS WORK

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DANIEL LYONS
MARK PELLERIN

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Confronted with tighter profit margins and greater risks, executives are under more pressure than ever to deliver higher returns from their business portfolios. In response, most companies are now weighing investments aimed at improving their performance. In the first half of this year alone, companies announced 19,932 mergers and acquisitions worth $1.8 trillion – the highest value since the first half of 2007, according to Dealogic. (See Exhibit 1.)

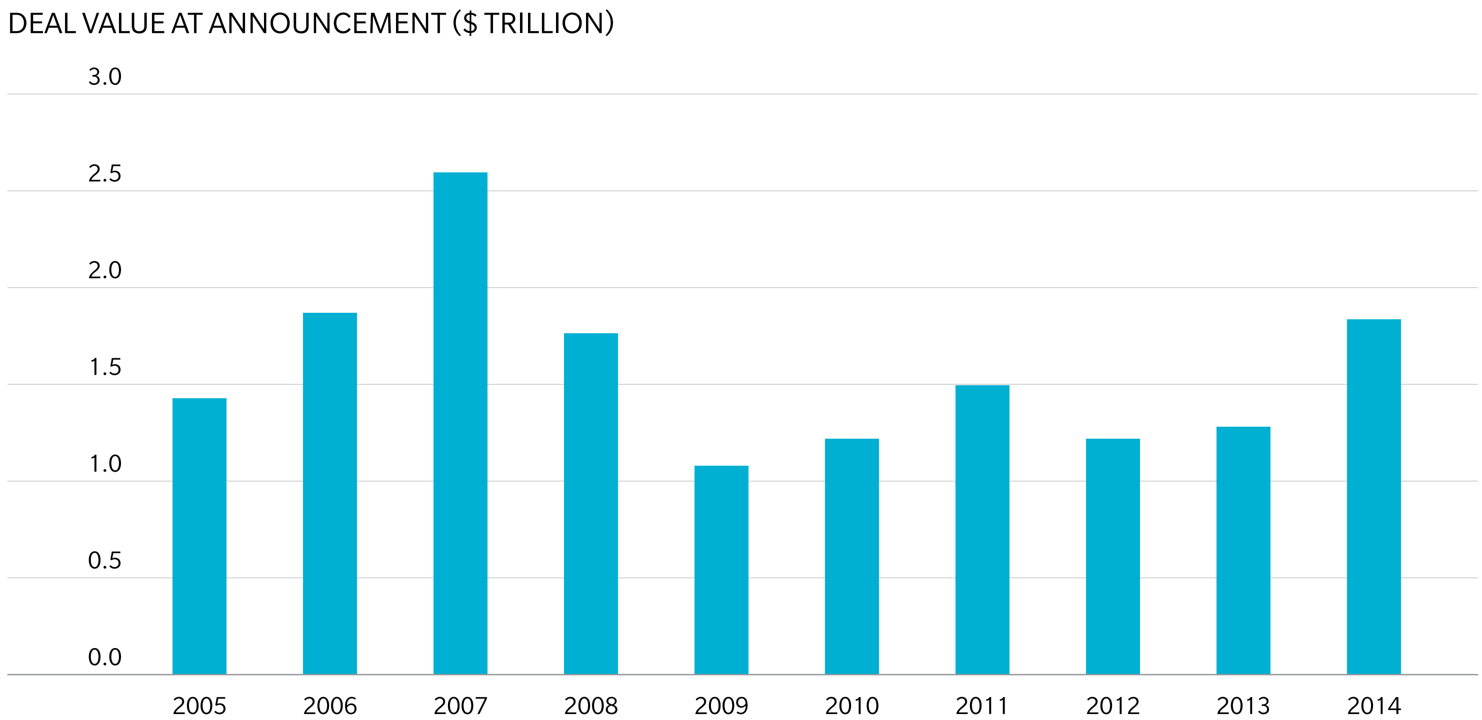
But there is a real risk that the acquiring companies could end up worse off, unless they take a fundamentally different tack to evaluating investments. Standard investment opportunity assessment tools that are based on hurdle rates determined by weight-adjusted costs of capital are proving to be flawed for several reasons: First, non-financial risks, such as regulatory and strategic risks, are typically not captured in such cost of capital allocations, even though they can dramatically affect business performance. Second, there is a tendency for companies to make capital allocation decisions on a stand-alone basis, as opposed to examining their impact on their entire portfolio of businesses. Third, many firms lack the capability to evaluate their future corporate portfolio's performance under a range of market and strategic scenarios.

We contend that companies will only discover the surest path to profitability for their entire business portfolio if they address these three shortcomings in their investment analysis. Many appear to have grown their portfolios too quickly, inhibiting their ability to integrate new businesses and reducing their returns on invested capital.

Indeed, when we examined the risk-return profiles of energy companies that make up the Standard & Poor's 500 index over a five-year time horizon, we discovered that the companies that more actively managed their portfolios by making greater capital expenditures or divestitures did not acheive superior returns. We estimate that 95 percent of these energy companies have the potential to improve their portfolio returns by at least 3 percent without assuming additional levels of risk if they follow the four steps outlined in this article. (See Exhibit 2.)

The energy sector is not alone: The same conundrum exists across multiple industries. To solve this problem, companies must do much more than simply identify attractive assets. They must also be prepared to operate them and manage the risks that accompany the acquisition.

EXHIBIT 1: TOTAL ANNOUNCED MERGERS AND ACQUISITIONS FOR THE FIRST TWO QUARTERS OF EACH YEAR



Source: Dealogic

Before examining potential solutions to these challenges more closely, let's look at why the three different types of blind spots mentioned above matter for the future of health care, energy, and banking industries.

BLIND SPOT 1
NON-FINANCIAL RISKS

Health plans will be unable to allocate capital effectively unless they take a proactive approach to understanding the non-financial risks they face. Non-financial risks have dramatically altered the health care industry's economics, especially over the past five years. Regulatory risk introduced by health care reform in the United States has made it challenging for health plans to formulate strategies. At the same time, new forms of health care delivery and disruptive consumer business models such as HealthKit, Apple's new app that enables users to keep track of their personal health and fitness data, will likely transform the ways in which people think about their health and well-being in the future.

The impact of health care reform is already starting to take its toll on the profitability of health plans. Due to regulatory oversight over pricing, product commoditization, and the introduction of consumer choice through health care exchanges, revenues are depressed at the same time that margins are being squeezed by rising medical costs.

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As a result, health plans are faced with two choices. They must either diversify their business models and seek new sources of profitability or prepare for consolidation and roll-ups in the sector. Examples of new diversified "big plays" include developing new consumer health engagement technologies, reimagining consumer health and well-being experience models, and starting care delivery enablement businesses.

But it will be years before any of these new strategies pan out, and health plans will need to adapt in step with a highly regulated, rapidly evolving market architecture. Since the government has increased its industry oversight through health care reform, small decisions (such as the delay of the government's SHOP exchange offering health insurance to businesses, or changes to individual coverage mandates) have had huge ripple effects.

86%

The percentage of senior financial professionals who expect as much, or more, difficulty forecasting critical risks in the future

BLIND SPOT 2
GOING IT ALONE

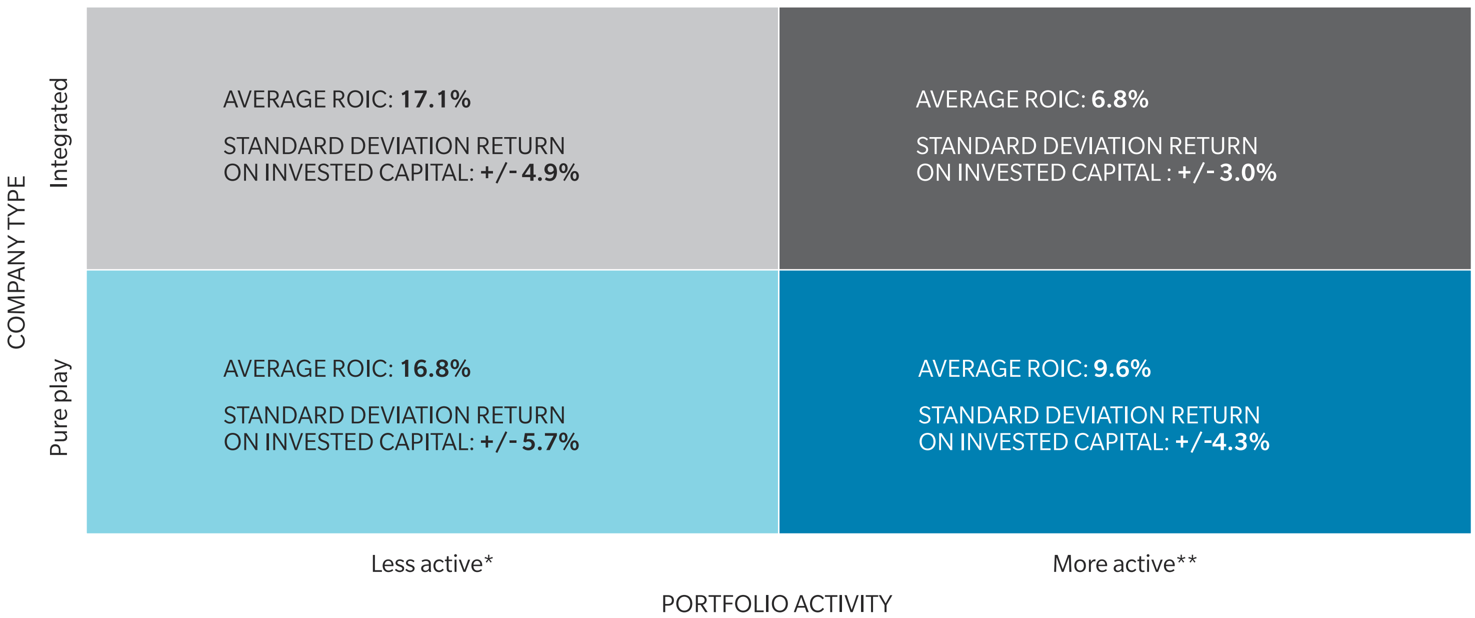
It is well known that acquisitions can often be worth more as part of the organization's portfolio than on a stand-alone basis. However, what is less understood is that the "synergy" created by an acquisition often comes from a different part of the organization than the primary operator of the asset.

International oil companies are large and complex organizations where decisions are often made in "silos" operating independent of one another. The supply and trading arms of these companies typically have the best perspective on the company's potential opportunities to earn greater margins in the market based on the quality, location, and timing of sales. However, the supply and trading businesses usually do not weigh in on decisions to invest in assets for operations, such as refinery upgrades.

By breaking down these silos, companies can discover investments that add greater value. For example, if refinery operations work closely with supply and trading divisions to make investment decisions, integrated oil companies are more likely to identify additional marketing and trading opportunities that potential investments can create.

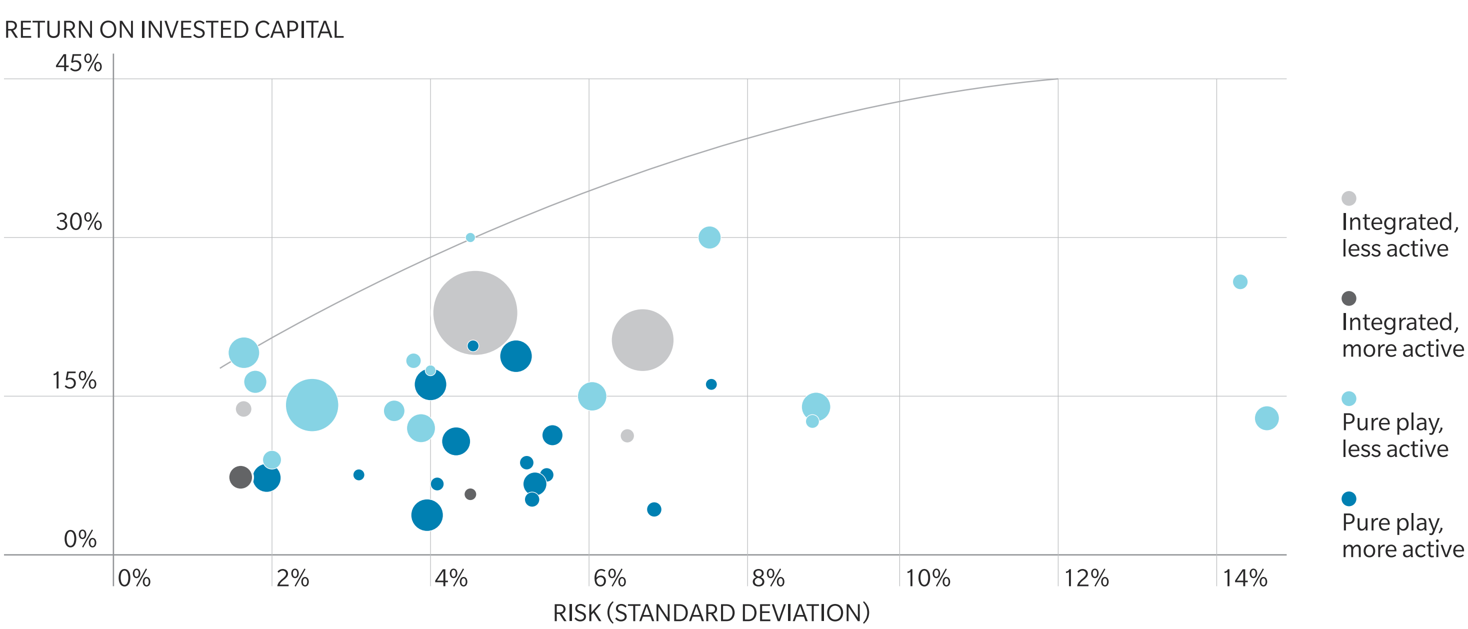
EXHIBIT 2: MORE ACTIVE PORTFOLIO MANAGEMENT IS NOT A SUBSTITUTE FOR QUALITY INVESTMENT DECISIONS

THE 40 ENERGY COMPANIES IN THE S&P 500 THAT HAVE DEVOTED A LARGER PERCENTAGE OF REVENUES TO CAPITAL EXPENDITURES AND DIVESTITURES ARE UNDERPERFORMING THEIR PEERS...



Source: Oliver Wyman market analysis of industrial company
* Invest (or divest) less than 30% of annual revenue
** Investment (divestment) activity = Balancing activity = [Absolute value (capital expenditures) + absolute value (divestitures)]/Revenue
return on invested capital = Earnings before interest and taxes/(Total assets – cash – accounts payable – accounts receivable)

...BUT THEY CAN IMPROVE THEIR PERFORMANCE IF THEY OPTIMIZE THEIR PORTFOLIO ALONG A "RISK-RETURN EFFICIENT CORPORATE INVESTMENT FRONTIER"



Source: Dealogic
Note: The "risk-return efficient corporate investment frontier" presents a series of potential options for a business portfolio to achieve its most attractive return for the level of acceptable risk

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BLIND SPOT 3
TUNNEL VISION

No one can predict the future. Companies must build robust investment portfolios that can deliver returns in a wide range of alternative market and price scenarios. But many companies fail to consider unconventional scenarios while constructing their portfolios and make investment decisions based on a static view of the future, or else consider only a small subset of possible outcomes.

As the recent credit crisis demonstrated, effective scenario planning is essential not only to the profitability of the banking industry, but to the viability of banks as going concerns, in large part because of their highly leveraged balance sheets. In response to the systemic risk that the crisis exposed, regulators have since instituted stringent "stress tests," such as the Comprehensive Capital Analysis and Review program (or CCAR). In such tests, banks must evaluate the impact of scenarios that would be stressful to the industry as a whole (such as a generalized downturn) on their business, as well as at least one scenario designed to probe their own unique vulnerabilities.

In order to provide rigorous support for their estimates, banks have made significant investments in tools and processes designed to translate the stress test scenarios into the detailed line-item impact that each scenario would have on their various business segments.

As such capabilities become more established, banks may also employ them extensively in the service of portfolio management objectives, such as setting the risk appetite and optimizing the risk-return metrics of the organization. Stress tests are an increasingly salient driver of capital requirements, which should be factored into projected returns on capital when comparing investment opportunities. Similarly, reference to stress scenarios can help a bank to define and communicate its risk appetite internally, allowing decision makers to apply it more consistently.

NEXT STEPS

The reasons why companies often fall short of evaluating the potential impact of investments on their entire business portfolio may seem straightforward. But in our experience, companies rarely address these challenges when they are actually making an investment decision. Instead, some executives rely on subjective judgment that reflects their strategic views. One Fortune 500 chief financial officer candidly summed

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up this approach by stating, "If I like the investment, the required return is 11 percent. If not, it's 14 percent." Or, in other cases, companies resist divestments for fear of signaling balance sheet weakness.

Below are four steps that, in our experience, have enabled companies to move forward.

1. **Define a target strategic portfolio.** Developing a multidimensional investment policy statement to guide portfolio investment and rebalancing decisions helps to align stakeholders about the future direction of the company. Target portfolios should consider both expected returns and the organization's risk appetite. Portfolio constraints – such as the type of asset and liquidity, concentration of assets, geographic footprint, ownership structure, as well as such issues as legal, regulatory, and social considerations – should also be taken into account.

2. **Establish an analytical risk-return framework**. The investment challenge that businesses face is complicated by the large number of disparate investment opportunities competing for capital across business units. For instance, an integrated energy company has to balance investments to build out upstream (domestic, international, deepwater, unconventional), midstream (terminals, pipelines, rail transportation), and downstream (refining, supply and trading, retail) businesses. Indeed, a company might have more than 10 asset classes within their portfolio, each with a unique risk-return profile, and each in turn requiring a unique risk-adjusted hurdle rate.

   As a result, a framework to profile individual assets and, ultimately, make trade-offs in a data-driven manner, is essential to determine the optimal mix for a company's portfolio. A corporate risk register should be used to identify and assess the key risks, drivers, and root causes of variation in financial performance. Risk-adjusted hurdle rates should be developed at the asset class level.

3. **Measure individual asset performance.** Companies need a quantitative and systematic way to quickly screen new portfolio investment opportunities, as well as to monitor the performance of existing assets. While defining the target strategic portfolio may establish the company's direction, it does not make individual asset investment or divestiture decisions any easier, nor does it prescribe the timing, which is based largely on available market opportunities.

$1.8 trillion

The value of mergers and acquisitions announced globally in the first half of 2014

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To make better portfolio management decisions, it's important to build a results-based culture and accountability for asset performance. At the same time, performance measurements need to be carefully calibrated to capture the total return contributions of an asset across organizational silos, and adjust for risk in a manner that considers plausible extreme scenarios, not just historical volatility.

4. **Optimize the efficient corporate portfolio frontier**. Unlocking incremental value within any portfolio typically requires rebalancing assets to realize higher returns for the same or less risk. Unfortunately, financial executives increasingly are finding it challenging to make financial forecasts. According to a recent survey of senior finance executives conducted by the Association for Financial Professionals and the Marsh & McLennan Companies Global Risk Center, 86 percent anticipate they will have as much, if not more, difficulty forecasting critical risks to their businesses over the next three years.

   One solution is for companies to develop a dynamic set of tools and modeling capabilities that simulate the performance of various portfolio options under a range of commonly accepted and stress scenarios. The outputs from this type of application become invaluable in giving the company's executive team and board of directors added confidence in their portfolio decision making. This same type of optimization can be used at a more granular level within most organizations to evaluate customers, suppliers, and products and optimize priorities and resource allocations accordingly.

CONCLUSION

Transforming a business portfolio requires the will and the ability to account for a wide range of critical risks and evaluate their impact on an organization's financial performance as a whole going forward. But we believe those businesses that take the time to select the assets that best suit all of these needs will find their efforts rewarded. For they will likely be the organizations that improve their returns by the widest margin as industries reshape themselves and businesses make more investments and acquisitions.

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THE REAL RISK FOR PROPERTY AND CASUALTY INSURERS

IRRELEVANCE IN THE NEW DIGITAL WORLD

ARTHUR WHITE
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Cyber risk, telematics, “digitalization,” and related buzzwords dominate discussions about the future of property and casualty insurance. These are important topics, but they are only the visible manifestation of a deeper and more fundamental threat: namely, that in this new world, today’s property and casualty insurers are becoming irrelevant to their customers.

This threat has been created by three profound changes in the insurance market.

THE TRIPLE THREAT

The first big change is around how *customers* behave – specifically, how they choose to interact with the people, objects, and companies in their lives. This is not merely a question of buying online. Increasingly, many of customers’ most valued assets are virtual (their photos, their music); their business and social interactions are mediated digitally – and their physical possessions and surroundings are increasingly connected. This is a world where people’s hopes, fears, and risks (and hence their insurance needs) are changing fundamentally.

The second transformational change concerns *information*. Vast floods of information about customers and their true behavior are becoming available. For example, a simple smartphone app can reveal more about how a customer really drives than any motor insurer has ever before known. It will be absolutely vital for insurers to work out how to gain access to these gushers of data, and how to convert them into insight.

The third change is in *competition*. Insurers are now coming face to face with new types of competitors with stronger brands, better customer relationships, more analytical firepower, and lower costs than the traditional insurer. These competitors are not only the well-known “big beasts” of the digital era, namely the likes of Google, Apple, and Facebook, but also retailers, utility providers, home servicers, and auto manufacturers. For example, the “my first Audi” concept in Germany bundles insurance into a single, low, monthly car rental cost.

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DEVELOPING A COMPETITIVE ADVANTAGE

These developments mean that many of the competitive advantages that insurers have relied on in the past – brand, physical distribution networks, and scale – are losing their value. (See Exhibit 1.) At the same time, new business models are emerging that look very different from those followed by a traditional insurer.

There is, of course, no single recipe for success. But the winners to date seem to share a number of characteristics. They rely heavily on analytics and actively seek out new types of customer data and insight. They use this data to make decisions rapidly, and react quickly to changes in the competitive landscape – for example, updating prices to customers daily, rather than monthly, and updating underlying technical models monthly, not yearly.

They have an entrepreneurial or "trading" mentality, founded on a "test and learn" culture of finding out what works and what doesn't. This is true not only in setting prices and designing the digital customer journey, but also in areas such as lead generation, retention management, and outbound communications.

They also have low operating costs, driven by a different approach to operations. They give primacy to digital interactions, customer self-service, automation, e-trading in underwriting (even in small commercial), and digital claims management.

The most successful new models have been built anew, rather than by cutting back an existing business. The best examples have achieved the operational holy grail of better customer outcomes, more satisfied staff, much lower operating costs, and better loss-ratio outcomes.

MAKING IT HAPPEN

These new types of business models are a long way away from where most insurers are today. Even if they accept the need for change, many large insurers will find it extraordinarily difficult to achieve it. They must struggle against legacy IT systems, resistance to change among staff, and skepticism created by the failure of previous cost-cutting initiatives.

The skills needed may require new talent, often from outside the insurance industry – which poses the challenge of how to attract and retain the type of commercially aware, entrepreneurial, digital-savvy employees who have not in the past seen insurance as their first choice.

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EXHIBIT 1: THE CHANGING SOURCES OF STRATEGIC CONTROL ADVANTAGE IN INSURANCE

WHAT DRIVES STRATEGIC CONTROL?	WHY DO INSURERS NO LONGER FIND IT EASY?	
OWNING A CRITICAL ASSET	Extensive branch and agent/broker networks...	...start looking like expensive liabilities if customers want to interact digitally.
A BETTER PRODUCT OR LOWER COST	Economies of scale from being the biggest insurer in the market...	...are undermined when new entrants have lower costs and better loss ratios.
BETTER ACCESS TO CUSTOMERS	Even the best-known insurance brands...	...turn out to be rather weak consumer brands.
BETTER KNOWLEDGE AND INSIGHT	Having the most policies in your portfolio...	...is no longer enough when new, far more insightful sources of data are available.
REACH AND NETWORK EFFECTS	Economies of scale and scope in operating claims networks...	...are undervalued by the end customer.

Source: Oliver Wyman analysis

Some large insurers have addressed this by taking a "skunk works" approach, piloting a new business model outside the constraints of the existing setup. This approach can pay dividends, not least by demonstrating what can be possible if today's constraints are relaxed. But it does not answer the question of how to transform the wider organization.

There is, of course, no easy answer to this question. Transforming large insurance firms will take tremendous effort from their management and leaders. Creating a sense of urgency and direction is the first step to motivating that effort. To do so, and to survive commercially while change is underway, we recommend the following six actions:

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1. **Carry out an unsentimental analysis of the status quo.** Examine the drivers of change in the market and evaluate where your company will be allowed to make a profit five or 10 years from now.
2. **Think big when making strategic plans.** Staying competitive requires transforming a company's operations, culture, and talent model toward becoming genuinely agile, entrepreneurial, and low cost.
3. **Don't be paralyzed by the scale of change.** Avoid becoming distracted by the need to "run fast to stand still." Start with some small steps that deliver significant wins and demonstrate the art of the possible early on.
4. **Position yourself to capture value in a world with vastly more data**. Get to the forefront of analytical techniques and potential uses of new data by taking advantage of new approaches not just to analytics and IT infrastructure, but also by setting up the right organizational structures and hiring new and different talent. Avoid being out-innovated by startups or technology companies.
5. **Get fit for change to ease the transition.** Protect the back of book and actively look to take cost out. In our experience, cost reductions of 30 to 40 percent are achievable if the company takes a "blank page" view of what is now possible in a digital world.
6. **Make defensive plays to avoid being squeezed out by new competitors**. Find propositions that cannot easily be replicated by new entrants, such as bundling multiple products to offer unbeatable value. Insurers should also consider entering into strategic partnerships with potential competitors before the balance of power shifts too far.

CONCLUSION

Insurance markets are changing radically, and so are the sources of competitive advantage within it. Insurers need to think hard about the changes brought on by the digital revolution, or they risk becoming irrelevant to their customers.

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SUSTAINABLE RETAIL

THE GROCERIES RETAILER GAP

MICHAEL LIEROW
SIRKO SIEMSSEN

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Most retailers agree that sustainability will be a key competitive advantage in the future. Unfortunately, there is a wide gap between their ambitions and reality.

A growing mismatch between supply and demand could erode the profits of the entire food industry within four decades. Global demand for agricultural production is expected to grow by 70 percent by mid-century and the global average per capita caloric intake is projected to increase by about 40 percent. The problem is that global food production already utilizes about 50 percent of the arable land surface available and the global agricultural sector already consumes about 70 percent of the freshwater available for human use.

Our research shows there is a broad consensus among retailers that they will almost certainly face wrenching cost and availability problems as a result of the divide that is developing between supply and demand. Most also believe that they will be confronted with very different demand patterns as customer priorities and regulations change. Ninety percent of the top 50 global grocery retailers market their own private-label organic products, and 68 percent publish a sustainability report. (See Exhibit 1.) In their annual reports, 82 percent of groceries retail chief executive officers cite sustainability as a key priority. More than one in three has opened "green" pilot stores.

Nevertheless, the reality behind these flagship initiatives continues to be largely "unsustainable." While sustainability now routinely figures in evaluating investment decisions and corporate projects, it has had little effect on the key commercial activities of the business – buying, store operations, or supply chain decisions. In most cases, sustainable product lines account for only a small percentage of sales revenues, and, with new product development and space decisions still dominated by other priorities, change will be slow.

Although retailers' advertising campaigns are increasingly built around green messages and products, their in-store price promotions largely ignore them – and these account for a very significant proportion of sales. The vast majority of new stores also have little to do with their "green" concept stores. More than 99 percent of all stores are still "traditional," "non-green" formats.

82%

The percentage of grocery retail CEOs who cite sustainability as a key priority

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WHY SUSTAINABILITY IS NOT "STICKING"

Retail is characterized by low margins, pressing daily challenges, and global, complex supply chains. As a result, retailers focus on pressing, urgent matters, leaving sustainability in the backseat. Even deeply committed retailers often struggle to achieve real impact.

In our experience, there are two reasons that this keeps happening. First, retailers fail to incorporate sustainability into their daily decision making. In many, and perhaps even most retailers, decision making is spread out across hundreds of buyers, category managers, procurement managers, store associates, logistics specialists, and ordering managers. Forty two percent of the top 50 global grocery retailers have established a sustainability function, and 14 percent now have a "Chief Sustainability Officer."

But only 10 percent of these grocery retailers actually measure and incentivize personal performance against key performance indicators of sustainability. In this context, it's not surprising that sustainability often remains limited to a few corporate "lighthouse projects," and rarely trickles down into decisions such as which products to carry, or what to promote next month. If sustainability is not an important factor alongside sales, volumes, and margins, decision makers will tend to ignore it.

The other challenge retailers face is that they can't manage what they don't measure. In order to make their core business model sustainable, retailers must understand the financial impact of sustainability initiatives. But only 16 percent of the top 50 grocers evaluate how sustainability efforts translate into financial outcomes. As a result, it is hard to define realistic targets, shape decision making, and measure progress.

Identifying and generating the right key performance indicators can be a difficult undertaking. Often, there is insufficient data. And even when such data exists, disentangling the link, for example, between improving a company's ecological footprint and its economics is far from straightforward.

10%

The percentage of grocery retailers who measure and incentivize personal performance against sustainability key performance indicators

MAKING SUSTAINABILITY HAPPEN

Nonetheless, leaders in sustainability have shown that it is not only possible to find ways to measure the impact of their efforts, but also to use this knowledge to achieve their ambitions.

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Given how decentralized decision making is in a typical retailer, making sustainability a reality requires getting "into the bloodstream" of the whole organization, particularly the decision makers in trading and operations. Our work with clients points to five important success factors:

FACTOR 1
CLEAR, STRATEGIC INTENT

Organizations must establish a clear strategic plan that is regularly reinforced over multiple years. Achieving this requires continuous and unambiguous top-level support. A company's management team must acknowledge the organizational and cultural challenges involved in targeting longer-term and more holistic objectives – while not losing focus on short-term sales, costs, and margins.

FACTOR 2
GREATER TRANSPARENCY

Measuring the ecological and social footprint of an organization's products and operations is very difficult, especially on the product side, since most resources are used earlier on. But the task is not impossible. To date, most retailers have focused on availability, cost, and time-to-market in their attempts to better understand upstream supply chains. In the future, supply-chain management and supply-chain collaboration will need to put as much, if not more, emphasis on resource usage, renewable resources, and social standards.

FACTOR 3
DEFINED TARGETS

Realizing a sustainability strategy requires quantified, operationalized objectives for functions and individuals, for both the short and the long term. For sustainability to become a reality, decision makers need to place it on a par with financial performance – and not just a "nice to have." This requires setting specific goals.

FACTOR 4
THE INCLUSION OF "SUSTAINABILITY" IN DAILY DECISIONS

Sustainability needs to be incorporated into daily decision making in a dispassionate, transparent, and quantitative way. To be effective, there needs to be a detailed understanding of how, when, and by whom

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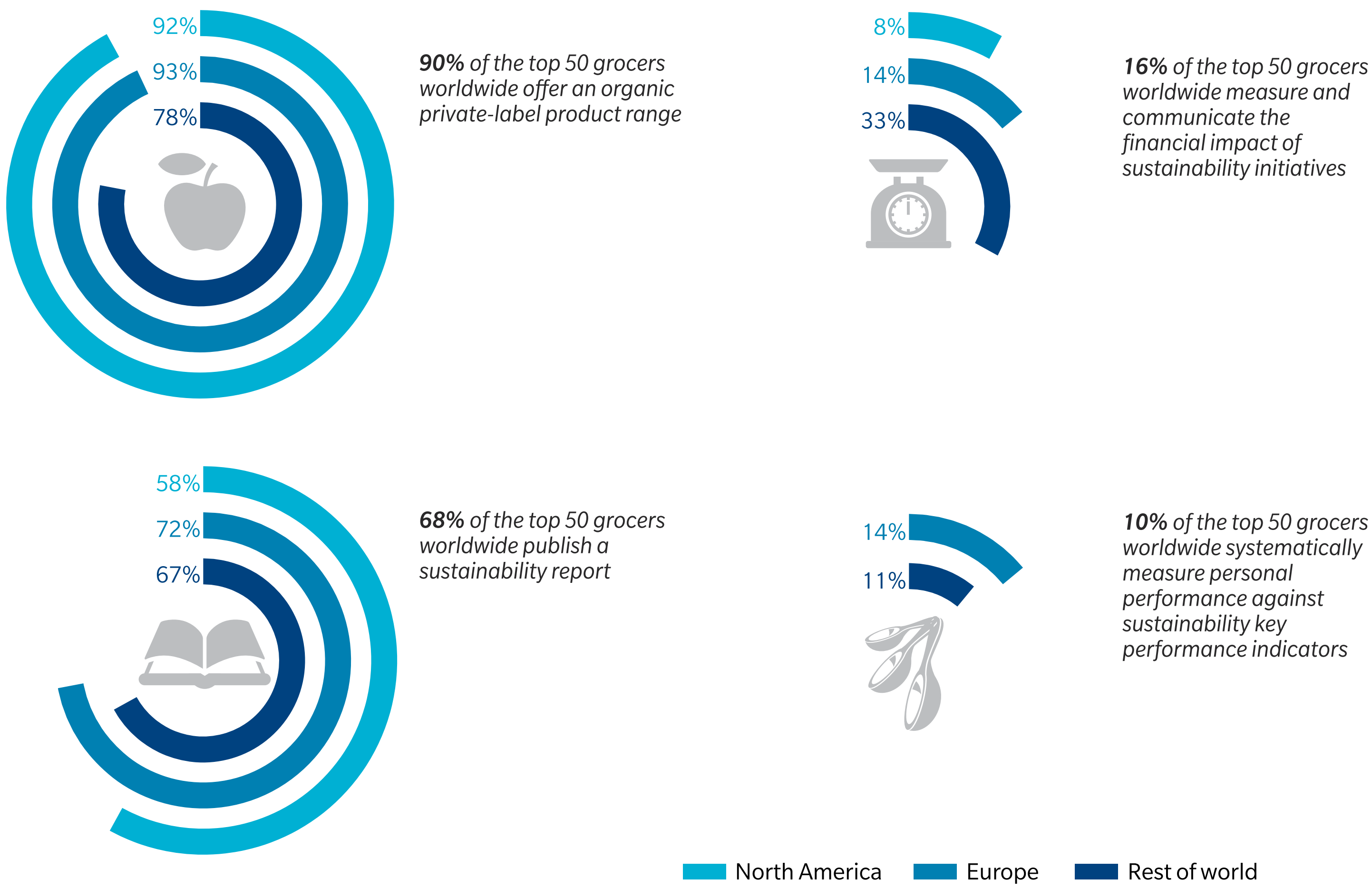
EXHIBIT 1: SHARE OF TOP 50 GROCERS WORLDWIDE



Source: Oliver Wyman analysis

decisions are being made, as well as how to influence and change them. Just throwing more data at buyers and at category and operations managers is not enough.

FACTOR 5
MEASURING THE IMPACT

Organizations must be vigilant in measuring detailed and quantified results delivered against the targets set. As described earlier, ongoing measurement using key performance indicators is a vital part of embedding sustainability into the organization. Without that, it is very difficult indeed to know how successful the strategy has been, or to ensure that sustainability remains top of mind for those making day-to-day decisions.

CONCLUSION

Building a sustainable retail business model is not easy. It costs money, and is not without risk. The argument for becoming sustainable is fundamentally underpinned by a need: coping in a world of finite resources and increasingly stark trade-offs. The business case for sustainability is fundamentally long term, driven by the need to address emerging but anticipatable realities – ones that only become obvious over time.

But even today, sustainability offers tangible opportunities to drive growth and to reduce costs. In Switzerland, sales of the Coop Group's private-label sustainability brands and quality labels have reached $2 billion – more than 18 percent of its food revenues. Coop's market share in Switzerland in organic products exceeds its overall market share by more than 100 percent. In the United Kingdom, Marks & Spencer has generated more than $168 million in net benefits, by reducing packaging, decreasing landfill waste, improving transport, and adopting energy efficiency initiatives.

These and other pioneers have shown there is a path to profitability in sustainability. Over the next four decades, companies that follow in the footsteps of these early pioneers, as opposed to those that do not, may find the key to prospering in an increasingly harsh landscape lies in doing the "right thing."

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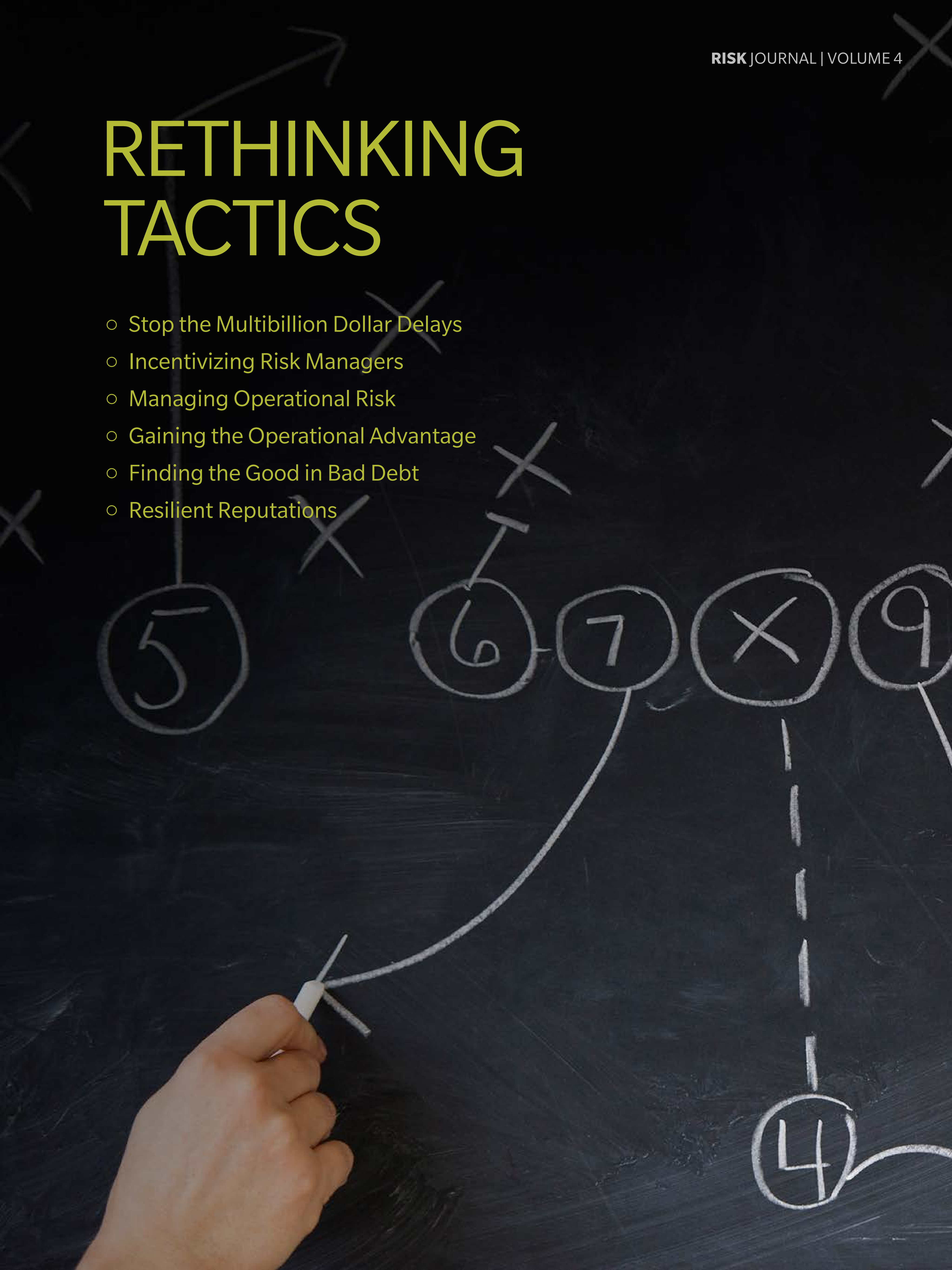
RETHINKING TACTICS

- Stop the Multibillion Dollar Delays
- Incentivizing Risk Managers
- Managing Operational Risk
- Gaining the Operational Advantage
- Finding the Good in Bad Debt
- Resilient Reputations



STOP THE MULTIBILLION DOLLAR DELAYS

PLANE AND TRAIN MANUFACTURERS NEED TO RETHINK PRODUCT DEVELOPMENT

BERNARD BIRCHLER
ERIC CIAMPI
ARCHAG TOULOUMIAN

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Manufacturers of planes and trains are experiencing ongoing delivery delay problems that have set the industry back by more than $20 billion over the past several years. On the aviation side, costs and delays have been the price for developing game-changing aircraft programs that will transform the economic profile of the airline industry. (See Exhibit 1.) On the rail side, rail integrators (which turn component assemblies into finished trains) are facing higher costs and penalties due to setbacks in high speed and regional passenger train projects across Europe.

Keeping the development and production planning of new products within budget and on schedule is a challenge for any manufacturer. But recently, the costs associated with setbacks have risen to new heights: Aviation and rolling stock development programs are experiencing delays of as much as four years, costing manufacturers significant additional engineering hours and hundreds of millions of dollars in cost overruns. At the same time, the contractual penalties that manufacturers must pay their customers, especially in the aviation industry, are soaring, reaching billions of dollars. (See Exhibit 2.)

SIMPLIFYING COMPLICATION THROUGH COLLABORATION

Rising demand for transport worldwide, coupled with an aging installed equipment base, will drive a large number of new projects. In the next 20 years, we estimate that there will be demand for 20 percent more aircraft globally – or approximately 36,800 units – compared with the orders received in the past decade. Orders for rail equipment, too, are expected to jump by 20 percent worldwide over the next two years, to $213 billion, up from $180 billion from 2007 through 2009, according to the Association of the European Rail Industry (UNIFE).

In addition, customers expect new equipment to reflect the latest available technologies, creating an even higher hurdle for manufacturers. The good news is that in our consulting, we are seeing a growing awareness on the part of manufacturers of the critical need for a more collaborative approach – one that can halt today's runaway costs.

In our view, the fundamental problem is that most manufacturers try to prevent product delays by improving their own product development and manufacturing processes in isolation. Instead, manufacturers must take a broader view to produce planes and trains that are becoming much more complicated and, thus, more difficult to deliver on time and on budget. Manufacturers must re-evaluate how they manage

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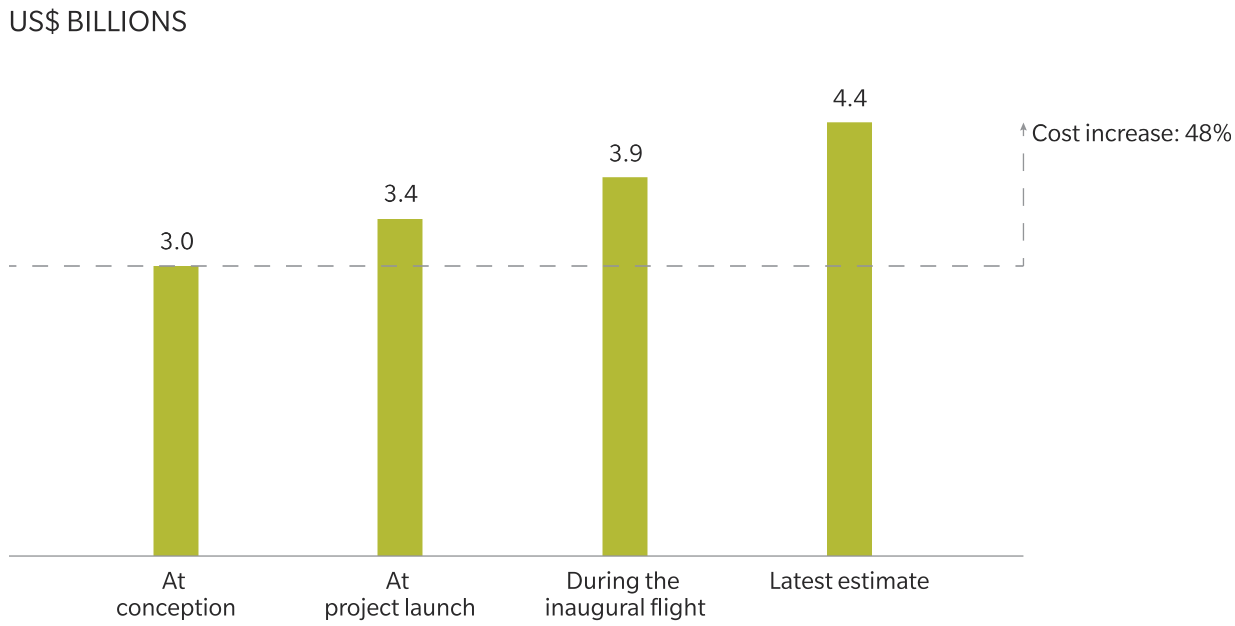
EXHIBIT 1: RECENT AIRCRAFT PROGRAM DEVELOPMENT COSTS, FROM PRELIMINARY DESIGN TO 2014

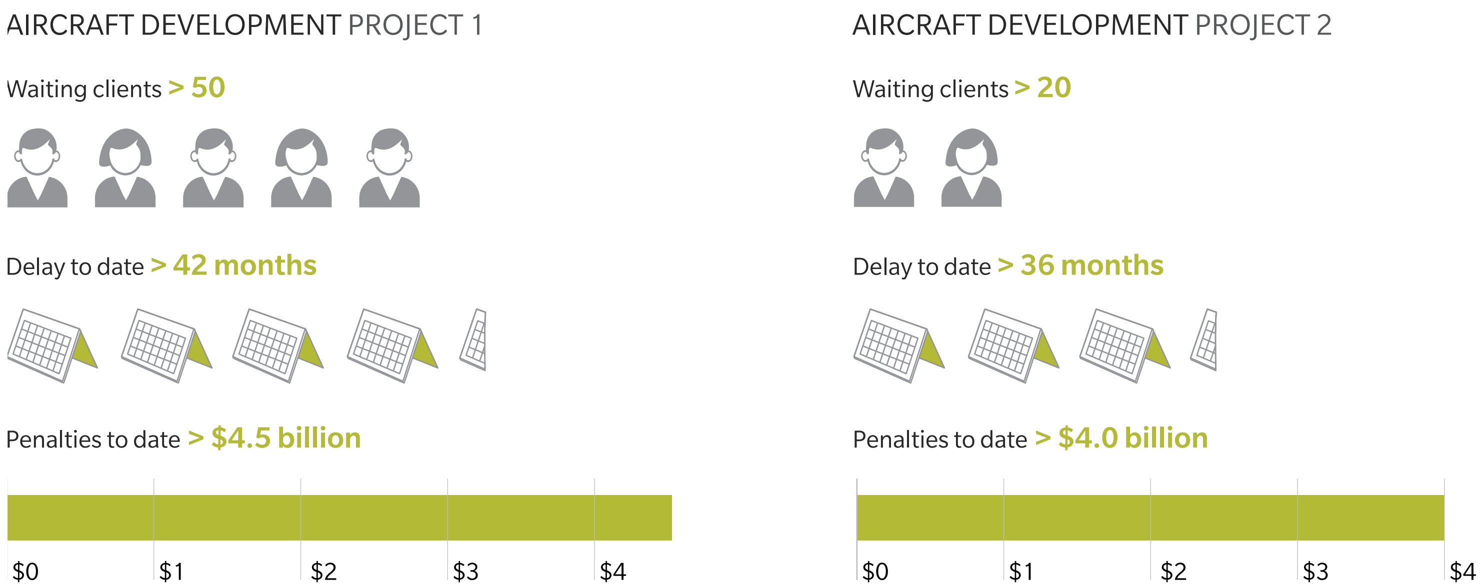


Source: Company reports, Oliver Wyman analysis

everything – from product development and the supply chain to production ramp-up – in a comprehensive manner, involving their contractors, suppliers, and other third parties.

Tomorrow's industry leaders will be those companies that develop the capability to involve a wide group of stakeholders, ranging from startups and academics to their customers' and suppliers' engineering teams globally. Today, many manufacturers rely on siloed, opaque product development processes and incomplete assessment metrics. To end product development and delivery delays and improve quality, manufacturers must develop a more far-reaching and transparent approach, as this will allow them to tap into the expertise of a wider group of stakeholders. This approach will help manufacturers not only generate more innovative concepts, but also better estimate the maturity of these concepts before including them in the scope of new projects. Manufacturers will also be able to better anticipate major risks and assess the feasibility of new product planning and budget – from the point at which a plane or train is a concept to when it rolls off the assembly line.

EXHIBIT 2: EXAMPLES OF AIRCRAFT DEVELOPMENT AND PENALTIES



Source: Company reports, Oliver Wyman analysis

GREATER DEMANDS

Of course, the first step in solving a problem is properly defining it. Why are aviation and rolling stock manufacturers experiencing rising delays and costs? The primary reason: A more demanding environment. Remaining competitive requires developing ever more innovative planes and trains, at a faster pace, and at an equivalent, or lower, price.

Customers' expectations are rising, especially for those extras that increase comfort, infotainment, and connectivity for passengers. In addition, environmental and safety standards are becoming more restrictive. Approval processes for both aircraft and rolling stock are becoming stricter, with longer testing periods and more required documentation. At the same time, building planes and trains packed with new technological innovations requires more sophisticated engineering. Many new technologies require hundreds of thousands of engineering hours before they are sufficiently stabilized for the approval process.

Manufacturers are attempting to meet these mounting demands with a global and often fragile patchwork of component and assembly suppliers. Most rely on hundreds of small and financially stretched firms that offer limited visibility into their operations. Moreover, manufacturers often engage suppliers without a robust audit of their ramp-up capacity and quality and more often than not devote insufficient resources to follow up on action plans.

Some manufacturers even inadvertently introduce contractual risk into their supply chains by failing to include back-to-back terms and conditions in supplier agreements (which ensure a supplier passes on

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its obligations and liabilities through to its subcontractors). As a result, these manufacturers may discover discrepancies between their needs and their suppliers' purchasing strategies much too late, requiring new initiatives on the part of the manufacturer to secure needed components and ensure product reliability. Such discrepancies increase the likelihood of a new product program running late and over budget.

Making matters worse, customers are asking for more robust contracts, with more clauses to protect them from potential deviations. Customers are also enforcing penalty clauses more often than in the past and have equipped themselves with significant claims management departments. (See Exhibit 3.)

EXHIBIT 3: EXAMPLES OF TRAIN DEVELOPMENT AND PENALTIES

Source: Company reports, Oliver Wyman analysis

NINE BEST PRACTICE FLASH POINTS

In our experience, securing an on-time, on-budget product rollout involves best practices at nine "flash points" that occur throughout the product development cycle. Just as hitting the flash point of a fuel will cause a fire, each of these points can suddenly trigger a delay or significant cost overrun if mismanaged. Below, we examine each of these best practices, in turn.

FLASH POINT 1
CAST A WIDER NET FOR CONCEPTS

Before deciding on a new product concept, hold an "open innovation" competition to attract the best ideas. Open innovation initiatives that invite suppliers, customers, and even outsiders such as academics to participate can significantly improve the pool of choices for innovative concepts and accelerate the shift into development. In addition, collaborating with equipment operators (current or potential clients) during the drafting of specifications can help avoid overloads, anticipate operational costs, and test the feasibility of deadlines.

FLASH POINT 2
STANDARDIZE ENGINEERING

Reduce development costs by standardizing engineering processes, and then focus on the development of standardized and modularized components and assemblies. Such systems can be more easily and speedily adapted for customers and projects in different geographies.

FLASH POINT 3
ANTICIPATE AND MITIGATE RISKS

Establish an efficient alert process early on to gain more control over product quality. By tightening the management of so-called "maturity gates" associated with a "V-model" development life cycle, a manufacturer can better anticipate risks and launch mitigation initiatives more effectively. Establishing key milestones, or "maturity gates," assist with validating each relevant step of a product's design at each stage of its development.

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FLASH POINT 4
IMPLEMENT A STRONG DESIGN AUTHORITY AND REINFORCE SYSTEM ENGINEERING

Build a functional architecture to manage interfaces, particularly as systems are becoming increasingly interlinked. To start, a company should improve its ability to track configuration evolutions by agreeing on a detailed description of objectives and expected performance at the various stages of development, using so-called "baselines." Another critical, high-impact step is creating a "design authority" comprising senior experts to monitor engineering teams' progress. Such an authority can ensure teams remain focused on quality, cost, and delivery requirements, and that the design is finalized at the appropriate juncture.

FLASH POINT 5
REVAMP TESTING STRATEGIES

A product's development time can be significantly cut by increasing the number of upfront digital simulations and reducing the number of physical tests. Designs can be tested more rapidly with the use of simulation tools and of 3D-printed prototypes.

FLASH POINT 6
RAMP UP PROJECT GOVERNANCE

Project management processes and skills must be able to handle increasingly complex production runs. Ensure key performance indicators are focused on process control and are predictive, so risks can be better anticipated. Track progress weekly on design maturity, software development, test completion, and documentation. Project governance also must be flexible enough to evolve as product development progresses.

FLASH POINT 7
STRENGTHEN THE SUPPLY CHAIN

Innovation and collaboration can help strengthen what is often a fragmented and fragile supply chain. Facilitating faster maturation of the supply base and supplier consolidation can reduce the risk of small suppliers defaulting. At the same time, treating key suppliers as long-term partners in the process can improve the reliability and

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performance of the product under development, with less likelihood of cost and time inflation. Back-to-back contracts can ensure that a supplier's obligations and liabilities to the manufacturer flow through the entire supply chain. Other ways that we have observed manufacturers assisting suppliers include helping them develop their engineering capabilities and expand their manufacturing capacity, locating subcontractors for them, and, at times, financing supplier initiatives.

FLASH POINT 8
ENSURE MANUFACTURING EXCELLENCE

To ensure an efficient process and a high quality product, embrace excellence. Practices such as lean manufacturing and Six Sigma are key to cost-effective assembly. Awareness must be raised as well, with regard to what constitutes operations excellence, so that standards are set along with a culture that encourages employees to send alerts at the first sign that something has gone amiss. In addition, reinforce external and internal quality control processes such as design reviews and First Article Inspection Reports that assess the effectiveness of the manufacturing process.

FLASH POINT 9
REGULARLY AUDIT THE ENTIRE PROGRAM

Program management teams often underestimate risks and overestimate their mitigation plans. Checkpoints often prove insufficient for large programs that involve a multitude of interrelated risks, including new technologies, technical issues, suppliers, partnerships, changing client requirements, ramp-up challenges, resource availability, and certifications. For these reasons, it is critical to perform an independent audit of the program at each key milestone, so as to challenge the program management's perspective on every potential risk.

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BRING COSTS UNDER CONTROL, NOW

Some aviation and rolling stock manufacturers already have started implementing a wider range of best practices to reduce their project delays and cost overruns. But the startling rate at which the costs and penalties for producing planes and trains continues to climb shows that much more should – and can – be done.

In our view, the surest and quickest path to reigning in soaring costs is for manufacturers to cast a wider net and work collaboratively with clients, contractors, and suppliers. Companies that move quickly to address the pitfalls and complexities of these large development programs are the ones most likely to thrive in an increasingly hypercompetitive environment.

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INCENTIVIZING RISK MANAGERS

WHAT IT TAKES TO MAKE RISK PERFORM

MICHELLE DAISLEY
DAVID HOWARD-JONES
LINDSEY NAYLOR

Banks are in the business of assuming risk. If a bank overestimates the risk of its lending and other activities, it will over-price or reject valuable opportunities. If it underestimates risk, unexpected losses could make it insolvent. The performance of a bank's risk function is therefore critical to its fortunes.

The risk function assesses and monitors the risks taken, and gives advice about the risks of complex transactions. Over the long run, if the risk function underperforms, only luck can save the entire bank from underperforming.

Yet managing the performance of the risk function is difficult because its performance cannot be readily observed. Banks must instead rely on indicators that should correlate with performance. And they must employ incentive schemes that encourage good performance of the risk function, which at its core is often unobservable.

The trick is to avoid creating perverse incentives. A performance management framework can easily make risk managers overly cautious and inclined to stifle the business. Or it can move in the opposite direction: Precrisis, some banks adopted incentive schemes that made it difficult for risk managers to say no or, sometimes, to be overly enthusiastic about saying yes.

In this article, we explain why the performance of risk staff cannot be observed directly and then suggest ways that their performance can nevertheless be measured and rewarded to incentivize good performance.

UNSEEN RISK PERFORMANCE

Risk functions are supposed to improve decision making by assessing, monitoring, and providing advice on the risks involved in doing business. The more accurate the risk evaluation, the better the risk function's performance. Alas, the accuracy of risk assessments is impossible to verify.

Suppose that the risk function is asked to evaluate a particular corporate loan. If the risk function assesses and approves the loan, we can eventually see whether or not the loan is repaid and therefore whether the risk team made the right call. However, if the risk function evaluates and then declines the loan, it is difficult to track whether this

Over the long run, if the risk function underperforms, only luck can save the bank

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was the correct decision, because the bank cannot observe what would have happened if they had approved the deal. The rejection may have prevented a loss but at the same time resulted in forgone revenue.

Thus tracking and rewarding the performance of the risk function cannot be based purely on its "yes" decisions, while ignoring the consequences of its "no" decisions. That could result in the risk function declining many profitable deals.

MEASURING RISK PERFORMANCE

Although the performance of risk staff cannot always be directly observed, we can track things that should correlate with it. Many firms seek to do this by using a set of specific key performance indicators that differentiate "factory" and "advisory" tasks.

Good performance for many "factory" risk processes, such as reporting, can be readily quantified by simple metrics. However, measuring the quality of outputs, advice, and guidance is more difficult and more important. Risk metrics must ensure that risk-taking remains within the appetite of the organization, yet does not stifle growth and innovation. It must support the business lines, but do so in part by challenging and constraining them.

The best approaches assess risk's "advisory" performance against multiyear and peer-benchmarked targets. These might include comparisons of nonperforming loan ratios, stock betas, or return volatility. These can be extremely useful measures, so long as the context of such comparisons is understood. For example, market comparisons cannot be meaningfully assessed without also considering the institution's risk appetite relative to peers. Many banks also use qualitative input, such as 360 degree feedback. But again, this feedback needs to be interpreted with care, given the importance of protecting the risk function's independence.

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LINKING PERFORMANCE AND REWARD

Given the difficulty in measuring the risk function's performance, how should rewards for risk staff be determined? Three principles should be followed:

PRINCIPLE 1
ALLOW FOR THE USE OF MANAGEMENT JUDGMENT IN THE PERFORMANCE ASSESSMENT

Since inaccuracy and asymmetry are unavoidable characteristics of quantitative performance metrics for risk management, most banks supplement them with the judgment of senior management (andthe board of directors' risk committee). Performance targets are expressed in terms of key performance indicators, and performance is assessed against them during the annual review. The link to bonus assessments is qualitative or judgment-based rather than formulaic to enable the incorporation of context and nonquantitative aspects. Nevertheless, the rationale for the reward should be documented and defensible.

PRINCIPLE 2
RETAIN THE FLEXIBILITY TO MOVE HIGH-CALIBER STAFF BETWEEN RISK AND THE FRONT OFFICE

Many firms favor a relatively low bonus component for senior risk managers' compensation, in line with regulatory guidance. However, setting pay structures for staff in the risk function that differ dramatically from those in the front office may reduce staff mobility between the two. This can be an impediment to attracting talent from the front office into the risk function (and vice versa).

Some organizations have managed this by maintaining relatively high ratios of variable to fixed pay in the risk function. In such schemes, because performance metrics for the risk function are less volatile than those for the front office, the volatility of bonuses within risk have also been lower, with less upside relative to front-office schemes and incentivizing long-term stewardship of the business.

If risk is everyone's business, then incentivizing risk managers the right way is critical

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PRINCIPLE 3
ENSURE THAT PAYOUT STRUCTURES SUPPORT LONG-TERM PERFORMANCE

In most developed markets, bonus deferrals are now standard practice for senior banking staff (and usually are required by regulation). The deferral is typically three years and 40-60 percent of variable compensation. However, deferrals will only have an impact on employee behavior if several conditions are met. First, a meaningful amount of total compensation must be placed at risk, which is another argument for material variable pay within risk functions.

Second, payment of deferred amounts should be contingent on the continued performance of the business and individual. The payout conditions for deferrals are typically set at a group, business unit, and individual level. The business unit level is especially important for senior risk staff because high levels of unexpected losses may be an indicator that risk models are ineffective, and may only be realized several years down the line. In those cases, however, it will also be important to assess the firm's relative performance to peers in order to ensure fair interpretation of risk's performance, as high unexpected losses are most often driven by market forces.

Finally, contingent conditions must have "bite." Thresholds for payment must be set at levels that have a realistic chance of being triggered. They must also have a solid legal basis in employment contracts, and a track record of acting on these conditions must be established.

CONCLUSION

If risk is everyone's business, then incentivizing risk managers the right way is critical. Good practices are emerging and advanced institutions have many elements in place. Still, approaches for assessing and rewarding performance in risk functions vary widely across the industry. Our experience suggests there remains significant room for improvement.

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Lindsey Naylor is a London-based partner in Oliver Wyman's Corporate & Institutional Banking practice.

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MANAGING OPERATIONAL RISK

WHAT FINANCIAL SERVICES CAN LEARN FROM OTHER INDUSTRIES

TOM IVELL
VIKRAM JAIN

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A long history of incidents, ranging from rogue trading to IT breakdowns to mis-selling of products and services, testifies to the dangers that lie beyond the intentional financial risk-taking inherent to the financial services business model. Financial services are not alone in being exposed to large, catastrophic operational risks. Other capital-intensive industries, such as energy, aviation, and natural resources, have their own histories of calamity, including nuclear accidents, plane crashes, and oil spills.

Despite the shared exposure to such losses, operational risk management in financial services has developed along a path that differs markedly from the path taken by other industries. There are some good reasons for this: financial firms have distinctive characteristics. Still, financial firms can learn a lot by looking at how other capital-intensive industries manage their operational risk.

Consider two illustrative but realistic examples:

1. **A pipeline in an oil field corrodes, releasing an explosive gas into the atmosphere and putting the site at risk.** Within minutes, a prearranged crisis response is initiated, containing the leakage and informing management. The severity of the incident determines the subsequent steps to be taken, which include an investigation. Initial findings identify the source of the crisis: A maintenance worker failing to inspect the line. Subsequent analysis finds a lack of risk-mindedness in the responsible mid-level manager who unduly prioritized cost reduction over risk control. Two actions result from the investigation: The objectives and performance targets of the relevant management positions are modified and the cost-efficiency program currently underway is enhanced to accommodate the impact of cost reduction on risk. The incident and lessons from it are widely communicated across the organization.
2. **A bank suffers a serious rogue trading incident.** While controls had been designed to prevent the incident, unclear roles and responsibilities across the bank's three lines of defense allow their effectiveness to decay over time. Now that the incident has taken place, there is no clear process for what happens next. The unwinding of the trader's position is delayed, leading to a larger than necessary loss.

   Meanwhile, the risk management team is busy mitigating the loss's unfavorable impact on its internal capital model. With Risk, Compliance, and Middle Office variously being blamed for the incident, each puts forward additional preventative controls. Under

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pressure from their regulator, management imposes these on business, pushing up compliance costs and frustrating the front line. Because it is still unclear who is responsible for the controls' ongoing effectiveness, the controls quickly decay.

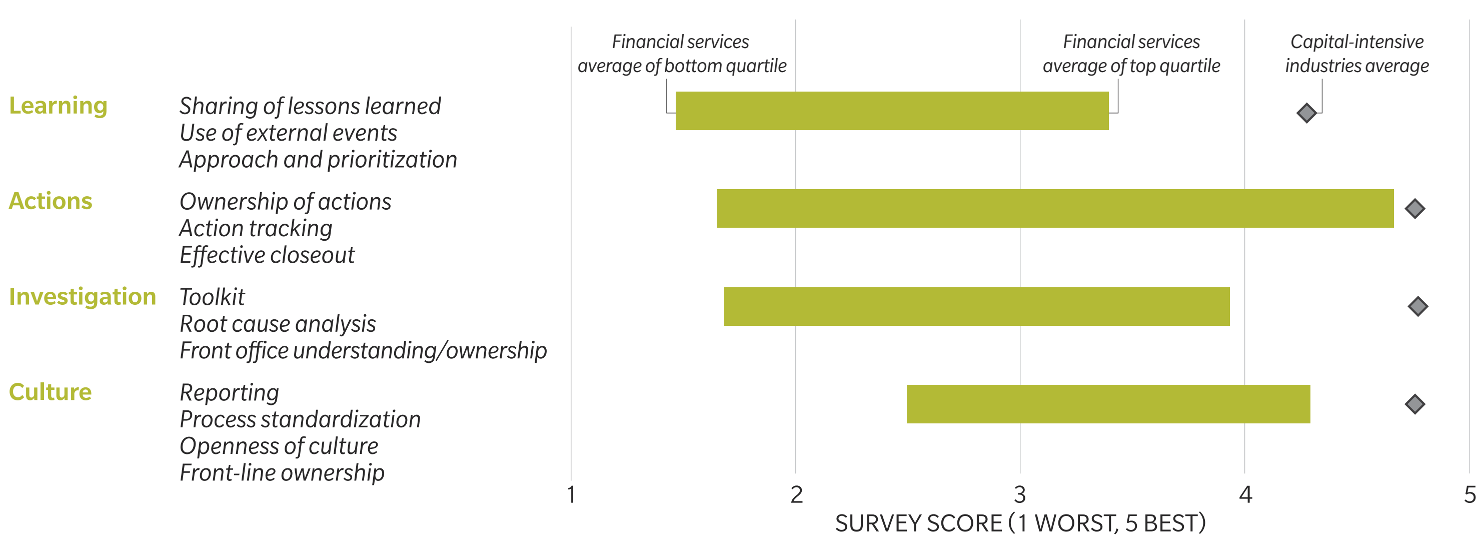
Regulators are demanding ever higher standards of risk measurement and reporting from banks and insurers. But this does not necessarily have the intended effect of reducing risk. An overbearing regulator can make financial firms passive, relying on prompts by regulators to take action. And the activity required to meet regulatory demands often crowds out genuine risk management.

Firms in risky industries that are comparatively unencumbered by capital adequacy regulation have developed operational risk frameworks that better support their business objectives. Common characteristics of these frameworks are a healthy balance between prevention and response and an emphasis on continuous improvement of control systems. We commonly find this is supported by a culture that ensures the organization is risk-aware and ready to learn from mistakes.

In a study of 27 firms across financial services and capital-intensive industries, we looked at firms' responses to operational risk events. Across the categories evaluated, we found financial services lagging other capital-intensive industries. (See Exhibit 1.)

What, then, should financial services firms look to learn about operational risk management from their counterparts in other industries?

EXHIBIT 1: FINDINGS FROM A RECENT CROSS-SECTOR STUDY OF OPERATIONAL RISK RESPONSE CAPABILITY



Source: Oliver Wyman analysis

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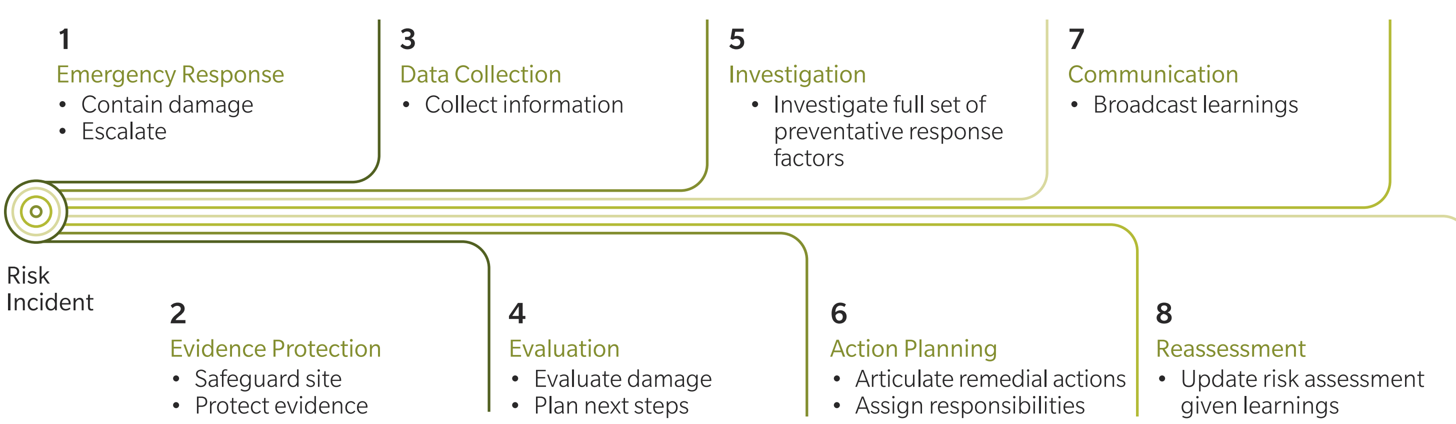
PREVENTION IS GOOD; BUT MITIGATION IS IMPORTANT, TOO

The best frameworks among industrial firms display a healthy balance between prevention and mitigation. There is often a diminishing return from controls that prevent the occurrence of an event, but a lot can be gained from mitigating its impact. Capital-intensive industries have focused on perfecting lessons-learned processes and now routinely issue detailed guidance and toolkits to identify underlying causes, preconditions, and ultimately, failed controls that contribute to an observed event. (See Exhibit 2.)

THE JOURNEY NEVER ENDS

Rather than piling layer upon layer of controls, the most efficient frameworks continuously review business processes for redundant and overlapping controls. This involves taking a view on emerging risks, assessing the efficacy of controls, and estimating the effort and other costs of employing them. Once set up, such ongoing reviews often reduce costs by avoiding the duplication of controls and assurance work.

EXHIBIT 2: BEST-PRACTICE INCIDENT RESPONSE PROCESS



Source: Oliver Wyman analysis

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CULTURE CLUB

Firms most successful at learning from mistakes exhibit strong leadership with regards to risk culture. Senior managers go beyond perfunctory missives, ensuring that the desired staff behavior is consistently articulated and explicitly valued by management. Their corporate culture is geared toward promoting risk awareness, transparency, and respect. This makes it easy for staff to challenge the status quo and contribute to better processes and controls, which includes a healthy lessons-learned process. These firms also have clear ownership of risk and controls. This is supported by a system of incentives that goes beyond penalizing "breaches" and measures, and toward rewarding good behavior.

CONCLUSION

When it comes to operational risk, financial firms are far more heavily regulated than firms in other risky and capital-intensive industries. This limits the ability of financial firms to adapt their approach to their circumstances and to experiment with new techniques. And it means that progress in operational risk management is most likely to be made outside of the financial industry.

Banks and insurers must continue to comply with regulations. But to discover ways of making real progress in operational risk management, they should look to their counterparts in more lightly regulated, non-financial, capital-intensive industries. Without the subsidy of bailouts and the tax of regulation, that's where the best trade-offs between risk, profit, and operating cost are being made.

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GAINING THE OPERATIONAL ADVANTAGE

RISKS ARE REWRITING THE RULES FOR COMPETITION

BILL HEATH • RYAN MCMASTER • DAMIAN WEST

Oil and gas firms are leaders when it comes to managing process safety risks. Now, they need to perfect the art of reducing variability in their operational performance. The front line for competition in the energy industry is shifting to determining the appropriate level at which operational risks should be mitigated, as energy companies embark on more complex new projects at one end of the spectrum and cope with aging assets on the other.

Unfortunately, many oil and gas firms are ill-equipped for this harsher operating environment. An unintended consequence of the energy industry's increased focus on process safety over the past decade has been for managers to equate operational risks solely with safety. Process safety has been separated from operational performance, with the former often managed by safety professionals and the latter by operational professionals.

It's time for a better approach. To be sure, process safety (which we define as the means of operating high hazard equipment without a major incident) is a natural part of operational excellence. But operational risks range from staffing to maintenance regimes to supply chains. In order to take advantage of the full breadth of opportunities that exist to improve their operational performance, companies need to address risks that may fall short of being catastrophic that could still have potentially significant impact.

Adopting this new tack is not easy. It requires examining explicitly the trade-offs involved in mitigating operational threats. Each risk needs to be analyzed and its impact on operations understood. The analysis should be viewed as

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all-encompassing, rather than through a purely safety or operational lens. After developing a comprehensive view of the company's tolerance for risks to its operations strategy, companies must then implement effective barriers to the threats considered unacceptable and create a corporate ecosystem capable of controlling them in a higher risk environment.

The goal is achievable. Already, companies in the vanguard of this paradigm shift, such as Exxon Mobil Corp. and Chevron Corp., identify and manage sources of volatility to the operational performance of certain platforms and refineries within their jurisdiction. We believe that more companies need to follow suit.

By setting operational priorities and changing the manner in which safety and operational leaders and managers interact with each other, companies will not just be able to improve their operational performance. Management teams will also be better able to reward shareholders, employees, customers, and communities.

Otherwise, a perfect storm of operational risks will likely only exacerbate the present volatility in their operational performance. Oil and gas firms need to begin to draw up a new game plan to get ahead of these risks – now.

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Ryan McMaster
is a London-based engagement manager, and
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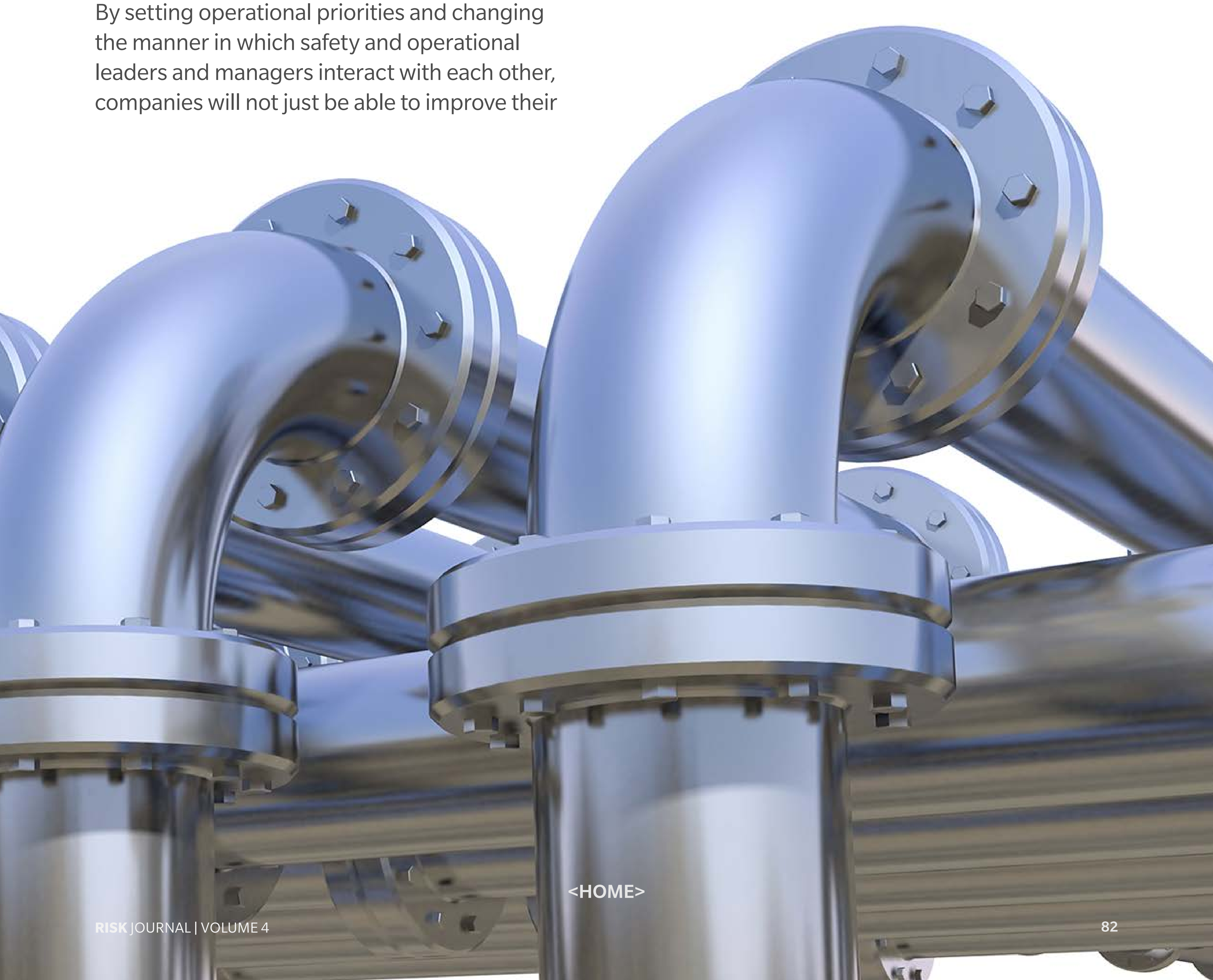

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FINDING THE GOOD IN BAD DEBT

BEST PRACTICES FOR TELECOM AND CABLE OPERATORS

LAURENT BENSOUSSAN
STEPHAN PICARD

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Bad debt management is a key driver of financial performance for telecom and cable operators. But it also presents a major challenge, with the risk and cost of nonpayment needing to be balanced against opportunity costs. Bad debt management techniques have a far-reaching influence. They impact much more than the control of nonrecoverable income and fraud, and should be an integral part of optimizing customer acquisition, development, and retention. If that happens, even relatively advanced operators can boost their earnings by one or two percentage points, our research shows.

Bad debt is costly for telecom and cable operators. Nonrecovered subscriber acquisition costs and nonrecoverable commissions can quickly add up, making it essential both to control the level of risk and to have an efficient recovery process in place. Fraud – when customers do not intend to pay their bills and will never become valuable – is particularly expensive, and requires tight control. In total, write-offs from bad debt and fraud can amount to one to two percent of revenue.

But for most operators, the opportunity costs of managing bad debt are even greater than the direct costs. Disconnecting potentially reliable existing clients or rejecting valuable prospective clients means foregoing future profits. Only a minority of payment incidents are high cost or fraud-related, with a high proportion of bad debt resulting from long-established and previously reliable customers, usually with relatively minor amounts at stake.

In most cases, losing these customers will mean a significant loss of future revenue. With as much as 25 percent of the churn in existing customers due to bad debt, the opportunity is therefore substantial when compared with the relatively low cost of outstanding payments. (See Exhibit 1.) Some operators decline to provide service to 40 percent of their new customers because of concerns about their debt, even though at least half of these customers would turn out to be valuable. So there is an opportunity to add significant value by adopting bad debt management practices that avoid disconnecting good customers or rejecting good prospective customers.

Of course, it's only helpful knowing that it's worth hanging onto half of your customers with payment problems if you can identify *which* half: better predictive modeling is therefore vital. A strong focus on value and bottom-line impact is also essential – such a shift away from a classical

EXHIBIT 1: AN ILLUSTRATION OF LOW IMPACT OF DIRECT COST VS. HIGH OPPORTUNITY COST

Marginal cost on usage

15% to 25%

Collection percentage of bad debt

40%

Typical "written down" cost due to bad debt

0.5

months average revenue per user

Cost to acquire

~6

months average revenue per user

The cost of outstanding debt (being mainly interconnected costs with high gross margin), on average, typically needs just 0.5 months average revenue per user to pay back. Many customers who become bad payers were previously good paying customers...

...When we consider that even among those bad payers reaching disconnection stage, 40% pay up, the cost is low relative to the risk of losing the customer and trying to acquire a new one – that typically costs six months of average revenue per user!

Source: Oliver Wyman analysis
Note: Illustrative, not all factors are included

cost control approach can deliver more profit while maintaining or even improving bad debt levels. Best-in-class bad debt management also needs to use a very broad range of tailored customer approaches.

A lot can be learned from other industries, where managing credit risk is a matter of life and death for the business. Principles and techniques from retail financial services can be particularly valuable. But it's also important to keep in mind that telecom and cable operators have fundamentally different economics. Retail credit is a low gross-margin business, with relatively low opportunity costs and a high impact for direct costs. Conversely, telecom and cable are high gross-margin businesses, with much higher relative opportunity costs. Adaptation of best practices is therefore required to fit the business model.

Overall, best-in-class bad debt management means moving away from bad debt *minimization* to bad debt *value management.* The rest of this article explores in greater detail the challenges and opportunities involved.

ACCESS TO SERVICE

When considering signing up new customers, operators need to decide which ones to accept, and which are too risky. Most operators have mastered core risk screening and prediction techniques. They distinguish fraud from bad debt using orthogonal scores, segment

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customers by channel, product, or handset, and combine data from multiple external agencies and internal databases to differentiate risk levels as effectively as possible. When the models and automated processes are deemed insufficient, they know when to defer to a human decision. Careful testing is also carried out through regular "champion versus challenger" treatment paths.

But beyond this, differences emerge between the best operators and the rest. Many operators rely upon risk-based cutoffs set arbitrarily, based on the outcome of discussions between marketing, sales, and finance – with essentially opposing objectives. But the best operators explicitly take a value perspective to acceptance, with all parties aligned in aiming to deliver the greatest overall value for the business. They account for risk in the form of fraud and nonpayment. But they also consider the likely future value of a customer, based on all of the information captured at the point of screening, such as their price plan, handset selected, and demographic.

By adopting such a view, decisions can be reached that create more value for the business. In our experience, around 30 percent of applicants are accepted when they would previously have been declined, or vice versa, resulting in significant benefits to the bottom line.

Being able to quickly offer carefully tailored products can capture value from customers who would otherwise be declined as probable bad payers. Specifically designed products such as a basic phone and lower-risk price plans can be used for this purpose along with variable deposits and dynamic credit limits once a customer has signed up.

New rewards structures also help. Commissions and incentives across marketing, finance, and sales channels need to reflect the true value of acquiring a customer, and this generally means adopting structures that combine new value-based target metrics, clawbacks, and residual/value-based elements. New soft and hard organizational structures that steer leads from finance, marketing, and sales are also typically required.

Strong analytical capabilities are equally important. Decisions need to be supported by predictive modeling to determine risks and expected value, including the prediction of other elements of behavior, such as voluntary survival and spend. By building a dynamic value and return-on-investment model allowing real-time point-of-sales decisions, for example, an operator can ensure that the decision to accept a customer is largely net-present-value based, while including some elements of risk that face the market.

25%

The percentage of churn in existing telecom and cable operators' customers due to bad debt

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LIFETIME COLLECTION

Once a customer is on board, the challenge for the operators is then to maximize the customer's value while controlling the potential cost at risk. Cutting customers off represents a major part of most operators' churn. Many operators are sensitive to valuable customers and continually reevaluate customers' risk levels with the latest internal and external information, to determine the best approach to collection.

While an approach focused strongly on recovery will encourage a proportion of customers to pay up, it will also drive many away unnecessarily, leading to lost profit potential. It would often take less than a month for many of the subscribers disconnected to pay back the costs of the debts they have incurred. So there is a relatively big potential upside to selectively saving and getting the customers spending again, with limited downside risk.

The best operators understand this, and actively manage the true value at risk and real loss potential from continued actions. They adopt a segmented approach, looking beyond write-off reduction. Their mindset becomes: "How do we maximize value capture by keeping customers spending for longer, rather than simply limiting bad debt, or recording a high collection rate?" They then treat customers differently based on value and need. Specific offers are developed to be used in each segment depending on the reason for bad debt and complementing traditional recovery. For example, operators may offer payment in installments, waive part of the debt, or switch the customer to a low-risk product.

EXHIBIT 2: CRITICAL COMPONENTS TO MAXIMIZING RETURNS FROM BAD DEBT

THE VALUE DELIVERED THROUGH THE CREDIT RISK MANAGEMENT FUNCTION

Analytical capability

The ability to apply best-in-class techniques, methodologies, models, and tools to predict expected customer behavior and to assess the impact of decisions on economics.

Strong value focus across the business

Understanding the value of a customer's business allows trade-offs against cost and investment, translating credit risk decisions into bottom line profitability.

Customized approach for each individual customer

Finding the best way to address customer-specific issues and situations by using innovative products and solutions will ensure the capture of customers with a good return on investment and controlled risk.

Organizational alignment

Effective organizations are well-aligned and supported by objectives, incentives, and steering, that force decision making to drive profit. This is perhaps the hardest challenge to overcome.

Source: Oliver Wyman

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Of course, it's hard to know in advance exactly which approach will work with each customer. So each activity's impact on lifetime spend and the recovered amount is quantified and modeled, allowing a "test and learn" approach to in-life debt collection. Decisions are supported by lessons drawn from the tests and econometric analysis, which is constantly refreshed to keep track of any learned behaviors such as bluffing. Risk and expected value can then be rescored during the life of the customer relationship based on all available information.

DEBT RECOVERY

When all else fails, operators need to maximize the amount they recover, at minimum cost and risk to the brand. Moving beyond the softer, more intensive strategies, the focus shifts from maintaining the customer relationship to recovering debts efficiently.

At this stage, a multiagency approach, combining internal and external agencies, is standard practice among telecom and cable operators. Agencies are carefully selected, then encouraged to compete. There is usually an internal agency, both to participate in the competitive process, and to deal with "easy pickings." Strong two-way information flow is established so that the operator knows which treatments are used with each customer, and so that each agency knows more about who they are dealing with.

But the best-practice operators go a step further than this. Debts are assigned based on their best chance to recover in addition to considerations of competition and fulfillment of other quality of service key performance indicators. At the same time, predictive models are used to understand which customer segments are best handled by which agency. The agencies' incentives are set to maximize recovered value, so that they treat all or at least most of the debt. In case of failed attempts, agencies are also incentivized to return debt early to maximize the speed of future stages and hence the recovered amounts. Finally, reconnection is also rewarded in some cases, since it can form a low-cost acquisition channel.

CONCLUSION

Bad debt management must be treated as an integrated commercial function because it influences many aspects of value capture, from acquisition volume and quality, to churn and spend. Cross-industry best practices, from financial services especially, provide the base from which the best operators can create more value. However, these best practices need to be adapted to account for telecom and cable economics.

To make advances requires significant analytical capability, a strong focus on value across the business, a customized approach for each individual customer, and organization alignment. If this is achieved, operators can significantly improve their earnings and steps can be taken quickly that pay for themselves many times over.

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Stephan Picard is a London-based associate in Oliver Wyman's Communications, Media & Technology practice.

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RESILIENT REPUTATIONS

HOW TO PROTECT AND RESTORE YOUR COMPANY'S GOOD NAME

RICHARD SMITH-BINGHAM

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Company reputations are in the spotlight more than ever before. Every month another major corporate mishap hits the news and sets off a complex chain of repercussions. An industrial accident. A revelation of unethical or criminal practices. A product recall. An extended service outage. Recent years have witnessed an explosion of social media commentary, strong interventions by regulators, and high profile pressure group campaigns. At the same time, changes in the global economy have arguably made the risk landscape for businesses more complex – dependent on moves into new markets, longer supply chains, higher risk operations, and increased pressure on costs.

Against this backdrop, companies need to re-examine their exposure to reputational challenges and their ability to respond to potential crises. Risks related to marketing, which often reflect reputational crises, are the most common cause of company stock price crashes, according to a landmark study conducted by our research partner, the Wharton School. (See Exhibit 1.) On average, it takes more than a year – 80 weeks – for shareholder value to recover.

However, while the importance of reputation risk is widely recognized in the boardroom, many companies' reputation risk management programs are often not robust enough to protect the company's good name. The best management frameworks are embedded long in advance of any crisis and approach reputational risk from multiple perspectives to identify both vulnerabilities and solutions. They are, moreover, led from the top of the company and driven through the business units and functions. Without a strong framework, events can quickly spiral out of control and have far-reaching consequences for companies and their leadership.

DEVELOPING RESILIENCE

Resilience requires developing capabilities through all phases of the risk management cycle and coordinating expertise and leadership from across different functions. (See Exhibit 2.) Only then can companies reduce the likelihood of highly damaging surprises and avoid the erosion of their brand over time.

In the first instance, it is critical to understand corporate vulnerabilities by reviewing the expectations that stakeholder groups have of the company against the corporate risk base. This will help identify those areas where the impact of an unwelcome turn of events might be amplified by reputational concerns. External apprehension will often be higher if

80
The average number of weeks required for shareholder value to recover from a reputational crisis

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EXHIBIT 1: SUMMARY OF SIGNIFICANT PRICE DROPS ACROSS 21 RISK FACTOR CATEGORIES

(2001 – 2011 FULL S&P 500)

RISK FACTORS	TOTAL	PERCENTAGE
Marketing	192	12.6
Operations	186	12.2
Acquisitions	150	9.9
Legal	119	7.8
Industry	108	7.1
Key personnel	102	6.7
Capital structure	100	6.6
Macro	97	6.4
Government	80	5.3
Labor	66	4.3
Competition	64	4.2
Credit risk	60	3.9
Capital expenditure	56	3.7
International	38	2.5
Investments	30	2.0
Catastrophes	19	1.3
Suppliers	14	0.9
Accounting	13	0.9
Distribution	12	0.8
Intellectual property	10	0.7
Customer concentration	4	0.3

Source: Wharton School

the incident appears to be symptomatic of a systemic failure – perhaps an unforeseen flaw in a core product, the result of chronic misbehavior, or the consequence of a key strategic initiative such as a major cost-cutting exercise. It is also important to consider the role of external influences – the likelihood of a problem going viral or being politicized, or even contagion from an incident at a competitor.

Then one must focus on corporate culture, which is the best safeguard against reputational challenges. Strong operating procedures, compliance processes, and whistle-blowing facilities are all valuable mechanisms for instilling appropriate behaviors. But they will only be

EXHIBIT 2: REPUTATION RISK MANAGEMENT PHASES

UNDERSTAND VULNERABILITY

- Assess risks and damage
- Review corporate reputation
- Integrate with enterprise risk management and oversight

BUILD RESILIENCE

- Reinforce values and brand
- Strengthen crisis preparedness
- Adjust operations (and strategy)

REGAIN TRUST*

- Review processes, governance, etc.
- Embed sustainable solutions
- Revitalize stakeholder engagement

RESOLVE CRISIS*

- Demonstrate ownership
- Communicate decisively
- Implement a swift fix for problem

Source: Oliver Wyman analysis
*Required measures will vary depending on the incident

effective if the detailed requirements are rooted in well-understood values, the tone is set from the top, and efforts are made to embed them consistently through all levels of management and other personnel. It is also important for management teams to consider the potential for reputational damage in major strategic and business planning decisions, and hone and test the reputational dimension of crisis-management plans.

Companies with well-established and effective crisis-management capabilities quash reputational threats and remove them from stakeholder radars as soon as possible. Conversely, a mishandled response to a crisis can generate more reputational damage than the event itself, and spur greater financial consequences. Firms must quickly show they are on top of the situation to avoid the vacuum being filled by other shapers of opinion, who might have less accurate information and be inherently unsympathetic toward the company. Stakeholders will demand visible leadership, a fast diagnosis of the problem, and the decisive implementation of a fix based on consideration of available options. They will also expect a robust (but fair) approach to offending parties and a pledge to develop a longer-term solution, where this might be required.

As companies seek to restore their reputation and performance, they should aim to balance three approaches in their planning: a thorough reflection on the causes of an incident and the outcome, sensitivity to stakeholder expectations, and the implementation of hard-edged commercial decisions that are right for the company over the long term.

Restoring trust can be a considerable investment for multinational corporations, and it may be quite some time before a company can confidently claim that new approaches have been properly tested

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and embedded in a way that the likelihood of a repeat offense is very significantly diminished. Any refreshment of the corporate brand, which can be a powerful way of signaling that a new chapter has begun, should wait until reputational wounds have healed and new, supportive measures have been embedded.

CLEAR RESPONSIBILITIES AND PROTOCOLS

To be effective, a reputation risk management plan also needs to specify clear roles and protocols for key functional and business unit leaders. While the risk, compliance, communications, and marketing functions must all pull together with business unit leaders, at the end of the day, reputation risk is a chief executive officer issue. He or she must promote corporate culture and exercise visible leadership in the event of a crisis. Reputational considerations should pervade the agenda of the board of directors and be a key feature of the dialogue with management.

Many companies are predisposed towards one dimension of the challenge or another – risk prevention or crisis management, mitigation efforts or communications – and tend to privilege one stakeholder group – customers, investors, or regulators – above others. But only those firms that bring together different types of expertise – risk analysis, crisis preparedness and management, brand development, operational improvement, and external relations – in a common management framework and in accordance with a clear set of corporate values can claim to be approaching the issue strategically.

THE VALUE OF VIGILANCE

Companies that build a response framework across all dimensions will be vigilant about changing risk levels, alert to evolving norms of stakeholder expectations, and appropriately flexible in their risk management and preparedness priorities. Equally important, they will be able to integrate downside risk management activities with upside reputation and brand development ambitions. Those that bring all this together are therefore not only being mindful of near-term threats but also investing in the long-term sustainability of their firm.

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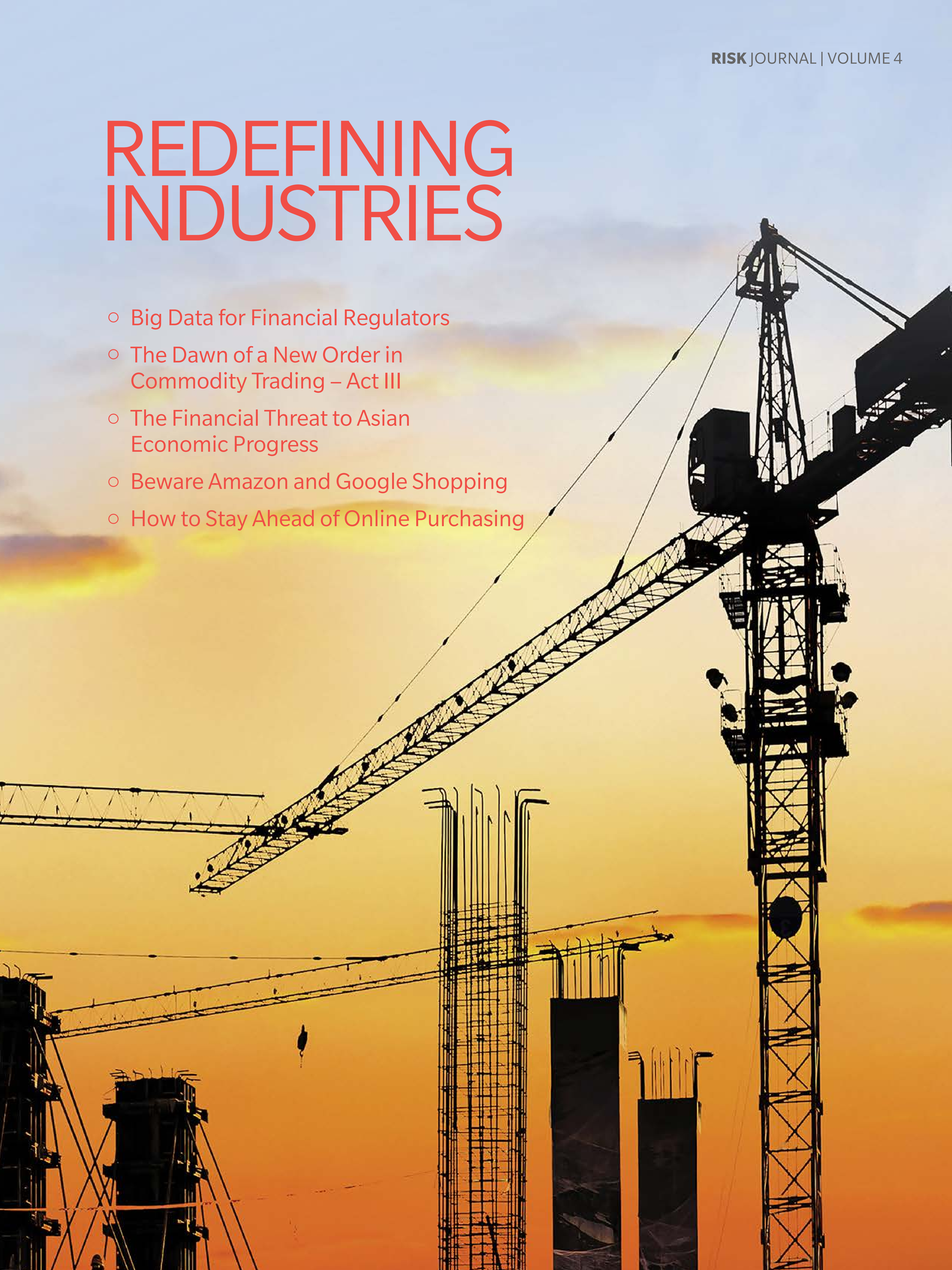
REDEFINING INDUSTRIES

- Big Data for Financial Regulators
- The Dawn of a New Order in Commodity Trading – Act III
- The Financial Threat to Asian Economic Progress
- Beware Amazon and Google Shopping
- How to Stay Ahead of Online Purchasing



BIG DATA FOR FINANCIAL REGULATORS

A GLIMPSE AT THE FUTURE OF FINANCIAL REGULATION

BARRIE WILKINSON

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It is the year 2020. The Governor of the Bank of England is informed that a major US investment bank, Garland Brothers, is collapsing.

He reaches for his iPad and clicks on an app called Big Brother: "Show me the credit exposure of the top five banks in the United Kingdom to Garland Brothers." The iPad responds instantly with a bar chart showing the exposure of each bank in billions of dollars.

"Break it down by currency and legal entity." Instantly, the chart updates with the additional detail. "Hmm. OK, I'd like you to run a scenario for me. Let's assume the worst and write down all these exposures to zero. Now let's overlay our adverse market scenario on their trading portfolios." He studies a chart of the depleted Tier 1 ratios of the five banks. He mumbles to himself, "OK, I think we can get through this."

During the last financial crisis, many financial institutions and regulators were found to be flying blind, with little idea of the size or even the real location of their risk exposures. And even now many financial institutions still lack reliable and comprehensive data about the risks they face. So the preceding story may seem to belong to science fiction.

In fact, however, advances in big data technology mean that this vision is within the realm of possibility. (See Exhibit 1.) Much work remains in order to get there. But, in our view, all the obstacles are surmountable and banks should prepare: Big Brother will soon be watching you.

STORAGE COSTS ARE NO LONGER AN OBSTACLE

Big data experts like to boast by telling you how many filing cabinets worth of paper can now be stored electronically on their mega servers. For example, if you covered the entire floor space of One World Trade Center tower twice over with filing cabinets of double-sided paper, it still wouldn't be enough data to fill a 30 terabyte database. The more impressive statistic is that 30 terabytes of storage now costs around $800 a year.

Of course, the world's financial institutions probably produce enough data to populate 100 World Trade Center towers every hour. Yet the cost of storing all of this data would still be only about $150 million a year.

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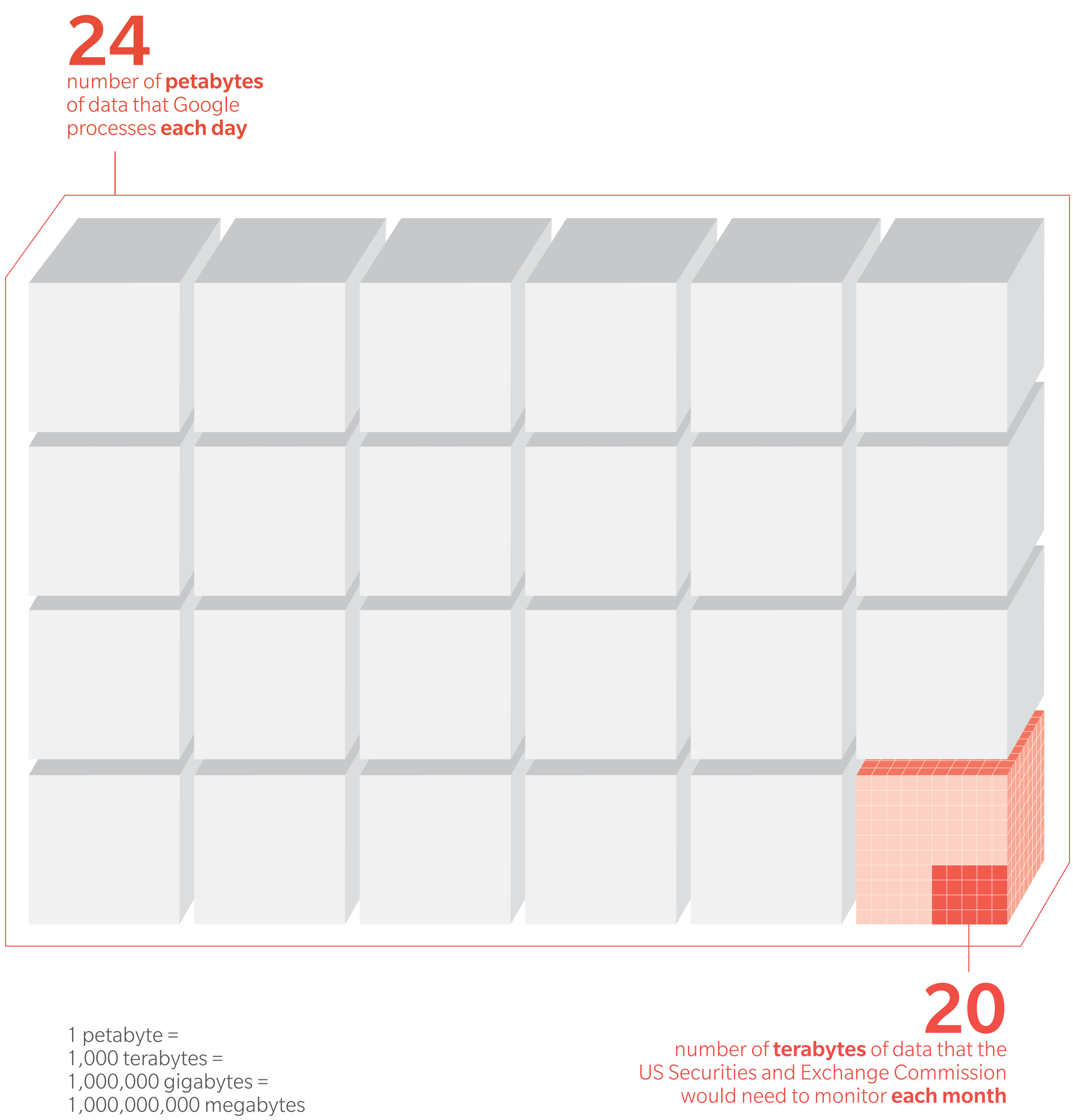
EXHIBIT 1: ADVANCES IN BIG DATA TECHNOLOGY

Due to recent technological advances, institutions have the ability to monitor much more data than is generally recognized. The US Securities and Exchange Commission estimates that it would need to monitor 20 terabytes of data per month to monitor all US capital markets activity. That's a small fraction of the 24 petabytes of data that Google processes every day.



Source: Oliver Wyman analysis

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This is a drop in the ocean of the annual IT spending of a large bank. In short, if you want to take the brute force approach of literally "storing everything," you now can.

IN-MEMORY DATA

Another major development in big data is in-memory data storage. This is the data that an application has at its fingertips without the need to search through databases. This type of data supports superfast analytics and live queries: that is, it supports the type of real-time response illustrated in our opening story.

While this kind of data storage is more expensive than traditional database storage, most data need not be stored in-memory. Clever ways of aggregating and compressing data without losing too much vital information can give users access to everything they need in real time.

ACCESS ALL AREAS

The obstacles to accessing the data that regulators might need are now political rather than technical. Client confidentiality and legal restrictions to sharing data are likely to present bigger obstacles to accessing and storing the data than any technical problems. However, regulators are in a privileged position when it comes to overcoming these obstacles, especially following the financial crisis. Provided the data is handled with the appropriate level of security, regulators should be able to gain access to all areas.

WHAT ARE THE POSSIBILITIES FOR REGULATORS?

MICROPRUDENTIAL REGULATION

We opened with an example of using big data analytics in microprudential regulation. Regulators should now be able to get all the information they need to understand what is going on inside individual banks. The key challenge here is in understanding which information is important.

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Information overload must be avoided. Risk reports can contain so much information that it is difficult to know what to focus on. This is a problem that is familiar to the industry and one that it is addressing. The typical solution is to start with high-level aggregate reports for senior stakeholders and provide more detailed and granular reports to more junior stakeholders.

In the big data vision of our opening story, however, senior executives can also drill into the detail if they want to – for example, by running custom queries on the fly. Or perhaps big data technology might allow the user to double-click on a cell in a table to see the information that underlies it. This is surely a regulator or senior executive's dream.

MACROPRUDENTIAL REGULATION

In the aftermath of the financial crisis, regulators decided to increase their focus on macroprudential regulation, which is designed to address threats to the broader financial system, rather than threats faced by individual institutions. One idea, for example, is for regulators to be on the lookout for bubbles in the real estate market which, if not kept in check, might bring down the entire financial system when they burst.

Big data can serve well the purposes of macroprudential regulation. To gain a complete picture, macroprudential monitoring requires access to information spread across the entire system. For example, if a bank launches a new product targeting low credit-quality borrowers, regulators might want to know how the bank's competitors are reacting. If they are joining in with this new easy credit boom, this could create a systemic threat. The ability to see how banks are behaving in the aggregate would allow regulators to spot systemic risks.

CONDUCT RISK

Perhaps the most intrusive regulatory application of big data analytics would be in the area of conduct risk. This new branch of regulation aims to control the way financial institutions interact with their customers. Is a bank treating its customers fairly? Is an insurer being transparent to a customer about the risks they are taking when they buy a financial product?

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Most financial institutions already record telephone conversations, and regulators often request access to e-mail trails in the event of a suspected regulatory breach. But regulators might begin to take a more proactive approach, seeking data before they have reason to suspect anything has gone wrong.

The more data regulators are able to get from across the entire industry, the better they can establish "normal" patterns of behavior. This can then help them to spot unusual patterns of behavior, such as a rogue trader hiding transactions or patterns of communication that suggest insider trading or the manipulation of market benchmarks. By using big data applications to detect unusual patterns early, they may be able to prevent breaches rather than responding to them after they have occurred.

In our view, financial regulation will inevitably be shaped by the big data revolution. Financial institutions should prepare now for its ramifications.

Barrie Wilkinson is a London-based partner and co-head of Oliver Wyman's Finance & Risk Practice in Europe, Middle East, and Africa.

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THE DAWN OF A NEW ORDER IN COMMODITY TRADING – ACT III

FIVE MEGATRENDS THAT WILL ALTER THE INDUSTRY

ALEXANDER FRANKE
ERNST FRANKL
ROLAND RECHTSTEINER
GRAHAM SHARP

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Since 2011, oil prices have traded in a narrow band of around $100 per barrel in spite of a series of disruptions that in another era would have triggered significant price spikes. In Libya, rebels took over the government of the fifth-largest holder of proved oil reserves in the world. An anti-government uprising in Syria shut off more than one-twentieth of global oil production. South Sudan lost one-third of its oil production to fighting that damaged its oil wells.

Commodity markets are repeatedly shrugging off shocks for a simple reason: The world is oversupplied with everything from crude oil to coal to natural gas, everywhere from the United States to China to Siberia.

But it would be a mistake to be lulled into a false sense of security. Behind this benign excess, the commodity trading environment is changing radically, introducing new challenges and opportunities for traders, industrial companies, and consumers worldwide. In our view, these new trends could potentially spark market disruptions, higher levels of commodity price volatility, and fundamentally alter the way commodity trading markets work in the future.

As we predicted in "The Dawn of a New Order in Commodity Trading" acts I and II, which appeared in the *Oliver Wyman Risk Journal* in 2012 and 2013, respectively, commodity traders, which traditionally leased or borrowed their assets, continue to invest in assets ranging from coal mines to storage terminals to gasoline retail chains.

Recently, traders have been increasingly trying to secure "structural shorts," the industry term for long-term supply contracts. Given that there is a glut in almost every type of commodity and the fact that they have built out extensive portfolios to capture a wide range of options, traders need to lock down stable sources of demand around which supply positions can be structured and optimized.

Historically, traders could achieve this by simply entering long-term sales contracts for a commodity. But in the current competitive environment, they must organize financing for asset investments, take equity stakes in their counterparties, or provide some form of expertise in areas such as financial risk management or technical blending to convince customers to enter into such deals.

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Take the example of independent trader Vitol. Since 2011, Vitol has paid billions of dollars to buy multiple assets from Shell, ranging from 870 service stations and a refinery in Australia to 1,185 retail stations and 900,000 cubic meters of storage in Africa. Vitol went so far as to agree to invest in and switch a power plant from fuel oil to liquefied petroleum gas for the US Virgin Islands' Water and Power Authority in order to secure LPG orders for seven years.

As commodity markets continue to shift, five new trends are accelerating, which will change the face of the commodity trading industry. These megatrends will either unlock new avenues for growth for trading firms or become a potential cause for their undoing.

Predicting how each of these developments will play out depends on the reactions from market participants, policymakers, and rating agencies. In this article, we examine three of the most likely potential scenarios from across a wide spectrum of possibilities. In our view, every company that produces, consumes, or trades commodities should carefully review its strategies against these three potential courses of events.

But before moving on to describe those three scenarios, let's first examine the five trends that are rewriting the rules.

FIVE MEGATRENDS

TREND 1
COMMODITY MARKETS MATURE

Traditionally, independent commodity traders earned their greatest profits from supplying commodities that could not be accessed easily on open markets. But now, many of these commodities are traded on markets that are transparent and liquid. (See Exhibit 1.)

As a result, traders can no longer act simply as intermediaries without the risk of losing market share. Transparent markets are shrinking their margins. As recently as five years ago, traders earned margins of $3 to $5 per ton using long-term fixed price arrangements to supply thermal coal. Now that thermal coal has become a much more widely traded commodity with transparent price benchmarks and indexed pricing, we estimate those margins have shrunk by 40 percent on average, to as little as $1 to $3 per ton.

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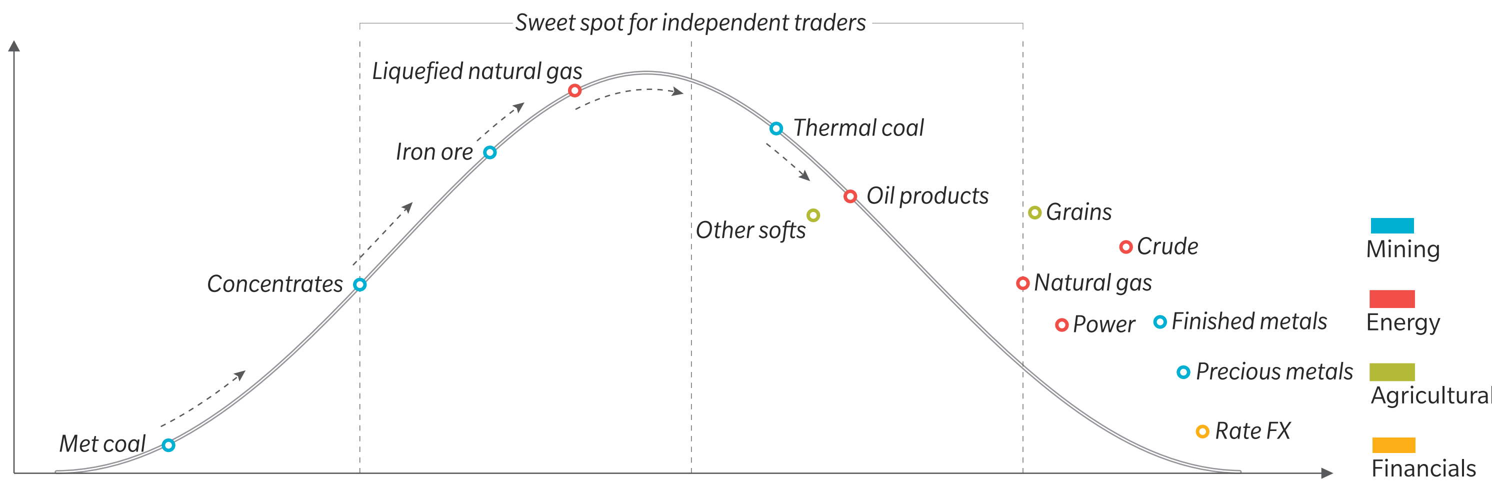
EXHIBIT 1: TRADING MARKETS MATURE

SOME COMMODITIES TRADED MOST PROFITABLY BY INDEPENDENT TRADERS ARE MOVING OUT OF THE "SWEET SPOT"

TRADING ATTRACTIVENESS (MARGIN AND VOLUME CONSIDERATIONS)



ILLIQUID – NOT TRADED
- Difficult to enter and exit, potentially high margins
- Natural playing ground of asset-backed traders and marketing units
- Met coal slowly developing into a commodity

SEMI-LIQUID
- Attractive for traders who are able to secure structural longs and build network
- Iron ore slowly joining metal concentrates activities
- LNG becoming more and more liquid and accessible, still high margin

LIQUID
- Liquidly traded, often the sweet spot for commodity traders because of high margins and big volumes

NEARLY PERFECT MARKETS
- Decreasing margins, but high volumes. Difficult to enter for new entrants
- Dominated by established players

Source: Oliver Wyman analysis

TREND 2
BANKS EXIT COMMODITY TRADING

Since United States President Barack Obama signed the Dodd–Frank Act into federal law in 2010 and European Basel III/CRD IV regulations placed restrictions on banks' proprietary trading, nine of the world's 10 largest Western banks that have been active in physical commodity trading have made moves either to withdraw from commodity trading completely, or to curtail their activities drastically. Ten other smaller banks have exited as well.

The impact of these moves on market liquidity has varied, depending on the commodity. Exchange-traded derivative markets for widely traded commodities such as oil remain robust because the remaining participants picked up the business left behind by those players who have departed. A few commodity trading teams also relocated from banks to hedge funds and other trading houses.

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But hedges are scarce in niche markets, especially for longer-term trades. We believe hedges will be in short supply in more markets going forward, which could lead to rising hedging costs for producers and consumers. Ultimately, consumers will bear the brunt of these higher costs.

TREND 3
NEW MARKET STRUCTURES ARE FORGED

The commodity trading market is a three-tiered structure made up of producers, commodity traders (including intermediaries such as banks), and consumers. Today, the balance between producers, traders, and consumers differs considerably across commodity classes. Metals and minerals markets are dominated by a few large players, while the markets for oil, power, and gas are fragmented with many participants.

In the next several years, we predict the structure of all commodity markets will become more homogeneous. Players will enter those markets where they can create significant value from their existing positions and exit those where global scale is increasingly important.

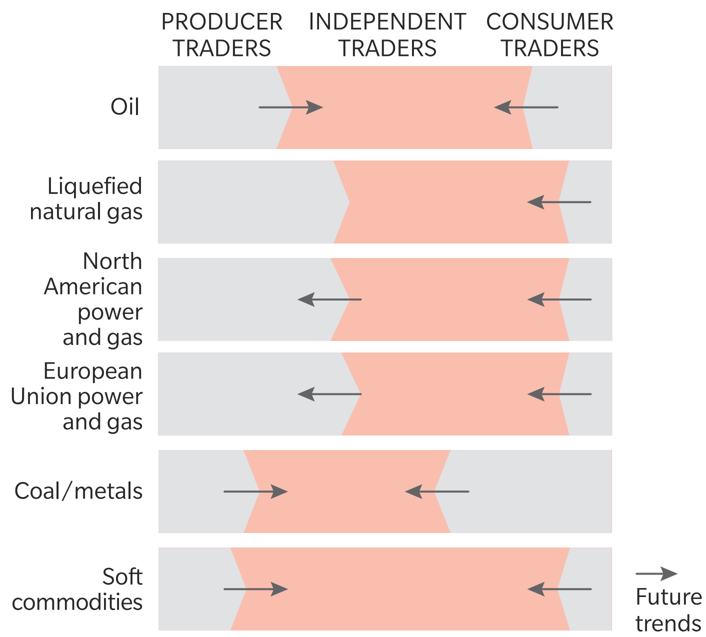
This new structure is already manifesting itself in a number of markets. Large commodity producers, such as oil majors and national oil companies, are increasingly establishing trading activities so that they can monetize their upstream production and gain greater control over their value chains. By contrast, smaller power producers are reducing their trading activities and leaving trading to larger players.

Major soft commodity consumers, too, that have critical mass in one or more commodities, are becoming more active traders. More Chinese companies are building up trading businesses that can source foodstuffs from a broader network of suppliers, instead of buying farmland in foreign countries. Global packaged consumer goods companies are following the lead of competitors with substantial trading businesses, such as Unilever and chemical giant BASF.

But independent trading players and smaller producers, which make up the market's middle tier, continue to be under pressure. In fact, we predict that soon only two to three will remain, due to an increasingly cutthroat environment. Fewer traders that specialize in a single commodity class will prevail. (See Exhibit 2.)

EXHIBIT 2: HOMOGENIZATION OF MARKET PLAYER STRUCTURE

MARKET STRUCTURES ACROSS COMMODITIES WILL FURTHER HARMONIZE, LEADING TO A THREE-TIER MODEL



MARKET PLAYER STRUCTURE WILL BE MORE HOMOGENEOUS IN FUTURE, ON THE BACK OF SCALE REQUIREMENTS AND VALUE-DRIVEN TRADING BUILD-OUT

POTENTIAL TREND IN PLAYER STRUCTURE

FRAGMENTED MARKET STRUCTURE

- Oil and gas
- Power

with 20+ significant players

Scale-driven consolidation

TREND TO HOMOGENEOUS PLAYER STRUCTURE

- Few significant players on long and short side
- 2-3 independent players per asset class

CONCENTRATED MARKET STRUCTURE

- Metals and minerals
- Softs

with 3-5 significant players

Value-driven trading build-out

Source: Oliver Wyman analysis

TREND 4
PRICE SPIKES RESULT FROM CHANGING METRICS

Since independent traders require more long-term capital to acquire assets, they are issuing more bonds and attracting greater attention from rating agencies. These agencies, in turn, are evaluating the independent traders' activities based on the expected returns from their total capital employed – instead of just their returns on equity.

Commodity price spikes will likely become more common in reaction to this basic shift in how potential returns from trades are evaluated. By taking the increasing amount of debt associated with trades into account, rating agencies are driving up the cost of traders' capital. These higher costs harm the margins of some of the industry's more traditional trading strategies, which have been critical to smoothing out demand and supply imbalances.

As a result, independent traders have significantly less incentive to make volumes of inventory readily available to resolve supply disruptions. If their capital costs rise by seven percentage points, we estimate the gross margins for trades associated with holding inventory could be cut by 50 percent or more on average. The gross margins on complex, structured trades, such as fixed-price supply agreements, could be reduced even more.(See Exhibit 3.)

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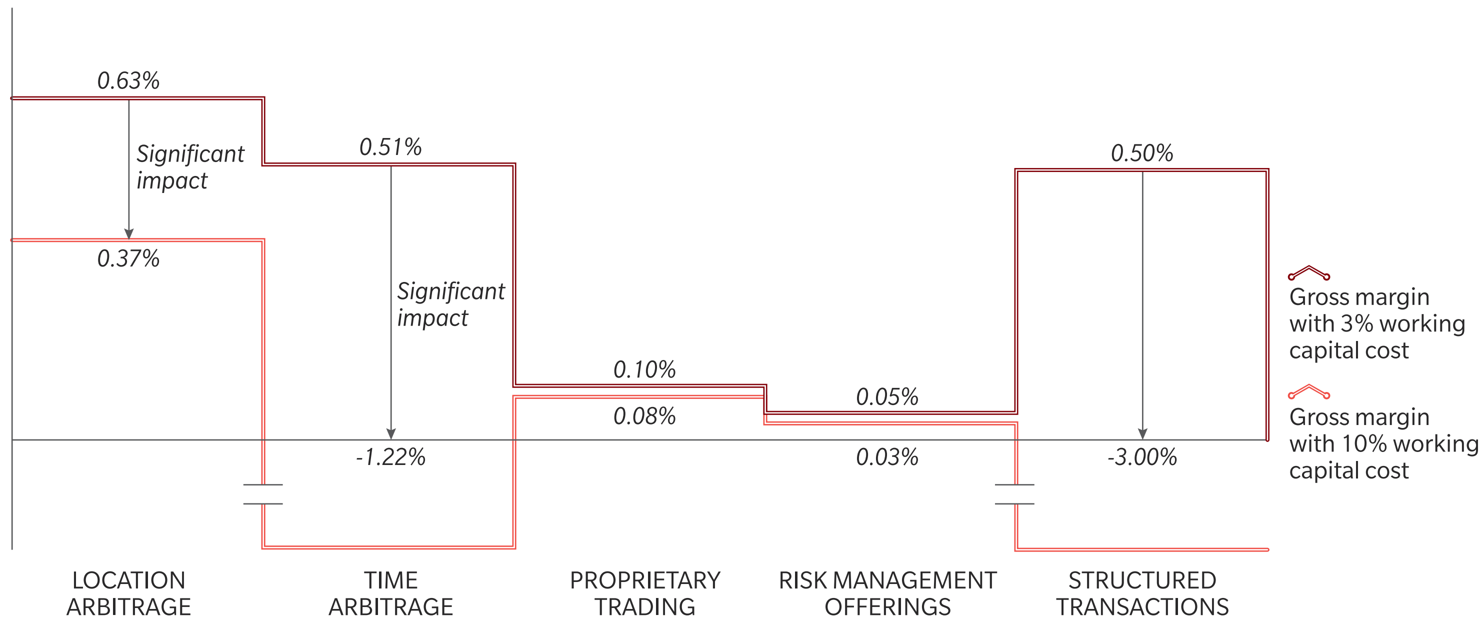
EXHIBIT 3: TRADING MARKETS MATURE

STANDARD TRADING PLAYS WILL BECOME SIGNIFICANTLY LESS ATTRACTIVE IF TRADERS ARE CHARGED MORE FOR THE COST OF THEIR WORKING CAPITAL

IMPACT OF A CHANGE IN WORKING CAPITAL COST ACROSS STANDARD DEAL TYPES



Source: Oliver Wyman analysis

TREND 5

LOW COMMODITY PRICE VOLATILITY CAUSES SUPPLY DISRUPTIONS

The volatility of energy commodities has dropped to a historic low and is now about 50 percent below its long-term average. (See Exhibit 4.) An overabundance of supply is shredding traders' margins, forcing them into riskier, more capital intensive, and complex deals. Traders are also abandoning some markets or reducing their activities, resulting in less available liquidity. Consequently, there is a higher probability of severe supply disruptions that could cause price spikes if supply or demand suddenly shifts.

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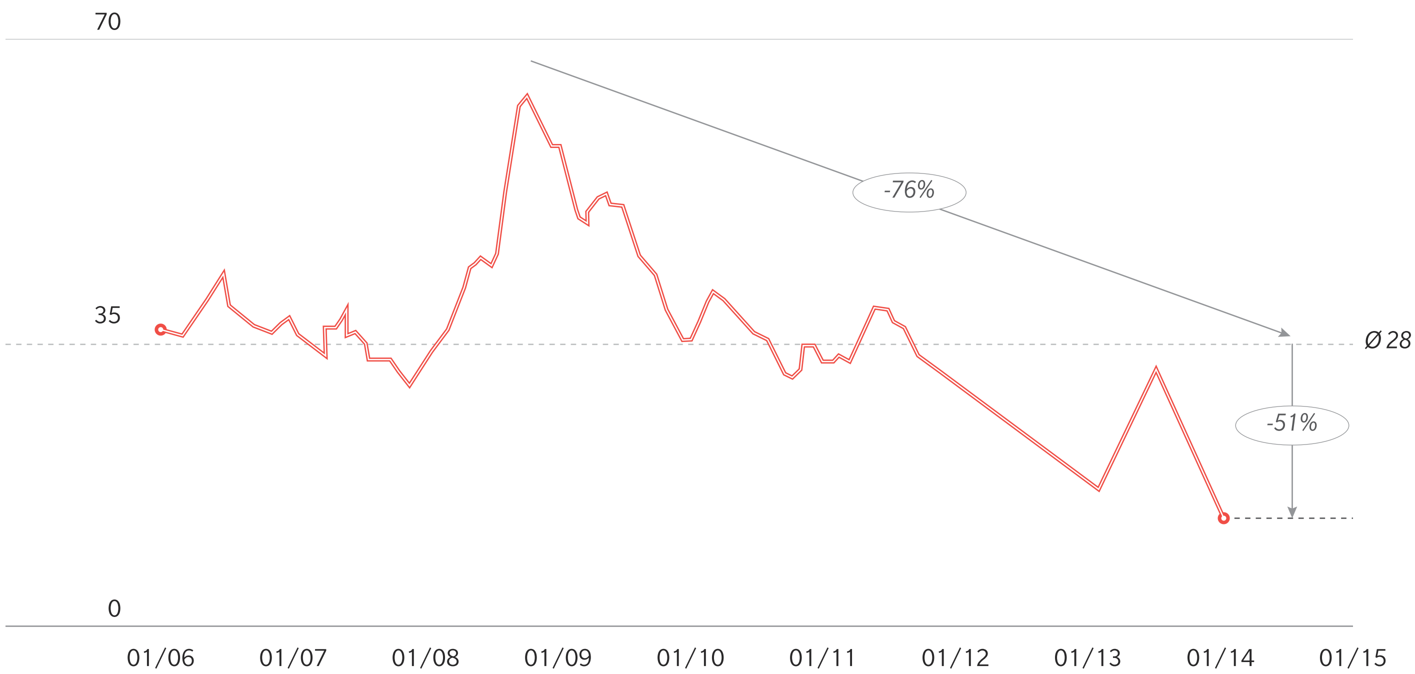
EXHIBIT 4: VOLATILITY IS CURRENTLY AT HISTORIC LOWS

AVERAGE ROLLING 60 DAYS IMPLIED VOLATILITY FOR KEY ENERGY FUTURES*
(% YEARLY STANDARD DEVIATION)



Source: Reuters, Oliver Wyman analysis
*Average includes: Brent, WTI, ICE Gasoil, RBOB, ULSD, NatGas HH, Nat Gas NBP

THREE KEY MARKET SCENARIOS

Although the reasons for change and rising risks in the commodity trading landscape are clear, their consequences are complicated, and the paths forward for companies defy simple solutions. Nonetheless, we have identified three illustrative scenarios that outline possible developments. Movement from one scenario to another can occur depending on regulatory or market reactions to these occurrences. (See Exhibit 5.)

SCENARIO 1
TRADING IS NOT WHAT IT USED TO BE

If the present levels of low commodity price volatility continue and present regulations and accounting rules remain in place, there is a significant risk that players currently active in the markets and that are filling the void left by the banks will also eventually have to reduce their activities. The overall profitability from trading will be minimal. Independent commodity traders, consumers, and producers will easily be able to find more promising and higher-returning uses for their capital.

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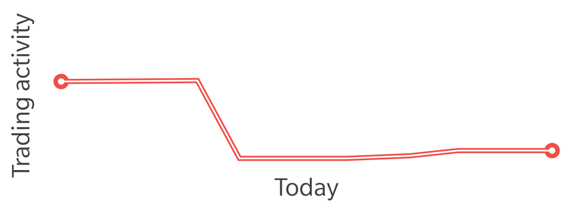
EXHIBIT 5: THREE KEY MARKET SCENARIOS

"TRADING IS NOT WHAT IT USED TO BE"



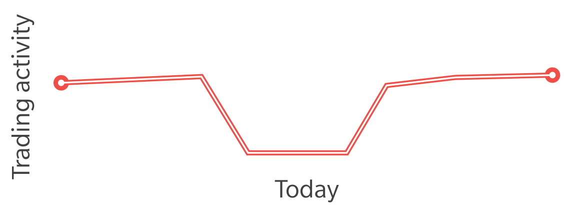
Banks' exiting the commodity trading space

Homogenization of market structure

DESCRIPTION

- Banks leaving the market, no substitution, limited activity of independents, producer, and consumer traders
- Alternative usages for capital preferred
- Prolonged period of low volatility

"BACK TO NORMAL"

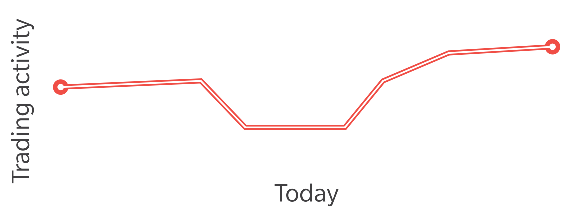


Pressure on independent trader model

Regulatory changes (Dodd-Frank, BASEL III, IFRS...)

- Substitution of the banks' activities through producer/consumer traders
- Alternative providers established for risk management offerings and market liquidity
- Increase to an average level of market volatility

"THE RETURN OF THE BANKS"



Commodity market dynamics and oversupplied markets

Maturing across commodity classes

- Change in regulation (potential for 3-4 year horizon) and/or engagement of emerging markets banks (BRIC, Singapore, Middle East)
- Banks in commodities trading supported by consumer/producer traders
- Increased market volatility

Source: Oliver Wyman analysis

The availability of hedging products and spot volumes will be limited. Market disruptions will have a greater impact on prices and supply chains. Intermediaries and their instruments, such as hedges and inventory, will be unavailable, making it difficult for traders to smooth out imbalances in the same way that they have traditionally.

Although we believe this is the least likely of our three scenarios, it is also the one that market players most need to guard against. Should it develop, there will be significant disruptions in global trade that will harm both industrial consumers of commodities and private households.

But a different scenario could materialize if these trends are mitigated by new developments. A better balance between supply and demand could be achieved if rating agencies treat marketable inventory and short-term debt differently. Market volatility could also return to its long-term historic average.

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SCENARIO 2
BACK TO NORMAL

The combination of commodity price volatility returning to a long-term average and a different treatment of marketable inventory by rating agencies will make commodity trading markets more attractive. In response, commodity producers, consumers, and new investors will become more active, replacing banks that have exited from commodity trading.

Established physical players will build up banklike risk management and product structuring offerings. This will enable them to offer risk management solutions to their clients and act as market makers. The result could be a well-functioning market, which is very similar to today's, with different players providing the cushion for short-term market disruptions and longer-term risk management solutions.

Participants who believe in this scenario have a strong incentive to build up product structuring and risk management capabilities now in order to be prepared, positioning themselves as the go-to players. Companies that cannot determine which of the two scenarios is more likely to occur should build the core set of capabilities and then be prepared to scale them depending on market developments.

However, it is also possible that the trading sector will grow in the future. If that happens, banks might return to the arena.

50%
The percentage that the volatility of energy commodities has dropped below its long-term average

SCENARIO 3
THE RETURN OF THE BANKS

When American and European lawmakers placed restrictions on banks that encouraged them to exit from the commodity trading business, their goal was to avoid another Great Recession by stabilizing banks and the financial system overall. They also aimed to discourage speculative trading that could drive up consumer prices.

However, there is a risk that their efforts could have the opposite effect. We believe commodity prices will soon be more vulnerable to sudden disruptions than they have been over the past decade, and will remain so for the foreseeable future.

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As a result, when there are disruptions, markets will experience more "spikes," which will have a greater impact on the real economy and consumers over the next several years.

Regulations may need to be revised to permit banks to re-enter the commodity trading business to provide market liquidity and a risk management offering to industrial corporations in the Western developed markets. Banks in less-regulated emerging markets (such as Asia or the Middle East) that are not subject to these restrictions will likely become major players in their own right. They will support the trading operations of commodity producers and consumers, starting with local trading firms.

We believe that this scenario will potentially materialize over time as a consequence of Scenario 2. Companies that position themselves well for the first two scenarios will benefit. If banks re-enter commodity trading, companies that have stepped in to provide the services traditionally provided for by banks will have a strong market position by then and may consider expanding further through joint ventures or other forms of cooperation with banks.

GAINING CONTROL OF RADICAL CHANGE

Radically shifting business landscapes can stymie capable companies when they don't understand what is happening around them and why. But managers who take the time to grasp potential paradigm shifts have been known to turn the changes into opportunities for growth.

The trends and scenarios that we have presented in this article are not only relevant for the firms currently engaged in commodity trading. Every company that makes use of commodities, whether as a raw material or in processed form, will feel their impact. Consumers may also confront periods of increasingly volatile prices for gasoline, power, and other commodities.

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Consequently, understanding these developments and preparing for their potential ramifications can assist a wide variety of companies to gain a competitive advantage and to grow their margins more than their more passive competitors. At a minimum, we recommend that every company that trades, consumes, or produces commodities should evaluate its current capabilities and strategic position in light of the trends and scenarios described.

Management teams should ask themselves three critical questions:

1. What is the scenario, or series of scenarios, that I believe is most likely?
2. What capabilities am I missing to be one of the players who thrives in this scenario?
3. Do I want to invest in building these capabilities in order to strategically position myself for this potential development?

The companies that openly and critically engage in this debate will be the future market leaders. They will be prepared to seize the opportunities created by new developments. Others may be caught by surprise when a situation suddenly transforms the commodity markets as they have come to know them.

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THE FINANCIAL THREAT TO ASIAN ECONOMIC PROGRESS

UNDERDEVELOPED CAPITAL MARKETS COULD CRIMP THE REGION'S GROWTH

CHRISTIAN EDELMANN
CHRISTIAN PEDERSEN

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Asia has become much richer, not only absolutely, but relatively, too. Over the past 10 years, its share of global gross domestic product has increased from 24 percent to 31 percent. Its vast population is increasingly urban and middle-class.

This growth has been achieved by following an "old economy" industrial and export-driven model. Because this model depends on low wages and the acceptance of environmental damage, it is unsustainable. Success drives up wages and wealthier populations typically demand cleaner and healthier environments.

As we first pointed out in *Asia Finance 2020: Framing A New Asian Financial Architecture*, a study we conducted with the Fung Global Institute in 2013, Asian economies will need to modernize in order to continue growing toward Western levels of per capita income. They will need to depend less on exports, industry, and unpriced environmental inputs, and more on regional consumption, services, and innovation.

This transition needs a financial system that can facilitate it. Specifically, it needs the free flow of goods and capital within Asia, a ready supply of finance for new enterprises, and stable funding for trade and infrastructure.

Alas, having evolved to serve the needs of the old industrial model, the Asian financial sector is ill-suited to this role. Inconsistent national regulations and barriers to foreign competition drive up the cost of cross-border business. Over-reliance on asset-based lending restricts finance for young and innovative firms. And shallow capital markets limit the funding available for infrastructure and other major projects.

If the Asian financial sector fails to adapt, Emerging Asia risks getting stuck as a group of middle-income nations.

UNDERDEVELOPED CAPITAL MARKETS

Long-term financing of the kind required by large infrastructure projects is best supplied by "real money" investors, such as insurers and pension funds. Unlike banks, which largely rely on short-term funding, insurers and pension funds have stable, long-term liabilities. This allows them to invest more in long-term and illiquid assets.

Yet most Emerging Asian countries suffer from a paucity of real money investors. (See Exhibit 1.) Whereas Westerners typically build up personal financial assets to provide incomes in retirement, retirees

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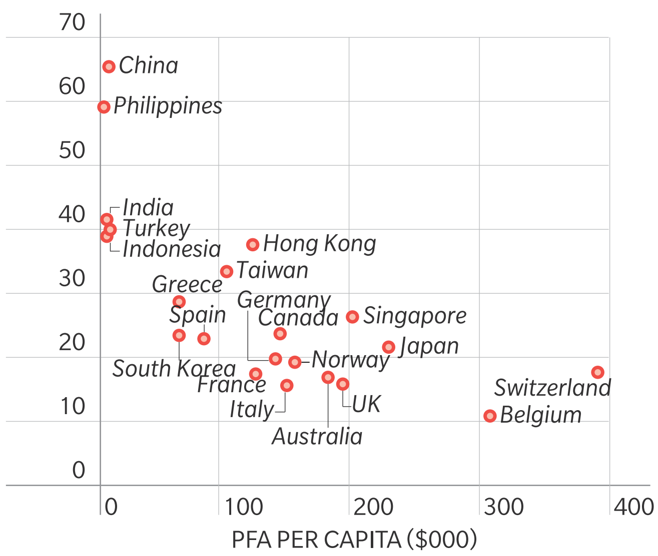
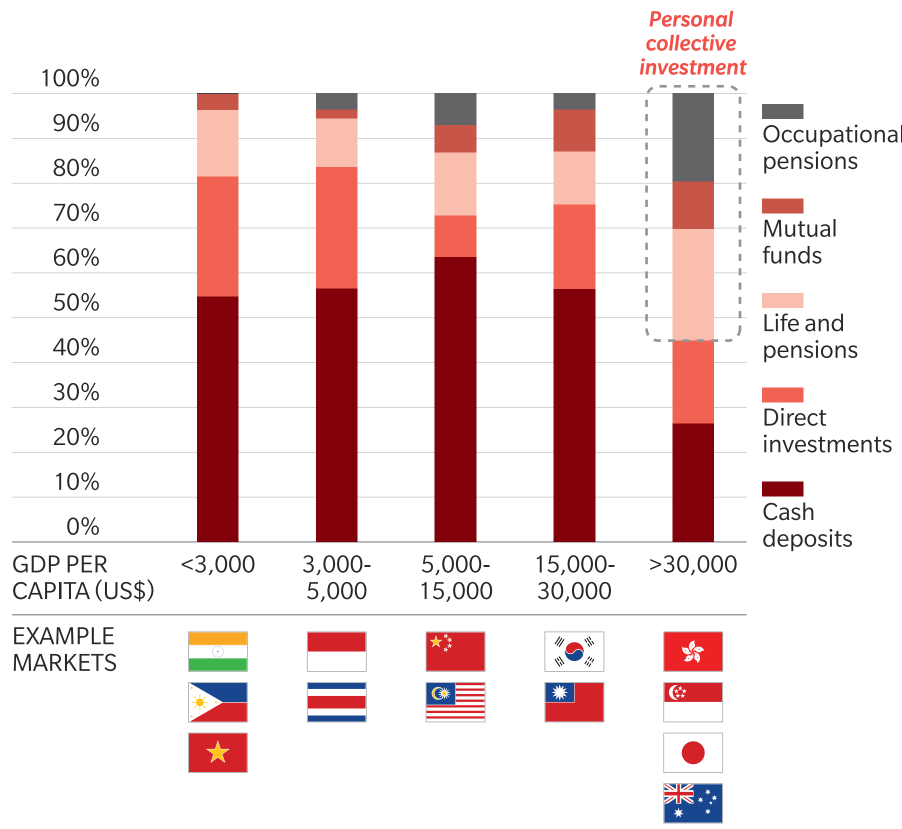
EXHIBIT 1: DISTRIBUTION OF PERSONAL FINANCIAL ASSETS (2012)

HELD IN CASH, DEPOSITS, AND SAVINGS ACCOUNT FOR EACH COUNTRY



FINANCIAL DEEPENING AT HOUSEHOLD LEVEL, 2012*



Source: IMF world economic outlook database, OECD, Oliver Wyman analysis
* Excludes home equity

in Emerging Asia still rely heavily on their children to support them in old age. And what personal financial assets they do have are disproportionately held in cash and deposits.

The flipside of this allocation of savings is underdeveloped capital markets and an over-reliance on short-term bank funding. Bank lending accounts for 47 percent of financing in Asia and 160 percent of GDP. In the United States, the comparable figures are 22 percent and 95 percent.

A sustainable mix of funding sources will need to include a bigger contribution of securities from Asian issuers. Home market demand for these will naturally rise as Asian personal financial assets grow. However, governments can accelerate the transition with policies that encourage savings via pensions or fund managers. The most direct way is through compulsory private pensions, which exist in Singapore, Australia, and now Malaysia. Malaysia is an especially good example, as its pension assets have risen to 46 percent of GDP due to its mandatory pension program.

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Alternatively, Asian governments can give tax breaks for savings in long-term vehicles and direct pooled investments in rural infrastructure, as in the United States and many European countries.

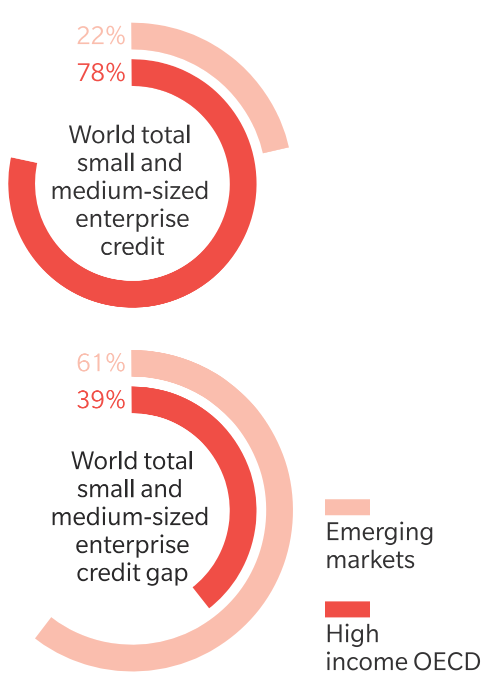
SUPPORT FOR SMALL AND MEDIUM-SIZED ENTERPRISES

Innovation tends to occur in new and small firms. Between 1993 and 2009, small and medium-sized enterprises accounted for 65 percent of new job creation in the United States and produced 16 times more patents per employee than large firms in the high-tech industry. If Asian economies are to modernize, startups and risk-taking will need to be encouraged. Small and medium-sized enterprises will need ready access to funding as they grow and evolve.

However, banks in Emerging Asia are ill-equipped to extend credit to small and medium-sized companies, especially those in the services or high-tech sectors. To compensate for limited data and cash-flow lending capabilities, Asian banks typically rely on taking security against tangible assets. However, firms that provide services or aim to produce intellectual capital can rarely provide such collateral.

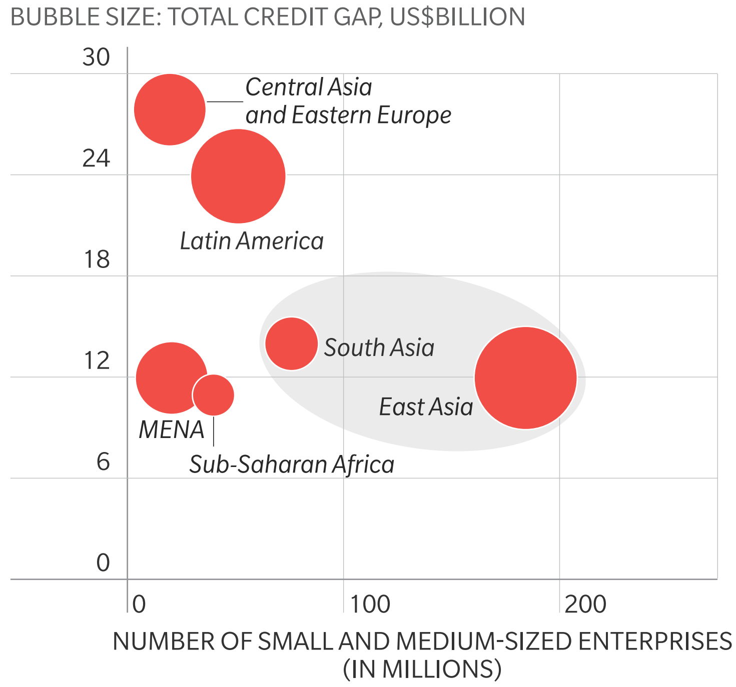
EXHIBIT 2: GLOBAL SMALL AND MEDIUM-SIZED ENTERPRISE FINANCING GAP

TOTAL CREDIT GAP RELATIVE TO OUTSTANDING SMALL AND MEDIUM-SIZED ENTERPRISE CREDIT GAP
2011



SMALL AND MEDIUM-SIZED ENTERPRISE FINANCING GAP
2011

PERCENT WITH ACCESS TO CREDIT
BUBBLE SIZE: TOTAL CREDIT GAP, US$BILLION



Source: IFC, Oliver Wyman analysis

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Governments can help by providing credit guarantees or seed capital for qualifying small and medium-sized enterprises. Moves in this direction are already happening in Singapore and China and can be further supported by credit bureaus.

Governments can also improve data availability to banks that lend to small and medium-sized enterprises. We recommend this not only at the national level but also at a regional – Pan Asia-Pacific – level.

The flow of capital to smaller companies is further threatened by the new Basel III rules, which will significantly increase the amount of capital that banks must hold against loans to smaller companies. As we are starting to see in Europe, this means lower returns to banks or higher prices for small firms and, thus, less lending to them.

Asia missed the opportunity to coordinate lobbying of the Basel Committee early on in the process. This was a result of the complacent assumption that Asian financial firms had plenty of capital and liquidity. It was also difficult for regulators from countries as far apart in economic development and regulatory sophistication as Japan and Cambodia to achieve a unified view.

The "post-Basel III economics" of lending and trading businesses, combined with realistic scenarios around a Chinese slowdown and political instability in parts of Asia, paint a challenging picture for the Asian banking sector.

Asian banks and regulators must now quickly embark on an agenda of gaining a deeper understanding of product-level economics.

47%
The percentage of financing that is bank lending in Asia versus only 22 percent in the United States

ASIAN FRAGMENTATION

Asian dependence on exports to the West can be reduced only by more Asian consumption and intra-Asian trade. However, intra-Asian trade is hindered by impediments to the flow of capital within the region and to cross-border financial business.

One such impediment is mechanical. Cross-border payments systems for large, wholesale transactions in Asia are generally state-of-the-art. However, cross-border retail transactions are less developed and threaten to hold back the burgeoning area of e-commerce.

Asian regulators should seek to improve current payments systems by:

- Ensuring the provision of payment-and-settlement infrastructure with multiple-currency capabilities and extended services covering lower value transactions.
- Supporting international standards on e-payments to enhance efficiency and connectivity.
- Closely monitoring and ensuring the security of digital payment solutions which emerge in the private sector.

An uncoordinated approach to regulation also drives up the cost of cross-region business, as financial firms need to comply with materially different regimes. More importantly, regulatory inconsistency can create systemic risk. For example, different levels of deposit insurance create the potential for massive and destabilizing cross-border flows during stress periods.

MAKING PROGRESS

Asia remains the world's most economically dynamic region. To continue its progress, however, Asia's financial sector must modernize. Bringing this about won't be easy, especially at a time of global financial and political instability. As highlighted in our article on political risk, the difference between success and failure can have major consequences for the future of these nations. (See "Political Risk in Emerging Markets," on page 15.) But the profound economic reforms made over recent decades show that it can be done, and that emerging Asian countries can continue their extraordinary progress.

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BEWARE AMAZON AND GOOGLE SHOPPING

HOW THE RULES ARE ABOUT TO CHANGE FOR WHOLESALE DISTRIBUTION

RICHARD BALABAN
KEITH CREEHAN
CHRIS MCMILLAN

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Over the past 15 years, the Internet has transformed the way consumers buy everything from books to music to insurance to travel. Giants such as Amazon and Google promise a future filled with instant-access information, interactive eyewear, and drone delivery of our groceries.

But another change is afoot that threatens wholesale distribution business models as more procurement professionals log on to AmazonSupply and Google Shopping. Worth about $7.2 trillion a year, the business-to-business market is a target that Amazon and Google can no longer ignore. The question is not whether Amazon and Google will be a threat in B2B, but rather which customers, purchase occasions, and categories will be attacked first.

In our view, AmazonSupply, Google Shopping, and likely one or two more "new" entrants, will have a profound effect on many wholesale and distribution sectors over the next five years. In fact, we are already seeing the early stages of a wave of innovation as the most forward-thinking wholesale and distribution businesses invest significant time and resources into becoming potent multichannel competitors.

B2B BUYING: THE NEXT GENERATION

The growth of general online purchasing is driven by one simple fact: Customers rule, and most procurement executives increasingly value quick, simple, effective ways of interacting to get the products and services they need, as well as new value-added services unavailable previously. As one chief executive officer recently shared with us: "Our customers have already been trained by Amazon on what 'good' looks like. That's what we have to compete with."

Online B2B purchasing already has a greater following among younger professionals. Ninety percent of procurement buyers between the ages of 18 and 35 in the United States make B2B purchases online, versus only 45 percent of purchasers between the ages of 46 to 60. (See Exhibit 1.)

As more of the purchasing workforce becomes Internet-savvy, the threat from online competition in wholesale distribution will only grow. Forty percent of corporate buyers spend at least half of their procurement budget online. Elsewhere in the supply chain, some manufacturers are

$7.2 trillion

The size of the world's wholesale distribution market

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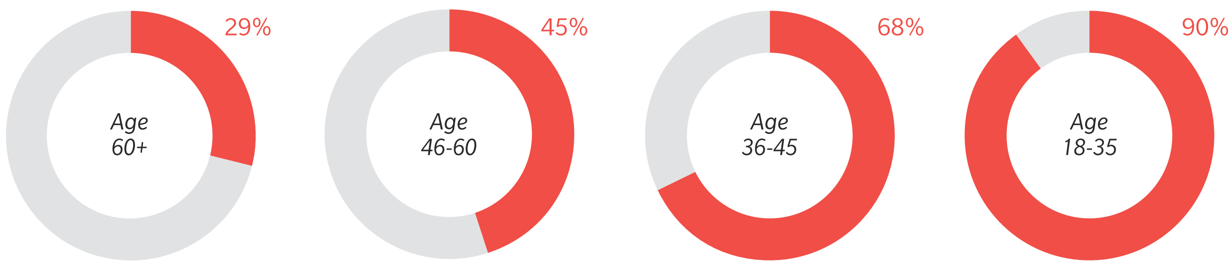
EXHIBIT 1: YOUNGER PROCUREMENT BUYERS – THE FUTURE OF THE B2B CUSTOMER BASE – ARE FAR MORE LIKELY TO USE ONLINE PLATFORMS THAN THEIR OLDER COUNTERPARTS

RESPONDENTS BY AGE MAKING B2B PURCHASES ONLINE



Source: The Acquity Group *2013 State of B2B Procurement Study*

using the Web to reach customers directly and to reduce their reliance on channel partners and intermediaries. Google AdWords supports this strategy by allowing suppliers and manufacturers to pay to appear in Google search results.

Next up could be meta-search businesses, already established in insurance, general retail, and travel, which allow B2B purchasers to compare products and prices before going direct to the manufacturer, cutting out the wholesale distributor altogether.

AMAZONSUPPLY IS CHANGING THE RULES

In our view, there are three reasons why AmazonSupply's offering is about to change the rules for wholesale distribution. We examine each, in turn.

RULE 1: CHOICE OF STOCK

In retail, Amazon already has a comparable or broader range of offerings than club stores or cash-and-carry formats. Additional services such as "Subscribe & Save" allow Amazon to automatically deliver frequently purchased, high-margin items – such as razor blades and diapers – every month. The impact to the club stores is twofold: First, Amazon is "hollowing out" shoppers' baskets since fewer items are needed, and those that are bought have a narrower margin. Second, customers are making fewer trips to the store, decreasing the amount that they spend on additional purchases, impulse or otherwise.

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EXHIBIT 2: SOME CATEGORIES ARE MORE IMMEDIATELY PRONE TO A NEW ONLINE THREAT THAN OTHERS

		INDUSTRIAL CHEMICALS	INDUSTRIAL PARTS
PRODUCT DRIVEN	**Intrinsic "shipability"**	Much lower value, heavy, bulky product – requiring local supply chain density	Typically high value, light, smaller product – easy to ship via common courier
	Handling requirements	Often requires specialist equipment/ handling/certification	Straightforward
CUSTOMER DRIVEN	**Technical guidance**	Numerous products require technical guidance and support	Many products easily "bought to specification"
	Product selection	Typical customer buys a small number of predictable products – enabling local product counts of hundreds and thousands only	Customers can buy across many thousands of products
	Value-added services	Diluting, blending, and cleaning are widespread and require physical presence	Real-time availability, tracking, and inventory management can often be executed remotely
		Not an obvious place to start	Online platform and remote distribution centers well-suited to meet many customer needs

Source: Oliver Wyman analysis

Items that are small, high-value, low-weight, and easy-to-handle and ship are especially amenable to Amazon's offering. It is no coincidence, then, that AmazonSupply launched with an industrial parts offer – a category which meets all of the above criteria – rather than, say, industrial chemicals, which fail most of the above tests. (See Exhibit 2.)

RULE 2:
PRODUCT RANGE AND PRICE

AmazonSupply's low prices are underpinned by a business model that permits it to run on operating margins that are a fraction of traditional suppliers' operating margins. Amazon's scale and lack of local operations and field sales give it a 20 percent sales and administration cost advantage. As a result, its operating margins are less than 2 percent.

The range of products available to users of AmazonSupply is another key advantage. Between June 2012 and June 2014, its product range grew from 500,000 to 2.25 million items. (See Exhibit 3.)

Amazon has also made substantial investments in distribution centers, allowing it to offer same day delivery within 19 cities in North America and Europe. This reach will only grow, and rapidly. In Europe, seven new

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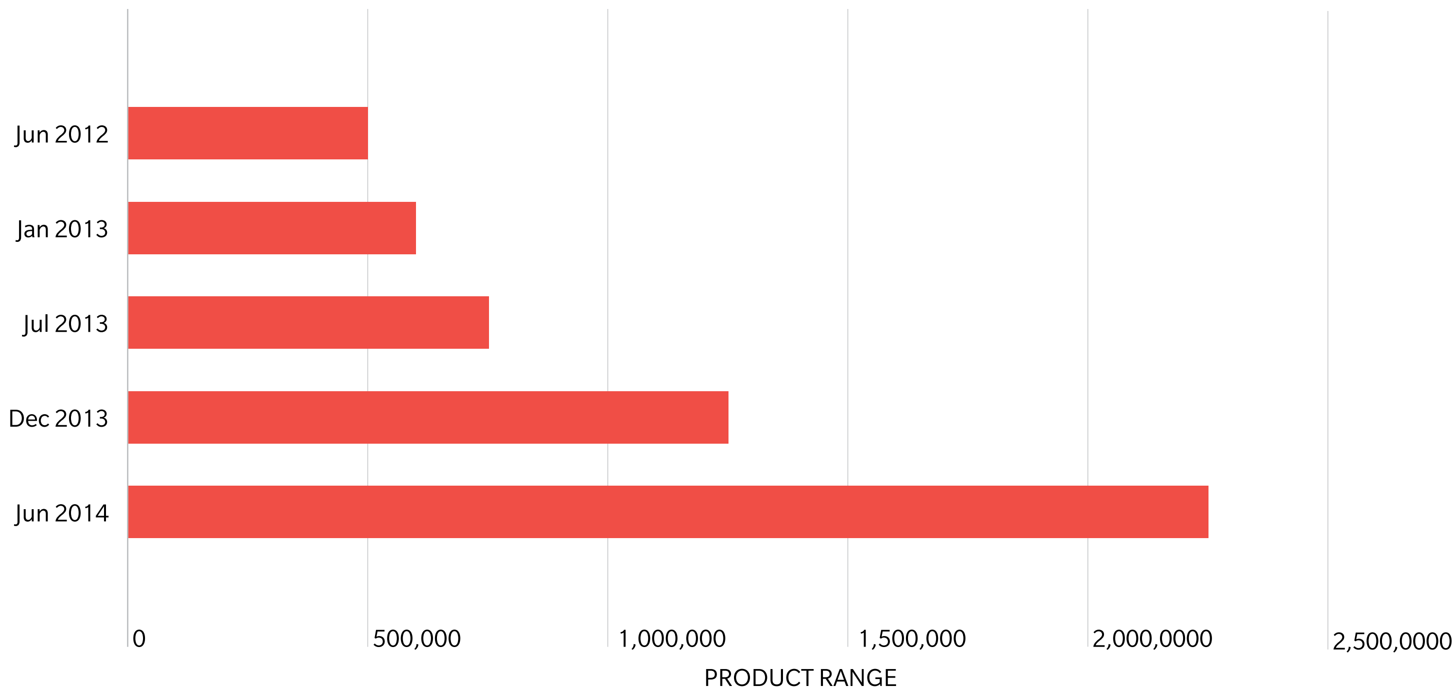
EXHIBIT 3: BUILDING A COMPELLING RANGE – AMAZONSUPPLY HAS BEEN AGGRESSIVELY GROWING ITS PRODUCT SELECTION, DOUBLING ITS BREADTH IN JUST OVER A YEAR



Source: Oliver Wyman analysis

fulfillment centers are expected in 2014, adding 7.1 million square feet in addition to its existing 23 centers. We estimate that as many as 20 additional satellite depots are potentially being considered.

RULE 3: BRAND AWARENESS

Amazon has also already won an important battle: Its brand is almost universally recognized and associated with the idea of a one-stop-shop for anything and everything at a competitive price. This means that it is often the first and only place that consumers and professional buyers go when thinking about making a purchase. Strong reliability, a “no quibbles” returns policy, and aggressive pricing add to its appeal. As a result, many customers now never check prices or range anywhere else.

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CONCLUSION

Until recently, wholesale distribution was an industry ruled by traditional distributors that had local presence and fulfillment, field sales, expert knowledge, and established relationships. These traditional tenets for success are now being disrupted by online distributors with more centralized operations and fulfillment, and no pretense of technical knowledge or field sales.

The online invasion has given rise to a well-executed multichannel model, where a number of CEOs are already working hard to take their businesses in the next two to three years. This approach enables customers to get the information and products they need via the Web, phone, mobile devices, and in person in a seamlessly integrated way, and with competitive economics.

History suggests that those companies that act quickly to strengthen a differentiated, high-quality, and good-value customer proposition will see their businesses flourish. Those that do not will struggle.

If your business does not yet have a credible plan to survive and thrive in the new ecosystem, there may be less time than you think.

90%

The percentage of procurement buyers between the ages of 18 and 35 in the United States who make B2B purchases online

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WHAT IS THE THREAT FROM **AMAZON**?

In April 2012, Amazon launched a web site for purchasing products for businesses, labs, workshops, and factories in the United States. AmazonSupply is specially tailored for B2B purchases in several ways. First, orders can be placed by telephone and fax as well as online. Second, a telephone customer service and helpline is available seven days a week. Third, suppliers can obtain credit through the service.

WHAT IS THE THREAT FROM **GOOGLE**?

From January 2013 to June 2014, Google ran Google Shopping for Suppliers as a test service targeted at B2B companies. Many of the learnings will be transferred to the main Google Shopping and Google AdWords businesses. Google Shopping for Suppliers was essentially an online catalogue in three test categories, with detailed structured technical data comparable across products and suppliers. The customer concept was to develop a truly comprehensive, fully up-to-date product catalogue that is as easy to search as Google.

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HOW TO STAY AHEAD OF ONLINE PURCHASING

SIX RECOMMENDATIONS

RICHARD BALABAN • KEITH CREEHAN • CHRIS MCMILLAN

Responding to the changing environment is not only about digital capabilities. It is about understanding what customers want and need, and then delivering it better and faster than your competitors. Here are six recommendations for how your company can come up with a credible plan to stay ahead of the shifting landscape in wholesale distribution.

RECOMMENDATION ONE: FAST-FORWARD ANOTHER FIVE YEARS

Ask yourself: "What could Amazon do to my sector if they got serious?" Work this through at the level of customers, purchase occasions, and categories.

RECOMMENDATION TWO: GET CRYSTAL CLEAR ON WHAT YOU NEED TO DO TO WIN CUSTOMERS

If your prices are more than 10 percent above Amazon's, it's time to review your pricing policy. If you can't fulfill next day delivery on 90 percent of your products, it's time to review your supply chain.

RECOMMENDATION THREE: STAY CLOSE TO BOTH YOUR CUSTOMERS AND COMPETITORS

Do you collect monthly customer feedback on your local service performance? Do you know how customers rate you versus competitors on key dimensions such as value, product quality, and service? Can you map this versus AmazonSupply? If not, you should.

RECOMMENDATION FOUR: GET SERIOUS ABOUT CUSTOMER RETENTION

Focus on information, services, and apps that you can deliver in a better way to core customers in a multichannel world in order to save them time or make them more

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productive. Pursue service activities that will enable you to “automate” online, cut costs, and drive up sales.

RECOMMENDATION FIVE: GO ON THE OFFENSIVE

Once you have a robust online catalogue and transaction engine, “re-skin” it for direct sales to consumers. Then, start adding more adjacent product categories. Consider acting as the fulfillment partner for AmazonSupply or a large B2C player.

RECOMMENDATION SIX: START THINKING “MOBILE FIRST”

Today, there are more mobile devices connected to the Internet than personal computers. Mobile commerce is forecasted to quadruple over the next five years. Delivering simple, relevant, highly personalized information, services, and ordering capabilities to customers while they are going about their business will be a competitive game changer.

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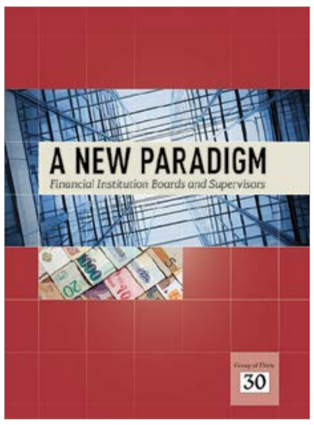

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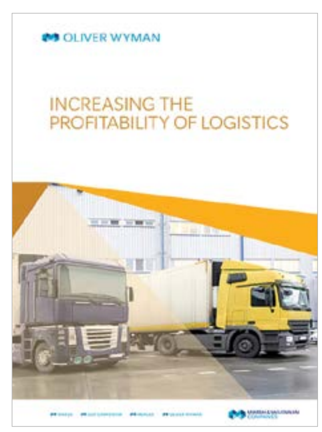

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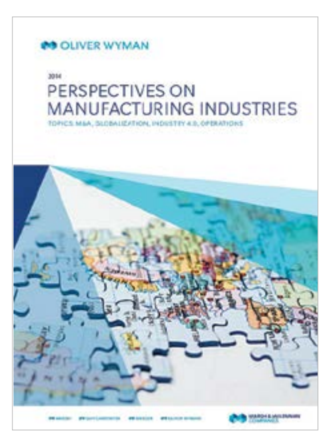

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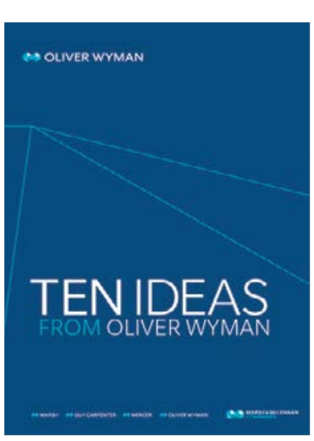

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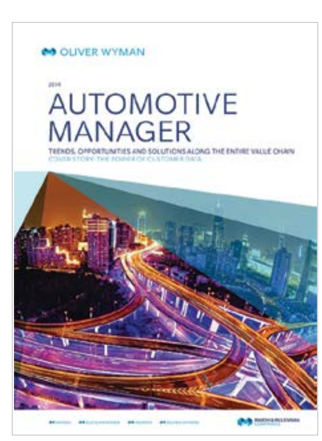

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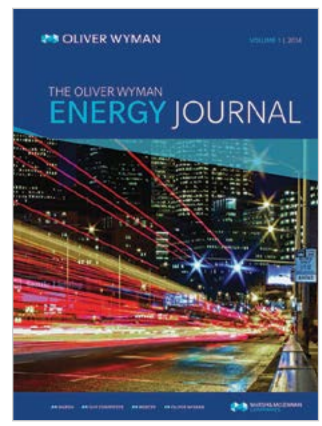

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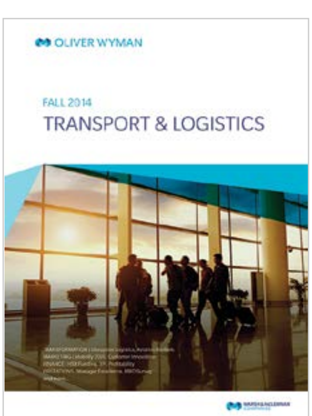

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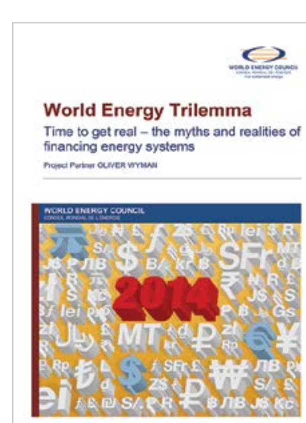

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