

Performance

**Infrastructure
in Australia**

Interview with Damien Frawley,
Chief Executive at QIC

Page 6

Where do we go from here?

The maturation of operational
due diligence of outsourced
investment management in
Australia

Page 12

Disruption

A new way to generate alpha

Page 26

Blockchain & Cybersecurity

Let's discuss!

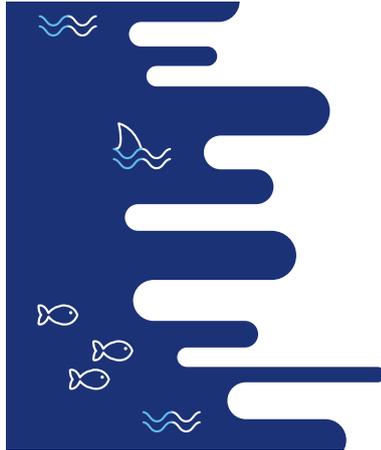
Page 42



In this issue



Page 6



Page 12



Page 18

06

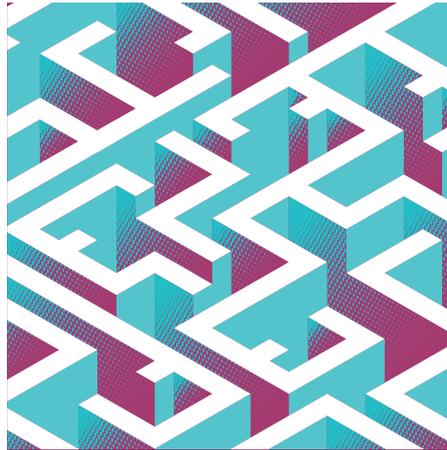
Interview:
Infrastructure in Australia
Interview with Damien Frawley,
Chief Executive at QIC

42

Blockchain & Cybersecurity
Let's Discuss!



Page 26



Page 34



Page 42

12

Where do we go from here?

The maturation of operational due diligence of outsourced investment management in Australia

18

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

26

Disruption

A new way to generate alpha

34

New risk

In a time of uncertainty and change

50

Investment fund distribution

How will innovative thinking in fund distribution create a competitive advantage?

58

A more objective alternative for pension fund reporting

64

Making Japanese M&A work for companies and investors

70

Expecting a smooth evolution of AIFMD

Foreword



Although the summer holiday season is drawing to a close, for this final edition of Performance in 2017, we have stayed true to our travel bug and relocated from our previous destination- South East Asia - to Japan where we take a closer look at M&A transactions. Heading further south, we reach a country perhaps more renowned for its animals and culture than investments. However, for those in the know, Australia is not simply all about super annulation funds but, following a conversation with the Chief Office at QIC, it is, in fact, the global leader in infrastructure investments for the last 20 years resulting in positive impacts for not only investors but also local residents, companies and communities.

In addition to circumnavigating the globe, three key themes dominate this edition – control, cybersecurity and innovation. Controls in the form of due diligence and operational risk oversight currently dominate the Australian investment management sector. Lessons learnt from their models can be applied to many sectors thereby promoting greater alignment on a global scale.

From due diligence to disruption – a somewhat unusual word for the financial sector but one that is becoming more commonplace. Disruption as a phenomenon, whereby a more practical and often cheaper solution is promoted for an existing process, was first seen in the computer industry but CPR Asset Management is now turning this concept into a positive investment theme as further explained herein.

A regular feature across financial magazines and conferences is one of regulation. This edition is no different,

yet regulation is not always about a specific rule or piece of legislation, but can also be linked to challenges resulting from regulation. Take cybersecurity or blockchain as examples – both of these stem from our increased dependency on information technology coupled with the internet and our wish to revolutionize many areas of both personal and professional lives. Yet both require the implementation of proper controls and oversight, two functions that are critical to the success of the investment management industry. Again, compliance and risk management plus the adoption of the SVR approach come to the fore.

Yet technology has its positive aspects as explored by innovative thinking – is smart sourcing the answer to gaining the competitive advantage in this increasingly technological era? At some point in the future, financial firms will have to embrace innovation to meet the heightened risk and compliance challenges. Taking the theme of innovation one-step further, discover how pension funds have started using objective indicators to compare not only costs but also pension fund performance.

On this note, we hope that our continued quest of providing you the reader with challenging and stimulating articles has been fulfilled. Who knows, perhaps next time, you may be the one contributing to the many debates within our industry.

Vincent Gouverneur
EMEA Investment
Management Leader

Nick Sandall
EMEA Co-Leader
Financial Services Industry

Francisco Celma
EMEA Co-Leader
Financial Services Industry

Editorial

Dear Readers,

In this edition of Performance Magazine we take a trip down under to Australia, home of kangaroos, koala bears, and an AU\$2.7 trillion wealth management industry.

Despite its relatively low population of around 20 million people, Australia punches well above its weight with regards to the wealth management industry.

Australian wealth was originally built off the gold rush of the 1850s, and since that time has mined multiple other natural resources across the breadth of the country, including coal, iron ore, and lead. Australia has also benefited from the growth of Asia, and specifically China, which helped it navigate a relatively untroubled path through the 2007-2008 global financial crisis.

Local legislation in Australia requires all Australians to contribute a portion of their earnings (currently 9.5 percent) into "Superannuation Funds" in order to generate an income stream on retirement. These contributions have been a key driver in growing the Superannuation sector in Australia, which is now the fourth largest in the world and ranked second in the Mercer Global Pension Index.

Deloitte Actuaries have predicted Superannuation funds will continue to develop, reaching an estimated AU\$9.5 trillion by 2035. Alongside the continued rise of the Asian economy, the Australian wealth industry is ideally placed to participate.

As the Australian wealth market has grown, there has been a steady increase in portfolio diversification, with significant

opportunities for fund managers across the globe. The size and accumulation nature of the sector has also fostered the growth of world-class infrastructure investors. Australia was home to some of the world's first infrastructure financial assets, and it continues to be a market leader in this sector with globally recognized managers such as IFM Investors, Macquarie, AMP Capital, and QIC.

In a previous edition, we published an article by IFM Investors in relation to implementing currency hedging. Now we interview QIC's Chief Executive Damien Frawley to understand his view on infrastructure assets in Australia and overseas and why he thinks it is an investment with multiple benefits.

As the sector grows, so does its sophistication and inevitably the regulatory oversight. This regulation is as multifaceted as always, but in this edition we look at Operational Due Diligence and what local and overseas investment managers should expect as requirements come into place.

To unpack the consequences of these additional requirements, we have spoken to Philip Hope, the previous CEO of Morse Consulting and now consulting Partner in Deloitte Sydney.

In summary, Australia's unique superannuation system has driven a large, diverse, and sophisticated market with world-class skills in asset classes such as infrastructure—a system that will drive continued growth opportunities for local and overseas managers albeit with increased regulatory demands.



Simon Ramos
Editorialist

Neil Brown
Australia Investment Management Leader

Please contact:

Simon Ramos
Partner
Advisory & Consulting
Deloitte Luxembourg
560, rue de Neudorf
L-2220 Luxembourg
Grand Duchy of Luxembourg

Tel: +352 451 452 702
Mobile: +352 621 240 616
sramos@deloitte.lu
www.deloitte.lu

Infrastructure in Australia

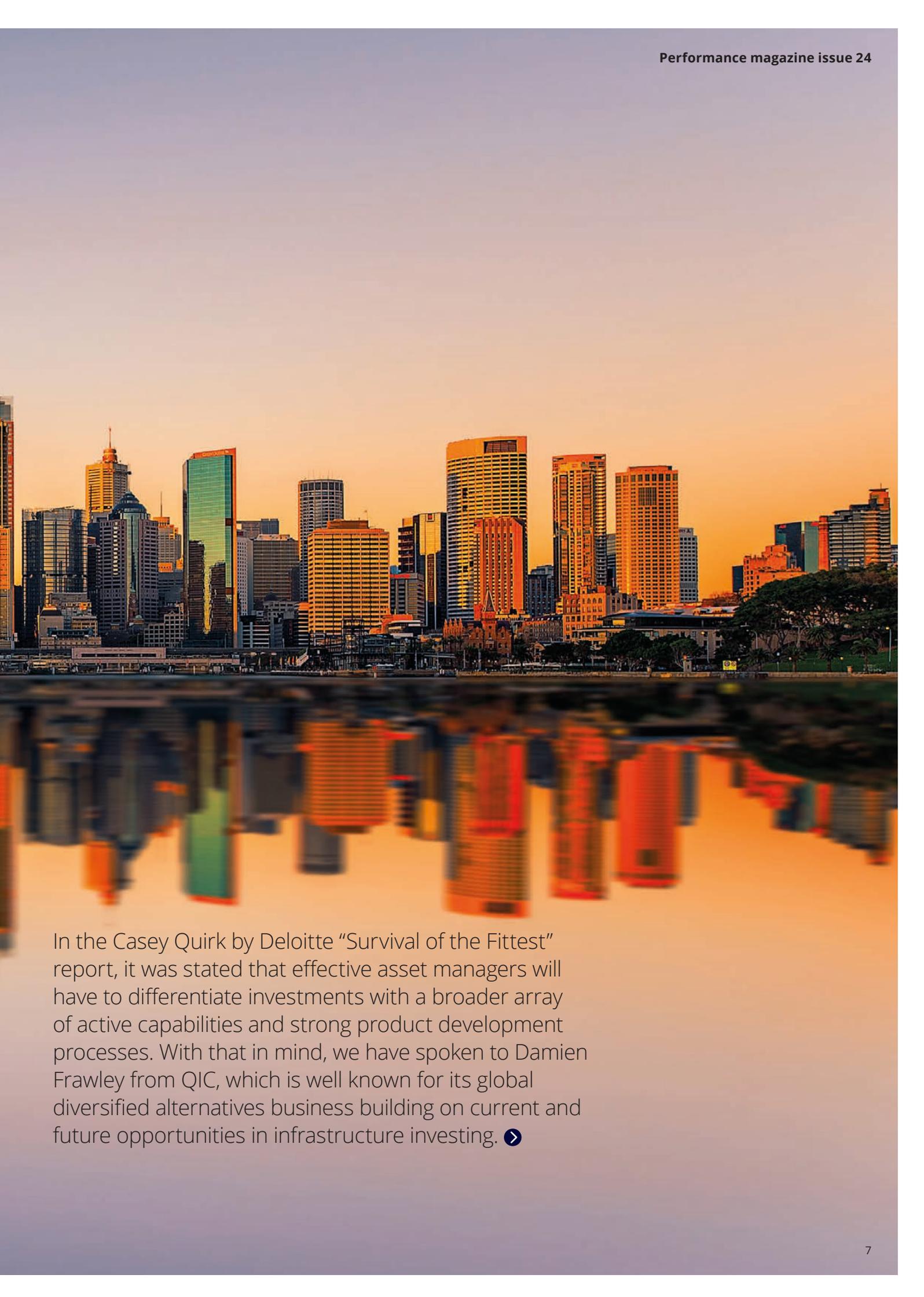


Neil Brown, Partner in Assurance & Advisory at Deloitte had a conversation with Damien Frawley, Chief Executive at QIC to get his perspective on how he leads the Executive Committee to achieve QIC's strategic and business objectives.



Damien Frawley

Damien has over 26 years' experience in the financial services sector. He has a strong focus on developing and executing strategy, particularly around growth and sales. Most recently, Damien was the country head of BlackRock Australia, responsible for managing \$45 billion of assets on behalf of clients. Prior to this, Damien was BlackRock's Head of Account Management, overseeing sales, marketing and product efforts across institutional and retail channels. Damien's career has also included roles at Merrill Lynch Investment Management, Barclays Global Investors and Citibank. On a personal note, Damien is a Queenslander and prior to his career in financial services he represented Australia in rugby union.



In the Casey Quirk by Deloitte “Survival of the Fittest” report, it was stated that effective asset managers will have to differentiate investments with a broader array of active capabilities and strong product development processes. With that in mind, we have spoken to Damien Frawley from QIC, which is well known for its global diversified alternatives business building on current and future opportunities in infrastructure investing. ➤



Deloitte: What is your view of infrastructure investment in Australia?

Over the past two decades, Australia has become a global leader in infrastructure investment. The strength of the infrastructure class in Australia has been particularly aided by institutional investors' willingness to diversify portfolio exposure away from traditional global equity and debt capital markets. Given that our nation's superannuation system has created a large savings pool, over AU\$2 trillion within the last 25 years, Australia now finds itself in an ideal position to investigate alternative investment solutions.

Through investing in infrastructure, institutional investors have been able to constructively work with all levels of government. This has led to the creation of numerous partnerships which have delivered outcomes that have had positive knock-on effects for various parties including local residents, communities, businesses, and investors.

In February 2017, Infrastructure Australia identified approximately AU\$60 billion in high-priority and priority projects over the next 15 years.

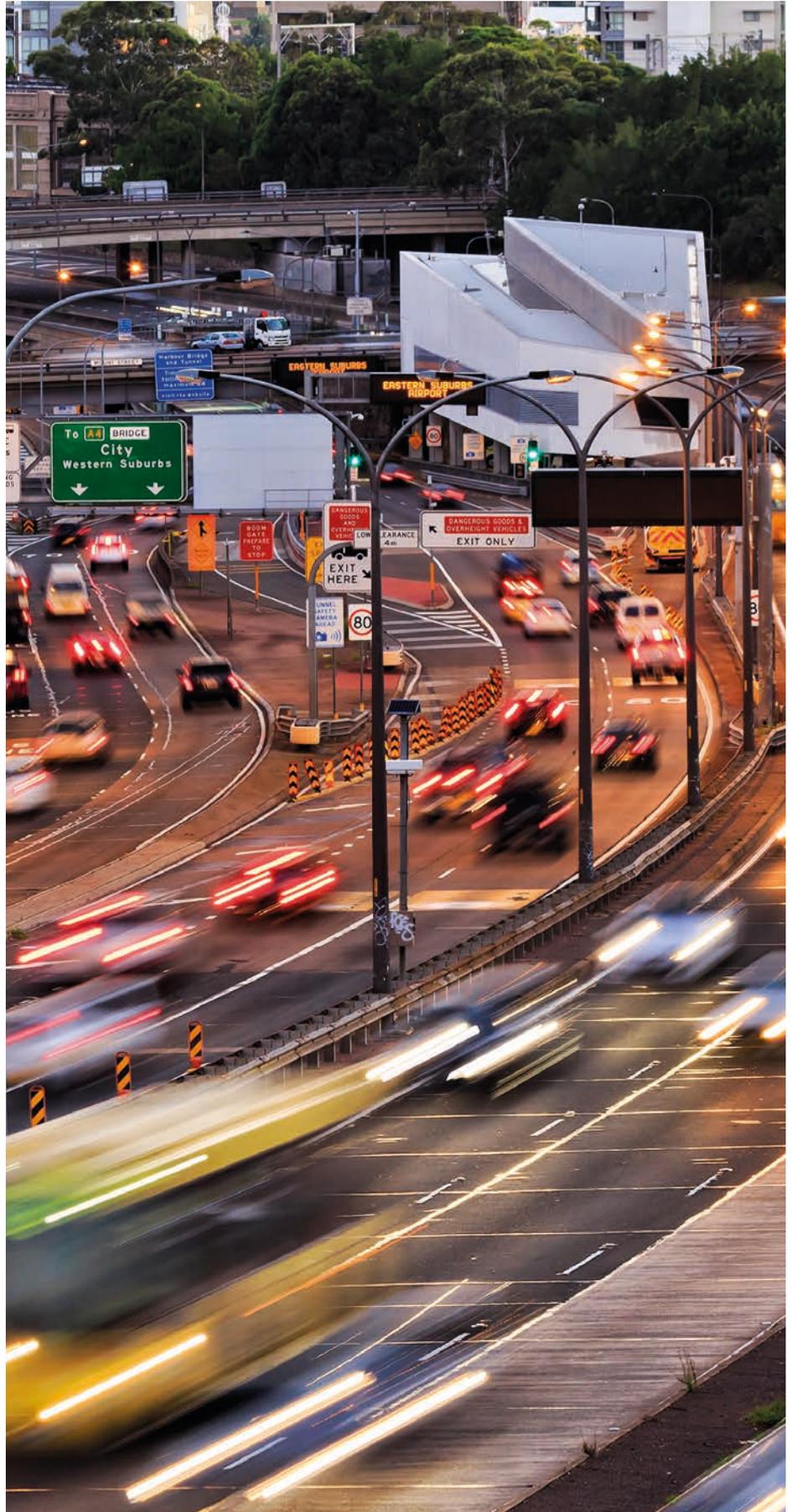
The competition for quality infrastructure assets can be intense, and prices reflect that fact. What qualities do infrastructure assets offer and what is QIC's approach to ensuring it is creating long-term value for investors?

Infrastructure assets have a number of desirable qualities, including a long-term investment horizon, increased cash flow predictability where the asset operates in a monopolistic environment like a seaport or airport, revenues with direct or indirect inflation linkage, relatively transparent legal and regulatory frameworks, and upside potential afforded through increased demand or expansion optionality.

Unlisted infrastructure assets, one of QIC's core focus areas, typically possess additional attractive features. These can include reduced correlation to listed equity markets, which is important for portfolio diversification, and quite often the ability to have direct governance rights at the asset level. This provides an enhanced ability to directly influence the strategy and risk appetite applied to the asset, thus better aligning ourselves with portfolio objectives. While noting that these benefits can come at the expense of reduced liquidity, it is unsurprising that the popularity of unlisted infrastructure as an asset class continues to grow. This seems particularly logical when we consider relative track record. For example, in an Australian context, MSCI data shows that unlisted infrastructure has outperformed equities, bonds, and property in delivering an average return greater than 13 percent per annum over the past 15 years.

Clearly, increased investor appetite brings greater competition in what can be a sparsely populated universe of prospective infrastructure assets. QIC is focused on being highly selective and disciplined in our approach. We prioritize the opportunities where there is enhanced scope for achieving relative value for our clients.

In addition to this, we also seek to prioritize opportunities of a bilateral or less competitive nature to the extent that we pursue investments through a competitive process.



When selecting global markets in which to invest, what key characteristics do you require?

From a geographic perspective, QIC typically focuses on infrastructure investments in OECD countries. This is mainly because of the relatively well-established and transparent legal, regulatory, and economic structures. We strongly believe in the merits of portfolio diversification, so we actively seek out investments across multiple jurisdictions.

More importantly, we also look to unpick the underlying macroeconomic drivers and other asset-specific factors relating to each opportunity from the outset. This process allows us to proactively assess portfolio fit and client suitability through rigorous economic scenario analyses. This includes a correlation analysis with the existing assets of the clients in question.

What qualities make Australia one of the global leaders in infrastructure?

We believe there are abundant factors that contribute to the nation being one of the global leaders in infrastructure. Firstly, Australia was a pioneer of facilitating private investment in public infrastructure. This means that the Australian market is mature and well-accustomed to the sorts of transactions, structures, and models that can be employed. It also allows the market to tailor innovative solutions to specific situations. Secondly, Australia has the same level of legal stability as other OECD countries but boasts relatively favorable demographics and a macroeconomic outlook at the upper end of all OECD member states. This is particularly aided by Australia's advantageous proximity to Asia, given the expected growth potential in this region. Thirdly, Australia is a large country, meaning its infrastructure needs and requirements are extensive. In February 2017, Infrastructure Australia identified approximately AU\$60 billion in high-priority and priority projects over the next 15 years. These projects provide a reasonable pipeline of opportunities for the private sector to become involved either directly or indirectly through schemes like the Federal Government's Asset Recycling Initiative. This initiative encouraged brownfield assets to be sold or leased to generate funds for new infrastructure investment. Further afield, QIC has previously invested in infrastructure assets in emerging markets such as India. We continue to selectively assess opportunities as they arise and to the extent our clients have appetite. Investing in such jurisdictions does not come without challenges. However, as an organization, we recognize and appreciate the long-term opportunities within these markets, further the importance of forging value-adding relationships with local and aligned partners. Making sure these relationships are cemented well ahead of time puts us in prime position for a prosperous and stable future.

Australia has the same level of legal stability as other OECD¹ countries but boasts relatively favorable demographics and a macroeconomic outlook at the upper end of all OECD member states. This is particularly aided by Australia's advantageous proximity to Asia given the expected growth potential in this region.



1. OECD - The Organisation for Economic Co-operation and Development



What opportunities do you believe recent government infrastructure plans, such as those seen in the US, will offer investors?

When designed and implemented effectively, infrastructure can drive economic growth in communities and improve quality of life. Any plans by governments to facilitate new infrastructure or sponsor upgrades of existing assets should be applauded. Given governments' increasing fiscal constraints, it follows that there should be increased scope for parties such as QIC to actively partner with governments to reduce their funding gap. This can be achieved through a private deployment of funds in attractive economic infrastructure opportunities.

With respect to the US, it is clear that there has been an underinvestment of investment in critical infrastructure. With estimates of the funding gap required to bring America's infrastructure to a state of good repair potentially running into the trillions of dollars, it is obvious that private funding will be essential. However, it is important to note that previous attempts to modernize the procurement and funding of infrastructure within the US have been slow and inconsistent, with some high-profile process failures such as Chicago Midway International Airport contributing to investor caution.

While limited details have been provided to date, President Trump's infrastructure plan represents a potential catalyst to revitalize US infrastructure through partnering with the private sector. Recent market commentary suggests as much as US\$200 billion could be sought from the private sector. Should this come to pass, it would represent a significant opportunity for parties such as QIC to invest in critical infrastructure in the world's biggest economy. More importantly, it is pleasing to see growing recognition of the private sector's ability to deliver and manage infrastructure more efficiently through better procurement methods, market discipline, and a long-term focus on optimizing the asset management lifecycle.

From QIC's perspective, we are actively assessing the sectors and regions most likely to benefit from this potential policy shift and increased activity levels. As a long-term infrastructure owner, we will be looking to work with governments at all levels on the best way for the private sector to deliver value for money and bring innovation to P3s (Public Private Partnerships) and asset-recycling programs. In particular, we will be able to offer a wealth of experience drawing on QIC's key involvement in leasing assets from governments and institutions within Australia and abroad, such as the Port of Melbourne, Brisbane Airport, and the parking system at Ohio State University. ●

Any plans by governments to facilitate new infrastructure or sponsor upgrades of existing assets should be applauded.



Where do we go from here?

The maturation of operational due diligence of outsourced investment management in Australia.

Philip Hope

Partner
Assurance & Advisory
Deloitte

Mark Archer

Director
Assurance & Advisory
Deloitte

Jenna Mollross

Manager
Assurance & Advisory
Deloitte



Operational risk is typically defined as a failure of people, processes, and systems. There are numerous potential opportunities for an operational breakdown within an investment management company, as in any business.¹

Although definitions vary slightly, the term operational due diligence (ODD), in our view, refers to an analysis of an investment manager's operational capabilities and the ability of their infrastructure to support the execution of their investment thesis. The purpose of the analysis is to identify the levels of residual operational risk within the investment management company, with the ODD process reviewing qualitative aspects of an investment management company—such as organizational structure, personnel, governance, policies and processes, business continuity planning, and service provider monitoring.

ODD considers the risk of loss stemming from issues related to middle and back-office functions. Such losses could be incurred from issues such as an incorrect valuation of a fund's investment portfolio, poor business continuity

processes resulting in potential loss of trading capabilities, or poor monitoring of cash movements. ODD also considers the cultural aspects of a firm, including incentivization structures, as well as risk management and compliance reporting processes, to ensure adequate transparency across the end-to-end operations of the fund manager's organization.

Historically, investment due diligence has been the main focal point when looking at making an investment decision or when reviewing existing investments. A focus on the performance return drove the thought process of a large majority of investors throughout the late twentieth century. This attitude changed somewhat due to a number of high profile events in 2008–2009. ➤

1. APRA Insight, Issue One 2014

Evolution

ODD has come to the forefront as a result of some high profile events over the past 10 years, with the Madoff case in the US and the Weaving Capital case in the UK demonstrating the need for increased operational scrutiny and ODD practices. Both the Madoff (2008) and Weaving Capital (2009) hedge fund failures were the result of weak middle and back-office procedures (including cash controls) and poor corporate governance structures. It has been observed that many of the red flags that were present in the Madoff scheme were operational in nature.

Furthermore, many recent failures of hedge funds where no fraud was present can be attributed to unmitigated operational risks that were inherent in those funds. Consequently, many individual and institutional hedge fund investors saw the lessons from the Madoff Ponzi scheme as an opportunity to refocus their attention toward ODD to prevent red flags from going unnoticed again.

Seeking to ensure that similar events did not recur, the Securities and Exchange Commission (SEC) and its UK counterparts soon introduced significant improvements to their oversight by enhancing safeguards for investors' assets and improving their risk-assessment capabilities.

In particular, since the Madoff scandal broke, the number of reviews of hedge funds' cash management policies and controls, transparency in reporting, and the role of service providers has increased substantially. However, there is still room for improvement in terms of scope. Information technology infrastructure, personnel turnover, and the quality of overall operations management are frequently overlooked operational risk areas.²

In Australia, ODD has historically been underdeveloped compared to the US and the UK, with more focus on investment due diligence practices. The primary reason for this is that the Australian investment market is predominately built on compulsion as a result of the superannuation guarantee charge (SGC),

the requirement for all Australians to contribute to superannuation. The Australian investment market initially started off small with industry super funds being the genesis of growth in the investment market, whereas US market growth was driven by insurers and fund managers, so it has historically been more developed.

Australian regulatory environment

Recent Australian regulatory developments have resulted in the "Stronger Super" regime. This introduced the perspective that superannuation savings are being managed for members, with the Australian regulator emphasizing the principle that registrable superannuation entities (RSEs) act in the best interest of the members in managing retirement savings.

In developing the Stronger Super regime, the regulator has taken cues from global developments and cross-functionality across industries with a focus on best practices across the globe. This has led to the introduction of ODD considerations in the Australian market.

2008

Madoff hedge fund failure (US)



2013

APRA introduces SPS 530



2014

APRA Insight article



The Australian regulator—the Australian Prudential Regulation Authority (APRA)—has been heavily involved in the development of ODD in the Australian market. Supporting the enhancement of the fiduciary and governance obligations under the Stronger Super regime, APRA developed a new regulatory standard in 2013: “Prudential Standard SPS 530: Investment Governance” (SPS 530). SPS 530 contained three key elements, none of which were new in terms of expectations of the fiduciary duty of an RSE, but were now enforceable by virtue of a prudential standard. These three elements are:

- Increased emphasis on liquidity management
- Requirements for stress testing
- Implicitly an effective ODD process as part of investment strategy implementation

In 2014, APRA published an article on ODD in its bi-annual Insight publication that effectively communicated the regulator’s expectations for ODD to be performed on investment management companies by RSEs.

The Insight article highlighted that “unlike investment risk, operational risk does not provide a risk premium and hence bearing operational risk is unrewarded. Nevertheless, the level of operational due diligence undertaken by RSE licensees is often not as intensive or extensive as that which is applied to investment due diligence. What is also critical is the interaction between these various functions, as activities do not occur in isolation—problems in one area will impact on other areas. For example, valuation errors will lead to incorrect performance measurement, rendering it difficult for the manager (and hence RSE licensee) to understand which decisions are improving or detracting from returns.”⁴

The Insight article noted that APRA’s expectations in relation to ODD were “reinforced by the requirements of ‘Prudential Standard SPS 530 Investment Governance’ (SPS 530) and ‘Prudential Standard SPS 231 Outsourcing’ (SPS 231). Furthermore, ‘Prudential Standard SPS 220 Risk Management’ (SPS 220) emphasizes the obligation to have an appropriate risk management framework addressing all material risks.”⁵

APRA has since reminded the industry that, as part of its ongoing supervision and risk assessment, it will assess RSE processes undertaken for the purposes of managing investment risk, which will include, where warranted, an assessment of the processes around the operational due diligence of investment management companies. ➔

Performing operational due diligence also provides insights into the risk culture and approach to risk management of the investment management company. This will include its ability to effectively measure and manage risk and to enact its stated investment strategy and approach.³

2009
Weaving Capital
hedge fund failure (UK)



2015
AIST Working
Group developed



2017
AIST Guidance
Note issued



3. APRA Insight, Issue One 2014
4. Ibid
5. Ibid

Industry response

In 2015, two industry bodies—the Australian Institute of Superannuation Trustees (AIST), which represents RSEs, and the Financial Services Council (FSC), which represents fund managers and RSEs in the retail superannuation space—each convened a working group of representatives to develop an ODD guidance note.

These working groups were developed in response to APRA's disclosure of its expectations of RSEs in relation to ODD on investment management companies and, in particular, the Insight article published in 2014.

In 2016, AIST published its first version of the ODD guidance note, with a revised version published in February 2017 following stakeholder feedback. The guidance note covers the nine distinct aspects of an investment management company that are to be considered by an ODD review.

The guidance note reinforces APRA's view that "appropriate attention must be given to operational risk policies and processes but also to the risk culture within an investment management organization."

The AIST guidance note promotes the "manager-engaged" model, with the obligation for the cost burden of ODD reviews to be carried by the fund manager as a prerequisite for a superannuation fund to allocate, continue, or renew a mandate with that fund manager. The manager-engaged model was chosen by AIST in order to achieve some degree of scale in the industry with fund managers able to provide copies of outsourced ODD reviews to multiple superannuation RSEs rather than having each RSE undertake its own ODD review.

The AIST guidance note observes that "the ODD review process must be conducted by an appropriately qualified, reputable, competent firm that is independent of the investment manager/product" and notes that "APRA expects that any RSE relying on the ODD conducted will need to be satisfied of the skill and independence of the firm conducting the ODD."

Emphasizing that the ODD review process is "not a 'tick the box' exercise," AIST notes that it expects the ODD provider will express "an independent validation of the investment manager's attestation regarding its policies and practices and that the ODD review process will include a mix of desktop policy reviews, questionnaires and detailed on-site due diligence." The expectation is that the investment manager will provide the ODD report to the RSE(s) for assessment and alignment to their own risk appetite.

The ODD review process must be conducted by an appropriately qualified, reputable, competent firm that is independent of the investment manager/product.





Outlook

The publication of the ODD guidance note raises the bar for the Australian investment market, with a maturing ODD model a positive step toward more thorough due diligence and alignment with the regulatory developments of our global peers. AIST will have a continuing role to play in the space with future iterations of the guidance note predicted to capture changes to expectations, perspectives, and analysis in the market.

It is possible that the current framework will evolve into a two-model system: manager-engaged versus RSE-engaged ODD reviews. Some of the larger Australian RSEs will continue to undertake their own ODD analysis and will use the information provided by the manager-engaged ODD reviews to supplement their assessment process.

There is also the potential for the ODD framework in Australia to resonate with our neighbors in the Asia Pacific region. Where there are less developed Asian markets, the ODD approach adopted in Australia may drive due diligence or investment expectations across Asia, particularly given Asia Region Funds Passport (an initiative to facilitate the cross-border marketing of managed funds across participating economies in the Asia region).

For global fund managers, the introduction of Australian market ODD obligations will bring us closer to the market standards and expectations currently in place in the US and UK. Where a super fund RSE may have mandates with internationally-based fund managers, the ODD expectations will remain in place but will likely be at least partially met by existing regulatory obligations in their local market, in particular in the US and UK. ●

To the point:

- Operational Due Diligence (ODD) is an analysis of an investment manager's operational capabilities and the ability of their infrastructure to support the execution of their investment thesis.
- Operational risk is typically defined as a failure of people, processes, and systems.
- Operational risk does not provide a risk premium.
- APRA has communicated its expectations for ODD to be performed on investment managers by Responsible Superannuation Entities.
- For global fund managers, the introduction of Australian market ODD obligations will greater align the standards of Australia to those of the US and UK.

A silhouette of a fisherman wearing a conical hat stands on a small boat on a body of water. He is holding a large, intricate fishing net that is spread out across the sky. The background is a vibrant sunset with orange and yellow hues, and the water reflects the colors. The overall scene is peaceful and evokes a sense of traditional industry.

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



Mohit Mehrotra

Partner
Consulting
Deloitte

As growth opportunities become progressively narrower globally, 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 the big shifts expected in this region into account, to achieve sustainable growth and to position themselves for market leadership. ➤

The 10 markets that make up the Association of Southeast Asian Nations (ASEAN) form the sixth largest economy in the world and are projected to become the fourth largest by 2025. There are emerging trends in the region that asset managers need to be cognizant of, including new pools of asset under management (AUM) opportunities totaling US\$3.5 to US\$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 the capabilities required to move from being product-centric to being innovation-driven in catering to 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.

01

Emerging demographic trends driving growth potential

The growing population of digital natives:

The growing population 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, tailored to digitally savvy customers and founded on digital platforms that enable more efficient customer interactions.

Aging populations: The impact of an aging population in Southeast Asia (SEA) can be felt among 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.



02

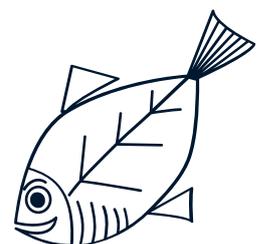
New pools of AUM opportunities

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 trillion to US\$4.0 trillion by 2025, with the institutional segment accounting for more than half of that AUM opportunity.

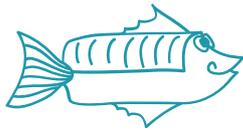
03

Increasing demand for product differentiation

In an environment of low or negative interest rates, investors in SEA have exhibited a strong desire to access a wider range of asset classes. Specifically, income-oriented strategies as well as solutions that 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. ➔



Many systems and processes used within asset management firms are considered to be “core” to their business operations.



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 true because the region is characterized by a wide spectrum of varying economic conditions, as well as region-specific investor preferences and needs, and uncertain regulatory landscapes. Moving forward, asset managers will need to think of new models for growth that are driven by innovation in order to successfully mitigate challenges and capture opportunities over the long term. Here, we take a look at several ways asset managers can leverage innovation to succeed in SEA management business in the region.

01 Developing strategic partnerships to penetrate local markets

Establishing partnerships with key local players provides a platform through which asset managers can leverage the distribution networks of these local players to accelerate their expansion in SEA. In Indonesia, a recent partnership between a global asset manager and a 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 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.



02 Increasing automation and efficiency

Many systems and processes used within asset management firms are considered to be “core” to their business operations. However, in an environment where a number of disruptors have emerged to provide low-cost, sophisticated investment alternatives (such as robo-advisers), asset managers maintaining modus operandi practices face a tangible threat of market share loss. This is especially true in the SEA context where a significant proportion 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 which critical systems and processes should be maintained as they are, 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 should be viewed as a springboard for such efficiencies and automation.

For example, the use of advanced analytics would enable asset managers to leverage advanced computer power, algorithms, and analytical models not only to automate existing manual processes but also to provide a new level of sophistication.

Potential impact on asset managers:

Technologies and processes within asset management setups will become more streamlined and efficient, thereby making it easier to adapt to the changing SEA landscape. The increased standardization 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. ➔



03

Developing an integrated offering and solution bundling

In terms of providing holistic investment services to local SEA investors, asset managers may consider an even more comprehensive offering by going beyond 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 along with comprehensive portfolio management, trading, and operations tools to help their customers 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 locations, including SEA.

Potential impact on asset managers:

Providing customers with an integrated product offering and solution bundling options will enable asset managers to connect more closely with the digital natives who are becoming increasingly prominent 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.

04

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 create 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 services 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 is owing to the fact that robo-advisers are expected to manage around 10 percent of total global AUM, or around US\$8 trillion, by 2023. 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 meet the growing 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 digital natives. The ability to serve the needs of multiple segments will provide a solid foundation for asset managers' efforts to secure future expansion in SEA.

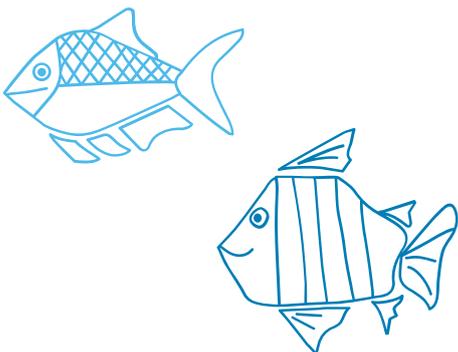
Nonetheless, in order to be able to provide digitally-enabled, value-added services, asset managers need to build additional supporting operational and technological capabilities. A key consideration for accelerating time-to-market and enhancing functionality is the use of open application programming interfaces (APIs), which allows the asset manager to leverage best-in-class third-party software and integrate it into their solutions through 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 scarce, the justification for asset managers to prioritize the SEA region is becoming harder to ignore. In order to increase the prospects for success in the region, business models need to be recalibrated to suit the overall landscape. Asset managers looking to succeed in SEA should consider a series of strategic choices to define their go-to market strategy and address emerging 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 to truly differentiate themselves in the market.

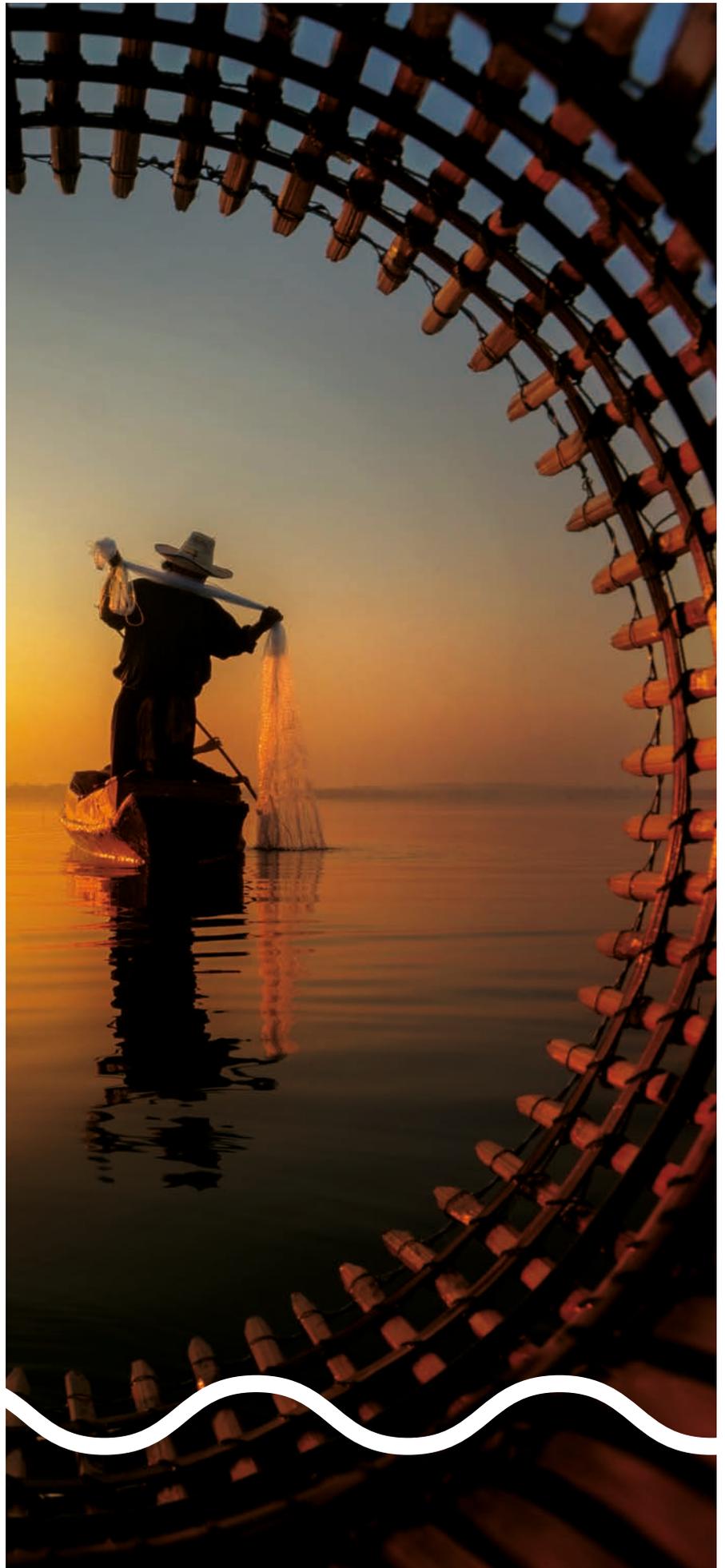


In order to increase the prospects for success in the region, business models need to be recalibrated to suit the overall landscape. Asset managers looking to succeed in SEA should consider a series of strategic choices to define their go-to market strategy and address emerging SEA regional trends.



To the point:

- The asset management opportunity in SEA remains significant and is expected to grow to US\$3.5 to US\$4 trillion in assets under management by 2025, with more than half being sourced from the institutional segment.
- Asset managers who want to win in this region need to be prepared for the challenges emerging from market trends while focusing their strategies on unlocking and capturing new opportunities.
- Three trends, specific to SEA, have been identified as key for asset managers in the region: emerging demographic trends indicating growth potential, the opening up of new pools of AUM and investors' growing demand for product differentiation.
- These trends threaten to disrupt the traditional model of growth for asset managers and call for a more holistic and innovation-driven business model.
- While several models of innovation exist, it is increasingly critical for asset managers to integrate multiple types of innovation, beyond mere product innovation.
- As growth opportunities become progressively narrower globally, 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 the big shifts expected in this region into account, to achieve sustainable growth and to position themselves for market leadership.



A man in a dark grey suit, white shirt, and dark tie is shown from the waist up, kneeling on a dark, textured surface. He is holding a glowing, spherical object in his right hand, which emits a bright light and a trail of particles. The background is a dark blue sky filled with stars and a nebula-like glow. The overall mood is futuristic and high-tech.

DISRUPTION!

a new way to generate alpha

This is a broad-based and cross-disciplinary approach to grasping the major societal, demographic, and economic phenomena, and choosing long-term investment solutions on that basis.

Estelle Ménard

CIIA Deputy Head of Global Thematic Equities Consulting
CPR Asset Management

Wesley Lebeau

Thematic Equity Portfolio Manager
CPR Asset Management

Thomas-Page Lecuyer

Strategist
CPR Asset Management

Disruption is driven by the emergence of a more practical, less expensive solution or product that consumers naturally move over to, thus undermining the established order on a market. Although it has only recently emerged as an investment theme, disruption is now regarded as a long-term trend and has become a theme in investment management.

Fashion comes and goes, but major investment trends have staying power, as they are structural in nature. Most importantly, they are an undeniable source of growth and, hence, investment returns. Asset managers have even set up dedicated thematic teams to cover them. *"This is a broad-based and cross-disciplinary approach to grasping the major societal, demographic, and economic phenomena, and choosing long-term investment solutions on that basis,"* says Estelle Ménard, deputy head of thematic investments at CPR AM. For about 20 years, CPR AM, a subsidiary of Amundi and the cornerstone of its thematic equities expertise, has specialized in thematic investments and is now recognized as a key player on a global level.

Thematic investments have traditionally been targeted at retail clients, but they are now drawing increasing interest from yield-starved institutional investors, who are used to investing in "plain vanilla" products but are now having to turn to less conventional ways to generate alpha. But, with its own intrinsic qualities, thematic management is no passing fad. *"This is an equity investment solution that is, all at once, robust, understandable and resilient,"* says Estelle Ménard. *"Most importantly, it offers geographical and sector diversification that helps us better manage risk."*

Allocation is only one reason why thematic investments initially caught on with a more retail clientele. Another reason is that they cast light on contemporary issues while suggesting some financial and economic ways of addressing those issues. This naturally appeals to retail clients who are driven by convictions and a desire to give meaning to their investments. *"Private banks and wealth management advisers are especially keen on thematic investing, due to their close relationships with their clients,"* Estelle says. *"These retail clients often need to identify with a subject to buy into an investment approach."* ➔



Asset managers, on the other hand, need to identify themes beforehand that are both robust and consistent. One of these is the aging of the global population, which over the years has naturally become one of the most recurring themes. Lower birth rates, longer life expectancies, wealth inequalities, and seniors' increased purchasing have helped produced the silver economy. This structural phenomenon has disrupted consumer habits, and the resulting challenges and economic fallout have coalesced into an investment theme in its own right. *"Our first thematic fund, in restructuring stories, was launched in 1996,"* Estelle recalls. *"It was based on the conviction that the construction of the European Union was going to give rise to an economic restructuring of the continent and, ultimately, major industrial consolidation in Europe. Our expectations were borne out."* In addition to the aging of the population and restructuring, the investment firm is also invested in such far-flung themes as luxury and lifestyles, agriculture, natural resources, gold, and energy.

With long-standing experience in this area and a team of nine specialized managers, CPR AM strives to be at the forefront of the major themes that will drive tomorrow's world. The first-mover advantage is crucial here. It allows CPR AM to occupy the terrain, quickly build up its AuM, and position itself as a leader in this field. Its quest for new ideas, innovative trends, and structuring phenomena recently led it to invest in a new theme: disruption.

"From conception to launch of CPR Invest – Global Disruptive Opportunities (GDO) in late December 2016, there were 13 months of intense brainstorming on the subject," Estelle said. *"In fact, everyone in our working group was excited about the theme."*

This is confirmed by Thomas Page-Lecuyer, strategist at CPR AM. *"There aren't a huge number of global, all-encompassing themes in the world. That's what led us to disruption."* A rapid review of the competition found that, while disruption was already being dealt with, it was in all cases being segmented. Existing funds took a mono-thematic approach based on either innovation or technologies—more of a niche approach based on single narrow concepts that differed from CPR AM's cross-disciplinary and diversification approach. *"Grabbing a theme is one thing; making it truly yours is another,"* says Page-Lecuyer. *"You have to buy into the theme on a more personal basis and come up with an approach that is your own, as well as the investment universe and management process that will flow out of that approach."* This is not an easy thing to do.

The concept of "disruption" was first theorized by Professor Clayton Christensen in the late 1990s as an economic development in which an innovative product or service undermines the established order of a market. This is probably best illustrated by IBM's early success in democratizing the use of computers in the early 1980s, when they

The concept of "disruption" was first theorized by Professor Clayton Christensen in the late 1990s as an economic development in which an innovative product or service undermines the established order of a market. This is probably best illustrated by IBM's early success in democratizing the use of computers in the early 1980s.

were still the province of large companies. But the Harvard professor's criteria are overly academic. He imagined a "disruptive" company as a startup that possesses a new, less expensive model that it uses to attack the market from the bottom, where the leaders do not address the needs of certain consumers. However, in light of the success stories of Apple, Uber, Tesla, Amazon and many others, this definition now looks too narrow. *"Christensen's criteria would not correspond to our idea of disruption,"* Thomas acknowledges. *"Disruption breaks with existing patterns, as opposed to an incremental innovation, which is a mere improvement on what already exists. In our approach, we are targeting long-term trends that alter everybody's consumer habits."*

This broader approach defines disruption as a substitution of one business model for another, integrating Schumpeter's notion of "creative destruction." It is the emergence of a smarter, more practical, and less expensive solution that consumers naturally move over to. Based on this definition, disruption is ultimately secular in nature, with countless examples. *"Historically, disruption was a hard-to-grasp, long-term trend where changes occurred over a period of 100 to 150 years and were therefore not felt by the same generation,"* says Nicolai Andersen Deloitte Germany, in charge of innovation at Deloitte EMEA. *"It's truly the technological developments of the past 30 years that have accelerated disruption and the way it is conceptualized."*

In investment, defining a theme is mainly a matter of defining its contours, i.e., identifying its reasons for being. *"We have isolated four main new trends where consumer habits have changed in recent years,"* the CPR AM strategist said. The first and most obvious of these is demographic trends, including exponential growth in the global population, an older average population in the West and a younger one in emerging economies, urbanization, and the advent of millennials. Another source of change is the planet and the environment, where limited resources are forcing us to come up with new ways of using those resources. When economic development is driven by consumer frenzy, nature inevitably demands that we behave more responsibly. Globalization and free trade have also influenced consumer habits in recent decades, by making the same product or service almost immediately and simultaneously available worldwide. Yet another parameter is digitalization, which has helped spread these new trends at a faster pace. *"Based on these observations, we have set the outlines of our investment universe, including the digital economy, the planet, healthcare and*

life sciences, and industry 4.0," said Wesley Lebeau, who manages CPR Invest – Global Disruptive Opportunities. Through these four major channels, CPR AM takes an overall approach to disruption while thus meeting its cross-disciplinary standard in thematic investment. In concrete terms, the investment universe extends from retailing to FinTech to driverless vehicles, photovoltaics, the Internet-of-Things, biotechnologies, immunology, precision agriculture, artificial intelligence, and robotic surgery. ➔



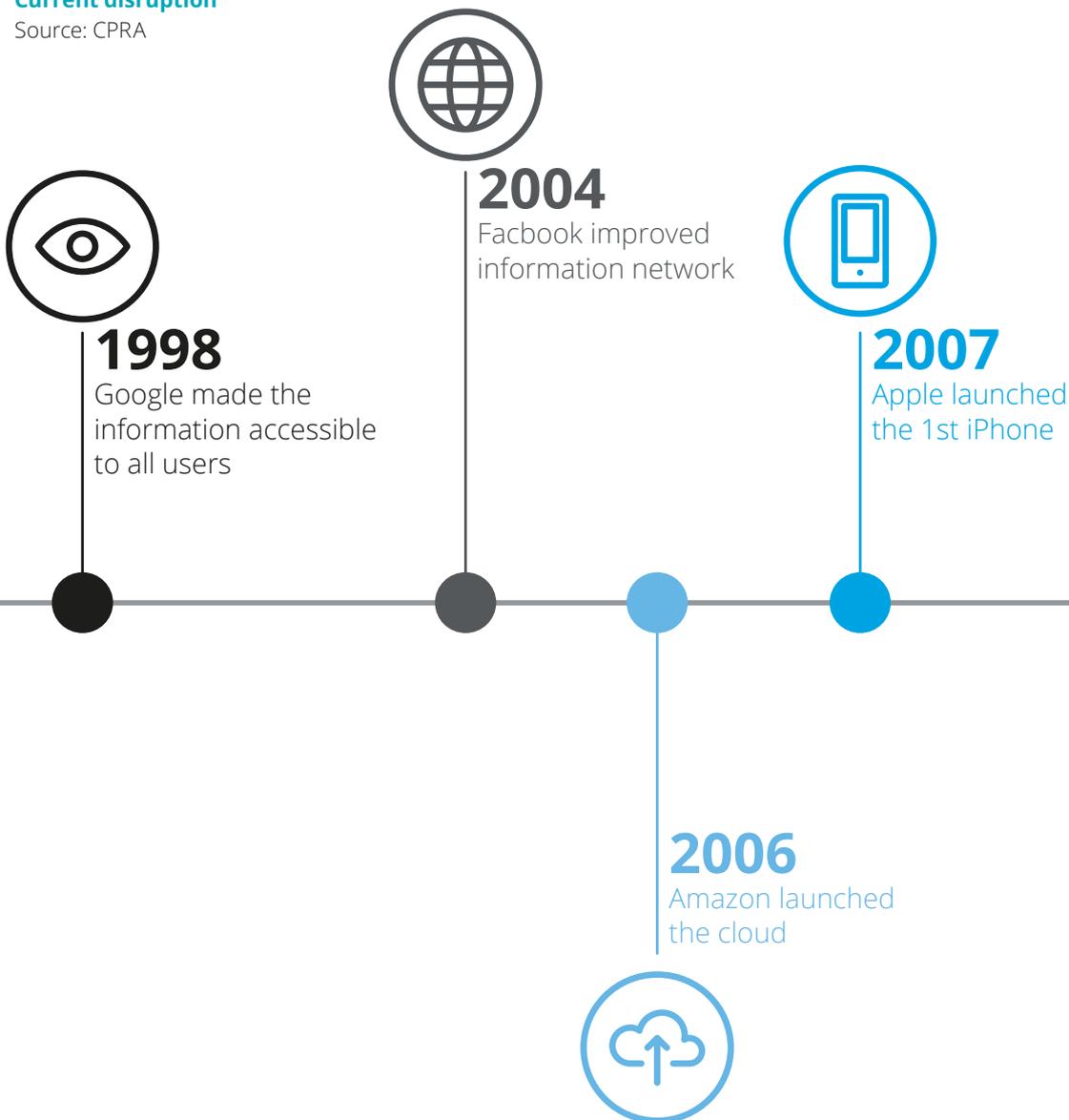
“Setting the parameters of our investment universe is no doubt the most important phase,” says Wesley. “That helps us construct the portfolio and is backed by a trade secret that is part of our DNA.” This is a “home-made recipe” developed in tandem by CPR AM managers, Amundi’s sector-based expertise, and, regarding disruption, a partnership with Deloitte. “Deloitte helped us grasp the innovation trends that we used to set the parameters of our universe,” says Wesley. CPR AM then used a two-staged quantitative filter to select the best investment ideas from the sectors and sub-assemblies it had chosen. The first stage is supplied by one of its data providers, Holt (Credit Suisse) and covers a company’s cash flow and economic value created based on its cost of capital. “This helps produce a rather fundamentals-based and long-term version of a company’s creation of economic value,” says Wesley Lebeau. A second, in-house filter helps CPR AM

optimize market factors to determine the companies with the best short-term upside potential. “This gives us orthogonality in our long-term and short-term views, which, in turn, produces buying ideas, on which basis we move on to fundamental research,” he says. Fundamental research is far more traditional and is based in part on the “house” research offices. It involves understanding a company’s business model and uses an investment test to find out “if the company has an attractive profile, if it has value that can be captured, if its catalysts will still exist in six to 12 months for the investment case to work, and for the company’s stock to outperform the market,” Wesley says. The final stage then consists in constructing the portfolio itself, by weighting the convictions that have been formed on the selected stocks and adjusting them for their implied risk, meaning their one-year historical volatility.

The range of possible investments is even broader, as the approach, in addition to being trans-sectoral, is based on the entire cycle of disruption, from the most mature companies to those just starting out. “We can invest in both 100 percent disruptive pure players and in incumbents that have reallocated some of their investments to a disruptive business,” says Wesley. General Election is one of many examples of this phenomenon. After weathering several series of disruptions, this more than 100-year-old company recently managed to reinvent itself with its Predix platform, which addresses the current revolution in robotics. ➔

Current disruption

Source: CPRA



Setting the parameters of our investment universe is no doubt the most important phase.



2008
App Store creation



2013
IBM launched artificial intelligence

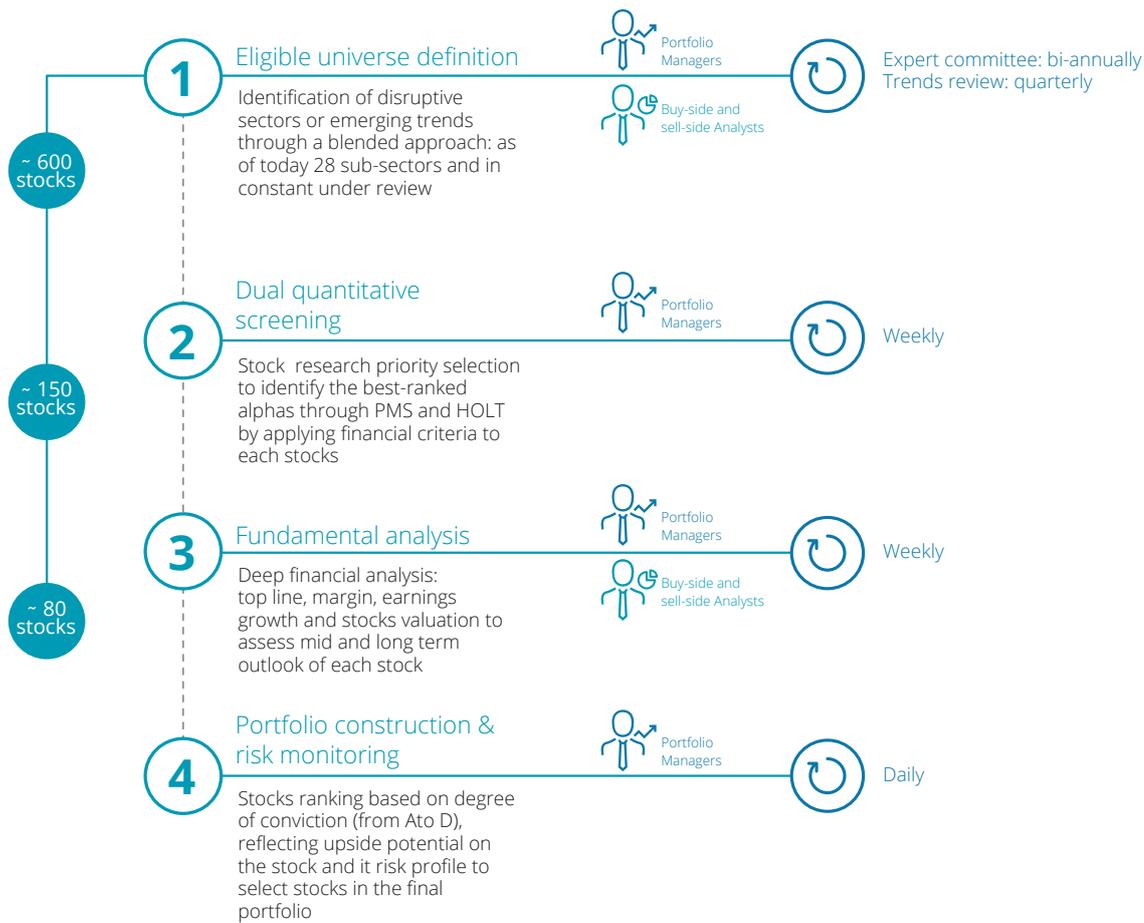


2009
Uber innovated with a new transport economic model



2014
Google created cars without drivers

A 4-steps Investment Process benefiting from high-quality inputs



This cross-disciplinary approach does engender uncertainties in the investment management process. While the degree of conviction depends on the visibility and stability of a company's business model, some companies are more exposed than others to industrial risks. This is the case of biotechnologies, for example, that are often subject to long regulatory approval processes for a drug or a compound. Another pitfall is the variety and complexity of businesses, products, or services when they are looked at across sectors. "Pure players like Amazon, Google, or Apple are relatively simple to grasp," continues Wesley. "However, in more complex sectors or segments, such as immuno-oncology, for example, it is not so easy to grasp the risks involved. That's why fundamental research is an essential first step to building a portfolio and the management process." Such risks are remunerated, of course. As disruption is mostly a synonym of innovation, it often carries a valuation premium during takeovers. "This is an additional source of returns in our disruptive universe," says Estelle Ménard, who also manages the "restructuring" theme. "Last year, within six months, five percent of the stocks in our funds were the targets of takeovers."

The process of building up a thematic fund is as complex as it is subtle, as it is based on strong convictions and sometimes requires tough choices between stocks. Just to give an idea: of the 600 stocks short-listed by CPR AM, only 87 were ultimately chosen. Fifty percent of these are in the digital economy, which is to be expected, as it is no doubt more disruptive than the other themes. It is followed by industry 4.0 and healthcare and life sciences at 20 percent each and, the planet, at 10 percent. "This allocation is not set in stone and could change with an acceleration in disruption within its various dimensions," the team says. Be that as it may, a fund's returns and success often depend on the quality of work in its early stages. In a little more than six months after launch, CPR Invest – Global Disruptive Opportunities has outperformed the MSCI World, its benchmark, by 7.7 percent. Launched with 50 million euros in AuM, it now has more than 140 million euros and is registered in nine countries. ●

A man in a grey suit and tie is crouching in a city that has been destroyed. The background is filled with smoke and debris, with a city skyline visible in the distance. The man has a serious expression and is looking towards the camera.

To the point:

- Trade globalization, technological innovations, demographic trends, and environmental challenges... The world is changing alongside all its ecosystems.
- The megatrends that are driving our world are many investment opportunities to seize; "Disruption" is one of the most prominent.
- Disruption is an accelerating phenomenon generating opportunities in all sectors and offering unprecedented and long-lasting upside growth potential.
- The digital economy, industry 4.0, the planet, and healthcare and life sciences best witness the impact of disruption.
- The investment landscape is in constant evolution and expected to evolve as disruption morphs and accelerates.



NEW RISK IN A TIME OF UNCERTAINTY AND CHANGE

Edward Hida

Partner
Deloitte & Touche LLP
Deloitte US

The years since the global financial crisis have seen a wave of regulatory change that increased both the scope and the 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.

The article is based on the Global risk management survey, 10th edition: Heightened uncertainty signals new challenges ahead, published in March 2017.

The external micro and macroeconomic environment is getting more volatile.

— Chief risk officer, large diversified financial services company

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 European Union (Brexit vote), coupled with US President Donald Trump's pledge to renegotiate trade agreements with China and Mexico, raise the possibility that trade volumes may decline.

The continual increase in regulatory requirements may abate or even be reversed in 2017 as President Trump 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 programs 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 obtaining 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) risk. Given the heightened geopolitical uncertainty and change during the period when the survey was conducted, it is notable that the percentage of respondents who considered their institution to be extremely or very effective at managing geopolitical 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 a 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 the 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 the 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; 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 platforms (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 or compliance risk as among the three risk types that will increase the most in importance for their business over the next two years, making this the second most frequently cited risk. Seventy-nine percent of respondents said that regulatory reform had resulted in an increased cost of compliance in the jurisdictions where their company 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 program 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 to review and approve overall risk management policy or ERM framework (93 percent), monitor risk appetite utilization including financial and nonfinancial 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, since no more than roughly two-thirds of respondents cited helping to establish and embed the risk culture of the enterprise as board responsibilities (67 percent) or reviewing incentive compensation plans to consider alignment of risks with rewards (55 percent).

Chief risk officer (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 regularly meets 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), to identify new and emerging risks (94 percent), and to 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 affect the risk profile (63 percent), or approve new business or products (58 percent). While regulators have placed greater focus on the importance of conduct and culture, reviewing compensation plans to assess the impact on risk appetite and culture was identified as a responsibility by only 54 percent of the respondents.

Steady increase in the adoption of enterprise risk management (ERM) programs

Seventy-three percent of institutions reported having an ERM program, up from 69 percent in 2014 and more than double the 35 percent recorded in 2006. In addition, another 13 percent of institutions said they are currently implementing an ERM program and 6 percent said they plan to create one. An institution's ERM framework 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 risk management programs 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 department (74 percent), which is a prerequisite for an effective three-lines-of-defense model. ➤



You need a good combination of analytical (quant) people, especially for advanced analytics and big data. But you need people who do not blindly do advanced analytics. You need business insight and business judgment as well. I think one of the main requirements or expectations is to get much stronger rotations between business and risk management folks. You need to have a much more rotational career to foster mutual understanding.

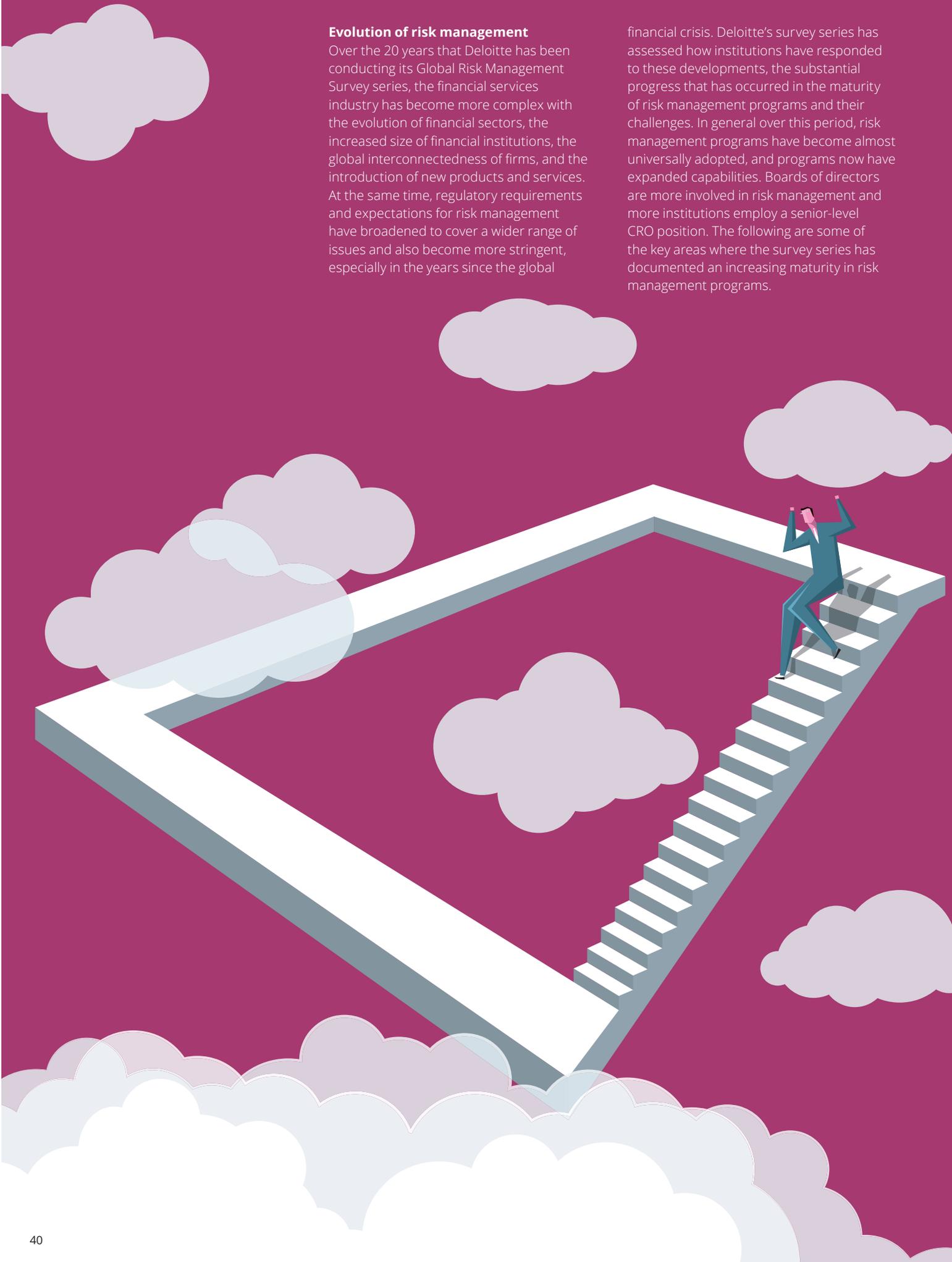
— Chief risk officer, large diversified financial services company



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 programs and their challenges. In general over this period, risk management programs have become almost universally adopted, and programs 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 programs.



More active board oversight

In 2016, 93 percent of respondents said their board of directors reviews and approves the overall risk management policy 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).

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



Increased adoption of the 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 almost universal at 92 percent in 2016 (Figure 2). At the same time, the CRO is now a more senior-level position reporting to higher levels of the organization. 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.

Figure 2. Percentage of institutions with a CRO or equivalent*



Wider set of responsibilities for the CRO

Over time, the CRO and the independent risk management program 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 an ERM program

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

Figure 3. Percentage of institutions with an ERM program in place*



While there has been considerable progress in the continued development and maturation of risk management programs, there remains considerable work to do. The specific areas where risk management programs need to further enhance their capabilities and effectiveness, and the likely future challenges, are detailed in the body of the report. ●

* Source: Deloitte analysis <https://dupress.deloitte.com/dup-us-en/topics/risk-management/global-risk-management-survey.html>

Blockchain & Cybersecurity **Let's Discuss**



Eric Piscini

Partner
Consulting
Deloitte

David Dalton

Partner
Consulting
Deloitte

Stéphane Hurtaud

Partner
Risk Advisory
Deloitte

Lory Kehoe

Director
Consulting
Deloitte

Special Acknowledgements:

Niamh O'Connell

Consulting
Deloitte

Blockchain technology is often exalted as the solution to nearly every security issue in many industries. But what is the current level of security for this technology? We investigate this with the CIA security triad model, composed of the three areas of confidentiality, integrity, and availability. >

Written by the Deloitte EMEA Grid Blockchain Lab with insights from Deloitte global cyber SMEs from members firms including Ireland, the United States of America, China, U.K, Argentina, Spain, Portugal, and Israel.

The technology provides a way of recording transactions or any digital interaction in a way that is secure, transparent, highly resistant to outages, auditable, and efficient.

The evolution of blockchain has been compared to the early rising of the internet. Comments and arguments of the technology's potential focus on the disruption of multiple industries, including healthcare, the public sector, energy, manufacturing, and particularly financial services. According to David Schatsky, Managing Director at Deloitte US, *"The technology provides a way of recording transactions or any digital interaction in a way that is secure, transparent, highly resistant to outages, auditable, and efficient."*

The high level of dependency on technology and the internet today has resulted in new business models and revenue streams for organizations. With this comes new gaps and opportunities for cyberattackers to exploit. Cyberattacks have become increasingly targeted and complex due to more sophisticated pieces of malware being leveraged and the increasing threat of professional cybercriminal organizations. These cybercriminals are attempting to steal valuable data, such as intellectual property (IP), personal identifiable information (PII), health records, and financial data, and are resorting to highly profitable strategies such as monetizing data access through the use of advanced ransomware techniques or by disrupting overall business operations through Distributed Denial of Service (DDoS) attacks.

So what about blockchain? Will the technology be an aid to cybersecurity or a hindrance? While still relatively immature, there is promising innovation in blockchain toward supporting enterprises tackle immutable cyber risk challenges. The platform could potentially help improve cyber defense, as it can prevent fraudulent activities through consensus mechanisms and detect data tampering based on its underlying characteristics of immutability, transparency, auditability, data encryption, and operational resilience.

Yet, blockchain technology is not a complete solution without the proper controls. Ensuring only interested and authorized parties have access to the correct and appropriate data is a common concern for organizations considering using a blockchain today. Protecting blockchain network access is fundamental in securing data access (particularly in private blockchains). If an attacker is able to gain access to the blockchain network, they are more likely to gain access to the data, hence authentication and authorization controls need to be implemented, as is the case with other technologies. Full encryption of blockchain data ensures data will not be accessible by unauthorized parties while this data is in transit (especially if data is flowing through untrusted networks).



Every organization has to consider the inherent link between performance, innovation, and cyber risk, and realize that protecting everything would be economically impractical and would likely impede some of the most important strategic initiatives.

In public blockchains, there is no necessity to control network access, as the chain protocol allows anyone to access and participate in the network, providing they download the software. In contrast, private blockchains require that appropriate security controls are in place to protect network access. In a perfect world it would be tempting to assume that, because of its private nature, local networks and systems are already protected well behind an organizations perimeter by several internal security layers (i.e., firewalls, virtual private networks, VLANs, Intrusion Detection & Prevention Systems, etc.), through the adoption of a so-called defense in depth strategy. However, perfect world scenarios are utopian, especially in security, and

relying solely on the effectiveness of these security controls is clearly insufficient. For this reason, security best practices recommend that security controls (such as access controls) should also be implemented directly at the application level, being that it the first and most important line of defense, particularly in scenarios such as an attacker gaining access to the local network.

“Every organization has to consider the inherent link between performance, innovation, and cyber risk, and realize that protecting everything would be economically impractical and would likely impede some of the most important strategic initiatives,” states Andres Gil, Deloitte’s LATCO Cyber Risk Lead. Organizations must assess its changing risk profile and determine what level and type of cyber risks are acceptable, considering what’s most important, and invest in cost-justified security controls to protect the most important assets. Organizations should implement an overall cybersecurity program to address these challenges, which include a governance framework with roles, processes, accountability measures, well-articulated performance metrics, and most of all, an organization-wide shift in mindset.

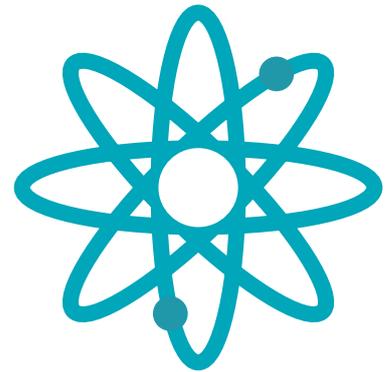
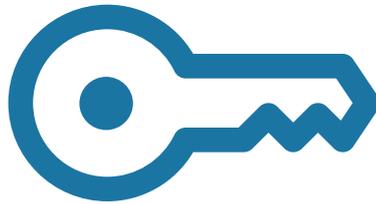
In line with these requirements, blockchain can provide advanced security controls, for example, leveraging the public key infrastructure (PKI) to authenticate and

authorize parties, and encrypt their communications. If blockchains become widely adopted, organizations will need to ensure they implement security controls to provide authentication, authorization, and encryption in order to properly protect data access. *“Attackers always seek for low-hanging fruit from site to site, and confidential information stored on a blockchain will likely become a high priority target if such controls were inadequate,”* says Eva Yee Ngar Kwok, Risk Advisory Technology Risk Partner at Deloitte China/Hong Kong.

Today, if an attacker gains access to a blockchain network and the data, this does not necessarily mean the attacker can read or retrieve the information. Full encryption of the data blocks can be applied to data being transacted, effectively guaranteeing its confidentiality, considering the latest encryption standards are followed. The use of end-to-end encryption—an important topic of discussion in recent years—ensures only those who have authorization to access the encrypted data can decrypt and see the data. Using encryption keys in conjunction with PKI can provide organizations with a higher level of security.

As an example, implementing secure communication protocols on a blockchain (assuming the latest security standards and implementation guides), guarantees that even in a situation where an attacker tries to do a man-in-the-middle attack, the attacker won’t be able to either forge the interlocutor’s identity or disclose any data while in transit. Even in an extreme situation scenario where long-term private keys are compromised, past sessions are kept confidential due to the “perfect forward secrecy” properties of security protocols. ➔





According to Artur D'Assumpção, head of Cyber Risk/Cybersecurity at Deloitte Portugal, *"In an enterprise environment, it will be fundamental to properly secure secret key material as to not jeopardize the ledger confidentiality and integrity. An example of adequate protection is the use of special purpose key vaults that implement technologies such as Hardware Security Modules to secure master secrets and provide a highly secure and tamper-resistant environment."* Today's cryptographic algorithms, used for public/private key generation, rely on integer factorization problems, which are hard to break with current computing power.

Jacky Fox, Deloitte Ireland's Cyber Lead, highlights, *"Advances in quantum computing will become significant for the security of blockchain due to their impact on current cryptography practice. For example, Bitcoin uses cryptographic algorithms to produce a public/private key pair and an address that is derived using hashing and checksum operations on the public key. Exposure of the address alone is not high risk. However, given sufficient advances in quantum computing, exposure of the address and the public key required to transact will potentially enable the derivation of the private key. While commercial quantum computing is not available as a large scale reality, it makes sense to plan now for the move to quantum resistant cryptography."*

Maintaining data consistency, and guaranteeing integrity during its entire life cycle is crucial in information systems. Data encryption, hash comparison (data digesting), and the use of digital signatures are some examples of how system owners can assure the integrity of the data, regardless of the stage it is in (in transit, at rest and in use storage). Blockchain's built in characteristics, immutability and traceability, already provide organizations with a means to ensure data integrity.

The technology combination of sequential hashing and cryptography along with its decentralized structure makes it very challenging for any party to tamper with it in contrast to a standard database. This provides organizations using the technology with assurance about the integrity and truthfulness of the data. The consensus model protocols associated with the technology also present organizations

with a further level of assurance over the security of the data, as generally 51 percent of users in public and private blockchains need to agree a transaction is valid before it is then subsequently added to the platform. Organizations can implement further mechanisms to prevent and control ledger splitting in the event of a 51 percent cyber control attack occurring, if for example one of the nodes increases processing power and is executing a significantly higher number of transactions. ➤



Every transaction added to a public or private blockchain is digitally signed and timestamped, which means that organizations can trace each transaction back to a specific time period and identify the corresponding party (through their public address) on the blockchain. This feature relates to an important information security property: non repudiation—the assurance that someone cannot duplicate the authenticity of their signature on a file or the authorship of a transaction that they originated. This out-of-the-box functionality of the blockchain increases the reliability of the system (detection of tamper attempts or fraudulent transactions), since every transaction is cryptographically associated to a user. Any new transaction added to a blockchain will result in the change of the global state of the ledger. The implication of this is that with every new iteration of the system, the previous state will be stored, resulting in a fully traceable history log. The technology's audit capability provides organizations with a level of transparency and security over every interaction. From a cybersecurity perspective, this provides entities with an extra level of reassurance

that the data is authentic and has not been tampered with.

Smart contracts, computer programs running on the ledger, have become a core feature of blockchains today. This type of program can be used to facilitate, verify, or enforce rules between parties, allowing for straight-through processing and interactions with other smart contracts. Such software provides a large surface area for attack, so an attack on one smart contract could have a domino effect on other parts of the platform, i.e., the language itself or implementation of contracts. During the DevCon 2 event in Shanghai, a DDoS attack exploiting a vulnerability in the Go-based Ethereum client's smart contract implementation prevented miners from mining further blocks.

Blockchain brings a new paradigm to software development and, as such, secure development standards and practices need to be implemented to account for the smart contract life cycle (creation, testing, deployment, and management). According

to Diego Rodriguez Roldan, Director at Deloitte Advisory practice in Spain, *"It will be necessary to apply methodologies such as the Secure Software Development Life Cycle (S-SDLC) in order to minimize the threat of a critical bug during the life cycle smart contracts."*

Any new transaction added to a blockchain will result in the change of the global state of the ledger.

Providing that the inputted data is accurate, blockchain technology can play a powerful role in transforming the data. Private and public blockchains can only take responsibility for the accuracy and quality of the information once it has been inserted into the blockchain, meaning that you need to trust that the data pulled from organizations' existing source systems is of good quality, as is the case with all other technology systems. Prakash Santhana, Advisory Managing Director at Deloitte US discusses, *"The biggest vulnerability in the blockchain framework will lie outside the framework in 'trusted' oracles. A corrupted oracle could potentially cause a domino effect across the entire network. An attack on an oracle could either be direct or indirect via third parties connected to the oracle."* Oracles result in untrusted data entering a trusted environment and so organizations might need to consider using multiple oracles to increase the trust in the integrity of the data entering the blockchain from the oracle.

Cyberattacks attempting to disrupt the availability of technology services continue to increase. DDoSs, one of the most common type of attacks, can also cause the most disturbance to internet services and blockchain-enabled solutions. The resulting implications are that websites get interrupted and mobile apps become unresponsive, and this can generate ever increasing losses and costs to businesses. Given blockchains are distributed platforms, DDoS attacks on blockchains are not like regular attacks. They are costly as they attempt to overpower the network with large volumes of small transactions (or in the case of the recent Ethereum DDoS attacks, actions with disproportionately low gas costs costing €3,000). The decentralization and peer-to-peer characteristics of the technology make it harder to disrupt than conventional distributed application architectures (such as client-server), yet they are also subject to DDoS attacks, and as such adequate protection measures are still necessary, both at the network and application level.

According to Peter Gooch, Partner at Deloitte UK, Risk Advisory practice, *"DDoS attacks will increase in size and scale, with regular Terabit/second attacks straining the*

Cyberattacks attempting to disrupt the availability of technology services continue to increase.

capacity of regional and even global internet infrastructure." This increase will be due largely to the growing installed base of insecure Internet-of-Things (IoT) devices, the online availability of DDoS malware, and the availability of ever-higher bandwidth speeds. Although resilient, decentralized blockchain solutions depend on high availability, and DDoS attacks will remain a persistent threat.

The combination of the peer-to-peer nature and the number of nodes within the network, operating in a distributed and 24/7 manner, make the platform operationally resilient. Given that both public and private blockchains consists of multiple nodes, organizations can make a node under attack redundant and continue to operate as business as usual. So even if a major part of the blockchain network is under attack, it will continue to operate due to the distributed nature of the technology. This does not mean that the network is completely bullet-proof. Since blockchain's inception in 2008, platforms have faced threats where attackers have attempted to jeopardize their stability, using different attack vectors. Transaction malleability, a bug found when transactions are in a pending validation status, resulted in an attack to the Bitcoin network in 2014, which had an impact on the users experience. In 2016, an attacker exploited the smart contracts in Ethereum and the way they can be used to create an overflow in the network, to the point where the creation of blocks and the validation of transactions were severely affected, slowing the network. This has been addressed with the creation of a hardfork (a permanent divergence from the previous blockchain version). ●

To the point:

- No cyber defense or information system can be regarded as 100 percent secure. What is deemed safe today won't be tomorrow given the lucrative nature of cybercrime and the criminal's ingenuity to seek new methods of attack. Although some of blockchain's underlying capabilities provide data confidentiality, integrity, and availability, just like other systems, cybersecurity controls and standards need to be adopted for organizations using blockchains within their technical infrastructure in order to protect their organizations from external attacks.
- Deloitte cyber professionals across the globe suggest entities follow the secure, vigilant, and resilient (SVR) cyber approach, which will not only support entities to remain secure but also become more vigilant and resilient to evolving cyber threats. We believe that adopting the SVR approach is a key step in helping leaders continue to drive performance at their organizations.

Reference:
Dalton, David, and Lory Kehoe. "Blockchain & Cyber Security: Let's Discuss." Deloitte Ireland, 29 May 2017. Web. <https://www2.deloitte.com/ie/en/pages/technology/articles/Blockchain_Cybersecurity.html>.

INVESTMENT FUND DISTRIBUTION

How will innovative thinking in fund
distribution create a competitive advantage?

Benjamin Collette

Partner
Consulting
Deloitte

Lou Kiesch

Partner
Consulting
Deloitte

Simon Ramos

Partner
Consulting
Deloitte

François-Kim Hugé

Partner
Consulting
Deloitte



This article is based on a white paper written for the cross border distribution conference (Feb. 2017) in collaboration with Elvinger, Hoss & Prussen.

Embracing change to gain a competitive advantage

While investment fund assets worldwide had increased to €39.4 trillion at the end of September 2016,1 profitability margins for wealth management firms are still under extreme pressure. In this competitive landscape, the distribution of investment funds is a crucial concern for regulators and market actors alike, particularly in light of four broad trends that are affecting the fund distribution value chain:

01

A new generation of investors seeking more personalized services and socially responsible investments, and expecting to be able to use online investment platforms.

02

Big data and analytics to help make sense of the huge volume of data and produce both descriptive and predictive analytics on investor behavior, performance measurement, market intelligence, and risk metrics.

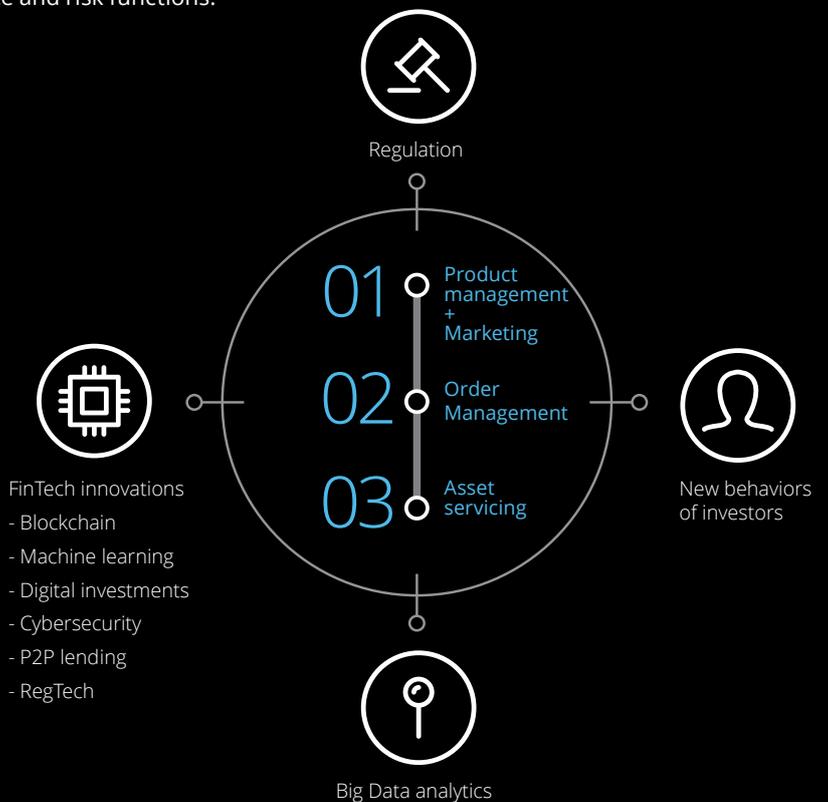
03

Regulation is still evolving too quickly and, in parallel, RegTech is emerging as a technology-based solution to foster efficiency and automation in the compliance and risk functions.

04

New technologies have emerged and are challenging the current operating models (e.g., blockchain, artificial intelligence, machine learning techniques, digital investment platforms, peer-to-peer [P2P] lending, etc.).

Staying one step ahead has become a major challenge, but embracing change could create a competitive advantage. This article does not provide the winning numbers for the next lottery draw, but it does aim to explore certain worthwhile opportunities involving the aforementioned market trends. ➔



1. Source: EFAMA Press Release, Q3 2016

Financial firms must embrace innovative solutions if they are to meet the heightened risk and compliance challenges they face.

01

Using RegTech to transform compliance and risk from support functions into business differentiators

The greater demand for transparency and rigor from the regulator has brought the role of technology to the forefront, leading companies to simply ask themselves the following question: how can a financial institution address compliance in a more efficient and less resource-consuming manner while improving the quality of the data reported to regulatory supervisory authorities?

Technological innovations continue to emerge apace, offering new risk and compliance solutions to help financial firms comply and manage their risk at a lower cost. Generally, these solutions tend to be cloud-based, meaning that data is remotely maintained, managed, and backed up.

Besides cloud features, a variety of RegTech solutions have advanced analytical and machine learning capabilities. As such, analytics is beginning to help the industry rapidly and automatically grasp not just the explicit meaning of a given regulation but also the implicit meaning or “nuance” that is so often the greatest challenge to assess and interpret.

In addition, some RegTech solutions use blockchain—a record, or ledger, of digital events distributed between many different parties that collectively guarantee the scalability and integrity of the said ledger.

The activities and processes covered by RegTech solutions are much broader than regulatory reporting alone, and they take many forms. By means of thorough market analysis, we have sorted over 80 RegTech companies offering various solutions into the following five categories:

01. Compliance
02. Risk management
03. Identity validation
04. Transaction monitoring
05. Regulatory reporting

The essential role of regulators in supporting innovation

As RegTech solutions are developing rapidly, it is difficult for financial firms to identify and commit to a particular technology. In addition, several constraints remain, such as those related to sharing, storing, processing, and accessing data. The general wariness on the part of banks and other financial actors to implement RegTech solutions is mainly rooted in the need for enforcement authorities and supervisors to approve the use of innovative products and services.

02

Unleashing the value of data to make faster and more precise decisions

Fund managers are faced with two primary challenges: margin pressure and an increasing regulatory burden. To overcome both, they need better information. Today, this data is housed in a variety of systems creating an array of data silos that are not interlinked or integrated. In most cases, data is also spread across multiple organizations and its volume and complexity are increasing exponentially. This scenario prevents good data analysis and timely performance of required actions.

To develop a suitable approach, it is useful to consider the lessons learned in other industries with more experience in the area of data analytics. The evidence suggests that technology alone will not be sufficient to generate relevant and valuable business intelligence. The key to success is the combination of in-depth business-specific expertise with strong analytical capabilities.

Fund managers and traditional fund service providers, such as custodians and third-party administrators, are becoming increasingly open to partnership service models to leverage the specialized expertise of the new organizations in the FinTech and RegTech space. This approach enables them to reduce their time-to-market and is usually also more cost-effective than any in-house development project could be.

Case study: distribution analysis

The centralization and integration of data would enable the generation of sophisticated business intelligence, for example in the following areas:

- A. **Distribution intelligence** An integrated and real-time view of the full distribution network, including intuitive visualization, allowing for flexible historical analysis, and timely identification of exceptions.
- B. **Distribution analytics** Dynamic monitoring of investor behavior in real time, and the intuitive visualization of data, allowing for timely identification and follow-ups on relevant occurrences.
- C. **Distribution oversight** A centralized data analysis platform might include a web-based tool to capture relevant data in relation to distributor due diligence, replacing the current manual process based on questionnaires.

RegTech and data analytics: innovation, not disruption!

The opportunities offered by data analytics are obvious, especially in response to ever-increasing regulatory requirements. They not only offer better decision quality by replacing “gut feelings” with facts, but also much more rapid reaction capability. As such, far from being disruptive, these developments represent clear innovation and improvement in comparison to current practices. ➔

To develop a suitable approach, it is useful to consider the lessons learned in other industries with more experience in the area of data analytics.

03

Accelerating business expansion through smart sourcing

The managed services offered by asset servicing providers are gaining in popularity because they offer asset management firms the opportunity to outsource various operational, financial, and technology infrastructure processes.

When smartly managed, business process outsourcing (BPO) can add substantial value for service providers by reducing risk and delivering additional value for clients, whether through lower service costs, improved service quality, or the ability to offer a wider range of services.

What to expect from smart sourcing in the fund distribution space

For fund distribution, smart sourcing offers advanced solutions.

Data on clients, markets, and products is currently spread across fund administrators, transfer agents, custodians, depositaries, and asset managers' or intermediaries' middle offices. Comprehensive smart sourcing solutions offer opportunities to pool data and create automated and user-friendly interfaces between all these actors within a one-stop-shop fund distribution support service.

Asset servicing actors can leverage these interfaces to build solutions for labor-intensive processes. These niche processes could include:

- Fund setup
- Marketing and liquidation services
- Fund distribution support
- Operational tax services
- Audit trail
- KYC/AML
- Risk/regulatory/marketing reporting solutions

Characteristics of the ideal process to smart source

One of the main root causes for a disappointing BPO experience is selecting the wrong process to smart source.

A critical step on the path to smart sourcing is, therefore, understanding what characteristics make a process ideally suited to outsourcing. To ensure that the right process is chosen for smart sourcing, it is vital to consider the following points:

- Core process for the smart sourcer, but not for you: the outsourced process must not be one of your core activities. Instead, it should be one of the core activities of the outsourcing service provider—the “smart sourcer.”
- Large scale/cyclical: take advantage of the service provider's economies of scale and measure its performance in a deadline-constrained framework.
- Complex/high-value tasks: complex tasks, especially those requiring an extensive range of skills, may be considered model candidates for smart sourcing for the simple reason that obtaining the necessary in-house expertise would be difficult, costly, and potentially risky to manage.

- Commodity services: a suitable candidate for smart sourcing is a service that it is conceived as a commodity, allowing firms to choose between several outsourcing providers competing not only on the best and most innovative services but also on price.

Embrace change to become better, faster, and stronger

In many cases, where outsourcing has failed to reach its potential, the client did not see the relationship between themselves and the service provider as a partnership, thus creating innovation deficits. A typical error for an outsourcing project would consist in “copy-pasting” or “lift and shift” solutions where the client simply asks the vendor to follow their legacy processes, thereby often defeating the purpose of outsourcing in the first place. In such instances, the client has failed to take advantage of the vendor's strengths. The point here is that firms must agree to transform themselves for the better, and allow service providers to follow their own proven *modus operandi*.

For fund distribution, smart sourcing offers advanced solutions.

04

Setting up an efficient robo-advisory solution

With technology on the rise, robo-advisers are becoming the norm and are now breaking into the investment world. Investment firms including banks, asset managers, and family offices are faced with various dilemmas as they endeavor to implement innovative solutions for their internal clients, while ensuring risk mitigation and a satisfying level of service.

There is no one-size-fits-all solution, as several options will be offered when it comes to setting up a robo-advisory solution. These will depend on the current maturity level of the investment firm and its strategic objectives. Selecting the right business model to suit the organization and its digital strategy is the first step in any technical implementation. As soon as the CIO has a good understanding of the key strategic objectives, the current capability and maturity, as well as the type of solution needed, three main scenarios can be envisaged:

Scenario 1: Creating you own robo-adviser

Developing an in-house robo-advisory solution may be easier not only in terms of leveraging internal expertise, architecture, and resources, but also regarding integration within the current IT landscape of the firm using existing data flows. However, building a proprietary robo-advisory solution is challenging, and it requires specific skills that may be scarce within the current IT organization.

Scenario 2: Partnering with a robo-advisory FinTech

Acquiring a B2B white-labelled solution at a fair price can offer growth potential in relation to the firm's strategy and IT/digital roadmap. This is the fastest and easiest way to set up a robo-advisory solution, regardless of the current level of maturity of the IT application landscape. However, particular focal points should be raised, namely:

- Reliance on an external provider
- Consistency of data and frames of reference
- Compliance with global and local regulations

- Security (e.g., data confidentiality, malware, etc.)

Scenario 3: Leveraging current applications

The task of leveraging existing systems and assembling seemingly disparate processes into a consistent end-to-end process is often overlooked, but it can offer numerous advantages:

- The required skills will mostly be available within the organization
 - Products and processes are already mature
- Of course, there are also constraints:
- Time-to-market and agility may not be as efficient as a pure player solution
 - Products/services may not be as distinctive
 - Running costs are likely to remain high



	Human resources	Time to market	Regulatory risk	Effort	TCO	Integration complexity	Security/privacy constraints
Scenario 1 NEW	★★★	★★★	★	★★★	★★	★★	★
Scenario 2 FINTECH	★	★	★★★★	★	★	★★★★	★★★★
Scenario 3 LEVERAGE	★★	★★	★	★★	★★★★	★	★

★★★ High impact
 ★★ Limited impact
 ★ Low impact

05

Accelerating the transformation of investment management with open application programming interfaces

Open application programming interfaces (APIs) allow organizations to leverage their existing IT assets to generate new business value through mobile apps, connected devices, and the cloud.

APIs can support bitcoin-based transactions or, more classically, automate payments, integrate instant account verification capabilities, and incorporate functionalities to boost analytics capacities—to name just a few examples.

To this end, many APIs now offer the acquisition of such capabilities on a much faster scale, and are offered by not only FinTechs but also innovative incumbent players.

The API-oriented approach to technology architecture is generating considerable attention. APIs are expected to reduce the time-to-market for various products and services and lower the build cost by “plugging in” with an open API.

In the investment management industry, where market data is the lifeblood of any organization’s business, obtaining accurate and up-to-date market data in the requisite format continues to be a time-consuming and complex process.

However, these businesses now have the option of linking their systems to external data feeds, which provide real-time, historical, and reference data without the need for complex in-house data management systems. These services may also potentially be sold by investment management firms as additional products over and above the existing suite of investment management services.

Openness, usability or re-usability, and how the framework can be made easier to interpret, as well as feasibility, stability, and transparency are key priorities for any API management framework. ●

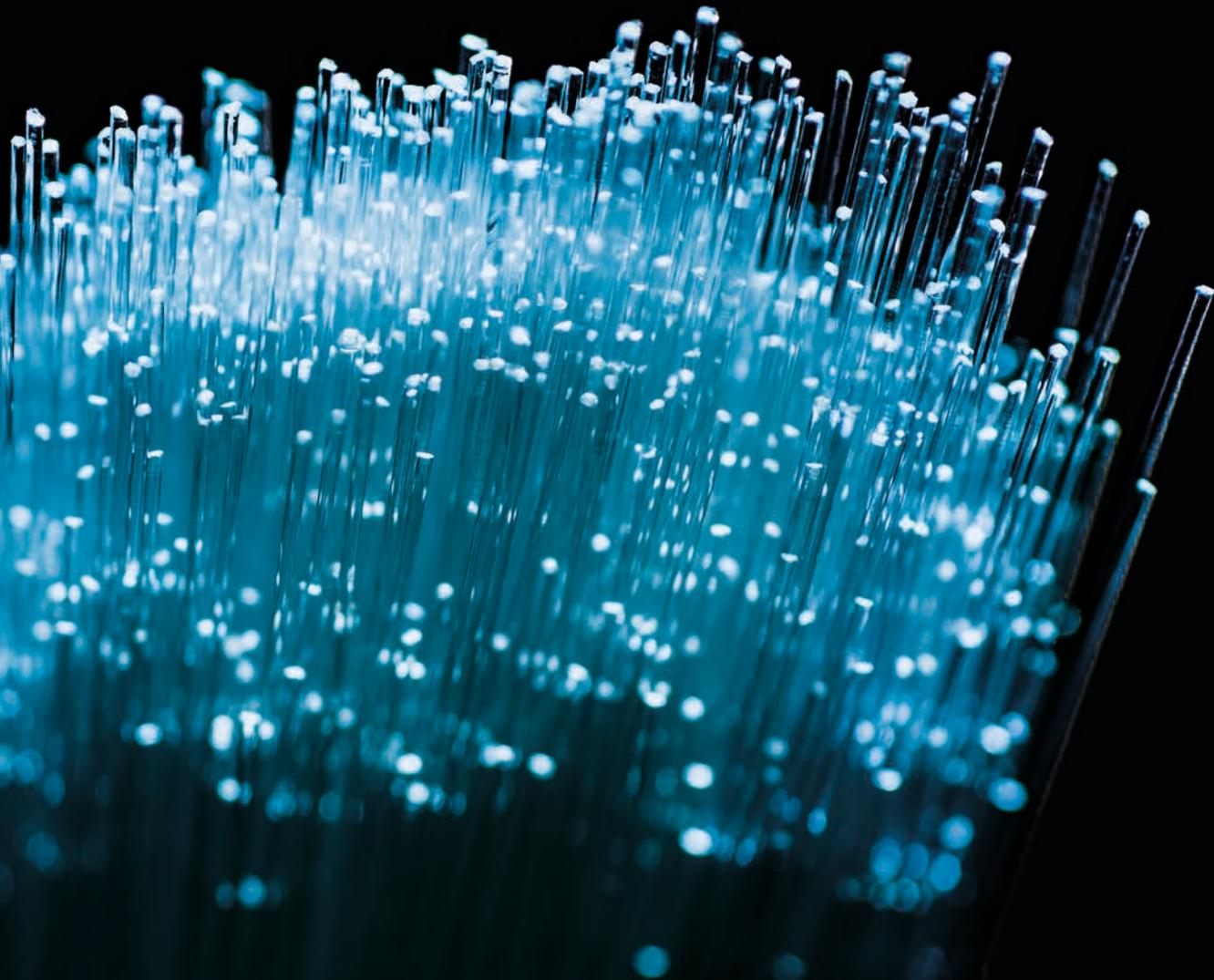
Organizations will need to think clearly about the transition from legacy architecture to micro-services and how these transitions will help them not only to better manage the maintenance budgets, but also to reduce time-to-market.

In the investment management industry, where market data is the lifeblood of any organization’s business, obtaining accurate and up-to-date market data in the requisite format continues to be a time-consuming and complex process.



To the point:

- With all the technological, regulatory, and social dynamics that have come into play, the distribution of the future will continue to be a specialist and complex topic despite being radically different from that of today.
- Regulators have a supporting role to play in fostering innovation, creating common integrated standards, and proactively driving efficiencies in the RegTech ecosystem.
- Data analysis in other industries has shown that those who embrace data analytics today will be the leaders of tomorrow.
- Reducing costs through outsourcing is possible and remains a valid business objective; nevertheless, this should not be the only motivation for outsourcing.
- The robo-advisory market is on the rise, and incumbent market players should weigh their strategic options.
- It is important to pave the way for business services and APIs to unlock new business models in the future. To do so, they will require the clarity of a well-positioned product.



A MORE OBJECTIVE ALTERNATIVE FOR PENSION FUND REPORTING

Eric Veldpaus

Managing Director and
Founding Partner
Institutional Benchmarking
Institute (IBI)

Ivo van der Veen

Senior Manager
Risk Advisory
Deloitte

As a general rule, investment management costs are compared by expressing fees as a percentage of assets under management (AUM). A list of the highest and lowest asset management costs is published by Pension Pro and the Dutch Central Bank (DNB), among others. This may lead to incorrect conclusions with potentially detrimental consequences for investors, the pension sector at large, and the specific pension fund in question. Higher costs may be due to investment in investment categories with higher expected returns or, for example, in a more diversified investment portfolio. The next step for the sector is to use objective indicators to compare pension fund performance. >



Investment policies directly reflect the investment beliefs of the relevant pension fund and its strategic investment plan.

Comparison of costs

Every pension fund is unique in terms of size, composition and age of participants, coverage ratio, risk management procedures, pension fund decisions in relation to the coverage ratio, and—sometimes—in terms of its recovery plan. For example, if a pension fund invests in more expensive asset categories (e.g., hedge funds and private equity), the cost should be assessed accordingly, pitting higher expected returns against higher risks. The goal of minimizing costs is fine, but only if efforts are being made to maximize efficiency and quality at the same time: this is the definition of cost optimization.

In developing recommendations on administrative costs (including investment management costs) for the Federation of Dutch Pension Funds ¹(in Dutch “Aanbevelingen Uitvoeringskosten” and hereafter “Recommendations on Administrative Costs”), the working group expected that the reporting of cost levels would fall. After all, no pension fund wants to top the list of the most expensive pension funds. This scoreboard journalism is an undesirable consequence of cost transparency and not in the interests of the participants. To avoid this, the Recommendations on Administrative Costs, which have already been published for asset management, indicate how pension funds can better explain their performance with a view to being judged in a balanced manner. However, these recommendations have yet to be fully adopted by the sector.

Differences between pension management costs can often only be explained by the effects of scale and size. Higher numbers of participants often result in lower fixed costs,

but that is just one reason why costs may differ. Greater granularity in the assessment of costs is necessary, to reflect the pension fund’s level of service and complexity. Recently, the DNB stated in *Het Financieel Dagblad*² that pension funds can differ from each other in terms of their complexity and the services they provide. Acknowledging these variations is the first step toward providing a clearer assessment of pension management costs.

Focus should not be shifted away from pension fund implementation costs. In addition, it is important for cost levels to be explained. Recently, the DNB indicated that it is in discussion with board members to understand the framework used by pension funds to determine asset management costs.

Recommendations by the Federation of Pension Funds

Ensuring consistency in terms of the method used to calculate management costs will facilitate an objective comparison between funds. In its Expenses Recommendations, the Federation of Pension Funds stated that asset management costs should be considered in relation to:

- The chosen investment policy and the associated benchmark costs³
- Long-term returns, also in relation to the corresponding benchmark return

The Federation of Pension Funds’ guidelines imply that if a pension fund chooses to deviate from the Recommendations on Administrative Costs, this decision should be justified in the annual report.

Investment policy and associated benchmark costs

Investment policies directly reflect the investment beliefs of the relevant pension fund and its strategic investment plan. Investment plans set out the selected investment categories (along with asset allocations and the decision of whether or not to invest actively) and the way in which the pension fund will invest. Asset management costs can then be estimated based on these assumptions. For example, a pension fund may have opted for more expensive investment categories that will yield a higher return in the long term or ensure a better spread of risk. The costs of a pension fund investing, for example, in hedge funds, private equity, and infrastructure, are significantly higher than those of a pension fund investing in cash and bonds. Alternatively, the pension fund can opt for active portfolio management, with the cost of active management being higher for a higher expected return.

Comparing the asset management costs of a pension fund with the average across the pension sector is meaningless because of differences in underlying asset allocation. This factor can be mitigated by analyzing the costs in relation to the corresponding benchmark costs. The term “benchmark costs” is a difficult concept and one that is unfamiliar to many in the sector. Frequently, benchmarking costs are thought to be the cost of benchmarking. This is not correct. Benchmark

1. <https://www.pensioenfederatie.nl/paginas/nl/openbaar/services/publicaties/aanbevelingen-uitvoeringskosten>

2. See *Het Financieel Dagblad*, 17 March 2017, “The Dutch Central Bank: Small pension funds are not efficient”

3. The definition used for this is explained in the following paragraph

costs are defined as an independent specific cost form, unique to each fund and calculated separately for each fund. The cost model is established by analyzing the asset allocation of the fund and the average cost of the relevant investment category for similar pension funds. This makes it possible to make an objective comparison between pension funds on the basis of the asset management portfolio.

Long-term investment returns and benchmark returns

Pension funds are long-term investors. Especially in illiquid investments, such as private equity and infrastructure, there is a J-curve effect. Costs are high for the first few years and returns are generated over a longer period of time. The differing investment results are also more volatile. In order to avoid short-term thinking, returns should be evaluated over a longer period. Often, mandates are given to asset managers with a benchmark to be followed (or outperformed, in the case of active management). Comparing returns to the performance of a benchmark can determine the quality of the asset manager and facilitate an evaluation of the performance.

A strict application of the above will provide a balanced picture of the cost level in relation to returns and allow for a new way of reporting pension funds' asset management performance to be adopted. ➤



Benchmarking is the next logical step

The asset management cost level is largely determined in advance by the investment beliefs applied. An important factor in comparing the performance of multiple pension funds is the asset allocation. The Institutional Benchmarking Institute (IBI) has developed several objective indices for these comparisons. For example, the IBI Asset Allocation Index measures portfolio distribution. Where spreads are greater, costs may also increase. The spread of the average investment universe is set at 100. Similar indices have also been developed to assess the level of active management (the IBI Alpha Index) and the implementation of the portfolio structure (IBI Implementation Index). This can be through specialized mandates or, alternatively, investment funds.

A significant proportion of overall returns (and therefore costs) can be explained by referring to the fixed asset allocation and the returns of the benchmark. Another important set of choices affecting overall returns is the interest rate hedge. Foreign currency hedging also has an effect on the total return, albeit to a

lesser extent. These, but also other important elements, are included in the IBI report.

In addition to asset management costs, the IBI compares pension administration costs. The level of service and the complexity of the pension scheme have an important effect on the cost of pension management. The IBI has also developed IBI indices to reflect asset management costs. The main indices for objective benchmarking are the IBI Service Index, IBI Complexity Index and the IBI Transparency Index. These represent a logical reaction to the Expenses Recommendations in the field of benchmarking.

Best practices

Pension funds' management costs are determined by their boards of directors, who are also responsible for transparency in respect to these decisions. Over the years, pension funds have reported on these costs in a variety of ways.

Execution costs are determined by the choices made by the board in respect to risk and return on asset management and

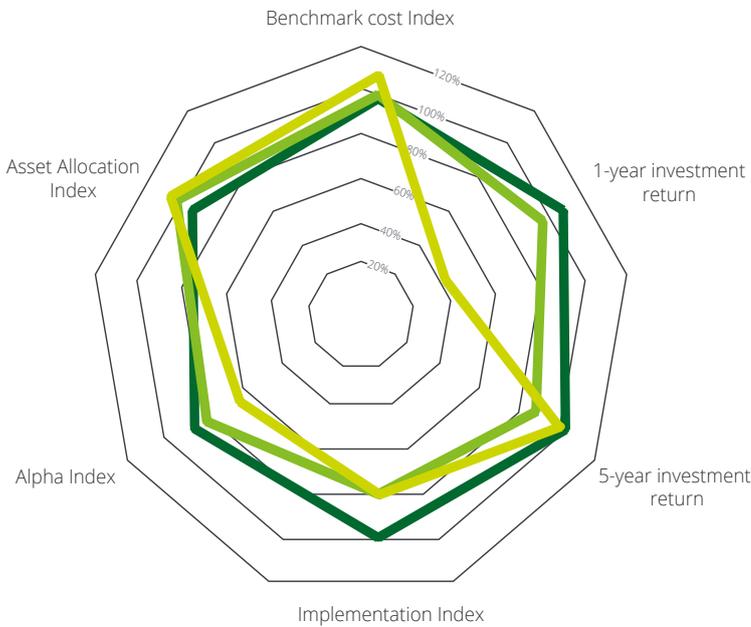
the pension scheme's level of service and complexity. Many pension funds do not explain the relationships between these factors in the annual report. Too much emphasis is placed on asset management costs alone (expressed in basis points) for the investment portfolio. Overviews with a cost breakdown for every sub-category of asset will lead to more detailed questions and, ultimately, to an explanation of the cost of pension funds' individual portfolio mandates for regulators and pension stakeholders. The degree of detail is increasing, as is the availability of competitive market information. It is much better to indicate how costs are affected by the choices made at the pension fund and long-term investment returns. By adding a qualitative explanation, the choices of the pension fund management can be better explained.

Comparing pension funds to objective indicators will improve cost transparency. This will result in a new way of reporting on performance for pension funds and institutional investors.



Reporting

The following example report explains the performance of the pension fund in the field of asset management in relation to a peer group and the investment universe.

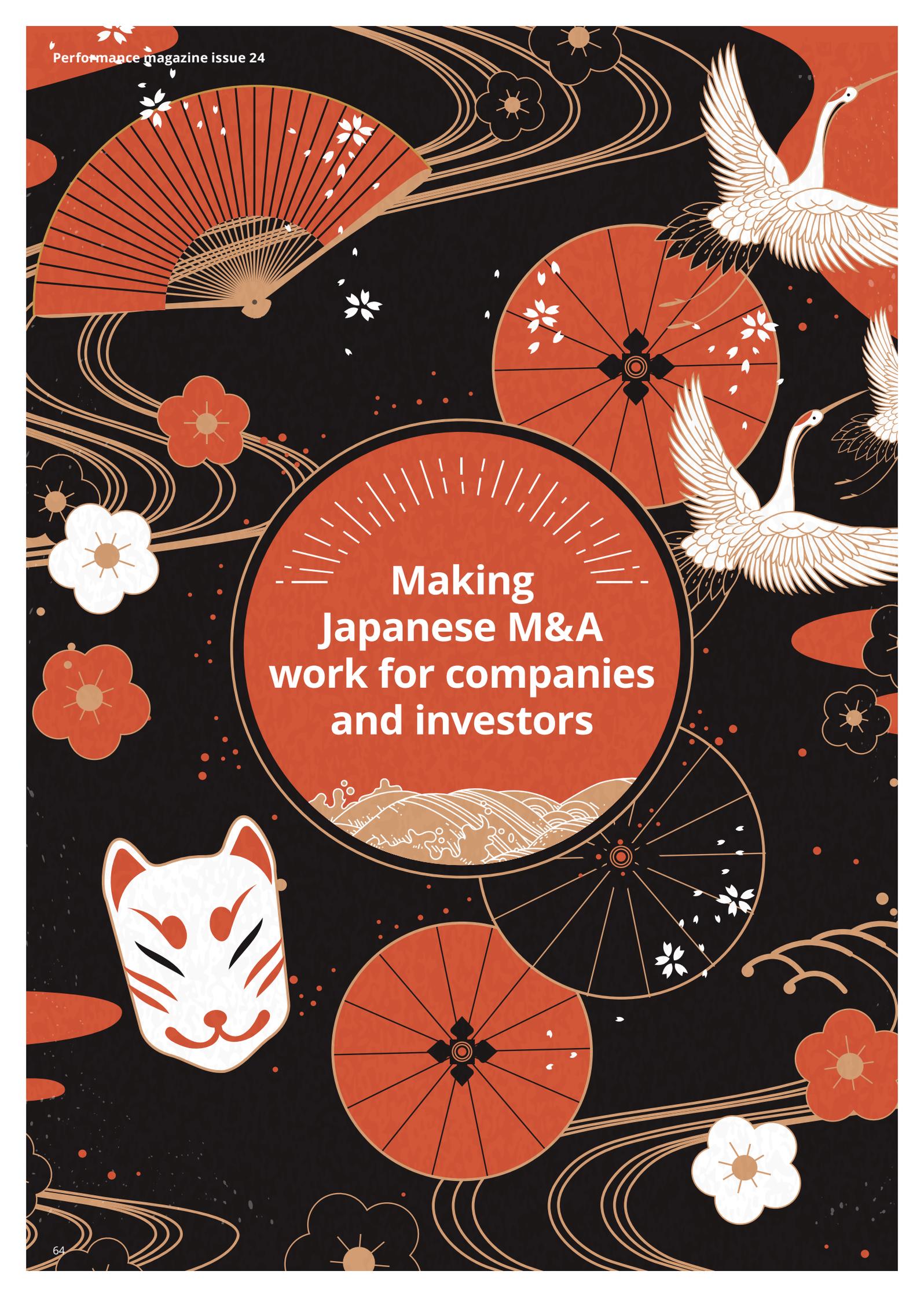


-  Pension Fund
-  Pension fund peer group
-  Dutch universe

This analysis shows that the fund “believes” in a diversified investment portfolio, due to an Asset Allocation Index score that is over 100, and thus has a broadly-spread portfolio relative to the peer group. The calculated benchmark costs (the norm) are lower than the cost level reported by the pension fund. The annual return on the portfolio is moderate, due to the J-curve investment effect. The return over a five-year period is average, but it is expected to increase as a result of the return on illiquid investments. The implementation is predominantly through an investment mandate. In comparison with other pension funds, active management is limited. ●

To the point:

- There is an increasing need for cost transparency.
- Cost reporting recommendations have not been adequately implemented by the pension sector.
- Scoreboard journalism is an undesirable consequence of the appetite for cost transparency.
- An objective comparison between pension funds may be achieved by providing a balanced overview of the capability in relation to the return on investment of the portfolio and long-term comparisons.
- A more objective image for pension funds may be obtained by including the pension scheme’s level of service and complexity in the cost comparison.



**Making
Japanese M&A
work for companies
and investors**

Vincent Poizat

Senior Manager
Risk Advisory
Deloitte

James Nepaulsingh

Counsel
Legal
Deloitte

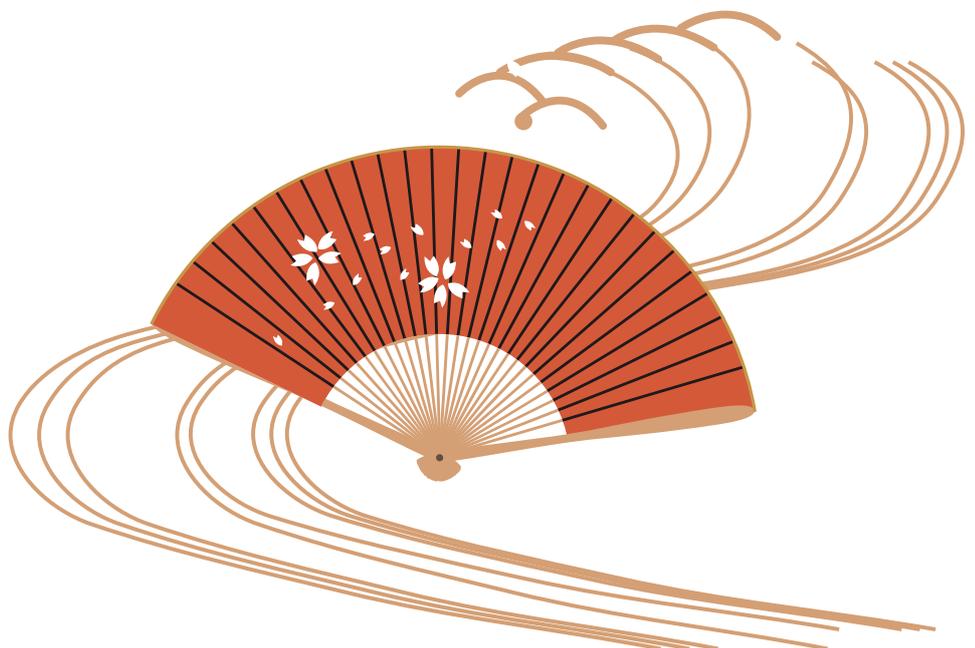
The situation: value destruction from a lack of process integrity

Year after year, news of scandals, impairment losses, and sales under pressure confirm the challenges of Japanese M&A: with too much cash on their books, too few domestic organic growth opportunities, and no inclination to increase dividends or buy back shares, Japanese companies regularly drive down value through expensive acquisitions, followed by ineffective synergy capture. There is ample literature covering the topic. The list includes the globally low-value M&A creation record, high premiums paid by Japanese companies, and the high number of write-downs in Japan.

A growing number of investors in Japan are expressing dissatisfaction with the alternative options available: letting companies either sit on cash or gamble it on an acquisition. Despite recent progress in shareholder engagement in Japan, with the publication of both the Corporate Governance Code and the Stewardship Code and significant political support, shareholder activism remains relatively quiet. The concept of share buybacks and higher dividends continues to be largely ignored. Calls to “westernize” internal processes at Japanese corporations have not been heard because traditional corporations see no reason to move away from a tried-and-tested course, acquiring and making investments by following processes that are consistent with their internal corporate culture. Proposing a method to improve M&A performance through changes that do not contradict, but instead leverage, corporate cultural aspects is more promising.

Our approach is to concentrate on the governance aspects of deal-making, which we call “M&A governance.” While corporate governance is a hot topic in Japan right now, the reasons behind our focus on M&A governance are: (a) the room for improvement in the field, (b) the fact that advances in M&A tools (M&A strategy, valuation techniques, due diligence standards, integration planning etc.) have led to no statistical improvement in terms of value-creation through M&A globally (various surveys indicate that today, like 20 years ago, only about a third of transactions add value to the acquirer), and (c) it is a relatively easy process to sell to management because it incorporates core tenets of Japanese corporate culture, such as risk aversion. It is also a robust and repeatable processes. ➤

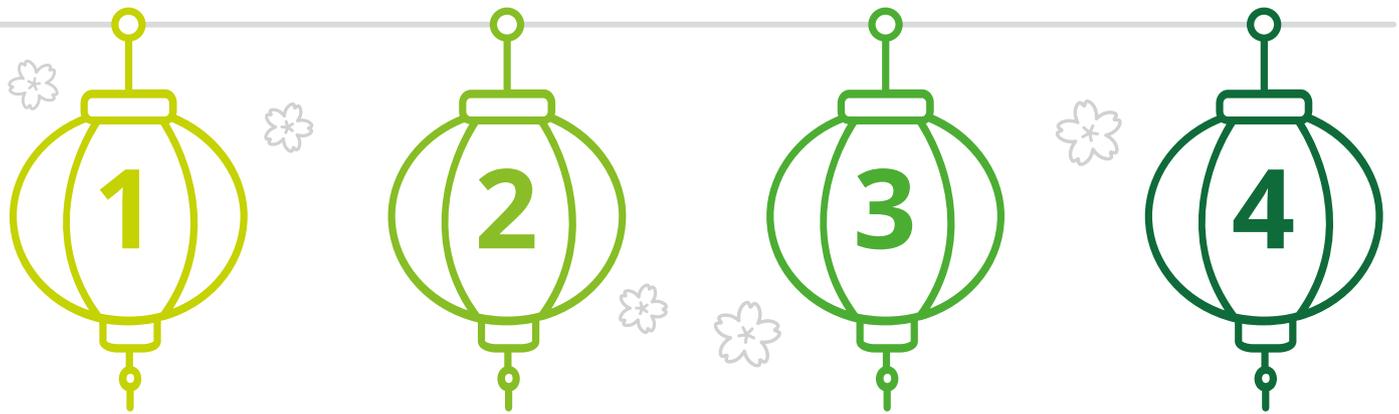
Calls to “westernize” internal processes at Japanese corporations have not been heard because traditional corporations see no reason to move away from a tried-and-tested course.



Our findings

We have conducted studies on Japanese companies that have been adversely affected by M&A transactions. We found that while Japanese companies have access to world-class M&A tools, they typically lack the right internal processes to bring them all together and fully leverage them. As a result, value destruction occurs at all stages, from strategy conception to post-investment subsidiary management. Some recurring issues include:

While acquirers are well aware of risks associated with the target, which they assume are addressed as part of the due diligence process, they rarely consider the execution and strategic risks associated with M&A.



Origination phase

A tendency of “analysis-paralysis” leads to inefficient and unresponsive origination, often resulting in a rushed deal to capture whatever asset is available, simply to meet the strategic plan’s deadlines

Auction transactions

Due to rigid and consensus-based decision-making, Japanese companies are well known for struggling to meet auction deadlines—to the extent that they are not always invited by the seller to participate. When they do make it to the final stages, they often show a certain inability to walk away from a bad deal once momentum has been built internally (recent impairment losses testify to this) and end up paying unusually high premiums

Synergies

Such high premiums are regularly justified by a general acceptance of unquantified and sometimes vague strategic synergies

Synergy capture

There is an absence of urgency and accountability to capture synergies, with many integration processes failing to be completed or even started several years post-transaction

The common theme to most shortcomings is a lack of hands-on, consistent supervision of the transaction process. Boards can eventually find themselves rubber-stamping a deal that neither they nor top management have adequately supervised and reviewed, and the acquisition likely joins the ranks of too-expensive-for-little-benefit transactions.

The challenges

The lack of debate at Japanese board meetings is certainly an ongoing fundamental issue. It would be ineffective, however, to focus on changing this as if by magic. We must first put a system in place for deal review and approval, and for process support and supervision that board directors find both culturally acceptable and possible to implement. The challenge is thus threefold:

- Basing a solution on features that appeal to Japanese core corporate values
- Encouraging good M&A governance by simplifying it through a systematic approach
- Providing support to companies at all levels, from the board to the deal team, to increase M&A competence in the short and long-term

The approach: a clear review and approval system based on risk management. Instead of insisting that Japanese firms adopt western systems and processes, we suggest appealing to Japanese core corporate values: risk aversion and an affinity with step-by-step procedures. M&A risk management underlines this approach, and what it delivers is a systematic process based on facts. As such, it limits the potential for long and heated opinion-based arguments.

M&A risk is commonly misunderstood. While acquirers are well aware of risks associated with the target, which they assume are addressed as part of the due diligence process, they rarely consider the execution and strategic risks associated with M&A. The value regularly destroyed by transactions would seem to justify a thorough risk management exercise, consisting in a careful review of firm- and initiative-specific risks leading on to predeal

risk treatment measures and in-deal monitoring of a manageable number of key risks. Deloitte has compiled a list of around 250 best practices throughout the M&A lifecycle, correlated with a register of risk factors that enables the identification, assessment, and mitigation of M&A strategic and execution risks, whether through implementation of best practices, training, or changes in M&A strategy. Not all risks will be adequately mitigated to acceptable levels and the most critical ones in terms of impact and likelihood will be an essential part of the deal review process. ➤

The lack of debate at Japanese board meetings is certainly an ongoing fundamental issue.



Risk is thus a cornerstone of transaction review and approval. This starts with the inclusion of risk considerations as well as strategic considerations in the definition of the approval process. Companies use a simple size threshold too often to determine whether board involvement is required. The reality is that small deals can bear high risk, or be strategically important to the point of demanding top-level supervision. Some Japanese companies do realize this, and it leads to nervousness as to what approval process to use, or to changes in internal approval processes during the transaction. Deloitte's methodology enables a systematic assessment of such factors to generate approval scenarios—by whom (board, committees, management), at what stage, and on what basis—for a range of deals. Choosing among scenarios is largely an automated process once the front-end analysis has been carried out.

The review plan, clearly communicated to the deal-team, encompasses the two main areas of focus of the board for M&A according to most corporate governance codes: ensuring strategic fit and adequate risk management. Pre-transaction work is combined with in-deal analysis, delivered to the board or committee in executive dashboard format, to ensure a consistent assessment of both strategic fit and risk—and beyond risk, of deal process integrity. Deal-teams may show reluctance to increased oversight on the basis that it may slow them down. Our approach negates this very valid concern: it ensures that the deal-team knows exactly what information to provide. The information is usually contained within fewer than 20 pages, as opposed to the confusing, data-rich thick books that we often see produced. As a result, the approving authority is clear on what it is expected to review. This enables effective oversight, as well as efficient reporting and decision making.

Although the system described above may sound relatively simple, its implementation requires continuous effort. The first phase is a significant project combining strategic analysis, risk management, and possibly organizational and operational changes. During transactions, the quality of the deal review will still hinge on information quality—which can be supported by Deloitte—and M&A competence among both reporting and reviewing parties. The latter remains a critical issue in Japan, especially among board members with little past exposure to M&A transactions (especially overseas ones). While Deloitte provides M&A training for all levels, including M&A governance training for board directors, education should not be a one-off effort. Rather, it is essential to design a learning program in order to build up firm-specific M&A competence over time.

Some key benefits

Improving M&A governance is not an academic exercise for the sole purpose of higher standards. Our approach creates value in practice by empowering companies to avoid typical transaction pitfalls from strategy development to post-transaction integration. For example:





A comprehensive understanding of M&A strategic risk leads to refined M&A strategies, investment criteria, and deal structures that improve the risk/reward profile of deals



A systematic and sound approval process that allows for a variety of deal-types balances efficiency and quality of oversight, supporting deal teams in time-pressured environments while making sure no corners are cut



An in-deal risk management system that provides a comprehensive picture of risks, from firm- and transaction-specific risks to those associated with the process so far, the proposal and the level of preparedness for the next steps, enable the reviewing entity not only to assess the deal's risk profile, but also to advise and support the deal team effectively



A thought-through and systematic framework to assess strategic fit, including comparisons with strategic alternatives as well as portfolio and parenting considerations, prevents companies from deviating from corporate strategy



Oversight that begins at the origination stage provides a framework conducive to efficient and strategically rigorous target identification, avoiding desperate deals on sub-par targets



Transaction risk management balances real-world requirements with best practices, guaranteeing due process for critical components, e.g., a pricing strategy that is anchored in detailed synergy analysis, itself involving the integration team and linked to the implementation of synergy capture



Clear risk limits and evaluation frameworks as well as strict process integrity compel acquirers, with little room for debate, to walk away from deals that are value-destroying



A risk-centric approach leads naturally to more structured and effective subsidiary governance, with a system in place for continuous strategic alignment and integrated risk management

The role of investors: unite and demand proof of sound M&A governance

The one thing that stands in the way of Japanese acquisitions creating value is the will of Japanese acquirers to implement such M&A governance improvement on a large scale. Many players still believe that they can make deals and hope for the best. Regulatory pressure on M&A governance could be stronger. The main source of pressure must be investors who see corporate cash used on unsuccessfully executed deals.

Investors and the companies in which they invest would all profit from stronger M&A governance. There is no valid reason for companies—Japanese or otherwise—to continue without an adequate M&A governance structure and process in place. ●

To the point:

- Appropriate governance of the M&A process is critical to acquisition success and enhanced shareholder value.
- M&A governance based on M&A risk management is highly effective at addressing typical issues and is culturally compatible with Japanese companies.
- Investors are in a position to insist that Japanese companies implement M&A governance.



EXPECTING A SMOOTH EVOLUTION OF AIFMD

Nick Tabone, Partner in Audit at Deloitte had an interesting conversation with Michael Collins, Chief Executive at Invest Europe on the ever-changing landscape of private equity and real estate.

This interview is a transcript of the interview that took place at the Deloitte PE Symposium, in Luxembourg, on 9 May 2017.



Michael Collins is Chief Executive Officer of Invest Europe, the association representing Europe's private equity, venture capital and infrastructure fund managers and their investors.

He represents Invest Europe's 650 members towards political and regulatory stakeholders at the highest levels and guides the agenda-setting work of the world's largest private capital association.

Michael joined Invest Europe in 2013 to head up its public affairs team. Previously, Michael was Managing Director for European Government Affairs at Citigroup with responsibility for advising senior management and clients on a wide range of financial regulatory issues. Prior to that role, he spent four years with the UK Foreign and Commonwealth Office in Brussels, as Financial Counsellor at the UK Permanent Representation to the EU, where he advised senior UK Ministers and officials on economic issues and regulation, including the Alternative Investment Fund Managers Directive. His career includes 15 years in the UK civil service.

Michael holds a First Class degree in Modern History from Wadham College, Oxford, and also holds a postgraduate diploma in management. [▶](#)



Many non-European general partners, particularly from the US, simply walked away from marketing to European investors for several years.

Nick:

Four years after the implementation of AIFMD in domestic legislation, do you think that the shift from an unregulated industry to a regulated one was as painful as initially anticipated?

Michael:

My relationship with AIFMD originates at its very beginning (2007–2008), when it was first proposed. At that time, representatives of the PERE industries believed AIFMD to be an existential threat. Some of the proposed rules—particularly those being raised in the European Parliament—might have been fundamentally damaging. However, the text that was eventually adopted in 2011 was much more balanced, not least as a result of efforts by market participants to educate policy-makers about what we do. Still, it had a major impact on the industry. AIFMD probably had the greatest impact on smaller European limited partners, as they saw a significant and quite sudden drop-off in their access to non-European fund managers. Many non-European general partners, particularly from the US, simply walked away from marketing to European investors for several years. On the European general partners' side, most agree that AIFMD has raised the structural costs of operating a fund. However, the cost increases implied by AIFMD are no longer seen as business threatening by market players, keeping in mind that it is slightly easier for larger general partners to absorb those costs.



Nick:

On the other side of the Atlantic Ocean, President Trump seems to be pushing for an era of deregulation. In Europe, with European Parliament and European Commission surveys being launched in line with potential discussions regarding AIFMD II, where do you think this will go? Do you expect, or are you calling for, similar deregulation?

Michael:

The current directive is far from perfect. But there is not a single piece of EU legislation or domestic legislation that is perfect. However, it lays down a relatively stable, and now generally understood, framework.

I fear that reassessing the directive might lead to a worse situation than the one we have now, as there are still plenty of politicians skeptical about the PE industry. Remuneration is one example where I would prefer the status quo: concerns about bankers' remuneration might easily end up with a toughening up of our regulation in this regard. Private equity fund managers would struggle to avoid that topic in any potential discussion on AIFMD II.

Nick:

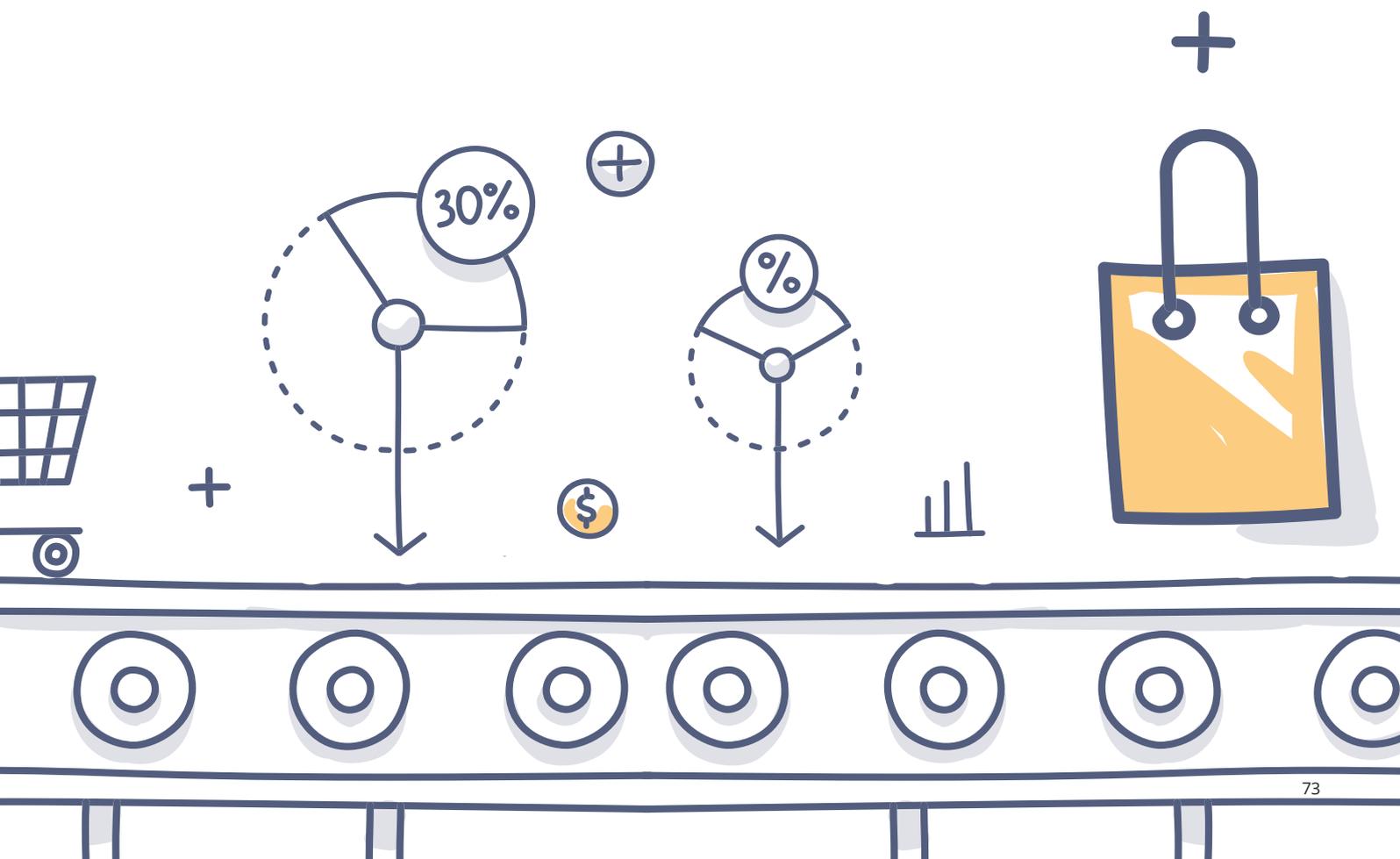
The carried interest model could still be viewed as ensuring the highest possible level of interest alignment between general partners and limited partners, as it is based on realized profits rather than unrealized gains. Do you not think that the industry could convince members of the parliament of the benefits of this model?

Michael:

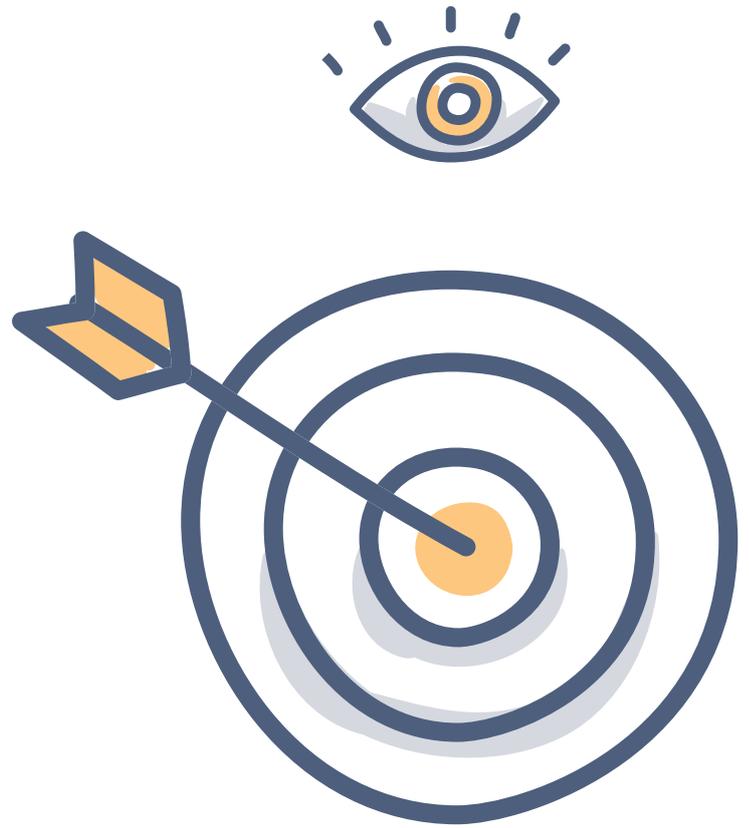
There is no question about the value of the current carried interest model and the benefits it brings. The largest fraction of general partners' remuneration only kicks in once the hurdle rate has been achieved and real money has been returned to investors.

However, the industry simply does not have the data to back up the theoretical argument on carried interest. Even Invest Europe is struggling to get the data because managers are reticent, for understandable reasons, to share this data. But we need to raise awareness among general partners that without sharing some data our position is much more difficult to explain and defend.

Reassessing the directive might lead to a worse situation than the one we have now.



We would like to access to that data to acquire valuable insights into our own industry.



Nick:

Could a push for industry-specific regulations (private equity, real estate, and hedge funds) rather than a one-size-fits-all approach help to make the case easier? For instance, is there any reason to address reporting the same way for each of those industries?

Michael:

It is correct that each sector of the alternative industry should have its own directive. The AIFMD universe is defined almost entirely negatively, insofar as it covers those funds that are “not UCITS.” As a result, AIFMD tries to capture a quite diverse and dispersed universe of investment strategies.

However, the European Commission does not have any appetite to break AIFMD into different parts, so we are stuck with the basic structure of AIFMD for the time being. One of the drivers for adopting AIFMD was to ensure that, through systematic, compulsory reporting, authorities would be better positioned to identify, anticipate, and tackle systemic risks than they were in 2008. However, there is no proof that the PE industry is a source of systemic risk.

Nick:

What would be on your wish list for a smooth evolution of AIFMD?

Michael:

Data reported by general partners to competent authorities is currently kept “in house.” I am not sure this avalanche of data from PE managers—or from other financial services firms for that matter—is used in a meaningful way. As an industry representative, we would like access to that data to acquire valuable insights into our own industry.

But the single biggest failure of the current directive is probably the regime for third-country managers. Today, there is still no third-country passport nor any prospect of it being available in the near future. The third-country mechanism of AIFMD does not really work but I have doubts that, in the Brexit context, there is any appetite for improving it in the near future.

Nick:

With a majority of asset managers physically based in London, what is the expected effect of Brexit on the PE industry? Do you anticipate that Brexit will bring any changes to the landscape?

Michael:

We still need to work out how Brexit will change the landscape: most of the impact will depend on the nature of the ultimate deal that is to be negotiated and on the nature of the long-term relationship between the UK and the EU that will be put in place. ●

Webinars

Programme 2017

Since 2009, Deloitte has decided to open its knowledge resources to the professionals of the Financial Services Industries community. We are happy to present to you the calendar of our new Link'n Learn season which, as in previous years, will be moderated by our leading industry experts. These sessions are specifically designed to provide you with valuable insight on today's critical trends and the latest regulations impacting your business. An hour of your time is all you need to log on and tune into each informative webinar.



Regulatory

- Basel III and CRD V/Crr II
9 November
- Political landscape and global impact for Funds
16 November



Investment Funds

- Disruption of the Banking Industry
7 September
- Investment Management Tax
2 November
- Money Market Funds
30 November



Operations & Techniques

- Derivative Financial Instruments - Part 1
5 October
- Derivative Financial Instruments - Part 2
19 October

For access to the sessions do not hesitate to contact deloittelearn@deloitte.lu
Dates and detailed agendas available here: www.deloitte.com/lu/link-n-learn

Contacts

Africa - East, West, Central and South



Dinesh Munu
Partner - Audit
+27 011 806 5767
dmunu@deloitte.co.za



David Nchimbi
Partner - Audit
+255 222 169 000
dnchimbi@deloitte.co.tz



Joshua Ojo
Partner - Audit
+234 190 421 30
jojo@deloitte.com.ng

Argentina



Claudio Fiorillo
Partner - MSS
+54 11 432 027 00 4018
cfiorillo@deloitte.com

Australia



Neil Brown
Partner - Assurance & Advisory,
Wealth Management
+61 3 967 171 54
nbrown@deloitte.com.au



Declan O'Callaghan
Partner - Assurance & Advisory,
Wealth Management
+61 2 932 273 66
deocallaghan@deloitte.com.au

Austria



Dominik Damm
Partner - Advisory
+431 537 005 400
dodamm@deloitte.at



Robert Pejhovský
Partner - Tax & Audit
+431 537 004 700
rpejhovsky@deloitte.at

Bahamas



Lawrence Lewis
Partner - ERS
+1 242 302 4898
llewis@deloitte.com

Belgium



Philip Maeyaert
Partner - Audit
+32 2 800 2063
pmaeyaert@deloitte.com



Maurice Vrolix
Partner - Audit
+32 2 800 2145
mvrolix@deloitte.com

Bermuda



Mark Baumgartner
Partner - Audit
+1 441 299 1322
mark.baumgartner@deloitte.bm



James Dockeray
Partner - Tax
+1 441 299 1399
james.dockeray@deloitte.bm



Muhammad Khan
Partner - Audit
+1 441 299 1357
muhammad.khan@deloitte.bm

Brazil



Gilberto Souza
Partner - Audit
+55 11 5186 1672
gsouza@deloitte.com



Marcelo Teixeira
Partner - Audit
+55 11 5186 1701
marceloteixeira@deloitte.com

British Virgin Islands



Carlene A. Romney
Partner - Audit
+1 284 494 2868
cromney@deloitte.com

Cayman Islands



Norm McGregor
Partner - Audit
+1 345 814 2246
nmcgregor@deloitte.com

Central Europe



Grzegorz Cimochoński
Partner - Consulting
+48 22 511 0018
gcimochoński@deloittece.com

Chile



Ricardo Briggs
Partner - Consulting
+56 2 2729 7152
rbriggs@deloitte.com



Pablo Herrera
Partner - Financial Advisory
Services
+56 2 2729 8150
paherrera@deloitte.com



Alberto Kulenkampff
Partner - Audit
+56 2 2729 7368
akulenkampff@deloitte.com

China (Southern)



Sharon Lam
Partner - International Tax
Services
+852 28 52 65 36
shalam@deloitte.com.hk



Anthony Lau
Partner - International Tax
Services
+852 2852 1082
antlau@deloitte.com.hk

Colombia



Ricardo Rubio
Partner - Financial Advisory
Services
+57 1 546 1818
rrubio@deloitte.com

Cyprus



Panikos Teklos
Director - Consulting
+357 994 917 61
pteklos@deloitte.com

Denmark



John Ladekarl
Partner - Audit
+45 36 10 20 78
jladekarl@deloitte.dk



Anders Oldau Gjelstrup
Partner - Audit
+45 20 41 68 02
agjelstrup@deloitte.dk

Finland



Ilkka Huikko
Partner - Consulting
+358 40 740 3529
ilkka.huikko@deloitte.fi

France



H el ene Alston
Partner - Tax
+33 1 55 61 60 32
healston@taj.fr



St ephane Collas
Partner - Audit
+33 1 55 61 61 36
scollas@deloitte.fr



Pascal Koenig
Partner - Consulting
+33 1 55 61 66 67
pkoenig@deloitte.fr



Jean-Marc Lecat
Partner - Audit
+33 1 55 61 66 68
jlecat@deloitte.fr



Jean-Pierre Vercamer
Partner - Audit
+33 1 40 88 22 03
jvercamer@deloitte.fr

Germany



Andreas Koch
Partner - Audit
+49 89 903 687 39
akoch@deloitte.de



Marcus Roth
Partner - Tax
+49 892 903 682 78
mroth@deloitte.de



Dorothea Schmidt
Partner - Consulting
+49 699 713 734 6
dschmidt@deloitte.de



Nina Schrader
Director - Consulting
+49 173 258 5554
nschrader@deloitte.de



Christof Stadter
Partner - Audit
+49 89 29036 8269
cstadter@deloitte.de



Alexander Wenzel
Partner - Tax & Legal
+49 69 75695 6111
alwenzel@deloitte.de

Gibraltar



Joseph Caruana
Partner - Audit
+350 200 112 10
jcaruana@deloitte.gi

Greece



Alexandra Kostara
Partner - Audit
+30 210 67 81 152
akostara@deloitte.gr



Despina Xenaki
Partner - Audit
+30 210 67 81 100
dxenaki@deloitte.gr

Hong Kong



Anthony Ming Young
Partner - International Tax Services
+852 285 210 82
antlau@deloitte.com.hk

Guernsey



John Clacy
Partner - Audit
+44 1 481 703 210
jclacy@deloitte.co.uk

Iceland



Arni Jon Arnason
Partner - FAS
+354 580 30 35
arnijon.arnason@deloitte.is

India



Porus Doctor
Partner - ERS
+91 22 6185 5030
podoctor@deloitte.com



Vipul R. Jhaveri
Partner - Tax
+91 22 6185 4190
vjhaveri@deloitte.com



Kalpesh J. Mehta
Partner - IM
+91 22 6185 5819
kjmehta@deloitte.com



Bimal Modi
Partner - FAS
+91 22 6185 5080
bimalmodi@deloitte.com



Monish Shah
Partner - Consulting
+91 22 6185 4240
monishshah@deloitte.com

Indonesia



Rosita Sinaga
Partner - Audit
+62 21 2992 3100
rsinaga@deloitte.com

Ireland



David Dalton
Partner - Consulting
+353 140 748 01
ddalton@deloitte.ie



Brian Forrester
Partner - Audit
+353 141 726 14
bforrester@deloitte.ie



Mike Hartwell
Partner - Audit
+353 141 723 03
mhartwell@deloitte.ie



Brian Jackson
Partner - Audit
+ 353 141 729 75
brijackson@deloitte.ie



Christian MacManus
Partner - Audit
+353 141 785 67
chmacmanus@deloitte.ie



Deirdre Power
Partner - Tax
+353 141 724 48
depower@deloitte.ie

Israel



Naama Rosenzweig
Director - ERS
+972 3 608 5251
nrosenzweig@deloitte.co.il

Italy



Marco De Ponti
Partner - Audit
+390 283 322 149
mdeponti@deloitte.it



Maurizio Ferrero
Partner - Audit
+390 283 322 182
mferrero@deloitte.it



Paolo Gibello-Ribatto
Partner - Audit
+390 283 322 226
pgibello@deloitte.it



Marco Miccoli
Partner - Audit
+390 283 322 308
mmiccoli@deloitte.it



Riccardo Motta
Partner - Audit
+390 283 322 323
rmotta@deloitte.it

Japan



Masao Asano
Partner - Advisory Services
+81 90 8508 5720
masao.asano@tohmatsu.co.jp



Yang Ho Kim
Partner - Tax
+81 3 621 338 41
yangho.kim@tohmatsu.co.jp



Yoshiyuki Omori
Partner - Tax and Legal
+81 3 667 213 77
yoshiyuki.omori@tohmatsu.co.jp



Nobuyuki Yamada
Partner - Audit
+81 90 650 345 34
nobuyuki.yamada@tohmatsu.co.jp



Mitoshi Yamamoto
Partner - Consulting
+81 90 1764 2117
mitoshi.yamamoto@tohmatsu.co.jp



Koji Yamamoto
Partner - Tax and Legal
+81 3 687 033 00
koji.yamamoto@tohmatsu.co.jp

Jersey



Gregory Branch
Partner - Audit
+44 1 534 82 4325
gbranch@deloitte.co.uk



Andrew Isham
Partner - Audit
+44 1 534 824 297
aisham@deloitte.co.uk

Kazakhstan



Roman Sattarov
Director - Audit
+7 7272 581340
rsattarov@deloitte.kz

Korea



Seul Hyang Wee
Partner - Audit
+82 2 6676 3314
sewee@deloitte.com



Ki Won Lee
Partner - Audit
+82 2 6676 3348
kiwonlee@deloitte.com



Sun Yeop Kim
Partner - Audit
+82 2 6676 1130
sunyeopkim@deloitte.com

Luxembourg



Eric Centi
Partner - Cross-Border Tax
+352 451 452 162
ecenti@deloitte.lu



Benjamin Collette
Partner - Advisory & Consulting
+352 451 452 809
bcollette@deloitte.lu



Laurent Fedrigo
Partner - Audit
+352 451 452 023
lafedrigo@deloitte.lu



Nicolas Hennebert
Partner - Audit
+352 451 454 911
nhennebert@deloitte.lu



Lou Kiesch
Partner - Regulatory Consulting
+352 451 452 456
lkiesch@deloitte.lu



Benjamin Lam
Partner - Audit
+352 451 452 429
blam@deloitte.lu

Malaysia



Anthony Tai
Executive Director - Enterprise Risk Services
+60 3 7610 8853
yktai@deloitte.com

Malta



Stephen Paris
Partner - Audit
+356 234 324 00
sparis@deloitte.com.mt

Mexico



Ernesto Pineda
Partner - Financial Services
+52 55 5080 6098
epineda@deloittemx.com



Javier Vázquez
Partner - Financial Services
+52 55 5080 6091
javazquez@deloittemx.com

Middle East



Joe El Fadl
Partner - Audit
+961 1 363 005
jelfadl@deloitte.com



Humphry Hatton
CEO - FAS
+971 4 506 47 30
huhatton@deloitte.com



Khaled Hilmi
Partner - Consulting
+971 4 376 8888
khilmi@deloitte.com

Netherlands



Bas Castelijm
Partner - Tax
+38 288 6770
BCastelijm@deloitte.nl



Martin Eleveld
Partner - Enterprise Risk Services
+31 62 324 5159
meleveld@deloitte.nl



Remy Maarschalk
Partner - Audit
+31 88 288 1962
RMaarschalk@deloitte.nl



Evert van der Steen
Partner - Enterprise Risk Services
+31 62 078 9545
evandersteen@deloitte.nl



Jan-Wouter Bloos
Partner - Consulting
+31 88 288 2768
JBloos@deloitte.nl



Jubin Majlessi
Partner - Consulting
+31 63 882 0198
jmajlessi@deloitte.nl

New Zealand



Rodger Murphy
Partner - Enterprise Risk Services
+64 930 307 58
rodgermurphy@deloitte.co.nz



Michael Wilkes
Partner - Audit
+64 3 363 3845
mwilkes@deloitte.co.nz

Norway



Sverre Danielsen
Partner - Enterprise Risk Services
+47 99 517 686
sdanielsen@deloitte.no



Henrik Woxholt
Partner - Audit & Advisory
+47 23 27 90 00
hwoxholt@deloitte.no

Philippines



Bonifacio Lumacang
Partner - Audit
+63 2 581 9000
blumacang@deloitte.com

Portugal



Maria Augusta Francisco
Partner - Audit
+351 21 042 7508
mafrancisco@deloitte.pt

Russia



Sergei Neklyudov
Partner - CIS FSI Leader
+7 495 787 06 00
sneklyudov@deloitte.ru

Singapore



Ei Leen Giam
Partner - Global Financial Services Industry
+65 62 163 296
eilgiam@deloitte.com



Kok Yong Ho
Partner - Global Financial Services Industry
+65 621 632 60
kho@deloitte.com

Slovakia



Miroslava Terem Greštiaková
Partner - Deloitte Legal
+421 2 582 49 341
mgrestiakova@deloitteCE.com

Spain



Rodrigo Diaz
Partner - Audit
+349 144 320 21
rodiaz@deloitte.es



Francisco Rámirez Arbues
Partner - Regulatory
+34 606289571
framirezarbues@deloitte.es



Antonio Rios Cid
Partner - Audit
+349 915 141 492
arioscid@deloitte.es



Alberto Torija
Partner - Audit
+349 143 814 91
atorija@deloitte.es



José María Grande Esturo
Partner - M&A Consulting
+34 944 447 000
jgrande@deloitte.es



Ignacio García Alonso
Partner - Tax
+34 67 952 180
igarciaalonso@deloitte.es

Sweden



Steven Payne
Partner - Consulting
+46 75 246 33 35
stpayne@deloitte.se

Switzerland



Cornelia Herzog
Partner - Financial Service
Industry
+41 58 279 6054
cherzog@deloitte.ch



Marcel Meyer
Partner - Audit
+41 58 279 7356
marcelmeyer@deloitte.ch



Simona Terranova
Partner - Audit
+41 58 279 8454
sterranova@deloitte.ch



Andreas Timpert
Partner - Consulting
+41 58 279 6858
antimpert@deloitte.ch



André Kuhn
Director - Tax
+41 58 279 6328
akuhn@deloitte.ch



Markus Weber
Partner - Tax
+41 58 279 7527
markweber@deloitte.ch

Taiwan



Vincent Hsu
Partner - Audit
+886 2 545 9988 1436
vhsu@deloitte.com.tw



Olivia Kuo
Partner - Audit
+886 2 25459988
oliviakuo@deloitte.com.tw



Jimmy S. Wu
Partner - Audit
+886 2 2545 9988 7198
jimmyswu@deloitte.com.tw

Thailand



Somkrit Krishnamra
Partner - Risk Advisory
+66 2 676 5700
somkrishnamra@deloitte.com

Turkey



Hasan Kiliç
Partner - Audit
+90 212 366 60 49
hkilic@deloitte.com

United Kingdom



Allee Bonnard
Partner - Audit
+44 20 7303 0472
abonnard@deloitte.co.uk



Tony Gaughan
Partner - Consulting
+44 20 7303 2790
tgaughan@deloitte.co.uk



Gavin J Bullock
Partner - Tax
+44 20 7007 0663
gbullock@deloitte.co.uk



Ross Millar
Partner - Risk Advisory
+44 131 535 7395
rmillar@deloitte.co.uk



Jamie Partridge
Partner - Audit
+44 14 1314 5956
jpartridge@deloitte.co.uk



Mark Ward
Partner - Risk Advisory
+44 20 7007 0670
mdward@deloitte.co.uk

United States



Edward Dougherty
Partner - Tax
+1 212 436 2165
edwdougherty@deloitte.com



Joseph Fisher
Partner - Audit
+1 212 436 4630
josfisher@deloitte.com



Patrick Henry
Partner - Audit
+1 212 436 4853
phenry@deloitte.com



Paul Kraft
Partner - Audit
+1 617 437 2175
pkraft@deloitte.com



Peter Spenser
Partner - Consulting
+1 212 618 4501
pmspenser@deloitte.com



Adam Weisman
Partner - Financial Advisory
Services
+1 212 436 5276
aweisman@deloitte.com

Venezuela



Fatima De Andrade
Partner - Audit
+58 212 206 8548
fdeandrade@deloitte.com

Vietnam



Thinkh Pham
Managing Partner
+84 839100751
thpham@deloitte.com

Contacts



Cary Stier

Partner - Global Investment
Management Leader
+1 212 436 7371
cstier@deloitte.com



Vincent Gouverneur

Partner - EMEA Investment Management
Leader
+352 451 452 451
vgouverneur@deloitte.lu



Jennifer Qin

Partner - Asia Pacific Investment
Management Leader
+86 21 61 411 998
jqin@deloitte.com

Please do not hesitate to
contact your relevant country
experts listed in the magazine

Deloitte.

Deloitte is a multidisciplinary service organization which is subject to certain regulatory and professional restrictions on the types of services we can provide to our clients, particularly where an audit relationship exists, as independence issues and other conflicts of interest may arise. Any services we commit to deliver to you will comply fully with applicable restrictions.

This communication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or their related entities (collectively, the "Deloitte Network") is, by means of this communication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser. No entity in the Deloitte Network shall be responsible for any loss whatsoever sustained by any person who relies on this communication.

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. Please see www.deloitte.com/about to learn more about our global network of member firms.

Deloitte provides audit, consulting, financial advisory, risk advisory, tax and related services to public and private clients spanning multiple industries. Deloitte serves four out of five Fortune Global 500® companies through a globally connected network of member firms in more than 150 countries and territories bringing world-class capabilities, insights, and high-quality service to address clients' most complex business challenges. To learn more about how Deloitte's approximately 245,000 professionals make an impact that matters, please connect with us on [Facebook](#), [LinkedIn](#), or [Twitter](#).