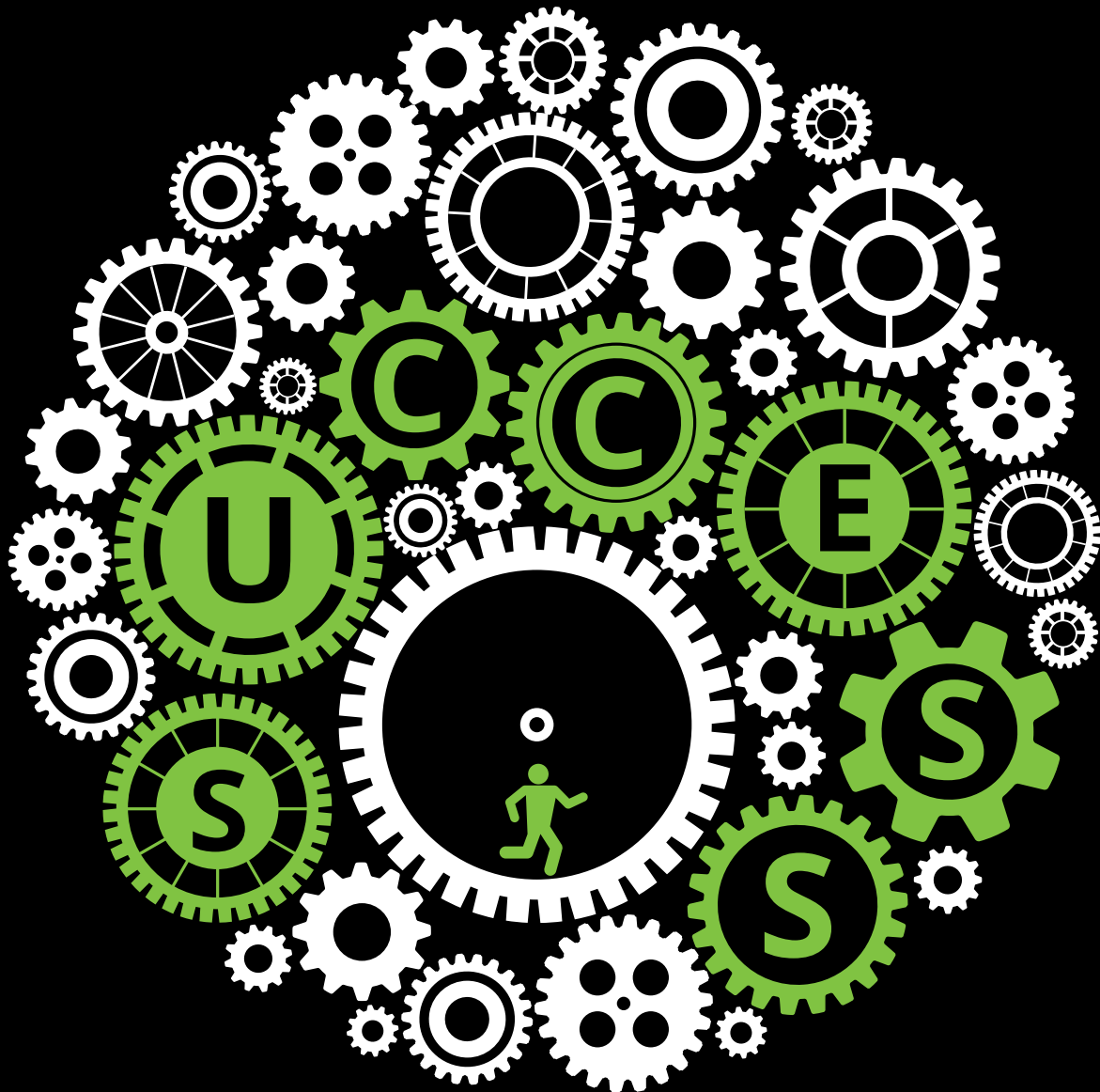


FSI Review

Deloitte Southeast Asia
Financial Services Newsletter
Issue 14, March 2017

Charting a course for success

- Financial services regulatory outlook 2017 – Navigating the year ahead
- Capturing the multi-trillion dollar asset management opportunity in Southeast Asia
- Global risk management survey, 10th edition – Heightened uncertainty signals new challenges ahead
- Building the bank of the future



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Adapting to the winds of change

Nimble will be the new normal in 2017 as financial institutions confront a marketplace that is changing more drastically than perhaps ever before. There is far more uncertainty than usual over the outlook for economic growth given the United Kingdom's (UK) referendum to leave the European Union (EU) and President Trump's decision to withdraw from the Trans-Pacific Partnership and his pledge to renegotiate trade agreements with China and Mexico.

In addition to macroeconomic and regulatory changes likely to impact the industry, financial institutions are coping with longer-term, game-changing trends such as the widespread emergence of FinTech firms. These start-ups are threatening to disrupt financial sectors and services such as lending, payments, wealth management, and property and casualty products.

But there are opportunities for nimble companies to prosper in a rapidly changing business environment. In this issue of *FSIReview*, we explore strategies to help financial institutions adapt to the winds of change in today's rapidly evolving, consumer-centric culture, and increasingly technology-driven economy.

In our first article, we share four major regulatory themes dominating the outlook for Asia Pacific financial services firms during 2017.

Next, we look at how asset managers can integrate multiple types of innovation to enable them to effectively capture new opportunities and mitigate challenges posed by emerging trends in the asset management sector in Southeast Asia (SEA).

We then present the findings of the 10th edition of *Global risk management survey*, the latest instalment in Deloitte's ongoing assessment of the state of risk management in the global financial services industry. Overall, the survey found that leading risk management practices continue to gain wider adoption across the industry. Almost all respondents consider their institution to be effective in managing traditional risk types such as credit, market, and liquidity risk.

Wrapping up this issue of *FSIReview*, we look at building banks of the future. To win over tomorrow's most demanding customers, some banks are transforming not only their inadequate IT environments, but also their fundamental value propositions.

We hope that you will find this edition of the *FSIReview* an interesting and insightful read.

Ho Kok Yong
Southeast Asia Financial Services Leader

Financial services regulatory outlook 2017: Navigating the year ahead

2016 has been another difficult year for the financial sector, with economic and political uncertainty complicating the completion of the post-crisis regulatory repair agenda.

Asia Pacific has not been as significantly impacted by economic headwinds or political changes that are currently shaking the EU, UK and US. Nonetheless, financial institutions in the region are living with moderating economic growth, operate under complex regulation and are facing competition from new technology enabled players. The political events that have occurred elsewhere will also, in time, have an influence in the region, particularly if there is a trend to dismantle efforts aimed at global harmonisation of regulation.

Asia Pacific will continue to have an active voice in international regulatory thinking during 2017. Hong Kong's Ashley Alder has assumed the Chairmanship of the International Organisation of Securities Commissions (IOSCO), which has also set up a regional hub in Malaysia. Jacqueline Loh of the Monetary Authority of Singapore (MAS) was appointed as Chair of the Bank for International Settlements (BIS) Markets Committee and Hiroshi Ota, from Japan's Financial Services Agency (JFSA), was elected as Vice Chairman of the Executive Committee of the International Association of Insurance Supervisors (IAIS). Steps are also being made to connect the traditionally fragmented region. The ASEAN economic community was established at the end of 2015, and 2016 saw the Asia

Region Funds Passport's Memorandum of Cooperation come into effect. Whilst the US has withdrawn from the proposed Trans Pacific Partnership Agreement for regional free trade, early indications are that Asia Pacific governments will continue to support its development.

Looking ahead

Overall, the prescriptive post-crisis rule making is nearing completion and the period ahead will be one of implementing and embedding these measures, as well as confronting remaining or new frontiers. We see four major regulatory themes dominating the outlook for Asia Pacific financial services firms during 2017:

Resilience: Since the financial crisis, much of the focus for regulators has been on ensuring the resilience of financial institutions and the financial system, and this will continue into 2017, with a particular emphasis on domestic implementation. The "Basel IV" rules for banks are expected to be published in early 2017, the first iteration of the global capital standards for insurers will be released in 2017 and the resilience of the asset management industry is to be investigated.

Regulatory expectations around stress testing will also increase in 2017, with more intricate and diverse scenarios, and local regimes will further align with international standards on recovery and resolution planning. Firms may need to devote significant energy and resources to meet new sets of rules and improve capabilities in these resilience building areas.

“The introduction of new financial technologies and digital distribution platforms are unleashing disruptive forces, promising benefits to consumers and markets while posing further challenges to the strategies and margins of established financial services firms. New technologies also stand to multiply the digital and cyber risks the industry currently faces. With the right approach, financial institutions can harness these technologies to improve core financial services processes and open new opportunities.”

Thio Tse Gan, SEA Cyber Risk Services Leader

Governance: Recent examples of governance and conduct failings will mean that in 2017 there will be a sharpened regulatory focus on ensuring firms have robust governance frameworks throughout the entirety of their organisation, and are placing priority on organisational culture. Firms should start reviewing existing governance frameworks and tackling practices that could signal problematic culture.

Supervision: In 2017, Asia Pacific regulators will be moving beyond concern about compliance with explicit rules, and instead they will adopt a more dynamic and forward looking supervisory approach, involving continual engagement and requests for granular data on a greater variety of matters.

Firms will need to be in a position to clearly articulate their business strategy and may need to invest in advanced data and analytics technologies. They should also expect more intense engagement with regulators, involving ongoing discussion, reviews, testing, guidance and challenge at the highest levels, covering all aspects of the business.

Technology: Regulators will continue to nurture FinTech in 2017 and will investigate regulatory technology (RegTech) uses. In hand with this will be enhanced expectations around the strength of cybersecurity measures.

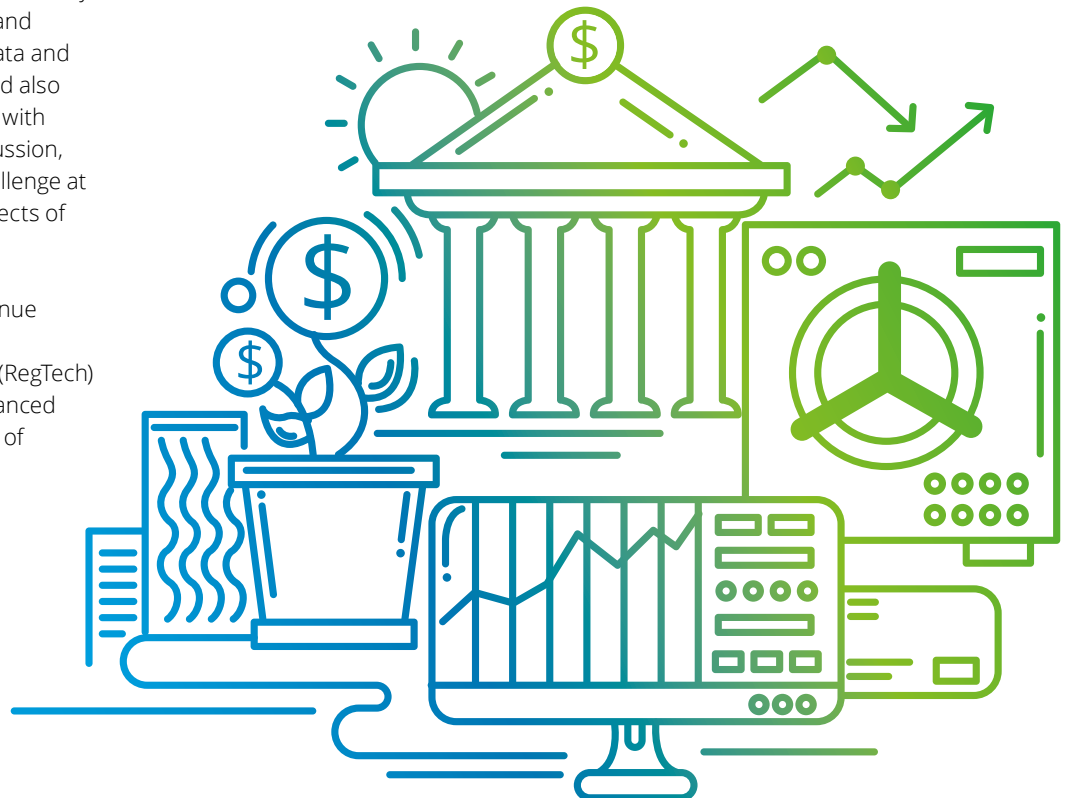
Firms wishing to maintain a competitive edge will need to invest in innovative technology, retain ongoing engagement on RegTech and take an integrated cross-functional cyber resilience approach. Technological innovations, while posing a threat to the established way of doing things, will also provide firms with the best ways to manage the range of stresses arising from the regulatory expectations.

Conclusion

Whilst the significance of each theme will vary across the different jurisdictions, the different industry sectors and the different institutions, we believe all will be relevant to financial services firms operating in Asia Pacific.

Firms are currently doing business in a more constraining regulatory, economic and political environment. As a result, companies need to refresh their strategies for how they respond to this environment. Not all firms will succeed in doing this in the year ahead. Those that do will be the ones that find ways of making this new environment work for them, capitalising on their resilience, agility and efficiency.

The article is an excerpt of the report, "Asia Pacific Financial Services Regulatory Outlook 2017 – Navigating the year ahead," developed by the Centre for Regulatory Strategy Asia Pacific. To receive a copy of the full report, drop us an email at sgindustries@deloitte.com.



Key regulatory events for firms in Asia Pacific

2017



January to April

- BCBS expected publication of revised Basel III framework on **credit risk, operational risk and floors** (Jan)
- BCBS **CCyB**, **SA-CCR** and capital for **equity investments in funds** and **exposures to CCPs** in effect (1 Jan)
- HK (**CCyB**) **ratio of 1.25%** in effect (1 Jan)
- SG **REIT managers/individual directors** to prioritise interests of unitholders (1 Jan)
- SG **amendments to MAS Notice 637** commence (1 Jan)
- AU **charitable investment framework** commences (1 Jan)
- FSB report on **fintech** and workshops on effect of **G20/FSB reforms** (early 2017)
- AU aggregate level **general insurance stress test** outcomes (early 2017)
- BCBS end phase OTC derivatives (VM) **margin requirements** phase in (1 Mar)
- AU/HK/SG **OTC margin** requirements commence (1 Mar)
- JP **insurance company field test** results (Mar)
- HK **short position reporting** for all SEHK Designated Securities (Mar)
- AU revised prudential standard on **residential mortgage lending** (Q1)
- **Securities financing data** to global data aggregator (Apr)



May to August

- BIS final **FX code of conduct** (May)
- IAIS **ICS version 1.0** (mid 2017)
- IOSCO CPMI guidance on **CCP resilience, resolution** and recovery (mid 2017)
- BCBS draft framework for **stress testing of CCPs** (H1)
- FSB report on **measures to reduce misconduct risk** (H1)
- IOSCO **wholesale market conduct** regulatory toolkit (H1)
- SG limits on **unsecured credit** if 18 times monthly income (1 Jun)
- FSB report on **climate-related financial risk disclosures** (Jun)
- HK professional investor new **client agreement requirements** (Jun)
- **G20 summit** Hamburg (7/8 Jul)
- HK **OTC derivatives phase 2 reporting** in effect (1 Jul)
- AU **prudential standards** on risk management, outsourcing, business continuity management, governance, fit and proper, intragroup transactions and exposures, aggregate risk exposures and audit become effective (1 Jul)



September to December

- IAIS **ICS data** due for 2017 confidential reporting process (Sep)
- SG **non-bank financial institutions OTC derivatives reporting** (interest rate/credit derivatives) (1 Nov)
- **G-SII** cohort 2016 to have **systemic risk/liquidity plans** (Dec)
- AU **residential mortgage lending data reporting** requirements commence (Dec)
- AU **industry funding** of ASIC commences (H2)
- AU launch of **New Payments Platform** (H2)
- HK white paper on **distributed ledger technology** (H2)
- FSB guidance on **compensation and conduct** and recommendations for **reporting and collection of data** (end)
- IOSCO **funds' liquidity mismatch** recommendations to be operationalised (end 2017)
- **Asia regional passport** funds to be implemented domestically (end 2017)



During 2017

- HK **NSFR and securitisation framework** draft rules
- SG **leverage ratio and large exposures** draft rules
- AU draft rules on capital requirements for **equity investments in funds, NSFR, leverage ratio, Pillar 3 and large exposures**
- AU report on **mortgage broker remuneration, financial adviser misconduct and conflicts management**

2018



- BCBS Basel III **Leverage ratio, securitisation framework, Pillar 1 and NSFR**, including disclosure requirements (Jan)
- FSB numerical **haircut floors** apply to non-bank securities financing (Jan)
- **IFRS9** effective (Jan)
- AU prudential standard and guidance on **liquidity and NSFR reporting** (Jan)
- AU new rules on remuneration for **life insurance advice** (Jan)
- AU risk mitigation requirements for **OTC derivatives** commence (1 Mar)
- FSB jurisdictions to have no legal/regulatory barriers to **reporting of OTC derivatives** (mid 2018)
- IAIS consultation on ComFrame including **ICS version 2.0** (mid 2018)
- IAIS **2018 ICS confidential reporting** data due (Sept/Oct)
- SG **non-bank financial institutions OTC derivatives reporting** (FX, commodity, equity) (1 Nov)
- **G-SII cohort 2017** to have systemic risk/liquidity plan (Dec)

2019 onwards



- BCBS capital requirements on **CET1, capital conversion buffer, G-SIB buffer, market risk countercyclical capital buffer, min T1 ratio and min total capital ratio** (1 Jan 2019)
- BCBS **liquidity requirements** on LCR and **large exposures** (1 Jan 2019)
- BCBS **G-SIB min TLAC** of 16% RWA and 6% LRE (1 Jan 2019)
- AU **new standards for financial advisers** commence (1 Jan 2019)
- SG **limits on granting unsecured credit** if 12 times monthly income (1 Jun 2019)
- BCBS G-SIIs' **BCR and HLA** requirements (2019)
- IAIS **ICS version 2.0** (end 2019)
- BCBS end phase in for **margin requirements for OTC derivatives (IM)** (1 Sep 2020)
- **G-SIBs min TLAC** of 18% RWA and 6.75% LRE (1 Jan 2022)
- **Emerging market G-SIBs min TLAC** of 16% RWA and 6% LRE (2025) and 18% RWA and 6.75% LRE (2028)

“As growth opportunities globally become progressively narrower, SEA with its mix of mature, emerging and frontier markets could be of interest to asset managers. It will be imperative for asset managers to augment their business models through innovation to take into account the big shifts expected in this region, to achieve sustainable growth and to position for market leadership.”

Mohit Mehrotra, SEA Strategy Consulting Leader

Capturing the multi-trillion dollar asset management opportunity in Southeast Asia

The ten markets that make up the Association of Southeast Asian Nations (ASEAN) form the 6th largest economy in the world and one that is projected to become the 4th largest by 2025. There are emerging trends in the region that asset managers need to be cognizant of, including new pools of assets under management (AUM) opportunities totalling US\$3.5 to 4 trillion by 2025, across the institutional, high net worth (HNW) and retail segments. To address these trends and be successful in the region, asset managers need to:

- Redefine the asset management business model with a set of strategic choices such as identifying where to play and how to win
- Build capabilities required to move from being product-centric to being innovation-driven in catering to the complex customer needs across the region
- Make it an imperative to integrate innovation levers such as developing strategic partnerships to penetrate local markets, and delivering digital value-added services to enhance customer experience

Emerging trends in Southeast Asia

Based on our analysis, three regional trends have been identified as having the most significant impact on the future of the asset management business in the region

1. Emerging demographic trends driving growth potential

Growth of digital natives: The growth of digital natives presents a significant opportunity for asset managers, particularly those who are able to adapt their service offering and go-to-market strategies to cater to the preferences of this segment. One key success factor is the ability to create superior customer journeys, catered to digitally savvy customers, and founded on digital platforms that enable more efficient customer interactions.

Aging populations: The impact of an aging population in SEA can be felt across both institutional and retail investors. For example, public pension funds have to account for the uncertainties caused by demographic factors such as early retirement and improvements in life expectancies when estimating future liabilities (i.e. annual pension benefit cash flows). These uncertainties compel pension funds to seek risk-management frameworks that mitigate future cash flow volatilities while ensuring sufficient returns on investments to meet long-term liabilities.

2. New pools of AUM opportunities

New wealth has translated into sizeable pools of AUM originating from institutional investors such as sovereign wealth funds (SWFs), pension funds (PFs) and onshore wealth in SEA. These AUM opportunities reside within the institutional, high net worth (HNW) and retail investment channels in SEA. Conservative estimates indicate that SEA will have a total AUM pool of around US\$3.5 to 4.0 trillion by 2025, with the institutional segment accounting for more than half of that AUM opportunity.

3. Increasing demand for product differentiation

In an environment of low or negative interest rates, investors in SEA have shown stronger preferences for a wider range of asset classes to access. Specifically, income-oriented strategies as well as solutions which reduce portfolio volatility feature strongly in the SEA investor's portfolio. For example, investments in alternatives such as private equity, venture capital and real estate have almost doubled in terms of AUM over the last five years. Similarly, due to the fast-growing demand for Sharia-compliant products, the respective AUM has also almost doubled since 2012, albeit from a lower base.

Leveraging innovation to succeed in Southeast Asia

As the market dynamics in SEA continue to change rapidly, traditional product-centric business models are no longer effective in catering to the complexity of customer needs. This is especially so given that the region is characterised by a wide spectrum of differentiated economic conditions, as well as region-specific investor preferences and needs as well as the uncertain regulatory landscapes. Moving forward, asset managers will need to think of new models of growth that are driven by innovation in order to successfully mitigate challenges and capture opportunities in the long term. Here, we take a look at several ways asset managers can leverage innovation to succeed in SEA:

1. Developing strategic partnerships to penetrate local markets

The establishment of partnerships with local champions provide a platform where asset managers can leverage on the distribution networks of local champions to accelerate their expansion in SEA. In Indonesia, a recent partnership between a global asset manager and local fund manager paved the way for both firms to distribute their respective funds within Indonesia and globally, creating a win-win proposition for both parties.

Potential impact on asset managers:

Developing an extensive partner network will enable asset managers to better access the various local opportunities in SEA, ranging from digitally-inclined millennials and aging populations to the growing onshore wealth. Through these partnerships, asset managers will not only save on building local business infrastructure, but also gain local market knowledge, capabilities and enhanced brand presence in their target markets in SEA.

2. Increasing automation and efficiency

Many systems and processes within asset managers are considered as “core” to their business operation. However, in an environment where a number of disruptors have emerged to provide low cost, sophisticated investment alternatives

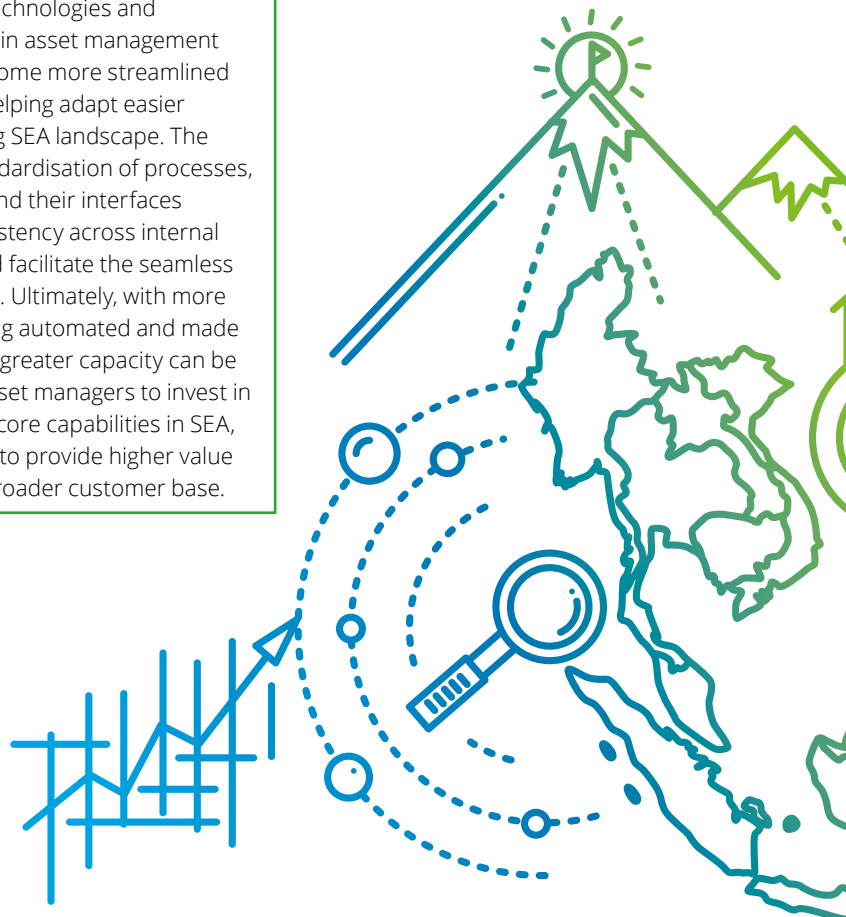
(such as robo-advisors), asset managers maintaining modus operandi practices are confronted with a tangible threat of market share loss. This is especially true in the SEA context where a significant portion of asset managers’ existing processes, including portfolio allocation and risk management, are generally manual and fragmented. As such, asset managers looking to succeed in SEA in the future need to re-examine what are the critical systems and processes that should be maintained as-is, and which ancillary systems and processes can be automated or made more efficient through innovation. Advanced analytics, cloud computing and natural language are three key innovations that can be considered as tools to breed such efficiencies and automation. For example, the use of advanced analytics would enable asset managers to leverage on advanced computer power, algorithms and analytical models not only to automate existing manual processes but also provide a new level of sophistication.

Potential impact on asset managers:

Technologies and processes within asset management setups will become more streamlined and efficient helping adapt easier to the changing SEA landscape. The increased standardisation of processes, technologies and their interfaces will bring consistency across internal operations and facilitate the seamless sharing of data. Ultimately, with more processes being automated and made more efficient, greater capacity can be freed up for asset managers to invest in differentiating core capabilities in SEA, enabling them to provide higher value services to a broader customer base.

3. Developing an integrated offering and solution bundling

In providing holistic investment services to the local SEA investors, asset managers can consider an even more comprehensive offering by going beyond just products and examining opportunities in bundling solutions to complement these products. Several large global asset managers have incorporated this type of innovation into their portfolios. For example, some asset managers have developed in-house platforms that provide sophisticated risk analytics with comprehensive portfolio management, trading and operation tools for their customers to make informed decisions, apply effective risk management, and practice efficient trading and operational scale. Others have started offering consultancy services to clients by providing advice on asset allocation. By bundling their respective solutions with products, these asset managers have built a system of integrated global offerings that enable them to better serve the needs of a wide range of clients based in different geographies, including SEA.



Potential impact on asset managers:

Providing customers with an integrated product offering and solution bundling option will enable asset managers to connect more closely with the digital natives whom are growing more prominently as a demographic segment in SEA. Moreover, asset managers will be able to further augment their value proposition for clients through the “shelf space” gained from these user-friendly digital and non-digital tools.

4. Delivering digital value-added services to enhance customer experience

While most asset managers tend to focus solely on product innovation, it is important to include a strong element of service innovation in order to possess a comprehensive innovation portfolio. To this end, digitally-enabled value-added services can be a key source of innovation and competitive advantage for asset managers. Such services include the use of web and mobile tools, as well as digitally-driven advisory to enhance the client experience. For example, to compete against new entrants for market share from millennials, there have been many cases of global

asset managers launching robo-advisory services through new service platforms. This rides on the fact that robo-advisors are expected to manage around 10 percent of total global AUM, or around US\$8 trillion, by 2020. Given that the demand for robo-advisory services in SEA is expected to reflect global digital trends, there is a significant opportunity for asset managers to grow AUM, win over digital natives, and engage customers more frequently through digital platforms.

Potential impact on asset managers:

Digital value-added services encourage a customer-centric model, which brings asset managers closer to the customer and accelerates the development of relevant offerings to address the increasing demand for differentiated products. In effect, it provides asset managers with a stronger lever to compete against new entrants and be more effective in gaining market share from the digital natives. The ability to serve the needs of multiple segments will be solid foundation in the asset managers’ aspiration for future expansion in SEA.

Nonetheless, in order to be able to provide digitally-enabled value-added services, asset managers need to build additional supporting operational and technological capabilities. A key consideration for accelerating time-to-market and enhancing functionality is the use of open application programming interfaces (APIs), which allows the asset manager to leverage best-in-class third-party software and integrate it into their solutions via a “plug and play” arrangement. Open APIs are particularly useful in the asset management industry, where market data acquisition continues to be a time-consuming process. With open APIs, asset managers can now link their systems with external data feeds, which provide real-time, historical and reference data without the need for complex data-management systems.

The time is now

In a decade where growth opportunities are increasingly obscure, the justification for asset managers to prioritise the SEA region becomes more pertinent. In order to increase the prospects of success in the region, business models need to be re-calibrated to suit the overall landscape. Asset managers looking to succeed in SEA need to consider a series of strategic choices to define their go-to-market strategy and address the oncoming SEA regional trends. The ability to integrate different types of innovation into their business models will be a determining factor that enables asset managers to successfully unlock and capture opportunities, as well as mitigate potential challenges that may emerge from shifting market dynamics. This is an opportune time for asset managers to position themselves for sustainable long-term growth in the region and focus on building plays that could help in truly differentiating themselves in the market.

The article is an excerpt of the report, “Capturing the multi-trillion dollar asset management opportunity in Southeast Asia” developed by Monitor Deloitte in Southeast Asia. To receive a copy of the full report, drop us an email at sgindustries@deloitte.com.



Global risk management survey, 10th edition: Heightened uncertainty signals new challenges ahead

“The rapidly changing environment suggests that risk management programmes may need to increase their ability to anticipate and respond flexibly to new regulatory and business developments and to emerging risks, for example, by employing predictive analytics tools.”

Somkrit Krishnamra, FSI Risk Advisory Leader

The years since the global financial crisis have seen a wave of regulatory change that increased both the scope and the level of stringency of regulatory requirements. New legislation and regulations have included the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) in the United States, Basel 2.5 and III, the US Federal Reserve’s Enhanced Prudential Standards (EPS), the European Market Infrastructure Regulation (EMIR), and Solvency II capital standards. In the years since the global financial crisis, financial institutions have had more time to understand the practical implications of these new regulations and what is required to comply.

Today, risk management is becoming even more important; financial institutions confront a variety of trends that have introduced greater uncertainty than before into the future direction of the business and regulatory environment. Economic

conditions in many countries continue to be weak, with historically low interest rates. The UK referendum to leave the EU (Brexit vote), coupled with US President Donald Trump’s pledge to renegotiate trade agreements with China and Mexico, raises the possibility that trade volumes may decline.

The continual increase in regulatory requirements may abate or even be reversed in 2017 as President Trump, the US Congress, and others have questioned whether regulatory oversight has gone too far. Strategic risk is increasing as entrepreneurial FinTech players are competing with traditional firms in many sectors. The rapidly changing environment suggests that risk management programmes may need to increase their ability to anticipate and respond flexibly to new regulatory and business developments and to emerging risks, for example, by employing predictive analytics tools.

Deloitte's *Global risk management survey, 10th edition* assesses the industry's risk management practices and the challenges it faces in this turbulent period. The survey was conducted in the second half of 2016—after the Brexit vote in the United Kingdom but before the US presidential election—and includes responses from 77 financial services institutions around the world that conduct business in a range of financial sections and with aggregate assets of US\$13.6 trillion.

Key findings

Cybersecurity. Only 42 percent of respondents considered their institution to be extremely or very effective in managing cybersecurity risk. Yet, cybersecurity is the risk type that respondents most often ranked among the top three that would increase in importance for their institution over the next two years (41 percent). In recognition of the broad senior management and board awareness of cybersecurity risks, most respondents did not report challenges in securing funding or in communicating with senior management or the board. However, many boards of directors face the challenge of securing sufficient technical expertise to oversee the management of cybersecurity risk. The issues cited most often as extremely or very challenging were *hiring or acquiring skilled cybersecurity talent* (58 percent) and *getting actionable, near-real-time threat intelligence* (57 percent).

Institutions less effective at managing newer risk types. Roughly 80 percent or more of respondents said their institution is extremely or very effective at managing traditional risk types such as *liquidity* (84 percent), *underwriting/reserving* (83 percent), *credit* (83 percent), *asset and liability* (82 percent), *investment* (80 percent), and *market* (79 percent). Newer risk types present more challenges, and fewer respondents rated their institution highly at managing *model* (40 percent), *third party* (37 percent), and *data integrity* (32 percent). Given the heightened geopolitical uncertainty and change during the period when the survey was conducted, as evidenced by the UK Brexit referendum and the discussion of US trade policies during the US presidential

campaign, it is notable that the percentage of respondents who considered their institution to be extremely or very effective at managing geopo-litical risk was only 28 percent, a sharp drop from 47 percent in 2014.

Significant challenges posed by risk data and IT systems. Few respondents considered their institution to be extremely or very effective in any aspect of risk data strategy and management, such as *data governance* (26 percent), *data marts/warehouses* (26 percent), and *data standards* (25 percent). Even fewer respondents rated their institution this highly in other areas including *data sourcing strategy* (16 percent), *data process architecture/workflow logic* (18 percent), and *data controls/checks* (18 percent). Many respondents also had significant concerns about the agility of their institution's risk management information technology systems. Roughly half of the respondents were extremely or very concerned about *risk technology adaptability to changing regulatory requirements* (52 percent), *legacy systems and antiquated architecture or end-of-life systems* (51 percent), *inability to respond to time sensitive and ad-hoc requests* (49 percent), and *lack of flexibility to extend the current systems* (48 percent).

Battle for risk management

talent. With the increase in regulatory requirements, there has been greater competition for professionals with risk management skills and experience. Seventy percent of respondents said *attracting and retaining risk management professionals with required skills* would be an extremely or very high priority for their institution over the next two years, while 54 percent said the same about *attracting and retaining business unit professionals with required risk management skills*. Since cybersecurity is a growing concern across all industries, the competition is especially intense for professionals with expertise in this area. As noted above, when asked how challenging various issues in managing cybersecurity risk were, the item cited third most often as extremely or very challenging was *hiring or acquiring skilled cybersecurity talent* (58 percent).

Greater use of stress testing. Regulators are increasingly using stress tests as a tool to assess capital adequacy and liquidity, and 83 percent of institutions reported using capital stress testing and the same percentage reported using liquidity stress testing. For both types of stress tests, more than 90 percent of institutions reported using it for *reporting to the board, reporting to senior management, and for meeting regulatory requirements and expectations*. For both capital and liquidity stress tests, the two issues most often rated as extremely or very challenging concern IT systems and data: *stress testing IT platform* (66 percent for capital stress testing and 45 percent for liquidity stress testing) and *data quality and management for stress testing calculations* (52 percent for capital stress testing and 33 percent for liquidity stress testing).

Increased importance and cost

of compliance. Thirty-six percent of respondents cited *regulatory/compliance risk* as among the three risk types that will increase the most in importance for their business over the next two years, the risk named second most often. Seventy-nine percent of respondents said that regulatory reform had resulted in an *increased cost of compliance* in the jurisdictions where it operates, and more than half the respondents said they were extremely or very concerned about *tighter standards or regulations that will raise the cost of doing existing business* (59 percent) and the *growing cost of required documentation and evidence of programme compliance* (56 percent).



Increasing oversight by boards of directors.

Eighty-six percent of respondents said their board of directors is devoting more time to the oversight of risk management than it did two years ago, including 44 percent who said it is devoting considerably more time. The most common risk management responsibilities of boards of directors are *review and approve overall risk management policy and/or ERM framework* (93 percent), *monitor risk appetite utilisation including financial and nonfi-nancial risk* (89 percent), *assess capital adequacy* (89 percent), and *monitor new and emerging risks* (81 percent). However, there is more work to do in instilling a risk culture, where no more than roughly two-thirds of respondents cited as board responsibilities *help establish and embed the risk culture of the enterprise* (67 percent) or *review incentive compensation plans to consider alignment of risks with rewards* (55 percent).

CRO position almost universal. Ninety-two percent of institutions reported having a CRO position or equivalent, yet there remains significant room for improvement in the role. The CRO does not always report to the board of directors (52 percent), which provides important benefits and is generally a regulatory expectation. Although the CRO meets regularly with the board of directors at 90 percent of institutions, many fewer institutions (53 percent) reported that the CRO meets with the board in executive sessions. The CRO is the highest level of management responsible for risk management at about half of the institutions (48 percent), with other institutions placing this responsibility with the CEO (27 percent), the executive-level risk committee (16 percent), or the chief financial officer (CFO) (4 percent). The most common responsibilities for the CRO were to *develop and implement the risk management framework, methodologies, standards, policies, and limits* (94 percent), *identify new and emerging risks* (94 percent),

and *develop risk information reporting mechanisms* (94 percent). Despite the increasing importance of strategic risk and the related need for risk management of business strategy and decisions, fewer respondents said the CRO has the responsibility to *provide input into business strategy development and the periodic assessment of the plan* (65 percent), *participate in day-to-day business decisions that impact the risk profile* (63 percent), or *approve new business or products* (58 percent). And while regulators have placed greater focus on the importance of conduct and culture, *review compensation plan to assess its impact on risk appetite and culture* was identified as a responsibility by 54 percent of the respondents.

Steady increase in the adoption of ERM.

Seventy-three percent of institutions reported having an ERM programme, up from 69 percent in 2014 and more than double the 35 percent in 2006. In addition, another 13 percent of institutions said they are currently implementing an ERM programme, and 6 percent said they plan to create one. An institution's ERM framework and/or policy is a fundamental document that should be approved by the board of directors, and 91 percent of institutions said this had occurred, up from 78 percent in 2014. Two of the issues frequently cited as extremely or very high priorities for their risk management programmes over the next two years concerned IT systems and data: *enhancing risk information systems and technology infrastructure* (78 percent) and *enhancing the quality, availability, and timeliness of risk data* (72 percent). Another issue considered to be an extremely or very high priority by a substantial majority of respondents was *collaboration between the business units and the risk management function* (74 percent), which is essential to having an effective three lines of defense model.

Evolution of risk management

Over the 20 years that Deloitte has been conducting its *Global risk management survey* series, the financial services industry has become more complex with the evolution of financial sectors, the increased size of financial institutions, the global interconnectedness of firms, and the introduction of new products and services. At the same time, regulatory requirements and expectations for risk management have broadened to cover a wider range of issues and also become more stringent, especially in the years since the global financial crisis. Deloitte's survey series has assessed how institutions have responded to these developments, the substantial progress that has occurred in the maturity of risk management programmes, and their challenges. In general over this period, risk management programmes have become almost universally adopted, and programmes now have expanded capabilities. Boards of directors are more involved in risk management and more institutions employ a senior-level CRO position. The following are some of the key areas where the survey series has documented an increasing maturity in risk management programmes.

More active board oversight. In 2016, 93 percent of respondents said their board of directors reviews and approves the overall risk management policy and/or ERM framework, an increase from 81 percent in 2012.

More use of board risk committees. It is a regulatory expectation that boards of directors establish a risk committee with the primary responsibility for risk oversight. The use of a board risk committee has become more widespread, increasing from 43 percent of institutions in 2012 to 63 percent in 2016, although there is clearly room for further adoption (figure 1).

Increased adoption of CRO position.

Over the years, there has been a continual increase in the percentage of institutions with a CRO position or equivalent, from 65 percent in 2002 to become almost universal with 92 percent in 2016 (figure 2). At the same time, the CRO is a more senior-level position reporting to higher levels of the organisation. In 2016, 75 percent of respondents said the CRO reports to the CEO, a substantial increase from just 32 percent in 2002. Similarly, the CRO more often directly reports to the board of directors – at 52 percent of institutions in 2016 up from 32 percent in 2002. Seventy-seven percent of institutions reported that the CRO is a member of the executive management committee, an increase from 58 percent in 2010.

Wider set of responsibilities for the CRO.

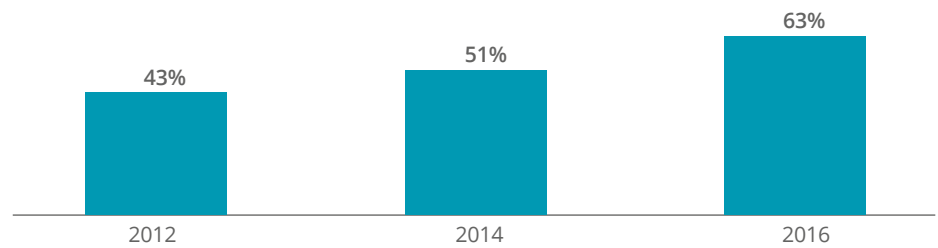
Over time, the CRO and the independent risk management programme have been given a wider set of responsibilities at many institutions. For example, 92 percent of respondents said a responsibility of the CRO was to *assist in developing and documenting the enterprise-level risk appetite statement* compared with 72 percent in 2008. Similarly, 76 percent said a CRO responsibility is to *assess capital adequacy*, while this was the case at 54 percent of the institutions in 2006.

Widespread adoption of ERM programme.

The adoption of ERM programmes has more than doubled, from 35 percent in 2006 to 73 percent in 2016 (figure 3). The implementation of ERM programmes moved upwards in 2010, which was likely due to post-financial crisis focus on enhancing risk management.

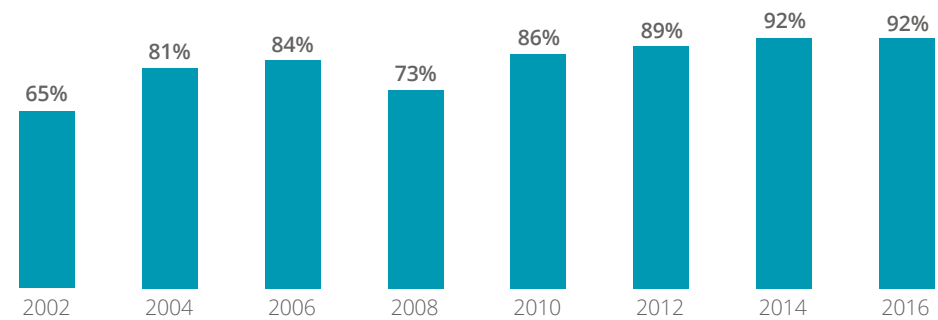
While there has been considerable progress in the continued development and maturation of risk management programmes, there remains considerable work to do. In this uncertain landscape, financial institutions are well-advised to remain vigilant in monitoring regulatory developments and building the capabilities to respond quickly to regulatory changes and remain in compliance. They should also consider being actively involved in the debate over the direction of regulation.

Figure 1: Percentage of institutions placing primary responsibility for risk management at the level of the board of directors with a board risk committee



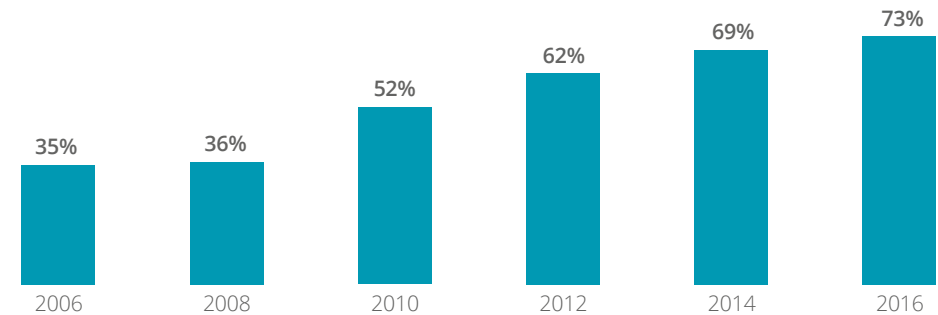
Source: Deloitte analysis.

Figure 2: Percentage of institutions with a CRO or equivalent



Source: Deloitte analysis.

Figure 3: Percentage of institutions with an ERM program in place



Source: Deloitte analysis.

With the future direction of risk management more uncertain than it has been for years, perhaps the most important lesson is that many risk management programmes should become more nimble. In the coming years, risk management programmes should focus not only on being effective and efficient, but equally on acquiring the agility to respond flexibly to a new set of demands on risk management.

The article is an excerpt of the report, "Global risk management survey, 10th edition: Heightened uncertainty signals new challenges ahead" published by Deloitte University Press. To receive a copy of the full report, drop us an email at sgindustries@deloitte.com.

Building the bank of the future

“Banks can take advantage of a customer-centric strategy, behavioural analytics, design thinking, more flexible and modular IT systems, and data-driven change management to create next-generation business models to survive in an age of disruption.”

Ho Kok Yong, SEA Financial Services Leader and SEA Banking & Securities Leader

Many banks find themselves in an untenable position today. Their reliance on outdated and overloaded legacy systems and architecture is compromising their ability to develop and sell appealing products and services to increasingly demanding, tech-savvy customers.

The challenge they face – to build a new, digital organisation centred on the human experience – is substantial.

Adopting a more flexible, efficient, scalable, automated, and secure IT environment is a start. And banks have the new technology options for doing so. But IT restructuring is mere table stakes, necessary but not sufficient for the digital business transformation banks strive to undertake. The bank of the future will abandon its traditional focus on silo-ed products and services and completely refocus on the customer experience with a next-generation technology foundation.

Making the drastic shift necessary to deliver smarter, more transparent, seamless, and connected digital experiences requires a well-thought-out digital business strategy that addresses changing customer needs, a new, flexible

architecture that enables the organisation to respond to changing customer expectations rapidly, and an effective change management programme to make it stick.

Banking on a new business strategy

Digital transformation is not just about technology. Organisations must first fundamentally rethink their business strategies. Form must follow function.

The digital banking transformation begins with IT and business leaders coming together to define the organisation's strategic ambitions. They can find inspiration beyond their own organisations and outside of their industry, in emerging technologies and among competitors and innovative leaders in other industries.

Any bank's strategy will also be informed by the degree of change it can realistically achieve. For some organisations, that may mean simply digitizing what they do today. Others may want to create a new business division to attract a new customer segment. Still others will pursue the bold vision of creating an entirely new bank. There's no right or wrong goal. But it is critical that IT and business leaders clarify their organisations' strategic goals and align initiatives accordingly.

The new business strategy will directly link to the value proposition the bank wants to offer its customers, while supporting customers' expectations. This means thinking about human interactions, emotions, and encounters as part of a more holistic understanding of the customer experience. It's not enough to make transactions more seamless, transparent, and integrated; consumers are also looking to be surprised and delighted.

One population many banks may seek to reach through their transformations are millennials. This group, 80 million strong, spends US\$600 billion annually; by 2020, they will be spending US\$1.4 trillion. Their expectations aren't shaped by traditional banking experiences, and they are changing the expectations of other consumers.

Millennials expect every company with which they do business, including financial institutions, to provide the seamless experiences they have with Amazon or Uber. They're more comfortable than other generations with sharing personal information, if they receive some benefit or incentive in return. They demand intuitive, easy, and elegant digital experiences. They're not just looking for a bank—they're looking for support in navigating their lives.

Banks that win over millennials deliver customised services and unique experiences, create smart products that self-optimize around customer goals, offer services that anticipate future needs, and deliver higher levels of security and trust.

Around one-third of respondents (34 percent) to the Deloitte Dbrief poll have a very strong focus on the customer experience. Using methods rooted in design thinking, IT and business leaders can better understand shifting customer expectations. Focus groups and surveys only go so far; banking leaders eager to transform their organisations may want to get more sophisticated insights by taking a human-centred design approach – going out into the world to walk in their customers' shoes. Ethnographic research and in-home observations, for example, help uncover unmet needs and find answers to more nuanced questions such as: How does money flow through consumers' lives? Where does money go and how is it used? What problems outside the traditional banking experience can we help solve for our customers?

To build on research insights like these, CIOs can also implement new software to go beyond the basic customer data spit out by a CRM system. New segmentation tools, predictive analytics, and machine learning can help banks anticipate customer needs, get smarter about them over time, and drive decision-making.

Systems of engagement

Once banks have a digital business strategy and an understanding of the experiences they want to deliver, CIOs and their teams can build the technology platforms to underpin their transformation. The monolithic legacy systems currently in place make it difficult for banks to respond to shifting customer expectations.

The bank of the future will be built on a next-generation architecture that offers vastly greater capabilities for much lower cost. A core set of technical design principles will guide the development of this platform, including:

Flexible and nimble architecture:

IT leaders can minimise duplication by componentising common functions and improve responsiveness to new business demands by designing components so new functions can be added to the IT landscape without affecting the customer or the organisation.

Efficient scalability to support high

throughput: Architecture should scale easily by component. CIOs can ensure this by continually evaluating components against business enablers and architectural principles.



Automated and digitized processes:

Simplifying an automation process reduces turnaround and delivery times, lowers delivery costs, and improves customer service delivery and consistency across channels.

Simpler and speedier development:

IT leaders can employ agile development to deliver capabilities incrementally by priority, reviewing and updating application architecture along the way to accommodate new capabilities. They can also leverage out-of-the box functionality and limit customisation.

Highly secure systems:

Banks remain cybercriminals' biggest target. IT leaders can limit their ability to hack and harvest data by segregating sensitive data and leveraging leading-class encryption technology.

Customer-centric data:

By building and leveraging a consistent version of customer data, IT leaders can enable their banks to deliver highly personalised service, real-time recommendations, and a holistic view of the financial value of a customer.

The goal is an integrated platform delivered as a service – at once data-rich and capital-light. Respondents to the Deloitte Dbrief poll cite such an integrated solution platform as the most important priority for digital banking transformation, followed by a superior user experience.

Not surprisingly, building that engagement platform will take time. CIOs can create a five- to ten- year vision to guide the digital bank as it makes the radical shift from selling individual products and services to connecting people and money in new ways.

Public cloud technologies will enable IT leaders to scale up and down and shift costs from fixed to variable. They can also take advantage of the latest best-of-breed financial technology solutions, aggregating those into an end-to-end system to deliver a differentiated customer experience. Interoperability will be key. A micro-services approach and open API platform can enable banks to quickly and easily weave components in and out of the value chain. With intelligent analytics operating in the background, banks will be able to anticipate and adapt to changing needs, providing greater value over time.

The science of organisational transformation

Banks face many change management challenges as they evolve their strategies, systems, and processes. Chief among them, according to the Deloitte Dbrief poll, are creating an effective vision and aligning everyone around it (17 percent); clarifying the effects so everyone understands the changes (17 percent); engaging and involving enough stakeholders to obtain sufficient input and broad support (13 percent); and preparing people with sufficient instructions, training, and leadership messages to drive adoption when systems go live (13 percent).

The problem with most change management programmes is that they focus on adoption resistance at the time a new system is rolled out. Given the challenges associated with bank transformation, it might be better to begin at a much earlier point, aligning key executives and engaging the right individuals in the effort.

The good news is that change management itself is evolving from art to science. The challenge for banks is to bring their diverse stakeholders on board with the transformation journey.

It's a mistake to take a broad-brush approach to change management—appealing to everyone in the same way leaves many people behind. Instead, banks can take a page from other industries that have managed broad demographic groups effectively.

CIOs can take a leadership role by harnessing tools and data to guide the change management effort. By implementing adoption analytics, IT leaders can focus on continually assessing stakeholder perceptions and risks throughout the process, enabling targeted messaging and training based on that data. CIOs can even build adoption scorecards around key stakeholder requirements to assess organisational readiness to move forward.

One size doesn't fit all

Not all banks will remake themselves in the same mould. One bank of the future may not resemble another. But the banks that succeed at long-term transformation will be clear about the ambitions and experiences they're pursuing, invest in the engagement platforms required to deliver them, and employ ongoing, data-driven change management to ensure organisation-wide adoption.

This article, written by Dounia Lievan, Managing Director; Jeff Wordham, Leader Of Dublin and Principal; Dan McHugh, Principal; and Gys Hyman, Principal, Deloitte Consulting in the US first appeared on the Wall Street Journal's online CIO Journal in December 2016. For more articles, visit www.deloitte.wsj.com/cio.

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