

Meredith Kaplan, State Street Corporation

Meredith Kaplan is the Global Head of Thought Leadership and responsible for research and thought leadership within State Street's Global Marketing division. She oversees the creation and execution of market surveys and conducts a range of industry and competitive analysis to produce insights on current and future trends impacting investment institutions.

Prior to joining State Street in 2008, Meredith was a senior business research analyst at Fidelity Investments. She also has experience in the not-for-profit and higher education sectors.

Meredith received a Bachelor of Fine Arts from Carnegie Mellon University and a Master of Business Administration from Boston University.

A NEW CLIMATE FOR GROWTH

Cultivating Asset Intelligence to Thrive

Meredith Kaplan

Seeking a new way ahead

The emerging discipline of agricultural informatics applies technology and analytics to improve decision-making and fuel future growth. This data-driven approach to innovation is urgently needed to boost crop yields and food security for billions of people around the world.

In 2014, David Lobell, a pioneer in the field and a professor at Stanford University, published an alarming study on America's massive Corn Belt, which supplies 40 percent of the world's corn. The research showed that corn is becoming increasingly vulnerable to the effects of global warming, including extreme heat and drought. Lobell and his team predicted a troubling reduction of yields if the plant is unable to adapt, possibly up to 30 percent over the next 50 years. The global impact of such a shortage would be massive.

In the same way that the acceleration of climate change threatens to render crops that have flourished for thousands of years unfit for their environment, the transformation hitting the investment industry is endangering incumbents' existing business models and threatening the industry's future growth potential.

Today, the pace of change across the financial sector is faster and the competition fiercer than ever before. New technologies are helping first-movers improve efficiency, gain better insight from data and expand the reach of their distribution channels. Regulators and investors are increasing their scrutiny of fee structures and demanding greater transparency of asset holdings.

And investors and managers can no longer rely on economic growth alone to help drive strong returns.

The industry response must be a radical one. Incumbents should be prepared to reshape their business models if they want to compete a decade from now.

A new standard for growth

New research from State Street shows that 66 percent of institutional investors believe that growth is more challenging to achieve in the current market environment. Based on our analysis, only a minority of industry participants say they have the right strategy, operating model and technology infrastructure in place to reach their full growth potential in these conditions.

Investor demand for more sophisticated portfolio diversification, greater value, and closer control of investment functions and strategy are redefining successful industry growth models. Financial institutions need to build a new platform for growth that will allow them to:

- · Compete at scale
- Align technology with ambition
- Cultivate asset intelligence

Our research shows how the industry is progressing toward a new model — and how it can accelerate on the path to growth.

Compete at scale

Four-fifths (81 percent) of industry respondents believe asset managers will need wide- ranging investment and distribution capabilities to meet investors' demands — and 61 percent say they're actively broadening their offerings. Meanwhile, 71 percent believe there will be more consolidation of smaller pension funds over the next five years, as they seek a stronger operating platform for growth.

In the new environment of mounting compliance requirements and demand for a wider array of customized investment solutions, large, diversified institutions will be best positioned to thrive. Smaller firms can still succeed, but they may need to forge more effective partnerships.



Align technology with ambition

Only 43 percent of our industry survey respondents say they are adapting technology quickly enough to support business growth needs, and only 46 percent can say this about their operations.

Financial institutions need to integrate often disparate systems and drive automation across the back, middle and front office. Asset managers and insurers need to digitize distribution to access new customers and differentiate themselves. At the same time, they must build a platform that can support the machine learning and distributed ledger technologies that 70 percent of industry respondents think will disrupt their businesses over the next five years.

Cultivate asset intelligence

As the investment industry becomes increasingly digital, institutions need deeper data insight across every facet of the investment cycle to achieve diversification and optimize investment performance, risk management and efficiency.

After strengthening cybersecurity defenses, enhancing risk and liquidity analytics is the most important outcome respondents are looking to achieve from their technology spend over the next year. The most data-savvy respondents are already seeing benefits, having outperformed their peers on their growth targets in the last year. But a new model can only succeed if it's backed by new skills and an organizational culture that embraces new perspectives and approaches.

Misplaced optimism?

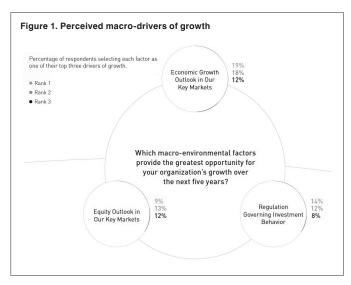
Old growth models are fading

Despite the obstacles it faces, the investment industry has a positive outlook for growth:

58 percent of respondents are confident they will achieve their growth objectives over the next year — and optimism jumps to 75 percent over a five-year horizon.

However, this confidence may be misplaced. The biggest perceived driver of growth is the economic outlook, with 49 percent of respondents viewing this as one of their greatest opportunities over the next five years (Figure 1).

In addition, the equity outlook is considered a major opportunity over five years, cited by 34 percent.



This suggests a dangerous assumption that future economic performance alone will easily translate into prosperity for the investment industry. With the rapid projected rise in old – age dependency ratios in developed markets, lagging productivity growth

— which has slowed in all OECD member countries over the last half century — and sustained low levels of business investment, investors need to consider that the future might look very different from the past.

Under prevailing market conditions, the old growth models are struggling. Figures from S&P Dow Jones Indices show that 88 percent of US large-cap funds underperformed the S&P 500 over five years to the end of 2016. Meanwhile, many pension funds have begun to lower their assumed rates of return.

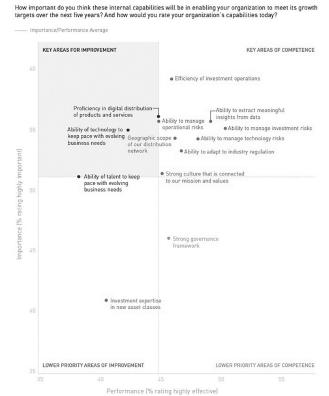
A disorienting pace of change

Aside from an uncertain economic and market outlook, growth optimism should also be tempered by the sheer depth and pace of change hitting the industry. Advances in technology are driving a bewildering rate of transformation — and incumbents are struggling to keep up.

Our Growth Gap Matrix (Figure 2) looks at the competencies perceived to be most important in driving future growth relative to reported effectiveness in these areas today. We identify competencies that institutions deem to be of high or critical importance for growth over the next five years, yet are relative weaknesses for them today:

- · Ability of technology to keep pace with business needs
- Adequacy of talent to meet evolving business needs
- · Proficiency in digital distribution

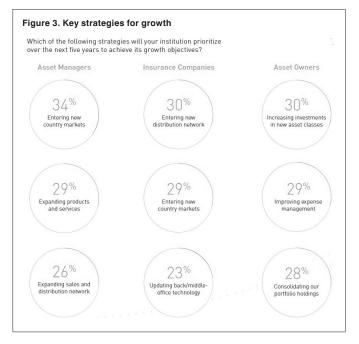




For asset managers, the rate of technology change combined with shifting client demands is making the sector ripe for disruption. Some incumbents are already responding by acquiring robo-advisors and digital distribution platforms to gain direct access to retail clients, while others are turning to big data and artificial intelligence (AI) to replace human stockpickers. We only need to turn to the technology industry to better understand the future potential of AI, where firms such as Google's DeepMind are developing solutions that no longer need to rely on predefined behavioral algorithms to govern their actions. For instance, the firm has created a system capable of synthesizing human speech without any input, and can even create its own musical compositions.

The investment industry is witnessing the same kind of transformative change. For pension funds faced with demographic shifts, funding pressures and challenges meeting aggressive return targets, the right technology and talent strategies will be crucial to success over the next five years. Only those who are proactively building capabilities in these areas will be able to achieve the necessary efficiencies and investment performance.

As industry participants embark on the strategies they believe will deliver their growth objectives (Figure 3), they must apply a new model — one that addresses the fundamental questions of scale, technology and asset intelligence.



Building the new growth model Compete at scale

Asset managers are under pressure to respond to investor demands for more global diversification and better pricing.

For instance, Asia Pacific's pension funds increased their average foreign market allocations from 19 percent of the total portfolio in 2008, to 31 percent in 2014. And asset managers say the top changes they need to make over the next five years to attract investors are expanding their distribution networks and reducing fees, each cited by 36 percent.

For asset owners and insurers, meanwhile, there's a need to rationalize costs and access new investment opportunities in areas such as infrastructure and alternatives to traditional fixed income.

Responding to such demands will require financial institutions to look at:

- · Consolidation to achieve economies of scale
- Upgrading technology to drive efficiencies
- · Outsourcing activities that are not "mission critical"

During 2015 and 2016, the asset management sector saw its strongest deal activity in a decade. Asset managers believe this volume will persist over the next five years:

76 percent say the rise of passive management will drive more active managers to consolidate, and three-quarters say increasing regulatory complexity will make it harder for smaller managers to survive on their own.

For investors, a similar sentiment prevails, with 66 percent predicting that a greater number of institutional investors with multiple funds will consolidate those funds over the next five years. By combining administrative functions and governance across schemes, significant cost savings can be achieved, while pooling assets can open up new long-term investment opportunities.



Outsourcing strategy

Outsourcing will be another pivotal part of solving the scale challenge. Our research indicates that the biggest drivers of outsourcing decisions are an inability to achieve scale quickly enough in-house, and the need for a partnership approach that can support long-term organizational growth (Figure 4).

Our study also shows that asset managers have put significant focus on outsourcing trade execution over the last five years, as third-party platforms offer greater efficiencies than could be achieved in-house. Over the next year, managers plan to make the most significant increase in outsourcing in fund accounting, investment operations and distribution support.

Nearly one-quarter (24 percent) of the asset owners and insurers we surveyed expect to increase outsourcing of their investment operations.

Scale is not just about operating models — it's also critical on the investment side. Institutional investors will look to co-investments or joint ventures as a means of accessing new investment opportunities, particularly in infrastructure and real estate (Figure 5).

Among institutional investors, the biggest reason for their strong appetite for co-investment is that it helps them access fresh investment expertise, as cited by 54 percent.

Very significant level of interest Significant level of interest Some interest	and the second se
Private equity co-investment/joint venture with an asset management firm	
110/	
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Real estate co-investment/joint venture with an asset management firm	
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Private equity co-investment with another institutional investor	
16%	
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32%	
Infrastructure co-investment with another institutional investor	
19%	
49%	
29%	
Real estate co-investment with another institutional investor	
Real estate co-investment with another institutional investor 17%	

Align technology with ambition

Technology is a powerful catalyst for change in the investment industry. Institutions' ability to implement the most agile, innovative solutions across the enterprise will determine their success.

Our research shows that institutions' key technology priorities for the next year are bolstering cybersecurity, strengthening investment analytics and managing costs (Figure 6).

In the drive for efficiency, institutions will need to better integrate their systems and processes from front to back. Higher levels of automation will help to strip out manual intervention from investment operations, and moving to sophisticated machine learning solutions will reduce break points yet further.

Distribution evolves

Insurers and asset managers must develop more technologically advanced distribution models to acquire and retain clients in the future.

The provision of user-friendly mobile access to investments is a key aspect of distribution that asset managers are addressing to enable future growth, with half of respondents citing this as highly important to their strategy. Digital disruption of distribution is becoming a concern in both business-to-business (B2B) and business-to-consumer (B2C) spaces. Asset managers see mergers and acquisitions (M&A) as an attractive way to on-board new digital innovations, as well as a strategy to gain scale. Fully 76 percent agree that acquisition will be an essential strategy for accelerating digital innovation at the necessary pace.

Figure 6. Where technology spending must deliver What is the most important outcome your technology investment must deliver over the next 12 months?

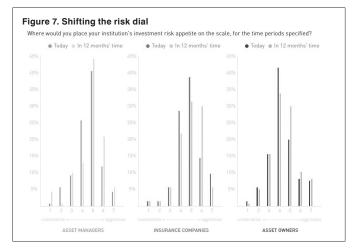
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Cultivate asset intelligence

In the digital era, institutions must acquire asset intelligence -a combination of digitized operating models, new data expertise and analytical insights - to deliver on their investment objectives and risk management needs.

Investors are moving toward increasingly complex portfolios in their search for better risk-adjusted returns in an environment of low interest rates and unsatisfactory yields from traditional strategies. Over the next five years, 26 percent of the asset owners and insurers surveyed say they will make their biggest portfolio allocation increases to emerging market equities, 15 percent say the same about real estate, and 15 percent say this will be the case for infrastructure assets.

Furthermore, respondents expect their investment risk appetite to increase over the next year. Only 24 percent of insurers would place themselves at the higher end of the risk spectrum today, but 36 percent expect to be there in a year (Figure 7).



Against this backdrop of diversification, machine learning technology, or artificial intelligence, is coming into sharp focus as institutions search for new methods to uncover investment signals and enhance their forward- looking risk analysis (Figure 8).

Please rate the following business over the next five		s in terms of how mu	ich you think they wi	ll impact your
 Highly significant impact 	• Significant impact	 Moderate impact 	 Slight impact 	
Machine learning to enhan	e the investment proc	ess		
34%				
35%				
18%				
10%				
RegTech solutions				
31%				
41%				
22%				
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4% Machine learning to enhan	e risk analysis			
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As investors and managers look to construct diverse portfolios that can achieve aggressive return targets, these deep data algorithms will play an increasingly important role in enabling a real-time, sophisticated analysis of risk. But this alone is not enough; institutions must pair this advanced technology with the right mix of people to fully activate asset intelligence.

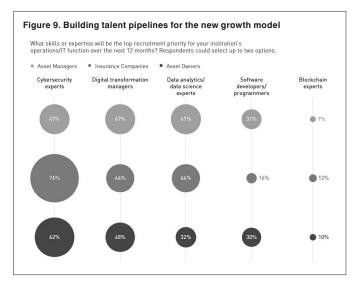
New-look talent

Institutions will need to underpin their shift to asset intelligence with new digital skills if they are to succeed.

The top recruitment priorities for operations and IT departments in the coming year will be cybersecurity specialists, digital transformation managers and data science experts (Figure 9). However, this prioritization may come at the expense of developing more disruptive technologies. Less than 10 percent of institutions will focus on recruiting blockchain expertise, despite 70 percent anticipating that distributed ledger technology will have a significant impact on their business over the next five years.

Interestingly, among those firms that are already most effective at extracting insights from data, there is an even stronger push to recruit data science experts, as they build an internal data analytics powerhouse.

Investment professionals with expertise in factor-based investment strategies (42 percent), alternative investment strategies (41 percent) and predictive risk analytics (36 percent) will be the biggest recruitment priorities for investment functions.



Re-engineer for growth

The investment industry's traditional growth models are under pressure, as the environment undergoes profound, secular change.

New technologies, market restructuring, shifting investor needs and complex regulations are creating a fresh set of growth conditions. These conditions will favor the firms that can re-engineer themselves to flourish.

Just as agricultural scientists seek to optimize seeds and farmers adapt their planting methods to a more difficult environment, so must the investment industry challenge its existing models.

Tomorrow's leaders will nurture an organizational culture that prizes vitality, experimentation and innovative approaches to growth.

Fortunately, our industry has a long track record of resilience and reinvention. With the right tools, incumbents can thrive. Our research shows that across the industry, institutions recognize their existing models may fall short. But at the same time, we see plans underway to transition to a new model that takes a fresh approach to scale, technology and asset intelligence. **Fs**

