McKinsey&Company

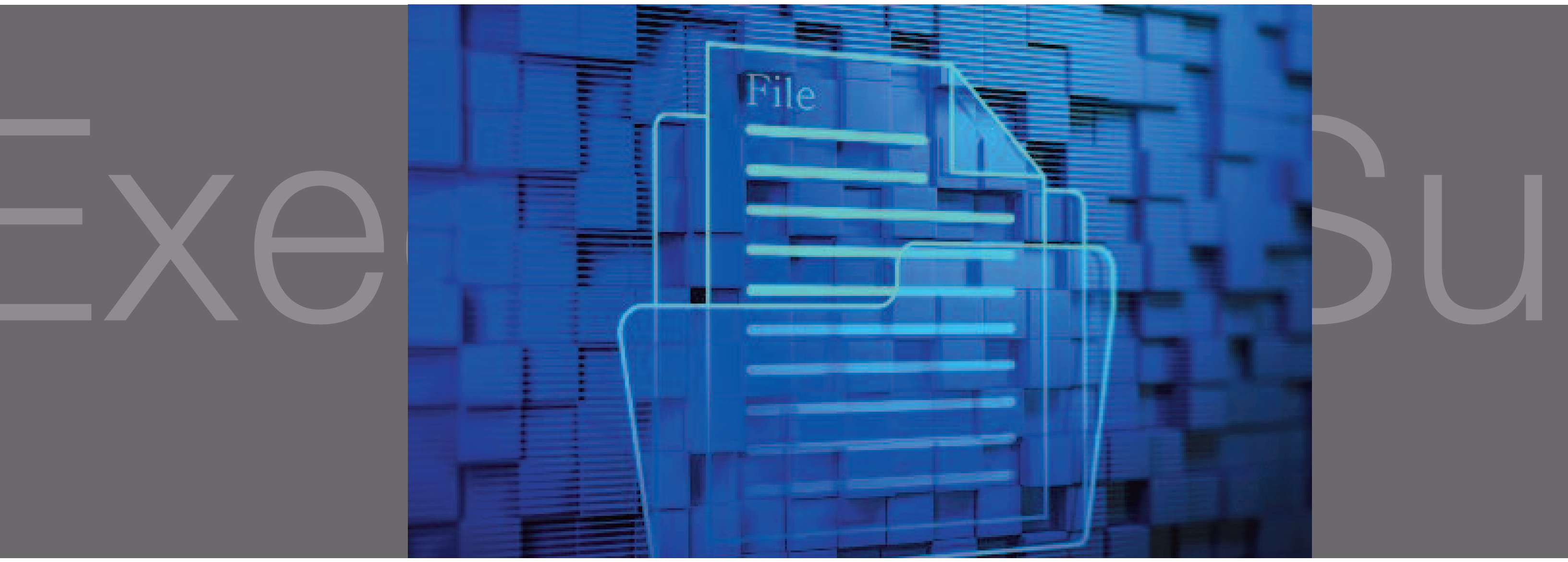
A Brave New World for Global Banking

McKinsey Global Banking Annual Review 2016

Financial Services Practice

A Brave New World for Global Banking

McKinsey Global Banking Annual Review 2016



Executive Summary

McKinsey's latest research on the global banking industry examines the effects of three powerful secular forces: slow growth and low interest rates, digitization, and new regulation. While developed-market banks are most affected, emerging-market banks are also vulnerable, particularly to the credit cycle. McKinsey analyzed the effects of two of these forces—low growth and digital disruption—by 2020 in two scenarios for banks in major markets (the effects of regulation were examined separately). The current consensus scenario features a slow recovery in economic growth, a slight rise in interest rates[1] (which has begun in the U.S. following the presidential election), and an evolutionary digitization of the industry. The harsher scenario includes some potentially severe risks for global banking from

[1] Based on September 2016 economic forecasts from the Economist Intelligence Unit.

continued economic slowdown and more disruptive digitization. Under the consensus scenario, the key findings include:

- The slow-growth/low-interest-rate environment in developed markets will continue to eat into banks' income, particularly in Europe and the United Kingdom, putting $35 billion (31 percent) of profits at risk. If combined with further digital disruption, this could cut already low profits in Europe and the United Kingdom from $110 billion today to about $50 billion by 2020, even after some basic mitigating measures by banks, and reduce already-low ROEs from around 3 to 4 percent today to 1 to 2 percent by 2020.

- U.S. and Japanese banks are less affected in the consensus view and should be able to maintain profitability. Lower growth may reduce profits by about $1 billion, and digital disruption could put up to $45 billion (or 18 percent) at risk by 2020. Nevertheless, profitability of U.S. and Japanese banks would drop by only 1 percentage point, to 8 percent for U.S. banks and 5 percent in Japan.

- In aggregate, developed-market banks are at risk of losing roughly $90 billion (25 percent) in profits. While U.S. banks with their 8 percent ROE would stay close to their cost of capital of roughly 10 percent, the ROE minus COE gap for Western European banks could increase to 8 to 9 percentage points and for Japanese banks, to 5 percentage points. This assumes that 20 to 30 percent of the impact can be mitigated by banks through traditional measures. New regulation, such as "Basel IV," may widen the gap.

- Emerging markets face a different challenge. They are structurally more profitable with ROEs well above the 10 percent cost of capital in most cases. But the credit cycle looms large. Should the consensus scenario come to fruition, Brazil, China and Russia might see $50 billion in profits put at risk, largely driven by China with $47 billion. However, a slower growth scenario could see additional credit losses of up to $250 billion, $220 billion of which would be in China. Given currently high profitability of $320 billion, Chinese banks should be able to withstand this scenario. Digital disruption in the key emerging markets is a lesser threat, with about $18 billion in profits at risk.

Clearly, the economic consensus scenario is challenging for banks, particularly in Europe and the U.K. We do not see much upside potential at this stage, and several factors could shift things in a negative direction. For one, growth rates may remain flat for the next five years, and the credit cycle could hit with more force than currently expected. At the same time, digital disruption is more likely in profit-challenged markets where banks are unable to invest adequately to stay competitive with digital attackers.

The banking industry confronts these challenges at a time when it has settled into a new level of performance. McKinsey's research finds that the global industry's return on equity in 2015 ticked up slightly to 9.6 percent, roughly returning the cost of capital. To be sure, some banks earn well above this mark, but many do not. Global banking is delicately perched between profit and loss, and the next move seems likely to be downward with the main questions being around timing and how quickly the industry can adjust.

To counter the headwinds now gathering force, most banks will need to embark on a fundamental transformation that exceeds previous efforts, centered on the themes of resilience, reorientation and renewal. First, they must ensure viability by protecting not only their balance sheets and financial resources, but also their customer franchises and regulatory position. Next, they must reorient the business model to the customer and the new digital environment, establishing the bank as a platform for data and digital analytics and processes, and aggressively linking up with Fintechs, platform providers, and each other to share costs through industry utilities. Finally, they must move beyond traditional restructuring and renew their institutions via new technological capabilities as well as organizational structures.

■ ■ ■

To set the pace of transformation, banks need to take into account their current position and the strength of the disruption in their markets. The task is daunting and should not be underestimated. Despite the efforts of individual banks, the European sector may require consolidation to return to health. But a brighter future is within the grasp of any institution that fully commits to its transformation. Already, several banks in each market have shown that it is possible to remake the bank into a dynamic institution that is relevant to its customers, rewarding to its investors, and responsible to its stakeholders.

Introduction

Global banking profits remain subdued. For the fourth consecutive year, ROE in 2015 came in just below 10 percent, at or near the cost of capital. In a deeply competitive industry like banking, returning the cost of capital is a decent outcome for a year or two. But it now looks like ROE in 2016 will come in at about the same level. In many parts of the world, most notably Europe, banking has settled into an uncomfortable new reality.

As always, banking's fortunes are tied to the underlying economy, which is stagnant in many regions. To stimulate growth, central banks in developed economies have purchased trillions in assets and pushed rates lower, below the zero bound in Japan and the eurozone. That has already cost banks dearly in their net interest income (NII).

In emerging markets, growth is sputtering, and banks are looking at a growing volume of non-performing loans with concern.

Stagnating growth is one of three broad challenges facing the industry. Another is regulation, where banks still face enormous challenges to digest the wave of post-crisis reforms.

Stagnating growth is one of three broad challenges facing the industry. Another is *regulation*, where banks still face enormous challenges to digest the wave of post-crisis reforms, although the outcome of the U.S. presidential election has raised the industry's hopes of a more benign regulatory environment. Control costs in risk, finance, legal and compliance have shot up in recent years. And though deadlines for implementation of Basel III stretch to 2019, further proposals termed "Basel IV" are already underway. Likely measures include stricter capital requirements, more stress testing, and new guidelines for conduct and compliance risks.

Meanwhile the pressures of *digitization* are growing. Some emerging-market banks are managing the challenge well, by offering innovative mobile services to customers. But in the largest emerging markets, China and India, banks are losing ground to digital commerce firms that have moved rapidly into banking. In developed economies, digitization is pressing on banks in three ways. First, regulators, who were initially more conservative about the entry of non-banks into financial services, are now gradually opening up, in some cases creating "sandboxes" where non-banks may play. In time, huge tech companies may be able to insert themselves between banks and their customers, capturing the vital customer relationship, and presenting an existential threat. Second, and more positively for the industry, a number of banks are teaming up with Fintech and digital firms, using big data and analytics to sharpen risk assessment and drive revenue growth. Finally, many banks have been able to digitize processes and dramatically lower costs in their middle and back offices (though others have found that digitization actually adds costs). Digitization is proving a many-headed creature, with major risks and commensurate opportunities.

The collective impact of these challenges is formidable. While banking has always gone through cycles, 10 years after the global financial crisis it seems that a full recovery is still elusive. Help is not coming from policymakers, nor are there any secular trends on the horizon that might provide a lift to banks' economics. There is nowhere to hide. Banks must adapt to the reality of a macroeconomic environment that offers a number of risks and limited upside potential. And they must adapt via a fundamental transformation. Tinkering around the edges, as banks have done for years, is not adequate to the scale of the task and will only exacerbate the sense of fatigue that comes from years of one-off restructurings. Senior banking executives must focus on three themes to successfully address the transformation needs of their institutions:

- **Resilience**. Banks must earn the right to compete by building a solid yet flexible foundation for a period of diminished opportunity. Digitization is only the start of the answer on costs; radical reductions in functional costs are needed to fundamentally rebase the cost structure. The decline in interest income can be offset to a degree through changes to the asset/liability mix and repricing. Some banks will need to restore the balance sheet to health; emerging-market banks can shift troubled loans to new entities. And banks must set a broad regulatory strategy.
- **A reorientation toward the customer and the digital environment.** Banks must determine how to compete across the main dimensions of customer centricity, operating model transformation, regulatory strategy and growth. Banks are compelled to digitize the essential customer "journeys" to deliver the same kind of delight that Fintechs offer. They must reconceive the bank as a platform for digital and data processes, putting analytics at the center of every meaningful decision. And they must tap into the emerging sources of growth.
- **Renewal of skills and capabilities.** Building resilience and reorienting toward the customer are enormous undertakings and can quickly deplete a bank's capacity for change. One way to raise the metabolic rate of change-fatigued banks is to embrace agile principles, giving teams the autonomy and power to get jobs done. Banks must build skills for vital roles such as data scientists and data translators, who convert analytical outputs to commercial and customer use cases. And they need to embrace a shared set of values, especially extreme collaboration and customer focus, to pin the whole undertaking together.

Strategic shifts and business transformations are traditionally driven top-down. Leaders will need to make tough choices about the initiatives that they must lead personally and those that they delegate. But the complexity and scale of change required in banking demands a complementary bottom-up logic. The entire organization must be excited by a clear vision of customers' needs and aligned on a set of values that places the customer first—and only initiatives that deliver against this vision and these values should be supported.

■ ■ ■

This is McKinsey's sixth annual report on the global banking industry. It draws on the experience of our clients and practitioners around the world, as well as the data and insights from Panorama, McKinsey's proprietary banking and Fintech research arm. We begin with a survey of the industry's present state, before moving on to an examination of the effects of the three primary forces that are eroding banks' profits. The report concludes with a discussion of the many elements that bank leaders might use to build an agenda of transformation that can put the bank on the right footing for the current environment.

The State of the Industry

The global banking industry continues to make headlines. Brexit was a shock to the system and introduced more uncertainty about the European banking sector. In North America, the march of new regulations continues, and the American presidential election has dealt banks a new wild card. Banks in China could be nearing a crisis, according to some analysts. Brazil's banks are looking at costly write-offs from big bankruptcies—and like their counterparts in Russia, are coping with the end of the commodities super-cycle.

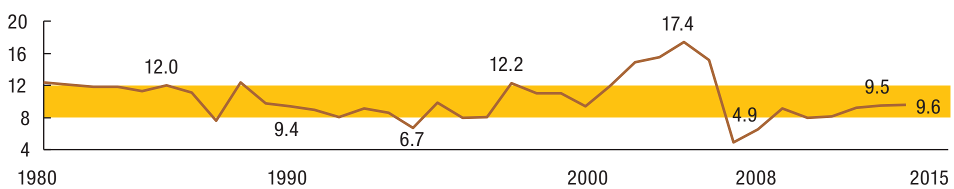
With economic conditions deteriorating in 2016, the industry has settled into a low-growth, low-profit rut. Investors are voting with their feet, and until recently bank shares had fallen more than other sectors. In this chapter, we explore the precarious economics of global banking, and the forces

Exhibit 1

ROE remained stable but with large differences between developed and emerging markets

Global[1] banking ROE, 1980–2015

Percent



ROE by region 2015

Percent

[1] Based on a sample of ~1.000 largest banks in terms of assets.

[2] Australia, Hong Kong, Israel, New Zealand, Singapore, South Korea, Taiwan.

[3] Bangladesh, India, Indonesia, Kazakhstan, Malaysia, Pakistan, Philippines, Sri Lanka, Thailand, Vietnam.

[4] Angola, Bahrain, Belarus, Egypt, Hungary, Iran, Jordan, Kuwait, Lebanon, Mauritius, Morocco, Nigeria, Oman, Poland, Qatar, Romania, Russia, Saudi Arabia, Slovenia, South Africa, Togo, Turkey, United Arab Emirates.

Source: Bloomberg, Compustat, Datastream, OECD, SNL, Thomson Reuters, McKinsey Panorama – Global Banking Pools

that are likely shaping investor opinion, depending on the region: economic uncertainty, slowing growth, falling margins and mounting risk costs.

Reality sinks in

The days of double-digit return on equity are becoming a distant memory. In 2015, global banking's[2] ROE stayed around 9.6 percent, a barely perceptible gain from 2014's 9.5 percent (Exhibit 1). For six consecutive years, global ROEs have gone sideways, in a narrow range bounded by 2011's 7.9 percent and the 2015 figure. Of course, many emerging markets continue to deliver much higher ROEs than developed markets.

As ROE has flattened, so have other key indicators (Exhibit 2, page 10). Revenue growth rose slightly from 2014 to 2015—but at 6.7 percent, is considerably slower than the 16.8 percent annual growth seen in 2002–07. Banks' capitalization is stronger: Tier-1 capital ratio rose from 12.3 percent in 2014 to 12.8 percent in 2015. Developed market banks registered little change in their price-to-book value (P/B) and loan-to-deposit (LTD) ratios.

What became evident in 2015 was that emerging-market banks were entering their own version of a slow-growth, lower-profit regime. For the past several years, banks in emerging markets (particularly China) have dominated the industry's rev-

[2] In this report, "global banking" and "the banking industry" include deposit-taking and lending institutions and other banks whose business is concentrated in investment management, servicing, and processing. We do not include pure asset or wealth managers, or insurance companies.

enue growth. But emerging markets' share of global revenue growth declined in 2015 for the fourth consecutive year (from 84 percent in 2012 to 57 percent in 2015). Some growth in developed markets kept aggregate industry growth close to 2014 levels.

The industry is proving resilient, able to make up for shortfalls in one region with gains in another. And the improving capital position is encouraging: while the latest additions to capital have been more expensive than earlier rounds and the growing buffers dent ROEs, they provide banks with stability. The industry has also weathered the Brexit referendum well. The eventual impact of Brexit on U.K. financial services will depend on the outcome of a lengthy negotiating process. However, the impact on other players, in particular on the Continent, will likely be manageable.

Investors are more focused on the industry's longer-term problems. Between January 2015 and August 2016, banks' share prices fell by 14 percent, cutting $1.1 trillion of shareholder value (Exhibit 3). That is considerably worse than the broader market; in the same period, the MSCI All-Country World Index dropped by 0.8 percent.

In parallel, P/B ratios continued to drop in emerging markets, from 1.3x to 1.0x, and fell below 1.0x in the developed markets

Exhibit 2

The new reality of banking is firmly in place

		Unsustainable expansion (2002–07) Double-digit growth, high ROE, multiples at unsustainable levels	**Crisis (2008–11)** Slow growth, ROE significantly below COE, low multiples	**New reality (2012–15)** Low, single-digit growth, plateaued ROE and multiples, improved cost-efficiency
Average ROE		14.0%	7.3%	9.1%
Revenue growth[1]		16.8%	3.9%	6.2%[2]
Emerging markets' share of revenue growth[1]		26.9%	69.0%	70.9%[2]
Tier 1 Ratio		10.5%	12.1%	12.5%
Loan/deposit	Developed	124.6%	128.8%	105.7%
	Emerging	75.6%	81.1%	77.4%
Price/book value	Developed	2.2	1.0	0.9
	Emerging	2.2	1.7	1.2
Percent of banks with price/book value <1.0x	Developed	28.4%	66.0%	64.1%
	Emerging	19.2%	27.9%	42.0%
Primary driver of economic growth		Volume	Risk cost	Operational efficiency

[1] Revenues before risk cost.

[2] Fixed conversion rate, $ 2015.

Source: Thomson Reuters, SNL, McKinsey Panorama – Global Banking Pools

(Exhibit 4, page 12). The proportion of banks trading below book value as of October 2016 is large—globally 58 percent, Japan 99 percent, Continental Europe 74 percent, U.K. 80 percent—and growing. Some of the largest banks have traded recently for as little as 30 percent of their book value. Even with some recent promising quarterly results, more banks are destroying value than creating it.

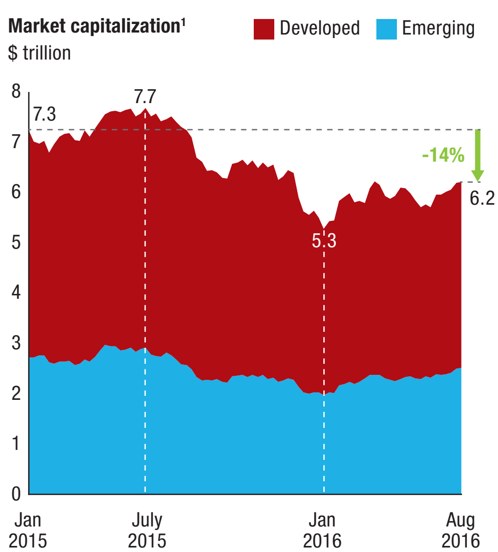
Slowing growth gives investors pause

The long slump in banking shares suggests that we should not expect a quick or permanent rebound in valuations. Investors are expressing concerns about the long-term trends affecting the industry, especially the deteriorating economic picture. Real GDP forecasts are growing more pessimistic: the Economist Intelligence Unit estimates global GDP in 2020 at $65 trillion, down from its $68-trillion estimate in 2015. Growth is expected to slow notably in Japan and several key emerging markets, especially Latin America. In our work with banks around the world in 2016, we find that many are struggling to maintain revenues, and margin pressures are significant. And we have noticed a change in how seriously banks take the digital disruption. Discussions at many banks are now at a different level than a year ago.

Exhibit 3

Continued profitability pressures have reduced valuations by 14% since January 2015

Global banking market capitalization



Valuation and market capitalization

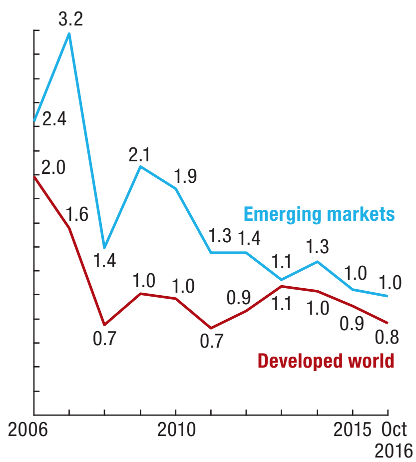
As of Aug 2016 Price to book value (multiple)		Mkt Cap[2] $ billion	Delta Mkt cap[3]
Canada	1.6x	329	-7%
Australia	1.5x	315	-12%
Emerging Asia	1.5x	269	-6%
Switzerland	1.4x	135	0%
United States	1.2x	1,475	-9%
Brazil	1.2x	136	-8%
India	1.2x	197	-3%
China	1.0x	1,250	-13%
Scandinavia	1.0x	170	-15%
UK	0.9x	308	-33%
Russia	0.9x	68	57%
Spain	0.7x	141	-42%
Japan	0.5x	359	-6%
Germany	0.5x	32	-50%
France	0.4x	136	-21%
Italy	0.4x	68	-44%

[1] Based on a sample of listed banks with assets over $10 billion; Reuters weekly EOD mid-spreads on corporate bond CDSs where available.
[2] Only regions with $100+ billion market cap are listed.
[3] Change in market capitalization since January 2015.
Source: Thomson Reuters, McKinsey Panorama – Global Banking Pools

Exhibit 4

Price-to-book values decreased in both developed and emerging markets in 2015 and 2016

Price-to-book multiples, 2006–2016 Oct[1]



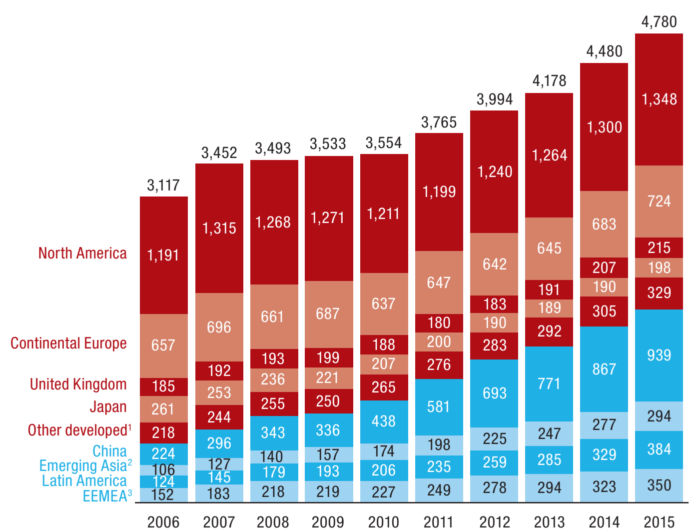
	P/B multiples 2014	2015	Oct 2016	Share of banks below 1.0x P/B[2]
Developed world				
North America	1.2x	1.1x	1.0x	20%
Continental Europe	0.9x	0.8x	0.6x	74%
United Kingdom	0.9x	0.8x	0.5x	80%
Japan	0.6x	0.6x	0.5x	99%
Other developed	1.3x	1.1x	1.0x	80%
Emerging markets				
China	1.1x	0.8x	0.8x	49%
Emerging Asia	1.5x	1.5x	1.5x	49%
Latin America	1.7x	1.9x	1.9x	15%
EEMEA[3]	1.3x	1.2x	1.1x	54%

NOTE: Book value does not exclude goodwill as the data is available only for ~60% of covered banks.
[1] Based on a sample of listed banks with >$10 billion in assets.
[2] Based on Oct 2016 market-cap values and 2015 year-end equity book value.
[3] Eastern Europe, Middle East and Africa.
Source: Thomson Reuters, SNL, McKinsey Panorama – Global Banking Pools

Exhibit 5

Global banking revenues have continued to grow in line with the longer-term average

Revenue before risk cost
$ billion, fixed 2015 FX rate



	Growth 2010–2014 Percent	Growth 2014–2015 Percent
Total	**6.0**	**6.7**
North America	1.8	3.7
Continental Europe	1.7	6.0
United Kingdom	2.4	4.1
Japan	-2.1	4.0
Other developed[1]	3.6	7.7
China	18.6	8.3
Emerging Asia[2]	12.3	6.3
Latin America	12.3	16.8
EEMEA[3]	9.2	8.4

[1] Australia, Hong Kong, Israel, New Zealand, Singapore, South Korea, Taiwan.
[2] Bangladesh, India, Indonesia, Kazakhstan, Malaysia, Pakistan, Philippines, Sri Lanka, Thailand, Vietnam.
[3] Angola, Bahrain, Belarus, Egypt, Hungary, Iran, Jordan, Kuwait, Lebanon, Mauritius, Morocco, Nigeria, Oman, Poland, Qatar, Romania, Russia, Saudi Arabia, Slovenia, South Africa, Togo, Turkey, United Arab Emirates.
Source: McKinsey Panorama – Global Banking Pools

Exhibit 6

Low and steady growth across product types, varying vastly across regions

Global banking revenue (before risk cost) growth, 2014–15
$ billion, fixed 2015 FX rate

>10% | 5%-10% | <0-5% | <0%

		Retail: $136 billion				Wholesale: $152 billion				Asset mgmt $12 billion
	Total	Consumer finance	Mortgage	Retail deposits	Retail wealth	CMIB[1]	Wholesale transaction banking	Whole-sale lending	Specia-lized finance[2]	
North America	48	7	13	8	4	0	9	1	3	3
Continental Europe	41	2	12	2	1	5	-8	23	0	2
United Kingdom	9	0	0	2	1	3	3	-1	0	1
Japan	8	1	0	-2	1	4	2	0	0	1
Other developed[3]	24	3	3	1	1	6	4	4	0	1
China	72	7	4	-2	11	4	52	-13	6	4
Emerging Asia[4]	17	4	2	2	1	2	3	3	0	0
Latin America	55	23	0	12	1	0	14	4	0	1
EEMEA[5]	27	1	1	4	4	1	4	11	1	0
Global	300	49	36	26	26	25	83	33	11	12

[1] Capital markets and investment banking.
[2] Leasing and factoring.
[3] Australia, Hong Kong, Israel, New Zealand, Singapore, South Korea, Taiwan.
[4] Bangladesh, India, Indonesia, Kazakhstan, Malaysia,Pakistan, Philippines, Sri Lanka, Thailand, Vietnam.
[5] Angola, Bahrain, Belarus, Egypt, Hungary, Iran, Jordan, Kuwait, Lebanon, Mauritius, Morocco, Nigeria, Oman, Poland, Qatar, Romania, Russia, Saudi Arabia, Slovenia, South Africa, Togo, Turkey, United Arab Emirates.

Note: Rows and columns may not sum because of rounding.

Source: EIU; IHS Global Insight; McKinsey Panorama – Global Banking Pools

Slowing demand is beginning to affect industry revenues (Exhibit 5).[3] Global revenue growth (before risk cost) reached 6.7 percent in 2015, slightly higher than the 6.0 percent annual growth recorded from 2010 to 2014. But in 2015, the growth gap between emerging and developed markets narrowed. China and other emerging markets in Asia, and some markets in Latin America, have slowed, while in developed countries such as Australia, South Korea and Western Europe, growth actually accelerated (though this was not universal and in Europe was driven almost entirely by a sharp rebound in revenues in Ireland, Italy and Spain).

Exhibit 6 shows growth in revenue by product for each region over the past year. Many products showed gains of 5 to 10 percent. However, many others were flat year-on-year, and in a few products, revenue pools actually shrank.

A regional perspective

Of course, most investors do not consider banking at the global level; they are more attuned to regional dynamics and the individual bank's story. If we look within

[3] Revenue growth is stated in fixed dollar terms; growth rates in a bank's domestic currency will vary.

Exhibit 7

ROEs have stabilized due to reductions in costs, credit provisions and fines, offsetting declines in margin and capital increases

ROE, 2014–15[1]
Percentage points

	2014 Percent	+ Margin	+ Risk cost	+ Cost efficiency	+ Taxes	+ Fines and other	+ Capital	=	2015[2] Percent
Global	9.5	–0.6	–0.2	0.8	0.1	0.4	–0.5	▲	9.6
Developed									
North America	8.6	–1.8	–0.1	2.3	0.0	0.8	–0.4	▲	9.6
Continental Europe	4.2	–1.9	1.7	0.9	–0.1	0.3	–0.2	▲	4.8
United Kingdom	3.8	–1.7	–0.4	0.0	0.6	1.1	–0.3	▼	3.1
Japan	6.6	0.5	–0.2	–0.3	–0.2	0.2	–0.2	▼	6.5
Other developed	10.3	–0.6	0.1	0.4	0.1	–0.2	–0.1	▼	10.0
Emerging									
China	17.9	0.4	–2.2	0.2	0.4	0.3	–0.9	▼	16.1
Emerging Asia	14.0	0.7	–1.4	–0.3	–0.2	0.0	–0.2	▼	12.5
Latin America	22.1	–5.0	–1.6	2.0	4.2	0.5	0.4	▲	22.6
EEMEA	12.6	–4.3	1.2	1.6	0.5	–0.2	0.1	▼	11.4

[1] Based on a sample of ~1,000 largest banks in terms of assets.
[2] Numbers do not add up to the ROE level of 2015 due to rounding.
Source: SNL, McKinsey Panorama – Global Banking Pools

global ROE, some of those regional stories emerge (Exhibit 7).

Developed markets

North America Revenues continued to grow, especially in consumer finance and wholesale lending (mostly to non-financial corporates), and there was some slow growth in mortgage volumes. Retail investment growth was more lackluster as securities markets took a breather after a long post-crisis rally (which has picked up again in 2016). Net interest margins eroded further in some lending products (mostly in wholesale banking), as players jockeyed for share in an expanding market. North American banks are also making considerable progress on cost improvement. While some of this improvement results from currency fluctuations, such that the costs of international subsidiaries of large U.S. (and some Canadian) banks now appear cheaper in dollar terms, most of the effect is due to real progress in trimming costs. Eight of the top 10 U.S. banks managed to cut budgets; Canadian banks also did well. North America is an outlier, however (Exhibit 8). Across the global industry, operating expenses (opex) have been rising,

Exhibit 8

Costs continue to rise worldwide, except in North America

Changes in operating expense,[1] 2012-15
Percent (fixed U.S.$ rates)

		2012-2015	2014-2015
Developed	North America	-2.2	-6.9
	Continental Europe	1.5	2.2
	United Kingdom	-2.2	0.6
	Japan	3.0	5.1
	Other developed[2]	4.7	5.5
Emerging	China	10.5	8.4
	India	16.8	9.6
	Southeast Asia	9.0	7.9
	Latin America	15.5	18.4
	EEMEA[3]	12.2	11.2
	Global	3.1	2.5

[1] Includes all recurring costs such as personnel, amortization, technology and communications, marketing, professional fees, and so on. Excludes non-recurring expenses such as litigation, losses on subsidiary sales, and so on.
[2] Australia, Hong Kong, Israel, New Zealand, Singapore, South Korea, Taiwan.
[3] Angola, Bahrain, Belarus, Egypt, Hungary, Iran, Jordan, Kuwait, Lebanon, Mauritius, Morocco, Nigeria, Oman, Poland, Qatar, Romania, Russia, Saudi Arabia, Slovenia, South Africa, Togo, Turkey, United Arab Emirates.
Source: McKinsey Panorama – Global Banking Pools, SNL

growing by 2.5 percent in 2015. Despite best efforts, system-level expenses grew in Continental Europe by 2.2 percent, and in the U.K. by 0.6 percent. In emerging markets, especially China and Southeast Asia, opex is growing quickly, faster than total assets.

Western Europe[4] As domestic consumption slowly expanded and real estate investments proved attractive in a slow-growth, low-interest-rate environment, 2015 saw a slight rise in consumer finance and mortgage volumes in local currency terms. Loan balances to wholesale clients continue to decline (even in local currency terms), due to weak investment activity, modest operational expansion by corporates, and caution on the part of banks. Retail savings balances (mostly investment products and sight deposits) are increasing, as households continue to build their safety nets in an uncertain environment.

Margins are on one path in Europe's central economies and another in the periphery. In the heart of Europe, net interest margins on deposit products are on a continued downward trend, which is only partially counterbalanced by rising net interest margins on loans (where banks try not to reduce client rates to the same extent to which interbank rates fall). In the periphery, refinancing rates have been gradually decreasing, improving NII on fi-

[4] Includes Continental Europe and the United Kingdom.

nancial assets. This rebound in margins improved revenues for these countries (though they are still below pre-crisis levels), and pushed the whole region to a higher growth path at 6 percent annually.

> The effect of continued fixed-asset investment—and of opaque funding from "shadow" banking, another wild card—on the long-term stability of China's financial sector remains to be seen.

Japan Japan's banking sector revenues declined in dollar terms in 2015, mostly driven by the depreciation of the yen as Japan continued its monetary easing. On a positive note, net interest margins increased as banks did their best to protect their wafer-thin spreads. They did not lower lending rates to the same extent as interbank rates fell.

Emerging markets

China The slowdown in revenue growth in 2015 was a natural outcome of the deceleration of the Chinese economy. Loans and deposits slowed, and risk costs increased. Lower central bank interest rates and the removal of ceilings on deposit interest rates also contributed to the slowdown by lowering banks' net interest margins. Investment products stayed strong, despite severe volatility. This shift in savings away from deposits and into securities, and a move by companies to seek non-loan financing (investment banking registered a major boom in 2015), signaled a departure from traditional, deposit-to-loan banking in China.

That said, H1 2016 has seen renewed growth in lending volumes, backed by a renewed investment push by China's government as it seeks to stabilize economic growth. The effect of continued fixed-asset investment—and of opaque funding from "shadow" banking, another wild card[5]—on the long-term stability of China's financial sector remains to be seen.

India The asset quality review conducted by the Reserve Bank of India (RBI) in December 2015 showed that stressed assets stood at around 15 percent of total bank assets—8.9 percent as gross non-performing loans (NPLs) and 6.1 percent as restructured assets, mostly corporate loans. The RBI directed banks to clean up their books, which slowed credit growth considerably, from about 17 percent in 2011-12 to less than 10 percent in 2015-16. Banks have taken substantial provisions, and a number of public sector banks have declared losses in recent quarters. However, the outlook is improving. Government initiatives, such as Skill India, Make in India, Digital India and others, should supply much-needed oxygen to the ailing corporate sector. Inward FDI has already improved, jumping 30 percent year-over-year, and manufacturing growth hit a 22-month high in October 2016. All this suggests that in time, retail

[5] Jonathan Woetzel, Yougang Chen, Jeongmin Seong, Nicolas Leung, Kevin Sneader, and Jon Kowalski, "Capturing China's $5 trillion productivity opportunity," *McKinsey Global Institute*, June 2016, mckinsey.com.

saving and consumption should benefit, making the still under-penetrated retail banking scene an exciting arena for the next few years.

Southeast Asia Diversity is the story in the region, as it often is. Countries that undertook significant structural reforms, such as Indonesia, are expected to continue to grow quickly. Vietnam continues to attract significant foreign direct investment and benefits from being the low-cost manufacturing center for the region. Malaysia and Thailand continue to tackle the challenges of significant household indebtedness and institutional uncertainties.

Latin America Growth in outstanding balances took a hit induced by declining commodities prices (driven by a combination of OPEC's sharply increased production and China's economic slowdown), as well as economic policy difficulties in several markets, notably Brazil, Chile and Venezuela.

Eastern Europe At 6.2 percent, 2015's revenue growth looked promising in fixed dollar terms. However, excluding Russia, the region did not grow in fixed USD terms, and several countries such as Poland, Hungary and Romania suffered a drop. Meanwhile, growth in Russia and the CIS economies was empty, as serious FX depreciation and economic issues took a toll. Corporate lending dropped, and consumer finance came to a halt. Deposits grew mainly because of high yields. In real terms, the Russian banking sector contracted in 2015, as its growth of 13 percent lagged inflation of 16 percent.

Other countries in the region have different issues. GDP growth is uncertain and slowing, and demand for corporate lending is still low. In the meantime, a low-interest-rate environment hurt income in deposit businesses.

Middle East and Africa An economic slowdown resulted from lower commodity prices and volumes, plus currency depreciation (in non-dollar-pegged economies). The slowdown naturally reduced revenue growth in Middle East and African countries. Margin compression, where it occurred, was driven by non-interest margins; these continue to slide due to competition and regulatory pressure.

A drop in margins is pressuring developed-market banks. Growing risk costs are doing the same for banks in emerging economies. As we discuss in the following chapter, banks are caught in a tightening vise. Operational efficiencies cannot compensate for the three factors that are compressing banks' returns: slow growth, regulation and digitization.

Under Pressure: The Three Forces Eroding Banks' Profits

Bank ROEs in recent years have stabilized at about 9.5 percent, with a divide between developed and emerging markets. For banks in many developed markets, ROEs are below the cost of equity. In emerging markets, revenue growth has slowed in line with the macroeconomy.

In both markets, profits could face additional pressure in coming years from three forces. Continued economic weakness and low growth will suppress profits everywhere. In developed markets, loose monetary policy designed to stimulate the macroeconomy will continue to choke banks' NII. Emerging markets may enter into a downward credit cycle as the global economy slows further, hurting local economies. Second, digitization will boost competition and compress margins. Third, new regulation may increase capital requirements. The set of rules now emerging as “Basel IV” and the multitude of capital add-ons regulators may charge under stress-testing and resolution schemes are particular concerns.

McKinsey designed scenarios to help bank leaders in both developed and emerging markets quantify the profit at risk by 2020 (Exhibit 9). Key parameters in the scenarios for developed markets include the trajectory of interest rates and the speed of digitization. Specifically, we took as our base case the current consensus scenario of interest rates rising in coming years in most regions, which has begun to happen in the U.S. post the presidential election. However, since similar expectations have been disappointed in the past, we also looked at a continuation of current low rates as the flat-rate scenario.

For emerging markets, the scenarios seek to understand the potential risks from the credit cycle. We include two scenarios: the current consensus view of slower growth, as a base case, and an adverse scenario in line with prolonged stagnation in developed markets.

For both sets of markets, we estimated the impact of digitization. We consider an evolutionary scenario of digital disruption in which the pace is set by incum-

Exhibit 9

Four scenarios for developed and emerging-market banks

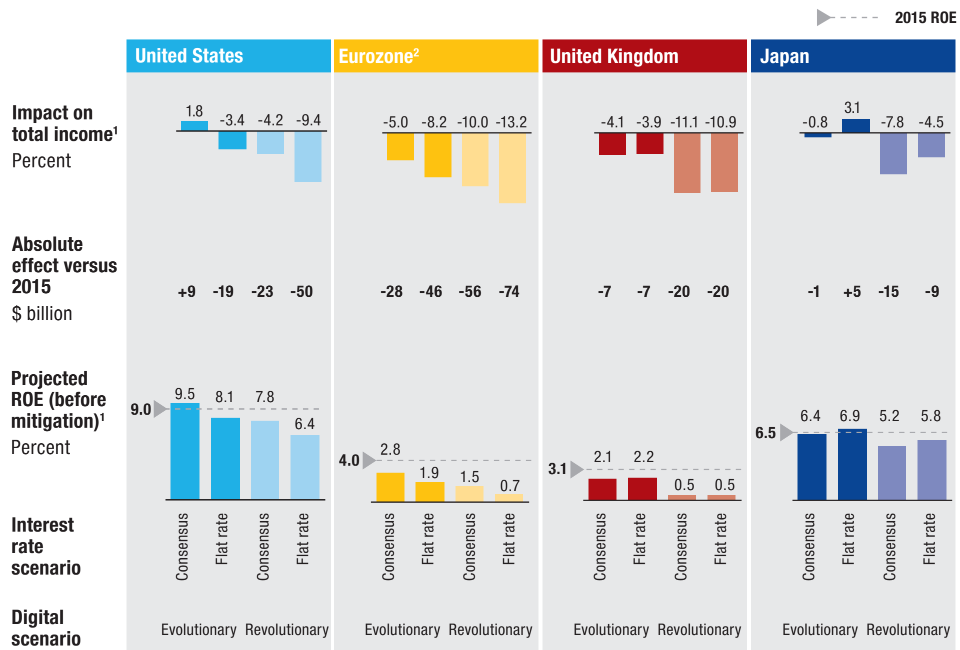
	A Macro scenarios	B Impact from digitization: **Evolutionary** → Incumbent banks drive digital competition	**Revolutionary** Faster conversion to digital/Fintech margin levels
Developed markets Interest rates	**Consensus** **Slow growth recovery** and rate increase over time	1 **“Fragile growth”**	3 **“Digital disruption”**
	Flat rate **Stagnating economy** with rates remaining at current low/negative levels	2 **“Stagnation and deflation”**	4 **“Dual threat”**
Emerging markets Credit cycle	**Consensus** **Lower growth** in Asia, rebound in LatAm/EE	1 **“Softer growth”**	3 **“Digital disruption”**
	Conservative **Further depressed growth** and increasing risk provisions	2 **“Hard economic landing”**	4 **“Dual threat”**

C Regulation (not quantified)

Source: McKinsey & Company Analysis

Exhibit 10

Europe most affected by persistent low interest rates; Japan and the U.K. most affected by digital disruption



[1] Effects as of 2020, assuming total income/ROE constant as of 2015.
[2] Eurozone consisting of 19 countries included in the euro monetary union.
Source: McKinsey Panorama – Global Banking Pools, McKinsey Profit Simulation Model

bent banks as a base case, as well as a more pronounced scenario driven by digital attackers that accelerates the economic pressures on incumbents.

We have not included in our estimates the effect of any mitigating actions discussed in the next chapter, which might lessen the impact by 20 to 30 percent. Nor did we include the impact from additional regulation, as the discussions on "Basel IV" to date have been inconclusive and the effect of individual regulatory action on surcharges cannot be estimated. Nevertheless, given the potential impact at stake, we offer an overview of the current regulatory situation.

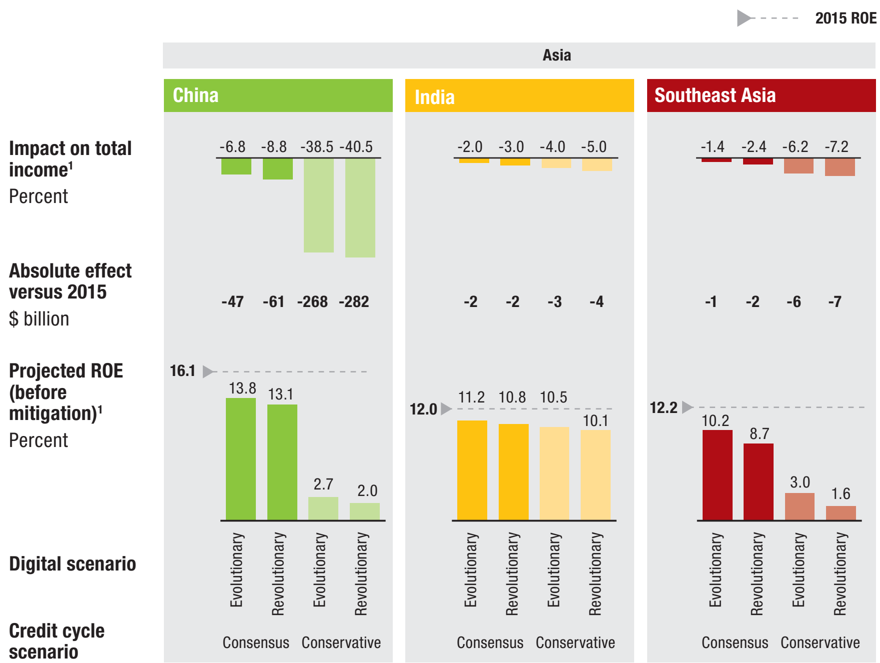
As Exhibit 10 lays out, key findings about revenues at risk include:

- Europe[6] will be significantly impacted. Our scenarios suggest that low interest rates and digitization would put between 5 and 13 percent of banks' revenues at risk by 2020. ROE is already low (4 percent in 2015); our scenarios suggest that another 1 to 3 percentage points are at risk.
- The outcome for the U.K. would be similar. Following the Brexit referendum, the expectation is that rates will remain low longer. We conclude that about 4 percent of U.K. banking revenues are at risk from low rates. Another 7 percent of

[6] In our scenario analysis and throughout this chapter, we define Europe as the EU-19

Exhibit 11

Asia expected to be hit hard by credit cycle in the downside scenario



[1] Effects as of 2020, assuming total income/ROE constant as of 2015.

Source: SNL, McKinsey Panorama – Global Banking Pools, McKinsey Profit Simulation Model

revenues are at risk from the potential digital threat. Current (2015) ROE of 3 percent may fall by 1 to 2 percentage points by 2020.

- Japan's banks have already seen most of the effects of low growth and interest rates over the past decade. In the next few years, they will be affected primarily by digitization, putting 1 to 8 percent of revenues at risk—equal to 0.5–1 percentage point of ROE, which currently stands at 6.5 percent.

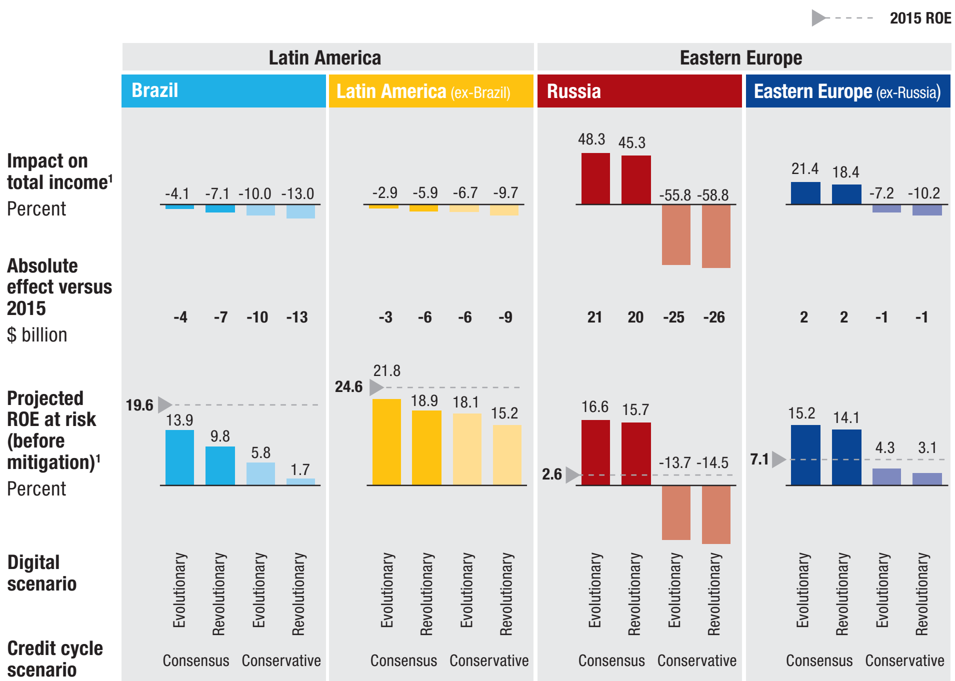
- In contrast, for U.S. banks the consensus interest-rate scenario foresees a revenue increase of up to 2 percent, if the pace of digitization is set by incumbent banks. However, if rates stay low and a disruptive digital scenario prevails, 9 percent of revenues would be at risk, similar to Europe. ROEs would stay above 6 percent, given the current, much higher profitability base.

For emerging markets the story is dominated by the question of lower growth and the impact on the credit cycle—that is, the difference between a "soft" and a "hard" landing.

- In Asia (Exhibit 11), the main story is China, where all eyes are on the credit cycle, and digital disruption has already taken place. A soft landing may reduce revenues by only 7 to 9 percent; a hard

Exhibit 12

Significant impact expected in other emerging markets in the downside scenario



[1] Effects as of 2020, assuming total income/ROE constant as of 2015.

Source: SNL, McKinsey Panorama – Global Banking Pools, McKinsey Profit Simulation Model

landing may put up to 40 percent of revenues at risk. Given current profitability, banks will still remain profitable. In India, we expect only minor effects on revenues: about 2 to 5 percent will be at risk. ROEs should remain above 10 percent, though COE for many banks may well be higher. Southeast Asia is at low risk of disruption by digitization, but rising credit risk could put 1 to 7 percent of revenues at risk. If the credit cycle proves severe, up to 8 percentage points of ROE will be at risk.

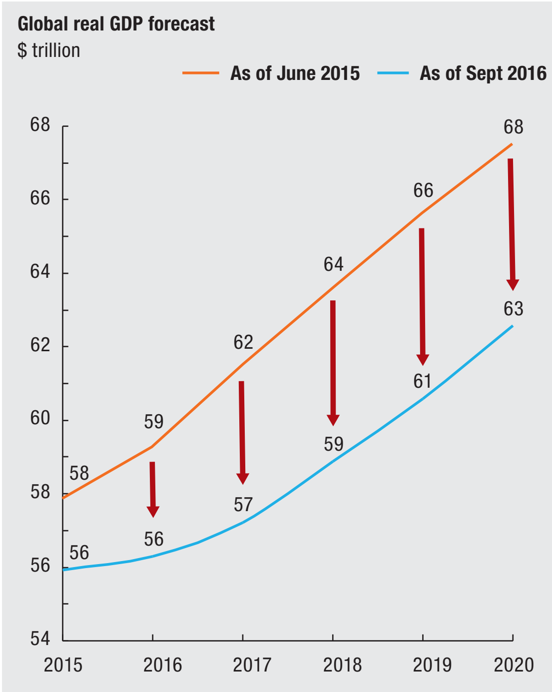
- In other emerging markets (Exhibit 12), Latin America's banks are among the world's most profitable, but digitization and especially recession, could put 11 percent of revenues at risk.
- Eastern Europe's outlook is shaped mainly by the credit cycle. Russia is particularly at risk; if the recession continues, banks could see another 50 percent of revenues put at risk. In the rest of Eastern Europe, up to 10 percent of revenues might be lost. In contrast, the digital impact looks mild.

The forces at work

Here we briefly review the dynamics of the three forces working against banks. For more on the assumptions used in the models, see "McKinsey's methodology" on page 33.

Exhibit 13

Increasing concern regarding the growth of the global economy across all regions



Average real GDP growth forecast 2015–20
Percent

	As of June 2015	As of Sept 2016
Global	2.8	0.9
Developed world		
North America	2.4	2.0
Western Europe	0.5	–0.4
United Kingdom	0.8	–2.1
Japan	2.3	0.2
Other developed	3.6	0.2
Emerging markets		
China	6.2	3.6
Emerging Asia	7.8	3.7
Latin America	1.0	–3.2
EEMEA	2.2	0.0

Source: The Economist Intelligence Unit (EIU), McKinsey Panorama – Global Banking Pools

The macroeconomic environment in developed markets

Growth expectations in the major developed economies—the eurozone, Japan, the U.K., and the U.S.—have been revised downward from last year (Exhibit 13). These economies have not expanded as fast as central banks hoped. Credit growth has slowed significantly in these economies with the exception of public borrowing.

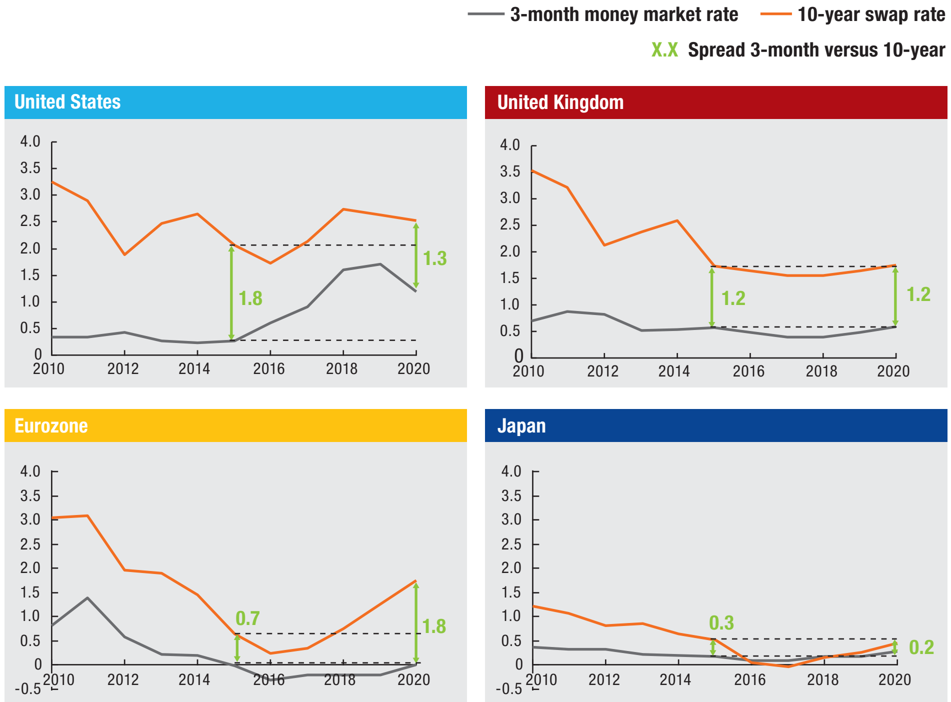
Most central banks have continued an expansive monetary policy to bolster growth via debt-financed consumption and investment. Central banks have significantly expanded their balance sheets, nearly doubling them in the U.S., the U.K., and Japan between 2010 and 2015, with Europe coming close in 2016. Over the same time, central bank interest rates have dropped close to zero in the U.S. and the U.K., and below zero in Japan, the eurozone, and several other European countries.

Low interest rates and a flat yield curve—another characteristic of many developed markets—erode NII. Asset margins decline while deposit margins bottom out around zero, as most banks are uncomfortable moving to negative rates. At the same time, the costs of holding liquidity increase significantly.

Exhibit 14

Two interest-rate scenarios for developed markets: Consensus view versus flat rates

Interest rate scenarios impact across countries
Percent



Source: EIU forecasts (post-Brexit)

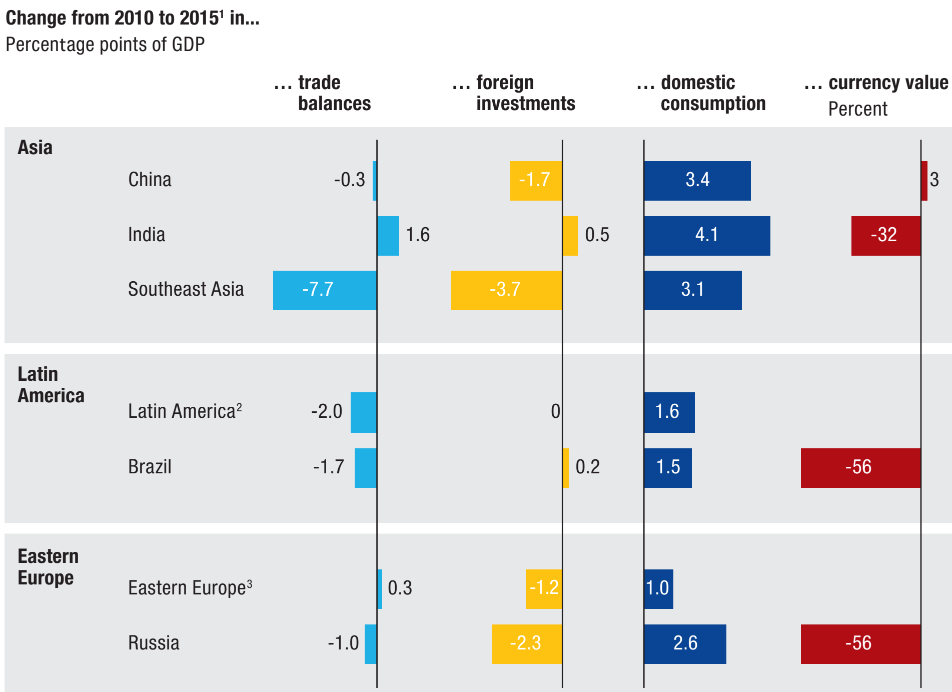
The problems continue over time, as banks' economics are driven mostly by their stock (the book of current business) rather than their flow (of new business). In simple terms, as the stock of long-dated assets reaches maturity, it is replaced with new business, which in today's world, can only be done at a much smaller margin. Banks' ability to collect margins for risk and maturity transformation is vastly curtailed in a world where near-term rates are at zero and long-term rates are only a couple of points higher. The effects have begun to show up in recent years and will continue for several more.

McKinsey modeled margins for major assets and liabilities and cash liquidity reserves held by developed-market banks in two growth scenarios (Exhibit 14). In the current consensus scenario, these economies stage a modest recovery, and interest rates begin to rise. In a more negative scenario, growth and interest rates stay flat for the next few years.

Although this scenario may be too pessimistic, growth expectations have been revised downward many times in recent years. Given this history, banks cannot rely on continued hopes of economic recovery when defining their change aspirations.

Exhibit 15

Emerging market economies deteriorated between 2010 and 2015



[1] 2015 is an estimate based on 1H2015 performance.
[2] Including Brazil.
[3] Including Russia.
Source: Bloomberg, McKinsey Panorama – Global Banking Pools

The macro-economic environment in emerging markets

The risk of lower growth in emerging markets comes not from low interest rates, but rather from currency devaluations and potential downturns in the credit cycle.

Lower growth in developed markets usually means that demand drops for emerging economies' exports (typically commodities or produced goods), hurting the economy and the balance of payments and potentially reducing the value of the currency. That has been the pattern for the past five years (Exhibit 15). The largest currency declines, roughly 40 to 50 percent since 2010, have been in Latin America, particularly Brazil and Argentina, and in Russia, on the back of negative growth (and restricted access to capital markets). In India, though it is growing quickly, the currency has fallen by 32 percent, whereas China was able to stabilize its exchange rate via domestic growth and currency interventions.

Local businesses suffer the consequences of weak growth in two ways. One, if they have taken on debt in foreign currencies, their debt level will rise proportionally to the devaluation unless covered by exports. More importantly, lower or even negative growth means less local consumption, higher unemployment and more defaults by businesses and private households. Ultimately banks' risk costs start to rise.

A key factor shaping the pace of digitization is the regulators' stance toward innovation and their willingness to permit digital attackers to provide banking services.

Digital impact—evolution versus disruption

Digitization will fundamentally affect the economics of incumbent banks in two ways. It will drive cost reductions through a higher degree of automation, but it will also shift revenue pools to those players with superior customer offerings. Both of these shifts seem inevitable. The open question is how fast they will take place. If incumbents can dictate the pace, the shifts may take place more slowly, at the same rate at which they transform their business models. But it is hard to ignore the potential threat of more disruptive development from large platform attackers—firms with the heft to reshape the banking sector from the outside at a much quicker pace based on their technological capabilities, fast-growing customer bases, and their often significant economic resources. (For comparison, the largest Internet platforms trade at a market-to-book ratio between four and eight; most banks struggle to maintain a market-to-book of one.) This dynamic is already at work in some Asian markets, and there is a growing likelihood that these platform providers will use their ecosystem to expand more aggressively into banking in developed markets.

A key factor shaping the pace of digitization is the regulators' stance toward innovation and their willingness to permit digital attackers to provide banking services. A "two-speed" dynamic is emerging. In many emerging markets, regulators have granted the required licenses to start-ups and non-bank attackers; key examples are China, India and Singapore. And in some developed markets, such as the U.K. and most recently Switzerland, regulators have allowed digital attackers to provide banking services in a limited fashion that some are calling a "sandbox" approach. The U.K. Financial Conduct Authority's Project Innovate has introduced an environment in which businesses can test innovative products, services and business models without immediately incurring the normal regulatory requirements. If these approaches allow market entrants to quickly develop scalable business models, the likelihood of more disruptive developments becomes much greater. In other developed markets, however, regulators have been slower to open the door for Fintechs.

Apart from some Chinese firms, we have not yet seen a breakthrough model for digital attackers. Instead Fintechs and banks are increasingly looking to each other as potential partners. Recent collaborations include Bank of America and ModoPayments; TD Bank and Moven; BBVA and Holvi; and BNP Paribas and SmartAngels, among others. Banks understand that Fintech innovations can help them accelerate their business, and Fintechs see how hard it is to scale up the customer base.

To account for these new dynamics, we have developed two scenarios: an evolutionary pace, driven by the incumbent banks, and a disruptive scenario driven by attackers. We estimated the impact on both products and national banking markets. The impact in the scenario of revolutionary digital disruption will likely be greatest on consumer finance, payments and wealth management businesses, where competition from digital attackers is already happening (Exhibit 16). Here over 10 percent of revenues are at risk within the next five years.

Regulation—a tough environment getting even tougher?

Lastly, regulation will continue to affect banks' profits in two ways. Additional operating costs continue to crop up from the implementation of new regulatory obligations, such as new reporting and model requirements and tighter rules on compliance. Second, new rules seem likely to impose additional capital requirements beyond the levels set by the current Basel III targets to be implemented by 2019.

Exhibit 16

Fee-based businesses likely to experience the largest margin reductions

Fee and margin reduction in revolutionary digitization scenario
Percent

0-3% | 3-10% | 10-20% | 20%+

		U.S.	U.K.	China	Japan	Euro-zone	Other developed	Eastern Europe	MEA	Latin America	Other EM Asia
Retail	Consumer finance	13.9	13.8	7.7	25.1	9.7	10.5	11.3	2.3	11.1	3.4
	Mortgage	2.5	5.1	1.0	4.4	3.7	3.2	1.0	0.2	1.6	0.6
	Checking deposits	1.0	1.4	0.4	1.4	0.6	0.9	0.3	0.1	0.1	0.0
	Term deposits	3.8	5.1	0.0	5.1	3.9	3.9	5.5	1.5	8.9	2.3
Corporate	Cash management	0.5	0.7	0.2	0.7	0.5	0.5	0.2	0.1	0.1	0.1
	Corporate lending	0.7	0.9	0.8	0.7	0.7	0.7	0.6	0.1	0.1	0.2
Payments	Payments	17.3	23.6	8.6	23.6	18.1	18.0	8.6	2.3	3.6	3.6
WM	Asset/wealth management	16.6	21.7	3.9`	21.7	16.6	16.6	3.9	1.1	1.6	1.6

Source: McKinsey Panorama – Global Banking Pools

Estimating new operational costs is difficult. Banks rarely identify the new operating costs, often lumping them in with the cost of their broader transformational/system programs. Nor do they always distinguish between the costs of meeting new and old requirements. But it seems clear that these costs are quite substantial parts of today's cost base. Some global banks have publicly stated that their increases in regulatory and control-driven spend were well over $1 billion annually between 2010 and 2015. These banks and others have invested significantly in regulatory and control-related staffing across businesses and control functions such as risk and compliance, which at each of the largest U.S. banks now number 10,000 to 20,000 FTEs, or 5 to 10 percent of all employees. At European banks, the comparable figures are between 3,000 and 5,000 FTEs, or 3 to 5 percent of all employees. To be sure, many banks now think these costs have peaked and have turned to identifying efficiency gains in these functions.

The proposals on operational and credit risk are being heavily debated, and the outcome is uncertain.

Regarding capital requirements, banks in developed markets have already significantly increased their core capital ratios in the wake of the Basel III implementation timeline of 2018. However, most banks have not yet added capital to respond to the proposals for limiting internal risk-weighted assets (RWA) modeling for market, credit and operational risks within the Basel III framework, which many are calling "Basel IV." The market-risk-related proposals are clear and seem to have been accepted by the banking industry. But the proposals on operational and credit risk are being heavily debated, and the outcome will not be known until 2017. For European banks, whose balance sheets often house lower-margin and lower-risk assets, internal-model approaches are quite important. In McKinsey's estimate, RWA and respective capital needs could increase significantly, in particular for specialized (asset-based) lending activities.

In addition, banks face challenges from local regulators that stem from stress-testing and resolution regimes. Whereas the European Central Bank (ECB) and European regulators still seek bank-specific capital increases via stress testing and the Supervisory Review and Evaluation Process (SREP), U.S. regulators have shifted their attention to the resolution regime. Additional surcharges might be introduced for systemically important banks.

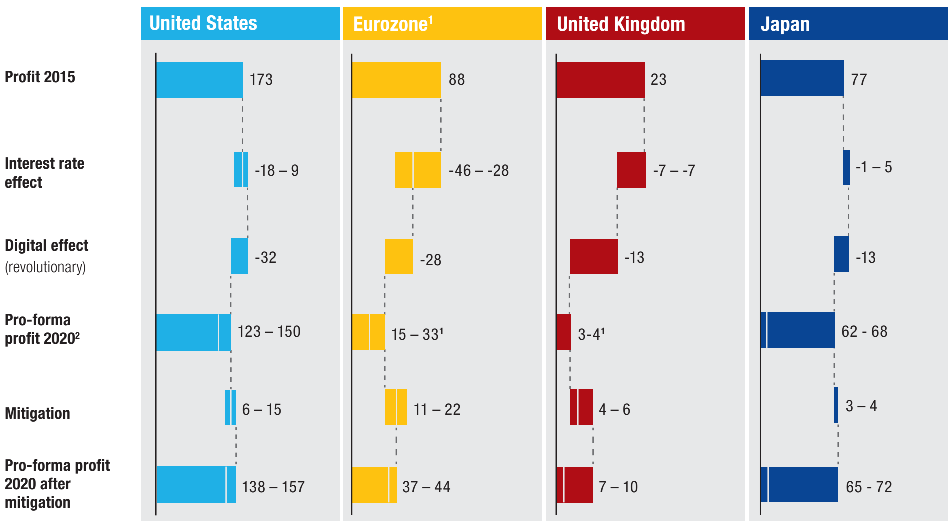
U.S. banks must deal with Total Loss-Absorbing Capacity (TLAC) requirements, which may require new "bail-in" capital on top of core Tier 1 equity. McKinsey estimates a current shortfall of about $450 billion for U.S. banks, and about $320 billion for European banks.[7]

7 European banks are subject to the European Banking Authority's rule on minimum requirement for own funds and eligible liabilities (MREL). MREL came into effect in January 2016, and provides for a 48-month transition period without binding requirements. TLAC will come into force in 2019.

Exhibit 17

Potential profits at risk and implied cost gaps in developed market banks

Changes in profitability from 2 secular forces, 2015-20
$ billion



Cost gap to reach	United States: Gap $ billion	United States: As % OPEX	Eurozone: Gap $ billion	Eurozone: As % OPEX	United Kingdom: Gap $ billion	United Kingdom: As % OPEX	Japan: Gap $ billion	Japan: As % OPEX
2015 profits	-35 – -16	-10 – -5	-52 – -45	-14 – -12	-16 – -14	-11 – -12	-12 – -5	-4 – -11
8% cost of capital	-16 – 3	-5 – 1	-132 – -139	-38 – -36	-53 – -51	-41 – -39	-30 – -22	-27 – -20
10% cost of capital	-54 – -35	-16 – -11	-183 – -176	-50 – -48	-68 – -66	-51 – -52	-53 – -46	-42 – -48

[1] In consensus and flat view, including evolution.
[2] Pro-forma 2020 profit is 2015 profit net of interest-rate and digital effects. Should profits grow strongly, banks will be better able to withstand the negative effects of low interest rates and digitization.

Source: SNL, McKinsey Panorama – Global Banking Pools, McKinsey Profit Simulation Model

Implications for the industry across regions

Both developed and emerging market banks may be severely tested in coming years. But there are substantial differences among regions, both in the strength of the forces and the impact on economics. We begin with the major developed markets, where we examine the effects of evolving interest rates (in the consensus and flat scenarios) and digital disruption (Exhibit 17).

United States

Of the major developed markets, the U.S. banking industry currently seems to be best positioned to face the headwinds, and the outcome of the U.S. presidential election has raised the industry's hopes of short-term rate rises and a more benign regulatory environment. With its 2015 profits of $173 billion and an ROE of 9 percent, the banking sector would, even under the most pessimistic scenario, still produce profits of $138 billion and ROE of 7.2 percent in 2020.

Even if interest rates remain lower than expected, this would only have a benign effect on U.S. banks, as they are still in positive territory and banks' balance sheets have a much shorter duration than in Europe, enabling them to adjust more quickly. While the U.S. also has an enormous capacity for creating Fintechs—it has 21 "unicorn" Fintechs with market values of over $1 billion—so far incumbent banks have been able to stay on their front foot in the fight for customers. However, this could change, given the historical experience of Fintechs taking over large parts of trading-related services (such as electronic exchanges and clearinghouses), attracted by the size of the market and its margins.[8] Retail banking is similarly attractive and may see further disruption.

In summary, McKinsey's view on the U.S. is that banks have profit at-risk of $23 billion to $50 billion. Of that, we believe that some $6 billion to $15 billion can be mitigated by increasing revenues (particularly if rates increase), leaving a gap of $35 billion to $54 billion, and implying a cost reduction of 11 to 16 percent to match COE of 10 percent. That said, current ROE at some banks, particularly the global banks, is lower than the national average, and the likelihood of additional regulatory intervention remains higher. These banks may actually require more aggressive cost reductions.

Europe and the United Kingdom

Banks in Continental Europe and the United Kingdom are currently in the weakest position among the major developed markets, with ROE of 3.8 percent in 2015, continued low-growth prospects, and in the eurozone, negative interest rates. Furthermore, in Continental Europe, banks' balance sheets are longer-dated (particularly in relation to on-balance-sheet mortgage and specialized lending businesses) and thus more vulnerable to continued low rates.

In the current consensus scenario featuring rate increases, an incumbent-driven digital transformation and some revenue stabilization, profits in the U.K. and Continental Europe will drop from $110 billion today to $77 billion in 2020; while ROEs, about 4 percent on the Continent and 3 percent in the U.K., would fall to 3 and 2 percent, respectively. However, if rates stay as unfavorable as today or digital attackers disrupt the industry more significantly, another $60 billion may be at risk. Even assuming that banks can mitigate some 20 to 30 percent of the effect and ignoring any further regulatory pressures, this would imply a cost gap of $58 billion to $68 billion to maintain current profitability levels. That gap is equal to 12 to 13 percent of the current cost base. Returning to an ROE of 10 percent, equal to the cost of equity that many banks use, implies a cost reduction of up to 50 percent. Some banks calculate their cost of capital at 8 percent, given the fall in rates. Even these banks would face a gap of 35 to 40 percent. To our knowl-

[8] The other big unknown is the ultimate endgame of the regulatory push to reduce the size of banks. We have not included this in our scenarios, as the potential effect is quite bank-specific and hard to define.

edge, no industry has taken out that much cost in such a short period of time.

On balance, European and U.K. banks will face more significant challenges than ever in adapting to the new environment over the next five years, particularly as the likelihood of prolonged low growth and rates is quite high, and in some markets including the U.K., digital attackers have been quite successful and have enjoyed some regulatory support. Additional industry consolidation may be required to return the sector to financial health. On the other hand, the Nordic countries and the Netherlands have shown that profitable banking models can be achieved, despite the headwinds.

Emerging markets experience different though still material effects from digital disruption and the credit cycle in both the consensus and conservative view.

Japan

In Japan, low interest rates and a margin squeeze have been in place for quite some time, and thus banks' profits have already bottomed out. Only an additional $1 billion of profits are at-risk from slow growth. However, the risk from digitization is quite strong for Japanese banks, putting an additional $13 billion of profits at-risk if attackers can gain the upper hand. This implies a potential gap of $5 billion to $12 billion, or 4 to 11 percent of costs versus today's profitability, even after assuming some mitigation.

Besides continuing to hope for an improved interest-rate environment, banks in Japan are diversifying into other markets and currencies and will likely focus on the digital transformation path. We already see some interesting examples in the digital efforts of Rakuten Bank and the Bank of Japan. Nevertheless, if Japanese banks targeted cost of capital of 8 to 10 percent, they would need to take out 30 to 50 percent of costs, even after mitigating 20 to 30 percent of the impact on profits.

Emerging markets experience different though still material effects from digital disruption and the credit cycle in both the consensus and conservative view (Exhibit 18, page 32).

Asia

For most emerging markets the big question mark relates to the health of the global economy and its impact on the credit cycle. This is particularly true for Southeast Asia and China, where digital disruption is already in full swing. China is home to eight "unicorns," accounting for 60 percent of the value of such companies worldwide. And China already leads the world in peer-to-peer lending. Further, most of China's profits come from corporate banking, which is proving less susceptible to digital disruption. And because attackers are not undercutting incumbent prices, it may be that market share losses are a greater concern to incumbents than declines in profit.

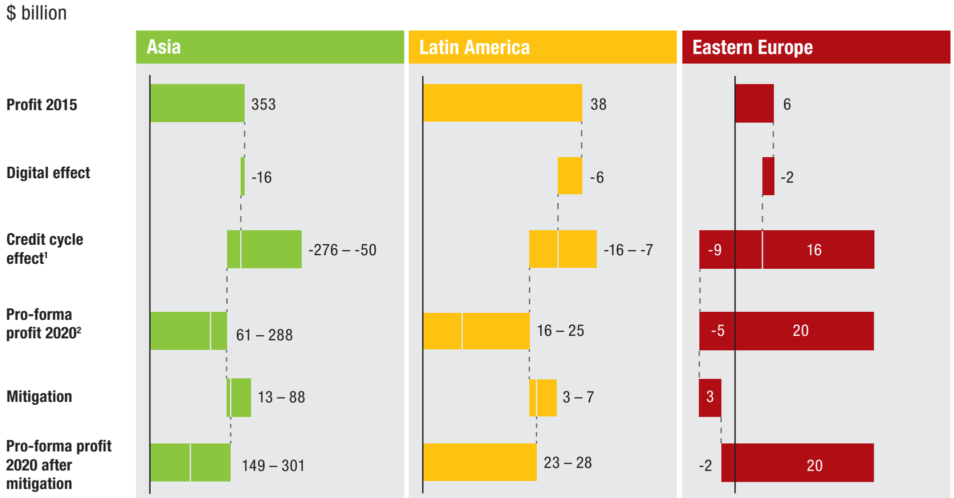
Although only $47 billion to $61 billion of profits are at risk in the economic consensus scenario, which includes further digital disruption, China might lose about 3 percentage points of its current 16 percent ROE. A "hard landing" could put another $220 billion at risk by 2020, potentially "unmasking" the currently high profitability to reveal an ROE of 2 to 3 percent in 2020. That said, the extent of state control of the financial sector will provide many ways to limit the impact. Chinese banks are now better able to manage risk costs when the economy slows. And the government may intervene to take NPLs off the books of China's banks. Alternatively, some banks may simply grow their way out of the NPL problem. All told, ROEs may fall only to 6 to 14 percent, depending on the scenario.

Southeast Asian banks could see similar impact in ROEs, which might drop from today's 12 percent to 2 or 3 percent in the adverse scenario (and 5 to 9 percent after mitigation), though in absolute terms the risk is much lower, with just $6 billion to $7 billion at stake. In contrast, Indian banks seem to face much smaller risks from either digital disruption or a worsening of the credit cycle.

Exhibit 18

Potential profits at risk and implied cost gaps in emerging market banks

Changes in profitability from 2 secular forces, 2015-20
$ billion



Cost gap to reach	Asia Gap $ billion	Asia As % OPEX	Latin America Gap $ billion	Latin America As % OPEX	Eastern Europe Gap $ billion	Eastern Europe As % OPEX
2015 profits	-204 – -52	-65 – -17	-15 – -10	-15 – -10	-8 – 14	-29 – 54
15% cost of capital	-227 – -75	-72 – -24	-3 – 3	-2 – 3	-26 – -4	-97 – -14

[1] In consensus and flat view, including evolution.

[2] Pro-forma 2020 profit is 2015 profit net of credit-cycle and digital effects. Should profits grow strongly, banks will be better able to withstand the negative effects of the credit cycle and digitization. China, for example, will likely see continued profit growth over the next five years.

Source: SNL, McKinsey Panorama – Global Banking Pools, McKinsey Profit Simulation Model

McKinsey's methodology

McKinsey

1. To measure the impact of *low interest rates* on NII at developed market banks, McKinsey designed scenarios on two dimensions: economic growth and digitization. The economic parameters used are a slow rebound of the economy versus continued stagnation in which interest rates continue to stay low or negative. To model digitization, we contrasted an evolutionary development driven by incumbent banks versus a more disruptive development driven by digital attackers.

To project changes in NII, we began by studying the composition of banks' balance sheets and their mix of businesses. We calculated assets for banks in each of seven main customer businesses: consumer finance, mortgages, micro and professional loans, wholesale loans, current account deposits, wholesale deposits, and other deposits. For each business, in each developed economy, we studied pricing and volume trends during 2000–15, and derived from these some assumptions to guide our projections.

In each line of business, in each developed economy, we can then estimate NII change from 2016 to 2020. We assumed that banks hedge assets that are exposed to changes in interest rates; we did not make the same assumption about deposits, whose behavior at the zero bound is unpredictable. As assets and liabilities come to expiration, they are replaced by new business at the prevailing rate. To estimate the effect, we assigned assets and liabilities to one of five maturity categories: less than 1 month, 1 to 3 months, 3 to 12 months, 1 to 5 years, and more than 5 years. In each business, we used the most recent assets and liabilities available and calculated the average weighted maturity for each. As each maturity and liability reaches maturity, we replaced it with a new one at the prevailing reference rate. For example, in the eurozone wholesale loans have a maturity of 5.2 years; we used the 5-year rate to replace it.

For deposits, we used a replicating portfolio approach to calculate margins. We assumed that funds were deployed in different interest-bearing asset classes (overnight, short-term money market securities, government bonds) based on a maturity distribution that we derived from market benchmarks. The aggregated return would then result in the deposit margins.

For market-facing activities, such as wholesale funding, we applied the maturity-matched market rate to bonds held and bonds issued. We determined margins by looking at bond spreads over relevant government bonds. We assumed banks would alter the maturities of their bond portfolios as rates change. Banks' cash holdings are treated at the overnight rate. We did not include income from equity holdings in our assessment.

We aggregated the results from customer-facing and market-facing activities to derive effects on the national banking industry.

2. To measure the impact of the *credit cycle* on emerging markets, we used 2015 revenue after risk costs, and risk cost margin figures by region, as a baseline. We made a *ceteris paribus* analysis on revenue figures: we examined how aggregated revenue after risk cost would change by regions, if we applied the 2020 downturn risk-cost margin. The 2020 downturn margin is a pessimistic estimate; we estimated it by using the historical sensitivity of each emerging region in crisis situations, for both retail and corporate banking risks. We also considered the historical peaks of risk costs during previous crises and made sure that our sensitivity analysis does not exceed those levels.

3. We followed a four-step approach to estimate the impact of *digital disruption* on revenue margins. First, we scanned individual bank offerings in emerging and developing regions to determine the pricing differences between traditional banks and digital attackers (including both digital banks and Fintechs). We then looked at current and projected rates of digital-banking adoption and concluded that 60 percent of the gap in margins would be closed in 10 to 15 years. We adjusted this for the shorter timeframe and found that 20 to 40 percent would be closed by 2020. As a third step, to calculate the digital disruption impact for 2020, we determined the pace of convergence by applying an S-curve (similar to other technology adoption trends). The curve proposes that in more digitally advanced regions, digital attackers will close the gap faster and the impact in those regions will be higher by 2020. Finally, we validated the results and findings with experts from McKinsey and the industry.

Banks in China and Southeast Asia may want to invest significantly in their credit capabilities and protect their balance sheets.

Latin America

Economic development and the digital evolution have a more equal impact in Latin America than in Asia. The current economic consensus scenario sees $7 billion to $13 billion in profits at risk, depending on the pace of digital disruption. Further economic downturn would cost banks another $9 billion in profits. Brazil, by far the biggest market in the region, would be significantly affected with ROEs dropping from about 20 percent in 2015 to 10 to 14 percent in the consensus scenario, and 2 to 6 percent in the "dual threat" scenario (although 7 to 12 percent after mitigation). The rest of Latin America is quite protected; ROEs of about 25 percent would fall to 15 percent or so, even in the most adverse scenario.

This implies that banks in Latin America, particularly in Brazil, need to focus on managing the credit cycle and reducing costs, potentially by 10 to 15 percent, to retain current profitability.

Eastern Europe and Russia

Both Eastern Europe and Russia have already been severely affected by weak economies and digital disruption. Further digital disruption would cost banks only another $2 billion. The situation could improve: the current consensus foresees an economic improvement that could reduce credit losses by some $20 billion in Russia by 2020, and by $2 billion in the rest of Eastern Europe. In contrast, a downturn could take out $25 billion of current profits in Russia and $1 billion in the rest of Eastern Europe. Here again, the focus has to be on protecting the balance sheet and P&L while continuing to adjust to digital trends. This will potentially include significant cost restructuring, if the downturn in the credit cycle is prolonged and cannot be mitigated.

The Triple-R Agenda: Resilience, Reorientation, Renewal

Given the headwinds, many incumbent banks face a significant challenge to achieve a level of profitability that covers their cost of capital. Banks' business models and markets vary significantly. Not every institution is positioned in the same way. But on balance, the banking sector must undergo an unprecedented transformation in the coming years.

The requirements can be defined along three dimensions, which we call the Triple-R agenda (Exhibit 19, page 36):

- **Resilience.** Banks must ensure the short-term viability of their business through tactical measures to restore revenues, cut costs and improve the health of the balance sheet.
- **Reorientation.** While the resilience agenda is defensive in nature, in reorientation, banks go on offense, by establishing customer centricity in the digital age, streamlining their operating models and IT infrastructure, and moving toward a proactive regulatory strategy.
- **Renewal.** Any new business model that banks design will likely require new technology and data skills, a different form of organization to support the frenetic pace of innovation, and shared vision and values across the organization to motivate, support and enable this profound transformation.

Resilience

It is hard to manage a fundamental transformation while engaged in continuous firefighting. Lurching from problem to problem detracts from the ability to set a long-term agenda. Banks should consider resilience as a set of short-term priorities that can be attacked in parallel with the first steps on the longer-term work of Reorientation.

The resilience agenda builds on four components: revenue protection, downsizing and cost cutting, balance-sheet strengthening, and protection of core assets. Many banks are aware of and focused on these topics; in fact, paradoxically, some are overly focused on these steps, mistaking them for a true strategic agenda.

Exhibit 19

Transforming the bank: Resilience Reorientation Renewal

Resilience	Reorientation	Renewal
Ensure short-term viability of business	**Fundamentally rethink the business model of the future**	**Develop fundamental skills**
Protect revenues through repricing and greater intermediation	Redefine the customer experience	Create a motivating culture of change, with shared vision and values
Downsize and reduce short-term costs	Rethink the operating model	Develop new organizational constructs
Manage capital and risk	Meet the spirit of regulation	Develop the digital skills needed to compete
Safeguard the customer franchise as well as human capital	Find pockets of growth	
Current focus of many developed market banks	**Industry leaders**	

Protect revenues through repricing and greater intermediation

Banks need a clear plan to protect the P&L and their share price, generate sufficient capital, and most importantly, fund the future transformation. Pricing assets and liabilities effectively is crucial to mitigate the effects of low interest rates—and in those markets with negative rates, it is particularly vital. Key moves here include:

Banks can also selectively charge negative rates on large depositors that are attempting to arbitrage the bank.

- **Adjust deposit pricing.** Banks can improve pricing on liability products by establishing specific customer segments and adjusting prices for each segment. Institutional and semi-institutional customers can be charged negative rates on deposits; these are the same customers who are buying the $7 trillion of negative-rate debt now in the market. Banks can also selectively charge negative rates on large depositors that are attempting to arbitrage the bank.
- **Increase asset gathering and reprice new assets.** After a decade of deleveraging, some banks actually have room on the balance sheet for more assets. While considering constraints on the balance sheet, credit risks and the competitiveness of the local market, banks with asset capabilities need more active asset-gathering strategies, perhaps with a focus on consumer lending, or if there is room on the balance sheet, even in mortgages. In emerging markets, repricing loans well means enforcing underwriting standards and risk-based pricing that considers the full credit cycle.
- **Shift to an intermediary fee model.** Banks without room on the balance sheet need to focus on their advisory and asset management capabilities. They should persuade customers to move funds off-balance sheet and into efficient managed products (such as exchange- traded funds and money market funds) which provide returns to the customer, but also reduce the negative NII effect of deposits and provide fee income. Ideally, banks will make the shift as old hedges and tranches reach expiration.
- **Maintain basic pricing discipline.** Banks should review their pricing practices and rules to make sure that basic pricing discipline is maintained. All too often there is significant revenue "leakage" (and a corresponding opportunity) driven by loose pricing practices (such as erratic and inconsistent discounts and fee waivers) that are not linked to desired client economic outcomes. Greater transparency, improved processes and enforcement of rules and procedures can help.

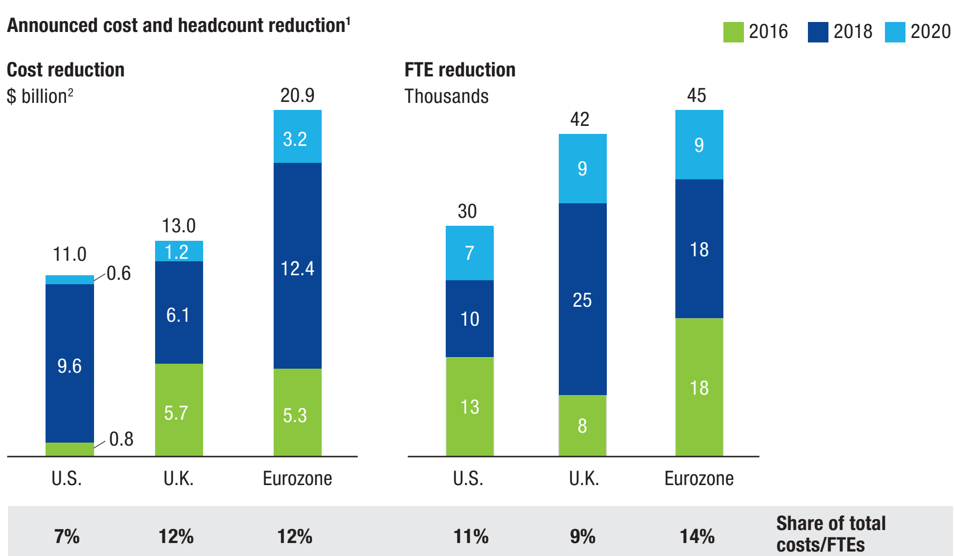
Reduce short-term costs

In the previous chapter we calculated that the cost cuts needed to offset the forces working against banks are significant. Banks have already cut budgets considerably. The top 22 developed-market institutions now employ about 335,000 fewer people than in 2010 (about 8 percent of the total workforce), and have already announced further cost reductions of up to 14 percent by 2020 (Exhibit 20). However, given the revenues at risk, even cost cuts of this magnitude may be insufficient. Depending on their cost of capital, to return to profitability banks will need to make total cost reductions of up to 50 percent in Europe, Japan and the U.K., all else being equal. What is needed now are some short-term moves, discussed here, and more fundamental steps, discussed later:

- **Exit activities that are non-strategic or non-viable in the current environment.** Many banks have already identified businesses that are non-strategic and non-viable no matter what transformational approach they choose. Typically, these are marginal, unprofitable franchises in some capital markets businesses and sub-scale activities in smaller markets that either do not cover their costs or add too much to the regulatory burden. Banks should test these candidates for divestiture against their newly reoriented business model. If a bank believes it can make greater use of its customer franchise, then some otherwise marginal businesses could stay. Banks should start now to find buyers for those that do not fit.

Exhibit 20

Banks are drastically cutting costs and pulling all levers to reach profitability targets



[1] Analysis based on the largest 20 banks per YE assets (US/EU), the top 4 banks according to assets (U.K.).

[2] GBP, euro and JPY converted to USD at current exchange rate (Oct 2016).

Source: Bank annual reports

- **Adjust the cost base to business volumes and reduce excess capacity.** Many businesses already suffer from reduced volumes, leading to excess capacity in volume-driven activities, from front-office coverage to back-office processes, particularly those that are not automated. Banks should adjust capacity to demand.

Stronger capital and funding management entails an accurate RWA measuring system and stress-testing approach.

- **Drive organizational efficiency** by eliminating shadow functions, reviewing central functions for value-adding activities, and making adjustments to spans of control and management layers.

Manage capital and risk

Stronger capital and funding management entails an accurate RWA measuring system and stress-testing approach. Other moves may also be needed to strengthen the balance sheet in markets with significant credit risks. A key component is the active management of the credit book by tightening underwriting standards. Banks can also:

- **Strengthen the capital position.** Banks must have sufficient capital to secure low-cost funding if they are to lend to clients who can easily tap capital markets. For banks that have not yet achieved their target ratios, further strengthening is needed, either through retained earnings where those are sufficient or through capital raisings. Those with strong balance sheets in relation to reduced growth expectations might consider returning capital to shareholders and thus improving their share price and their ability to tap markets in future.
- **Reduce risks,** particularly by managing down non-performing loans and their drag on the balance sheet. Especially in Southern Europe and emerging markets, banks should move quickly and “rip off the Band-Aid.” Keeping troubled assets on the balance sheet can wear out investors, result in further losses as loan positions deteriorate, and increase capital requirements including regulatory surcharges.
- **Close litigations and legal uncertainties.** Many banks are still working through their legal issues. Here too, quicker is better: apart from the actual settlement costs, uncertainty about the outcome and the effect on the bank’s capital can dilute the share price significantly.

Protect core business assets

Broadly speaking, most banks will need to:

- **Safeguard the customer franchise.** As a bank restructures, it runs the risk of hurting the core customer franchise. Customers may be reassigned without care or consideration. As banks exit certain businesses, some customers may be stranded without access to a full product portfolio or decent services. Throughout the process of bolstering the balance sheet, banks must keep their focus on core customers.

- **Maintain the license to operate and manage the regulatory change agenda.** Many banks still have significant regulatory agendas, primarily to implement new rules, but also to meet regulatory review and remediation needs. Completing this work must be a top priority.

Banks must determine how to cut through this complex agenda in ways that satisfy regulators.

At too many banks, however, the breadth of the regulatory agenda can lead to highly fragmented and ineffective remediation approaches. The result is hundreds of projects, small and large, which are hard to govern, often miss the targeted deadlines, and create unnecessary costs in terms of budget and management capacity. Banks must determine how to cut through this complex agenda in ways that satisfy regulators.

- **Safeguard people and skills.** Like any restructuring industry, banks need to protect their human capital and retain the skills needed to manage the change as well as to acquire the new skillsets required for the future business model. In particular, banks will need skills in the line, beyond the traditional core senior management positions.

Note that in building resilience, rigor in execution is critical. Only after executing the resilience agenda will the bank have the resources and capacity to achieve the greater transformation.

Reorientation

As we have seen, the magnitude of the challenges facing developed-market banks means that they must go beyond traditional restructuring approaches and cost-saving programs needed to build resilience. That said, emerging market banks may need to place greater emphasis on resilience than on reorientation. Their challenges are different but also powerful, and many banks in Asia, Africa, Eastern Europe and Latin America have not yet established the fundamental building blocks of cost discipline and taut management. Interestingly, some of these banks are doing better than developed-market peers at reorienting the bank for the new world. Leading banks are recognizing the potential of three big growth pockets – the unbanked and underbanked, a thriving affluent middle class, and small and mid-sized businesses.[9] But even for them, there is a long way to go.

There are four vital levers for reorienting the business model *(see "Open banking and the consumer opportunity" on page 42)*:

[9] *Weathering the storm: Asia-Pacific Banking Review 2016*, June 2016, mckinsey.com

- **Putting the customer at the center of the bank's thinking** and redefining the customer experience
- **Achieving operational excellence,** by establishing a data and technology platform on which processes operate efficiently
- **Meeting the spirit of regulation** to nurture a strong culture of good conduct
- **Finding pockets of growth**

The telecom sector reduced its structural costs by 15 percent between 2010 and 2015. The automotive sector improved operating margins by 18 percent in the same time span, through product and pricing enhancements and cost cuts.

This reorientation is similar to transformations made by the auto, telecom and logistics industries. The telecom sector reduced its structural costs by 15 percent between 2010 and 2015. The automotive sector improved operating margins by 18 percent in the same time span, through product and pricing enhancements and cost cuts.

Bankers are often dubious about the applicability of these transformational principles to their industry. We believe that the disruption taking place makes such a transformation necessary and the new capabilities, if appropriately leveraged, make it possible, as some banks have already started to demonstrate.

Redefining the customer experience

McKinsey research has found that for every 10-percentage-point uptick in customer satisfaction, any company (including banks) can increase revenues by 2 to 3 percent.[10] At a time when the customer-satisfaction scores of top-quartile institutions can exceed those of bottom-quartile firms by as much as 30 to 40 percentage points, the financial payoff from best-in-class customer experience (CX) can be significant indeed. These gains come from a variety of sources, including expanding client relationships. And they come from customers of all ages *(see "Why an aging population does not matter – yet" on page 46.)*

McKinsey's newest research[11] on three key customer journeys—including retail onboarding, small and medium-sized businesses (SME) onboarding, and mortgage applications—revealed four traits of distinctive CX that all retail and commercial banks should understand and implement. As banks know well, reaching the top quartile of CX performers is no easy task.

- **Focus on the factors that move the needle.** McKinsey asked customers to assess different characteristics of their end-to-end experience and found that, typically, just three out of 15 factors had a material impact and accounted for the

[10] Alex Rawson, Ewan Duncan, and Conor Jones, "The truth about customer experience," *Harvard Business Review*, September 2013, hbr.org.

[11] For more, see Joao Dias, Oana Ionutiu, Xavier Lhuer, and Jasper van Ouwerkerk, "The four pillars of distinctive customer journeys," September 2016, mckinsey.com.

Open banking and the consumer opportunity

Revenues from mobile apps reached $25 billion last year and will hit $70 billion by 2017.[1] App developers and the Apple and Google app stores are not the only ones profiting from this boom. A small but growing portion of app revenues is going to organizations that make their data available through application programming interfaces (APIs)—toolkits and protocols that, among other things, enable third-party app developers to leverage a company's aggregated data or selected services.

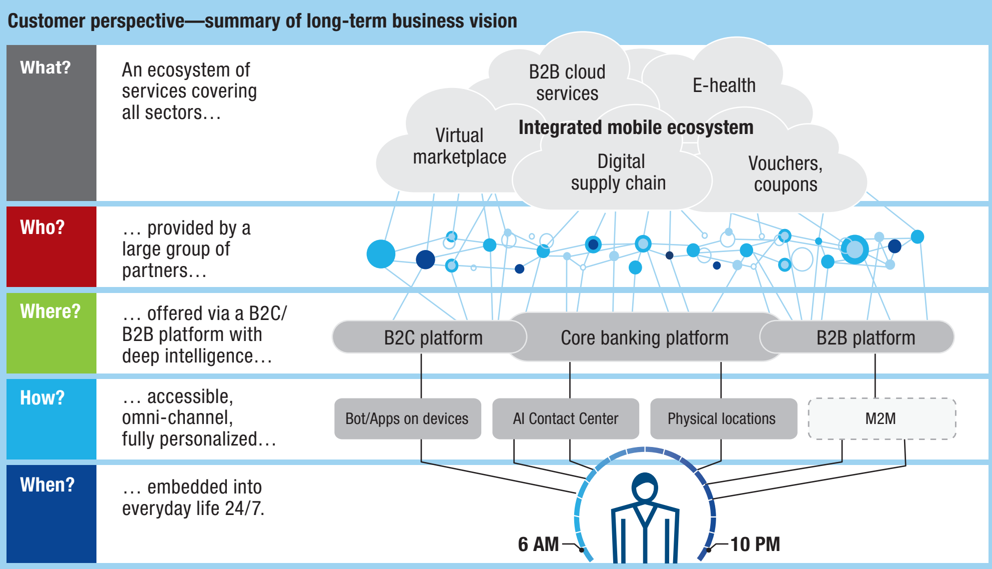
Some of the institutions that are creating open APIs include Citigroup, BBVA Compass, Bank of America, Capital One and Crédit Agricole. European banks creating open APIs are in part responding to a regulatory need. The Payment Services Directive 2 will require banks to share their customer data, potentially exposing banks to the loss of one of their most valuable assets.

Open APIs are ushering in an age of open banking—providing access to the bank through third-party digital channels. Some of the banks pioneering open banking see it as a gateway to an enormous opportunity—the networked consumer economy. Banks are used to thinking about defending their slice of a $4-billion industry. But they are actually a part of a much larger networked digital economy centered on the digital distribution of every single consumer good and service, which McKinsey estimates will reach $60 trillion by 2025. By shifting from defender to attacker, banks can capture a share of this networked economy. Even a small share of this vast system can be worth much more than their defensible share of the banking sector.

In the past year, the world has seen the full flowering of WeChat, perhaps the single best example of an "ecosystem operator:" a digital company that offers interconnected, personalized search, shop and buy services across consumer categories (Exhibit 21). Not to be outdone, more than a dozen banks, in every part of the world, are laying the foundation to construct and operate their own ecosystems, in-

Exhibit 21

Banking and other consumer services, delivered to the customer 24/7



Source: McKinsey & Company analysis

[1] Neha Ajmera, Livia Sato, and Brian Stafford, "Monetizing mobile apps: Striking the right balance," *McKinsey Quarterly*, June 2014, mckinsey.com.

[2] "Banking Group ING goes digital," ING Bank Web Newsroom, ing.com; "Disruption and Connection: Cracking the Myths of China Internet Finance Innovation," July 2016; mckinsey.com; N Fonstad et al, "mBank: Creating the Digital Bank," MIT Center for Information Systems Research, *2015*, cisr.mit.edu; "Sberbank launches new digital platform based on Backbase CXP," *PRNewsWire*, 2015, prnewswire.com.

[3] "GE Digital CEO Bill Ruh says corporate structures must evolve with technology," *The Wall Street Journal CIO Journal*, posted by Steve Rosenbush, January 13, 2016, wsj.com.

king a

cluding ING Bank, Ping An, mBank and Sberbank.[2] These banks are already dispelling the notion that banking is not the best business to use as a springboard into the networked economy. It is true that customers by and large are not focused on banking; they notice it mostly when something does not work. But banking is a vital need, and McKinsey's research suggests that the ecosystems will spring up around genuine consumer needs, even those that are less exciting than shopping for the latest clothes or booking a taxi to a new hot restaurant.

Success in this model will require a great deal of trust. The path is open only to banks that enjoy a strong relationship with their customers. Customer trust has to be repaid with flawless judgment about customer privacy and exceptional cybersecurity. And this new model will require new skills. In essence, the shift will turn banks into data companies. This will demand a portfolio of IT, back-office, finance and risk infrastructure skills that can compete with the best digital companies. Eventually, IT functions are likely to merge fully into the business, as is happening at GE and other companies.[3] Similarly, operations are likely to fully dissolve into an automated "backbone" run by artificial intelligence.

All of this depends on the bank's ability to safely utilize customer data in real time, in a truly insight-driven model. Done right, there is potential for a bank-led ecosystem orchestrator with exceptional customer experience and expanded margin opportunities in adjacent markets. By 2025, such banks would have:

- A truly passionate customer community, not just a great customer experience
- Services that are fun and invisible, not just easy and simple
- Fully personalized segments of one, not just micro-segmentation
- Seamless immersion in the customer's life, not just anytime availability
- True precognition and proactivity, not just fast reaction time
- Enthusiastic brand ambassadors, not just happy customers

That may be a long way off, and getting there clearly will not be easy. But that only increases the urgency of getting off to a good start now. To begin, banks need a partnership strategy with Fintechs, the current experts on the digital customer experience. Fintechs can be part of the solution, not just part of the problem. As a few banks have proved, it is easy to partner with these firms and outsource part of the bank's innovation to them.

bulk of satisfaction (Exhibit 22, page 44). In retail onboarding, these are price transparency, ease of communication, and a clear understanding of the process status. Banks should concentrate their improvement efforts on these.

- **Get on the plateau and beware the cliff.** Today's harried customer values convenience and hates delays. For example, in France, customer satisfaction is 10 points higher if the time to open an account can be reduced to less than 15 minutes. But there is only a slight payoff for reducing the time to between 45 minutes and 15 minutes (the "satisfaction plateau"), and satisfaction drops by up to 30 percentage points if the process goes over the "satisfaction cliff," by exceeding 45 minutes. Banks need to get smart about the trade-offs between investments in the process and the resulting upticks in customer satisfaction and new value created.
- **Master the digital-first journey, but do not stop there.** McKinsey analyzed both online and branch journeys, as well as mixes of the two. Those that start online scored 10 to 20 percentage points higher than traditional branch-first journeys. Further, journeys that are the most fully digitized lead to the greatest customer satisfaction. Many banks, however, do not provide fully digital services, such as digital identification and verification, although these tools are readily available.
- **Brands and perceptions matter.** Unsurprisingly, banks with strong brands and advertising and good word-of-

mouth deliver 30 to 40 percentage points more satisfaction than their peers. But the effect of advertising or word of mouth on customer perceptions is not well understood. Two banks in the U.S., for example, performed nearly identically across a set of customer journeys. However, customers rated one bank's overall CX much higher than its rival's, because its advertising promoted user-friendliness.

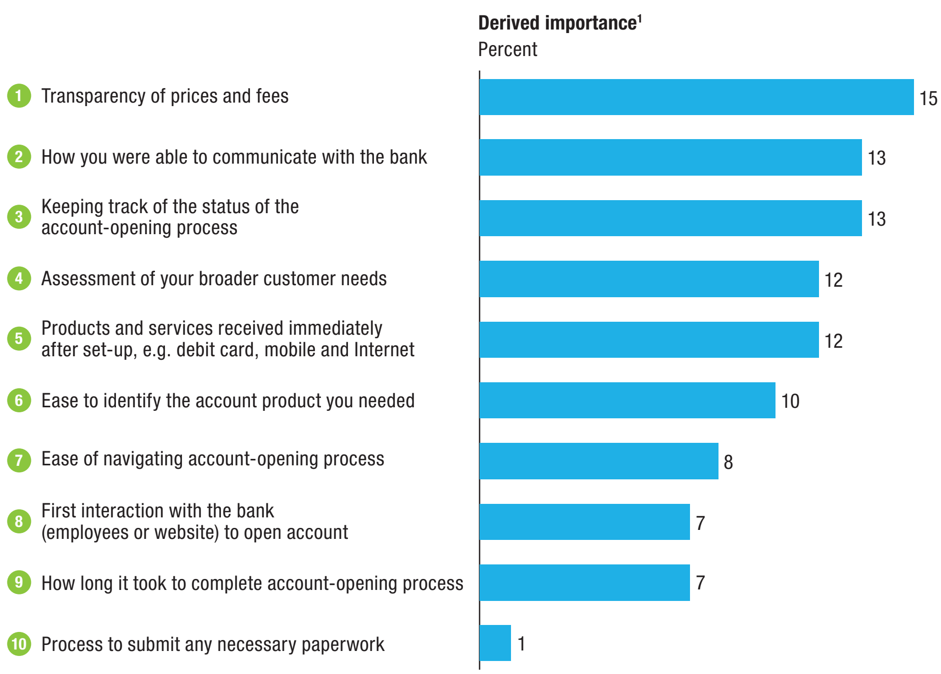
In designing the customer experience, regional differences count for a lot. As always, reacting to live feedback from real customers—along with design thinking and a test-and-learn approach—is often the difference between a good and a great CX.

Most banks measure client experience and customer satisfaction frequently. There are few banks, however, that have taken the next step to fully integrate and hardwire CX metrics into their performance management, business review, planning, evaluation, and compensation processes. As such, CX performance metrics remain somewhat disjointed, a "nice to have" that marketing or product people need to worry about rather than a key organization-wide objective. Banks that have excelled in this (for example,

Exhibit 22

A select few capabilities drive customer satisfaction in retail onboarding

Derived importance as reported by bank customers across metrics



[1] Johnson Relative Weighting was used, based on overall account opening satisfaction.
Source: McKinsey Customer Journey Benchmark

Commonwealth Bank in Australia) have seen impressive results.

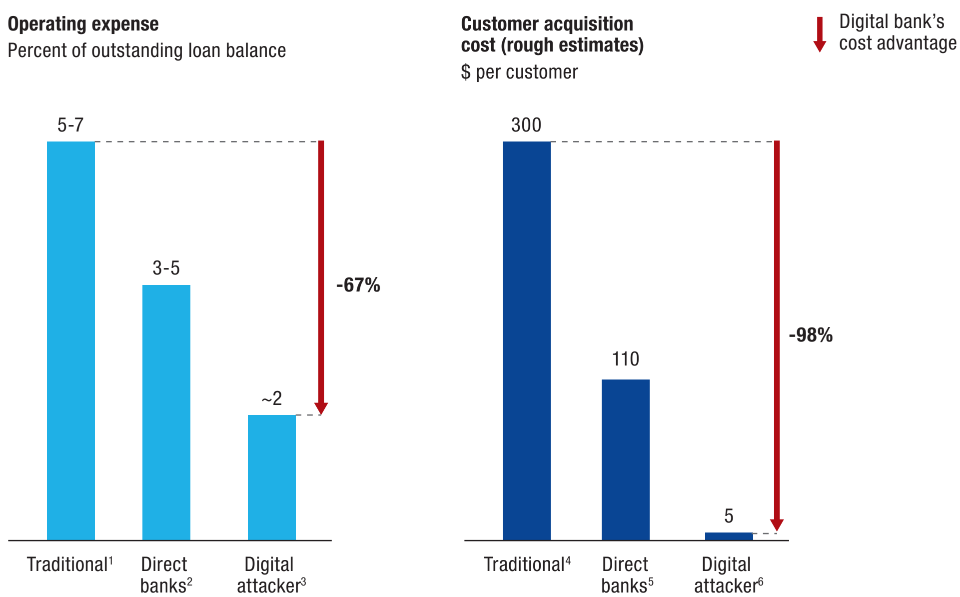
Fundamentally rethinking the operating model

While focusing on the digital customer is a clear priority, banks face a critical question of how to do it while also running their operations in a way that is cost-efficient, reliable, fast and flexible. To achieve this, they need to fundamentally rethink five key aspects of their model.

- **Reduce distribution costs.** The branch network, call centers and monthly paper statement are significant costs, particularly in retail and commercial banking where they typically represent between 40 to 60 percent of total costs. Some incumbents have three times the operating costs of direct banks and even higher disadvantages compared with some Fintechs (Exhibit 23). To be sure, banks have a big advantage in their large customer base; they have already invested heavily in customer acquisition. Over time, however, that advantage can be eroded by the differential in operating costs. Banks should digitize as many of their customer interactions as possible. If an activity can be done digitally, it should be;

Exhibit 23

Digital attackers enjoy substantial cost advantages



[1] Traditional banks: based on sample of top 500 banks' data from Reuters.
[2] Direct banks: ING DiBa, Activo, Checbaca, AirBank, mBank, Zuno (2014).
[3] Lending Club First Quarter 2016 Results.
[4] Foundation Capital, 2014; Lending Club based on St. Louis Fed, Federal Reserve.
[5] Based on expert interviews.
[6] On Deck, company presentation May 2015.
Source: Annual reports, press searches, McKinsey & Company analysis

to the point that banks should no longer offer physical channels for certain activities. Some interactions still call for the human touch, but even these can often be delivered remotely. The human part of the distribution system should be managed more effectively to make sure that people are doing the value-adding activities that machines cannot do.

- **Reduce product complexity.** Most incumbent banks labor under enormous product complexities, making them vulnerable to digital attackers whose simpler product portfolios enable them to provide higher service levels at lower costs. Some banks leading the way on reorientation have started to reduce their product complexity—

Why an aging population does not matter – yet

The demographics of aging are a growing concern to bank leaders, for two reasons. First, many banks are convinced that they need to make gains with millennials, to build the next generation of customers. Second, many are worried that as populations age, people will start to spend down their savings, hurting deposit and investment businesses.

Both worries may be realistic in the long run, but for now, banks are not threatened. On the first point, it is true that banking is going digital, and millennials are digital natives. But at present, millennials represent only a small opportunity. They need only basic banking products, and most are years away from a mortgage or a suite of investment products. And they are extremely price-sensitive.

The biggest opportunity in digital banking, surprisingly, is the over-50 cohort. At 14 million U.S. households, older customers are a smaller group than the digital natives, but are growing quickly. They have about twice the income and nearly 10 times more assets per household. Further, they are less indebted (their leverage ratio is 10 times lower than that of younger customers) and generate more revenues per household.

This makes banking different from other industries. At telecom companies, for example, the age of the peak-value customer is 29. At banks, it is 58. As older customers become more fluent with banks' websites and apps, a greater portion of their business will cross over to digital. As they do, and given their age, these older customers will likely remain loyal to the bank for the rest of their lives.

The second concern, about aging populations, may well come true sometime around 2030, and bank leaders are right to be concerned. New research from the Federal Reserve finds support for the idea that the aging of the population reduces real interest rates.[1] For the moment, though, banks have plenty of capital. Global saving rates are strong, and the loan-to-deposit rate in developed markets is at a historical low of 104 percent. However, the decumulation of assets as populations age is not a foregone conclusion. Japan and Germany, two of the most rapidly aging nations, also have two of the highest savings rates worldwide. China presents a similar picture. U.S. banks would seem not to be affected, as the U.S. population is aging slowly, if at all. Moreover, capital flows today are truly global, and savers in one country can make up for deficits in another.

[1] Etienne Gagnon, Benjamin K. Johannsen, and David Lopez-Salido, "Understanding the New Normal: The Role of Demographics," Federal Reserve Board, October 2016, federalreserve.org.

from several hundred to several dozen products. They are zeroing in on the products that contribute most significantly to revenues (at some banks, 25 percent of products generate 90 percent of revenues). They are also jettisoning ineffective features, promotions and campaigns. A tightly managed product strategy can help with costs as well as customer satisfaction.

To lower costs and build better quality and customer experience, banks must reestablish a front-to-back governance structure that takes an integrated view on products, processes, systems and data.

- **Reintegrate the front-to-back value chains and streamline business processes.** In the name of synergies, most banks broke up their business systems to create large-scale centralized back-office functions, particularly product settlement, administration, finance and risk, many of which then started to specialize by function, further breaking up the value chain. Complexity arose from multiple interfaces and misaligned processes and systems, as each silo optimized for itself, particularly as functions tried to adapt to regulatory and technological change. As a result, costs increased and process quality fell; the business lost (or delegated) most of its control over core processes, with its direct cost ownership dropping below 40 percent in some instances.

  To lower costs and build better quality and customer experience, banks must reestablish a front-to-back governance structure that takes an integrated view on products, processes, systems and data. This can be done in many ways, including reintegration or "divisionalization" of back-office functions. More importantly, it requires more transparent performance, resource and cost management driven by the front office from a value-to-customer perspective.

- **Systematically exploit data assets and new technologies.** Banks now have to compete with digital attackers that base their business on superior data and IT platforms. Banks must do the same, by using data to improve processes, better identify customer needs, make better decisions, and more easily meet regulatory reporting requirements.

  For example, a European bank with significant churn problems turned to machine learning. New algorithms better predicted the currently active customers who were going to reduce their business with the bank, cutting churn by 15 percent. A U.S. bank used machine learning to study the discounts its private bankers were offering to customers. Some were worthwhile, but many were not. Cutting the unnecessary discounts lifted revenues by 8 percent. A top consumer bank in Asia had trouble interesting customers in new products. It used advanced analytics to find undetected similarities that enabled it to define 15,000 microsegments in its customer base. It then built a "next-product-to-buy" model that resulted in approximately a three-fold uplift in likelihood to buy.

Banks must make sure to optimize the operating model, products and processes first, something that did not always happen in previous waves of outsourcing.

New technology can also enhance vital processes. Customer identification is a key issue in most transactions. While some paperwork is still necessary for documentation, robotic techniques can immediately digitize a lot of data that currently sits on paper. For example, many banks now provide apps to customers to scan their bills and make automated payments.

Despite these advances, few banks have set a broad IT transformation strategy to compete systematically with the digital attackers. Many are stuck at low levels, running experimental labs or building their own digital banks. More is needed.

- **Build smarter sourcing and location strategies in production and central functions.** Lastly, the new environment requires a new view on sourcing and outsourcing, as service delivery will change with new technologies. In the past, banks tried to maintain ownership of the value chain and outsourced many smaller activities, which led to more than 10,000 vendor relationships at larger institutions. The complexity of managing these relationships has grown to the point that it neutralizes the original offshoring advantage. And more complications await; many broader, formerly "core" activities have become industrialized and less strategic and are now susceptible to outsourcing. Examples include risk model development and validation.

Banks have a few choices for a smarter sourcing strategy. At the extreme, they may consider a hub logic by which they pull together all non-client-facing activities in a central hub in order to maximize scale, technological, skill and conduct efficiencies. All sub-scale production and product components not necessary to meet regulatory requirements should be considered for systematic, cost-efficient location strategy including nearshoring and offshoring. Banks must make sure to optimize the operating model, products and processes first, something that did not always happen in previous waves of outsourcing. Original equipment manufacturers (OEMs) in other industries such as automotive and telecom have shown the way (Exhibit 24).

Meeting the spirit as well as the letter of regulation

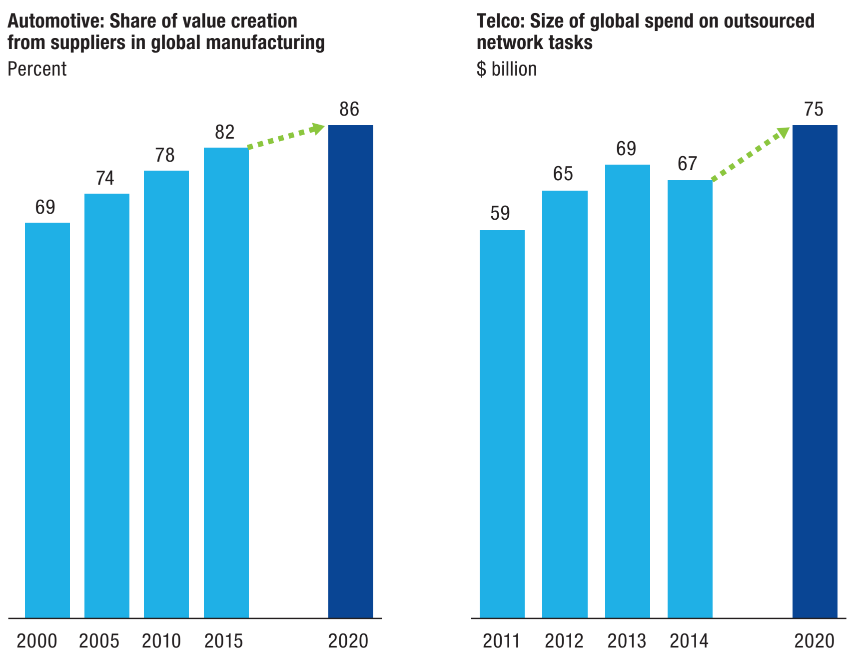
Given the size of today's regulatory agenda, banks are engaged in hundreds of implementation projects and remediation actions. Most of this activity is reactive and focused on making quick, efficient, affordable fixes. However, regulators and lawmakers find this approach increasingly frustrating. "Duct-taping" the issues often leads to sub-optimal and even insufficient results. Over time, banks will have to move to a broader approach that deals with regulation more strategically by intent, focused on five regulatory themes:

- Fair conduct vis-à-vis customers, markets and investors
- A viable, resilient business model
- An adequately capitalized and funded balance sheet
- Robust and well-controlled operations and infrastructure
- A resolvable legal-entity structure and operations that limit contagion risks

A regulatory agenda aligned with these principles helps the bank set a course in a new direction. Such an agenda differs in four ways from the detailed rule-based approach banks are using now. Most importantly, it *sets fundamental aspirations,* and focuses the bank on the root causes of any regulatory shortcomings.

Exhibit 24

Value contributed by suppliers has grown in automotive and telco industries



Source: Infonetics, Statista, Thomson Reuters

The financial crisis demonstrated that weak business models scaled up through excessive leverage can lead to trouble, not only for global banks, but smaller players.

Second, this approach *protects against future regulatory changes*, as it helps banks focus on a broader interpretation of the rules. In particular, a conduct-oriented culture will protect the bank from consequences of dubious actions that may still be within the law. A conduct-oriented culture will not allow the behavior to take root, so if the law changes, banks will not have a problem. Examples include the current discussion on the provision of financial services in tax havens.

Most regulators by now have taken a discretionary approach as they review banks and their business practices.

Third, it *allows for a better prioritization* and focus for implementation (even though regulatory timelines sometimes dictate the priorities). Most regulators by now have taken a discretionary approach as they review banks and their business practices. As such, a principle-based agenda aligns much better to their priorities. For example, as part of Basel II, regulators have already chosen to accept the capital figures used in the management process, rather than the figures that the bank's model produces. Equally, U.S. and European regulators are looking beyond the quantitative stress testing results to instead emphasize the qualitative components of banks' assessment process, data, infrastructure, and governance.

Finally, this agenda provides *better guidance for the organization* and its conduct culture on how to fundamentally protect the bank, its customers, employees and other shareholders.

Finding pockets of growth

While the pace of growth is slowing in many emerging markets, especially in Asia and Africa, three promising segments remain underserved by most financial institutions.[12] Tapping into these growth pockets—the unbanked and underbanked, a thriving affluent middle class, and small and midsized businesses—can help banks rekindle momentum.

Throughout the world, about 2 billion adults do not have a formal relationship with a bank. More than one-third live in three countries: China, India and Indonesia. Serving this large, latent market would not only create significant business opportunities, but would also address growing regulatory pressure to bring institutional financial services to these populations, composed largely of low-income households. Serving these customers is not easy. Many lack identification. Rigid cost controls are needed just to break even on product offerings. And little data is available to help banks make lending decisions. But banks are finding ways around these problems, relying on new technologies such as biometric identification and smartphone data.

[12] *Weathering the storm: Asia-Pacific Banking Review 2016*, June 2016, mckinsey.com

The growing wealth of the middle class is another opportunity. By 2020, McKinsey estimates that banking revenues from affluent households could reach $141 billion, about 12 percent more than revenues from serving high-net-worth households. Annual revenue growth from the affluent segment is expected to exceed 10 percent in China, India and South Korea between 2014 and 2020, with other markets also expected to show strong growth. Affluent households have specific financial needs. Wealthier households want investment products tailored to their situation – for example, building a career or nearing retirement – and guidance in investing abroad. They are also looking for experienced and knowledgeable bank representatives who understand their risk profiles and investment expectations and can offer personal advice.

Most successful banks are defined by their organizational health, which supports change and motivates employees.

Commercial and corporate lending is also seeing a change that banks can capitalize on. In China in 2009, large corporations held about 47 percent of total loans outstanding, compared with about 40 percent held by small- to medium-size enterprises (SMEs). In 2016, balances held by SMEs surpassed those held by large corporations, and the trend is expected to continue. Other emerging markets exhibit similar patterns. In India, SMEs are hungry for credit. Competition with Fintechs to win this business is already fierce, but banks can succeed by creating an end-to-end digital offering that anticipates the needs of these customers.

Renewal

Reorienting the bank toward a new long-term vision is just one-half of the equation. The other is enabling the organization to deliver. The old patterns of change management, with top leaders setting targets for everyone else to meet, do not work. The aspiration is often too high. The problems of functional siloes and fragmented value chains are too great. The current skillsets and the buy-in from many in the organization are too weak. Renewing the organization, its capabilities and its change culture are essential to the bank's reorientation.

Create a motivating culture of change, with shared vision and values

Most successful banks are defined by their organizational health, which supports change and motivates employees. Given the force of the headwinds buffeting the industry and the damage to its reputation, it is increasingly hard to motivate employees to support comprehensive change unless banks can establish a shared alignment on the vision and a belief in the path to be taken.

McKinsey research[13] shows clearly that organizational health drives bank perform-

[13] ohisolution.com.

ance: the top quartile of banks, based on organizational health scores, has produced three times the performance of the bottom quartile over the past 10 years. All banks have competitive cultures, but healthy banks focus much more on engaging employees, talent development, supporting bottom-up innovation, creativity and entrepreneurship. This type of corporate culture gives employees a stronger sense of ownership as well as a shared vision and meaningful values.

Employees must feel empowered to define their own agenda, develop new initiatives, and drive the change needed.

Depending on the organization, two actions are critical. At healthy organizations, management invests in creating a common vision so that employees understand the purpose of the transformation and will support it. Weaker organizations must do that and also demonstrate that they will create and endorse a culture that empowers individuals and rewards ownership, entrepreneurship and collaboration. This requires a much broader engagement and communication process in the organization and visible changes to core leadership practices and people processes.

Some leading banks, such as Nordea and UBS, started several years ago to fundamentally transform their culture around a shared vision and values. They created a compelling story and adjusted their systems, structures and valuation systems to support this transition. At the core of their efforts lies the strong belief that transformations of this magnitude are only achievable if they are led by each employee. Employees must feel empowered to define their own agenda, develop new initiatives, and drive the change needed. The work continues, but these banks have learned that the combination of a strong top-down vision and direction with bottom-up initiatives and change ideas can achieve remarkable results, even in today's complex environment.

Develop new organizational constructs

The problems with organizational silos have been known for a decade or more,[14] yet still persist at most banks. Consider a typical software development project. A business request for a new widget for its site is pieced out to multiple teams: one team working on the front-end application, another updating associated servers and databases, and still another reconciling the front-end application with legacy back-end systems. Moreover, the development also depends on business support teams (among them, budgeting, planning, and outsourcing), each looking after its own interests.[15]

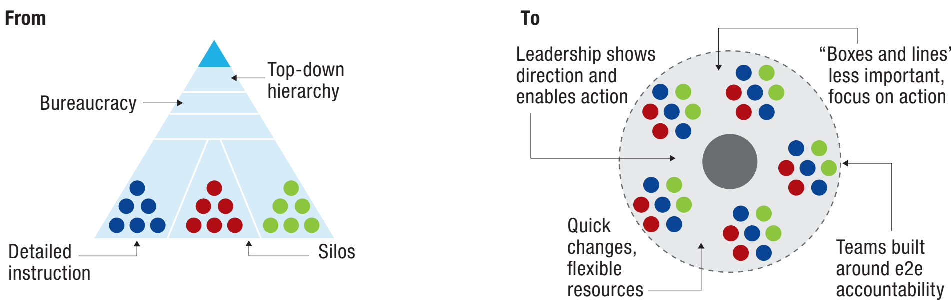
Specialization of labor makes some sense—but dividing the project in this way creates long delays in decision-making and new product development and afflicts the bank with enormous blind spots. Today's tech companies are living proof of why a

[14] See Emily Lawson and Colin Price, "The psychology of change management," *McKinsey Quarterly*, June 2003, mckinsey.com.

[15] See Santiago Comella-Dorda, Swati Lohiya, and Gerard Speksnijder, "An operating model for companywide agile development," *McKinsey on Business Technology*, May 2016, mckinsey.com.

Exhibit 25

Agility enabled by a shift in the mental model of what an organization is and how it operates



From	To
Organizations as machines with hard-coded instructions and a rigid blueprint	**Organizations as organic systems**, in which people collaborate quickly and effectively around tasks and projects across boundaries
Leaders as **masterminds who delegate tasks and instructions** in a top-down manner	Leaders as **catalysts who show direction and set up the system** for people to do their jobs effectively
Protecting most people in the organization from stressors and complexity and **treating information as a scarce resource**	**Exposing all employees to a certain amount of uncertainty** and stressors to help them grow and stay flexible and making **information by default available**
Optimizing for set outcomes and plans	**Optimizing exposure** to unexpected events (positive and negative)

Source: McKinsey & Company analysis

cross-functional organization works better. Banks need to adapt quickly, if they are to successfully build a new customer experience and operate a data platform.

What Spotify, Netflix and other tech companies have learned is that the key to moving quickly is to be an agile organization. Many executives assume that simply means moving faster. In fact, McKinsey research has shown that truly agile organizations, paradoxically, learn to be both stable (resilient, reliable and efficient) and dynamic (fast, nimble and adaptive).[16] To master this paradox, companies must design structures, governance arrangements and processes with a relatively unchanging set of core elements—a fixed backbone. At the same time, they must also create looser, more dynamic elements that can be adapted quickly to new challenges and opportunities. And they must change their very conception of how the organization works (Exhibit 25).

ING has transformed its corporate center using these agile concepts. Its modular teams are the “squad” and the “tribe.” Squads are teams of seven to nine people with a range of functional expertise who come together to work toward a single goal, such as building a new mortgage application or optimizing the search engine. When the project is completed, the squad is dissolved, and members join new squads. At any one time, ING has about

[16] Wouter Aghina, Aaron De Smet, and Kirsten Weerda, “Agility: It rhymes with stability,” *McKinsey Quarterly*, December 2015, mckinsey.com.

300 such squads. Each squad is a member of one of the bank's 13 tribes that work on related projects. To ensure their development and coaching, people doing similar activities within a tribe (such as Java developers, UX specialists, and data analysts) are helped along by a "chapter lead," responsible for their functional development. Chapter leads are coaches and are also members of the squad, where they spend most of their time. Other coaches help ensure consistency of agile methods across squads and tribes. Begun in 2015, the transformation is working: the bank has seen a 30 percent increase in efficiency and radically improved time-to-market and employee engagement.

Develop the digital skills needed to compete

Analytics can reorient the bank, but there remains the question of who can deliver this kind of change. Banks have some of these skills already, but must add others. Doing so successfully means becoming an attractive employer compared with Fintechs and other technology firms. Prospective employees will look for:

- A tech-empowered business model and a vision for technology and analytics at the core.
- An innovative work environment that supports and enables these capabilities and positions analysts and tech experts as drivers of business and not as mere internal service providers. The agile organizational concepts outlined above are a crucial component of this environment. Some banks take this even further and establish separate companies to digitally attack other incumbents.
- A talent program that provides clear career perspectives for people with different kinds of skills and aligns incentives around these capabilities.

While banks are recruiting heavily at hackathons and innovation conferences, they are paying less attention to the need for interdisciplinary skills. Technical skills are only 10 percent of the need. Even more important are people with the skills to translate technology into the business, and vice versa, to bring new technologies and analytics to life in the banking environment.

Putting it all together

Clearly, the Triple-R agenda is extremely complex and challenging. Bank leaders are right to wonder how they might take it on, set direction for the bank, and provide guidance on how to move ahead without getting lost in the detail and complexities. There are no easy answers, but some keys to success include:

- Understand the forces at work and define the ambition level. The forces we describe in this report will differ by market and have varying degrees of impact on banks, depending on their business model. Moreover they are long-cycle developments; impact analyses will have to take a longer-term view, beyond the usual three-year planning horizon. Banks should define alternative scenarios and understand what they mean in the competitive dynamics of their particular market.

- Create a joint vision and approach to transform the bank. The transformational changes required go well beyond banks' recent changes. Leaders need to create a clear long-term vision that sets out a convincing value proposition for customers and counterparties.
- Communicate the future model in the context of forces at work and emphasize the bank's strengths. Only in this way can leaders gain the credibility needed for all stakeholders to come together and lay the foundation for a successful long-term transformation.
- Empower and enable the organization. This is potentially the most important aspect of making the transformation work. Standard-issue change management will only work at smaller banks, or where the impact from the three forces has so far been minimal. New ideas are needed, especially for organizational alignment, breaking down siloes and creating true cross-functional teams.
- Keep execution flexible as uncertainty unfolds. The best protection is to structure the transformation around larger change themes, anchored in the organization. These deep-rooted themes are likely to prove sustainable no matter what exogenous changes come along.

Reality is setting in for the global banking industry. A low-growth, low-interest-rate world seems like it is here to stay. Meanwhile, Fintechs and other firms have the lead over banks in the race to build exceptional digital experiences. The bright light of these forces, along with regulation, leaves banks nowhere to hide. Banks must come to terms with the new reality and take the steps needed to make a better future for themselves, their shareholders, their employees, and the financial system.

Denis Bugrov

Miklos Dietz

Thomas Poppensieker

For McKinsey Panorama—Global Banking Pools: Tamas Csikai, Attila Kincses, Tamas Nagy, Zoltan Pataki, Miklos Radnai and Gabor Studniczky.

Editor: Mark Staples

The authors would like to thank their many colleagues in McKinsey's Global Banking Practice, and in particular Laura Bergonzini, Kenza Bouhaj, Christian Casal, Leorizio D'Aversa, Sarah Dahlgren, Gabriella Garbasz, Daniela Gius, Philipp Härle, Matthias Heuser, Paul Jenkins, Allison Kellogg, Xavier Lhuer, Heitor Martins, Asheet Mehta, Adam Mtimet, Michael Pieper, Pedro Rodeia, Joydeep Sengupta, Zubin Taraporevala and Paal Weberg, for their contributions to this report.

Appendix

Definition of metrics and common terms

1. **Return on equity (ROE).** Total accounting net income after taxes divided by average total equity

2. **Revenues.** Total customer-driven revenue pools after risk costs

3. **(Revenue) margin.** Revenues before risk cost divided by average total assets

4. **Risk cost (margin).** Loan loss provisions divided by average assets

5. **Cost-to-income ratio.** Operating expenses divided by total revenue pools before annual provisions for loan losses

6. **Capital ratio.** Tier-one ratio, calculated as tier-one capital/risk-weighted assets

7. **Loan-to-deposit ratio.** Total non-securitized customer-lending volumes divided by total customer-deposit volumes

8. **Price to book value (P/B)**. Market capitalization divided by average total equity less goodwill

9. **Fintechs/Fintech.** Financial technology firms; also, technology innovations in the financial sector, originating from start-ups, banks and non-bank players

Databases used in this study

Three primary databases were used to derive the data aggregates presented in this report.

Panorama—Global Banking Pools (GBP). A proprietary McKinsey asset, Global Banking Pools is a global banking database, capturing the size of banking markets in more than 90 countries from Kazakhstan to the United States, across 56 banking products (with 7 additional regional models covering the rest of the world). The database includes all key items of a balance sheet and income statement, such as volumes, margins, revenues, credit losses, costs, and profits. It is developed and continually updated by more than 100 McKinsey experts around the world, who collect and aggregate banking data from the bottom up. The database covers the client-driven business of banks, while some treasury activities such as asset/liability management or proprietary trading are excluded. It captures an extended banking landscape as opposed to simply summing up existing bank revenues, including not only activities of traditional banks but also of specialist finance players (for example, broker/dealers, leasing companies, and asset managers). Insurance companies, hedge funds, and private-equity firms are excluded. The data covered for each country refer to banking business conducted within that region (for example, revenues from all loans extended, deposits raised, trading conducted, or assets managed in the specific country). The data cover 15 years in the past (2000–15) and 10 years of forecasts (until 2025).

Panorama—FinTech. A proprietary McKinsey asset, Panorama FinTech is a curated multidimensional searchable database cataloguing financial technology (Fintech) innovations globally. The database contains more than 3,000 Fintech innovations from across the world categorized across eight dimensions relevant to banks and insurers, such as customer segment, banking product, and value-chain segment. It has deep-dive profiles on more than 1,000 of these innovations, including key functionalities, distinctive features, impact potential, and achievements to date. The database is developed and maintained by a team of Fintech experts, and is continually expanded based on the latest research findings.

SNL Financial. A database of the key profit-and-loss, balance-sheet, and other financial metrics of big banks. Our analyses are made on aggregated figures from the top 1000 banks by assets. All banks are clustered individually into countries (based on their domicile) and regions. The data cover 6 years (2010–15), with a varying number of banks available in different years.

Financial Services Practice
December 2016

www.mckinsey.com/clientservice/financial_services