CFA Institute®
Future of Finance

INVESTMENT FIRM OF THE FUTURE

BUSINESS MODELS AND STRATEGIES FOR A MORE FORWARD-THINKING INDUSTRY

OVERVIEW

Firms face a future of accelerating and disorienting change.

In this report, we analyze how investment firms can adapt their business models to succeed in the future environment.

The urgency for the investment industry to adapt is unleashing considerable stress and disruption on individual firms. There are two underlying types of accelerating and disorienting change: 1) adaptive change, in which existing organizations create new business models, adapt to disruptions, and curb opportunities for new organizations, and 2) destructive change, in which new organizations with new business models destroy existing organizations.

The report is informed by a survey of CFA Institute members that is indicative of these underlying changes. Among those surveyed, 72% expect the pace of industry consolidation to speed up, and 55% believe the biggest challenge for financial performance will be fee or cost pressures.

Investment Firm of the Future outlines how firms could develop with stronger intentional leadership. The current investment industry composition (by headcount) is roughly 50% asset management (split between product manufacturers and product distributors), 5% asset owners, 15% private wealth, and 30% support firms and organizations. Among CFA Institute member survey respondents, Asia is the only region where a majority (56%) expect continued growth in the number of investment professionals. In terms of the composition of investment professionals, 53% say the business case for improved diversity in the industry is strong or very strong, but only 14% say the speed of uptake of diversity and inclusion practices will be fast.

We look out over 5–10 years, which represents an important time horizon for individual firms to better face realities, manage risks, and help craft alternative pathways. We unpack firms into five models by reference to their functional parts: business model, operating model, people model, investment model, and distribution model. The operating model is the area in which CFA Institute members expect to see the greatest change, with 72% saying the influence of technology and data on decision-making at investment firms will grow significantly.

OF OUR MEMBERSHIP SURVEYED:

72%

expect the pace of industry consolidation to speed up

80%

expect increased demand for products that incorporate personal values

64%

expect that defined contribution participants will be more engaged

51%

say their firm's top technology priority is use of technology for client engagement

Many of the emerging trends for the next 5–10 years are based on changing client expectations, as seen in some of the key survey findings among CFA members:

- 80% anticipate that demand for solutions mandates will grow.
- 80% expect increased demand for products that incorporate personal values.
- 72% expect their firm's future commitment to the research of environmental, sustainability, and governance (ESG) issues to be higher.
- 64% expect that defined contribution participants will be more engaged.
- 51% say their firm's top technology priority is use of technology for client engagement, followed by cybersecurity (24%) and use of machine learning technologies in portfolio construction (21%).

Amidst these trends, some cultural challenges for investment firms exist:

- Only 14% say their firm has a very large cultural and financial commitment to innovation in products and services.
- 54% strongly agree that they personally have a strong sense of purpose and wanting to do meaningful work, but only 28% say this is true of their firm overall.

The modular structure we have adopted allows readers to consider the trends alongside actions that can be taken by individual firms or across the industry to impact future outcomes.

A STRUCTURED APPROACH TO ANALYZING THE FUTURE

The investment ecosystem is full of multiple strands, non-linear parts, and two-way feedback loops that make the landscape very difficult to map—and even harder to map to the future.

We begin by referencing the Scenarios from Future State of the Investment Profession, which are descriptions of possible future states, at a high level, not point estimates or forecasts.

The Scenarios are a tool to help organizations prepare for the future. From them, we develop contingent Narratives that make the Scenarios more specific for investment firms.

Given the Scenarios and the Narratives, we suggest Shifts, or actions that individual investment firms and the industry as a whole can take to adapt to a range of future outcomes.

The links among the Scenarios, Narratives, and Shifts allow leaders to zoom in and out between big-picture and smaller-picture views. Doing so produces a well-balanced picture with more accurate understanding of the issues, more agreement on beliefs, and better connections to actions.

In presenting the narratives, it is worth noting the following qualifications. First, the segmentation of the industry makes generalizations harder as narratives may well apply only in some segments and in some geographies. As presented earlier, there are segments in asset management manufacturing, asset management distribution, wealth, asset owner, and industry support firms, and it is likely that specializations will strengthen over time.

Second, the narratives present plausible outlooks based on evidence, but because we are dealing with a volatile, uncertain, complex and ambiguous system, we can only hope to be approximately right most of the time.

Scenarios

Differentiated stories about possible future pathways and states in the investment industry and the wider world. They are not point estimates or forecasts; as relevant stories they help firms prepare for the future.

Narratives

Descriptions of the current and future state of industry-specific issues. They help firms with understanding the key details of the evolving landscape in the next 5–10 years. They follow from the Scenarios.

Shifts

Descriptions of what should change in the next 5–10 years for positive progress to be made—both at the level of the individual firm and on an industry-wide basis; they help firms to decide on desirable actions and the industry to evolve its practices. They follow from the Narratives.

SCENARIOS

Fintech Disruption

New technologies promote new business models; disruption and creative destruction are endemic

Parallel Worlds

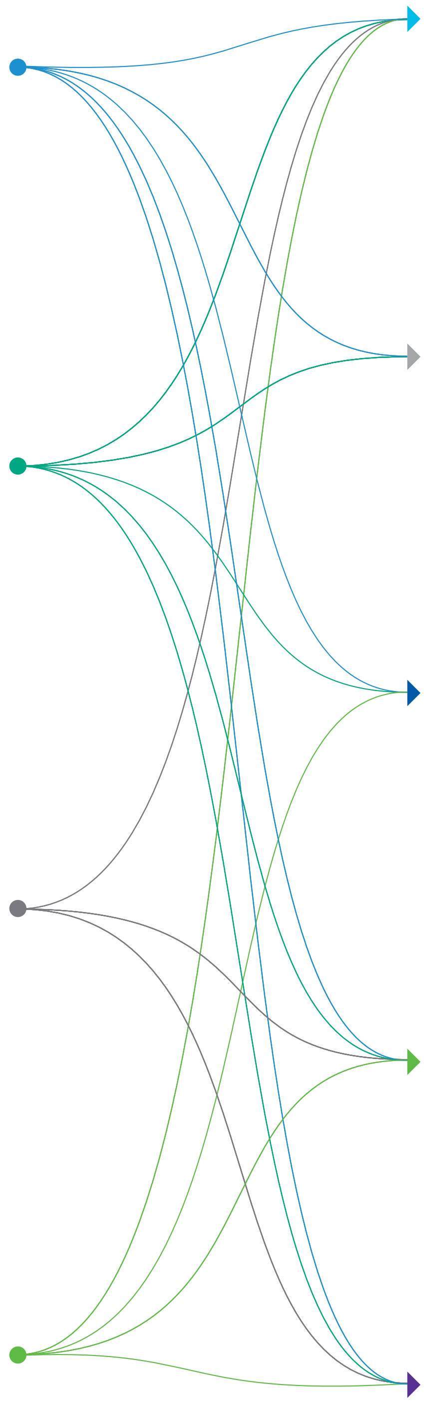
Engagement in society differs by geography, generation and social group; effects on financial services participation and preferences

Lower for Longer

Interest rates stay low, global growth disappoints, and political instability rises

Purposeful Capitalism

Investment industry becomes more professional, ethical, and client-centric



MODELS

BUSINESS MODEL:
Core attributes on value and competitive differentiation

- Successful firms don't dodge industry realities.
- Professionalism emerges as key business driver.

OPERATING MODEL:
How the organization manages its products and services

- The power of people plus automation.
- The power of platforms and customization.

PEOPLE MODEL:
The staffing model and the attract-and-retain methods used

- Step-change in collective intelligence.
- Firms working on cultural edge.

INVESTMENT MODEL:
The component parts of the organization's investment philosophy, beliefs, and capabilities

- Traditional investment models overturned.
- Sustainability embedded across the industry.

DISTRIBUTION MODEL:
The client relationship model

- Smarter client segmentation.
- Technology can engender trust.

Successful firms don't dodge industry realities

1. Industry profitability challenges grow:
Firms must learn to push against profit headwinds

Asset management firms collectively have achieved consistently high margins and decent growth for many years. But future business conditions in developed markets look much more challenging both for margins and for growth, reflecting fee pressures, lower inflows, and clients switching to lower-fee products. Leaders cannot rely on the tailwind conditions of the past and must adapt to headwind conditions.

NARRATIVE

- Asset management firms need to recognize and respond to deteriorating sector fundamentals. Some may simply accept the tougher conditions and lower their profit expectations. We see this narrative as a reasonable outcome for clients. Alternatively, firms can cut costs and try to consolidate. In this narrative, they risk harming their client base.
- The biggest single reason for this deterioration is that asset owners are increasingly fee resistant amid likely lower returns, from which fees are extracted. This trend is extremely disruptive for the industry. *As Future State of the Investment Profession* describes in the Lower for Longer scenario[1]: "Costs are seen as an unacceptable drag on returns precipitating transitions to lower-cost, higher-tech investment solutions."
- Top-line global revenues for the asset management industry ($275 billion in 2017, according to Boston Consulting Group 2017 and author calculations) are very likely to drift sideways in the next 5–10 years or to increase only slightly. The Boston Consulting Group report suggests the revenue trends will be derived from gains from market value growth (producing, say, 4% per annum revenue increases) and low net new flows (say, 2% per annum [pa] revenue increases) but losses from fee pressure (reduced fees on the same product, say, 3% pa revenue decreases) and fee product drift (movements from products with higher fees to lower fees, say, 1% pa revenue decreases).
- The trends at work in the business models of more-profitable firms are as follows:
  - Indexed and factor-based productsgrow, funded by reduced active core mandates.
  - Alternative asset mandates grow, but with capacity constraints.
  - Private wealth firms grow faster than asset management firms.
- So, there is little likelihood of resuming the trend of old, whereby revenues climbed comfortably ahead of global GDP (the past 10-year compound annual growth rate in global revenues has been 6% pa, according to Boston Consulting Group 2017). Revenue growth seems more likely to be around 1%–3% a year.
- Cost still rise in a number of areas. Innovation and new products, technology, compliance, and service all demand bigger budgets, and net costs are set to grow in line with recent experience at around 3%–5% pa.
- Net margins look set to be shaved by around 1–2 percentage points annually from the attractive levels of recent years (around 35%–40% of revenues). This margin contraction will emerge in an uneven shape but is potentially transformative.

[1]In the Lower for Longer scenario from *Future State of the Investment Profession,* lower investment returns are expected in the next 5–10 years due to headwinds to growth from indebtedness, excess savings, adverse demography, and other factors. This scenario is particularly disruptive to investment institutions because the underlying arithmetic supporting their sustainability is structurally altered.

2. Regulations and standards get tighter:

Firms need a proactive response to regulatory complexity

Regulation is highly influential in the way the industry evolves. Country-specific differences are creating a complex compliance environment for global investment firms. But we can expect the challenges of conducting businesses to increase further in the next 5–10 years. How fiduciary responsibilities will be enforced is a central theme of regulation everywhere.

NARRATIVE

- Regulation has become a key part of doing business in the investment industry because of increased complexity in both the regulations themselves and how business is conducted, locally and globally. The issue is complicated on two counts: First, there is no global regulatory authority, so national regulations may diverge, or standards may be implemented at different speeds. Second, the interconnectedness of the investment ecosystem makes it hard to anticipate the consequences, often unintentional, of new rules. An example of regulatory complexity is the difficulty with the interpretation of fiduciary duty.
- Regulation is focused on balancing financial stability, fair competition, client protection, economic growth, and societal well-being. The direction of travel toward increased client protection and a higher bar to the "social license to operate" is unlikely to change, with coverage of environment, social and governance (ESG) issues increasingly significant in the EU and China.
- New investor protection regulations in Europe are strengthening fiduciary protections for end investors. The Markets in Financial Instruments Directive II (MiFID II) reforms aim to improve safety, transparency, and competition. The directive's complexity means analysts, traders, and asset managers will take years to fully adjust, with winners and losers emerging. Sell-side firms are clearly among the losers.
- As described in *Future State of the Investment Profession*, pension reform is an evergreen theme among world regulators, which are addressing—to varying degrees—improved investor protections, safe harbors, solvency requirements, and fiduciary duty. Regulatory interest will no doubt also focus on pensions conduct and culture.
- Interestingly, among large institutional investors, there is moderate appetite for additional regulation. In the CFA Institute study titled *The Next Generation of Trust* (2018), 64% think the industry is appropriately regulated, 29% think it is under-regulated, and only 7% think it is over-regulated. These findings suggest that industry clients see value from the growing regulation.
- Value can be created from self-regulation, particularly in areas such as performance, cost presentation, and conduct. Higher standards of fiduciary practice will be critical differentiators.
- Asset managers will develop their strategies for dealing with regulation in their business models. Leaders must apply high standards of corporate governance to avoid bad outcomes. The industry may be able to come together under a mix of regulation, self-regulation, and culture, with the possibility that the industry might itself unite and become focused on influencing positive outcomes. There is the potential for self-regulation to become more influential as there is greater clarity around the concept of professionalism.

3. Success influenced by business model differences: Firms must achieve differentiation

Business success has resulted from marketing and product innovation as much as from investment prowess and performance. This dynamic will likely continue. The future may particularly favor bigger organizations that can exploit scale advantages through brand differentiation and robust, yet nimble, technological infrastructure.

NARRATIVE

- Weak growth in revenues and profits masks differences by geography and segment. In particular, there is profitable growth in Asia, wealth management, investment solutions, and alternative assets. These segments reflect the Parallel Worlds scenario,[2] in which new sources of investment funds flow to those firms most attuned to investor needs and wants.
- The ecosystem framework pinpoints three sources of business model challenge and opportunity at asset management firms. First, although existing organizations have strong brand credentials to develop innovations, they have inbuilt limitations from innate inertia (see Christensen 1997). Second, there is a threat of substitutes – for example, asset owners internalizing some or all of their asset management activities (see Porter 1979). Third, while existing organizations have previously had pricing power, bargaining power is now on the side of clients (see Porter 1979).
- Scale advantages, evident in many industries, are seen in asset management, too. It is likely that increasing concentration in the top five asset managers continues (currently BlackRock, The Vanguard Group, State Street Global Advisors, Fidelity Investments, and Allianz). The top five firms have grown their share of assets under management (AUM) from 14% in 2000 to around 19% currently (Willis Towers Watson 2000, 2017b).
- Mergers and acquisitions (M&A) are the rational response to help develop strategic edge and/or AUM scale. Areas where strategic edge is critical include the following:
  - differentiation in products and services;
  - managing scale successfully, particularly where product capacity is an issue;
  - adaptability to new needs and trends;
  - people and culture edge, where employee engagement and employee value proposition are central to better client outcomes; and
  - technology quality where the IT need is for a more holistic technology and data strategy.
- The industry has large numbers of firms doing very similar things, and businesses that lack edge and suffer from deteriorating fundamentals are candidates for consolidation.
- Our survey respondents see consolidation as likely to accelerate in the next 5–10 years, with 72% expecting consolidation to speed up significantly or somewhat. Yet consolidation is proceeding at a slow pace (there have been 20 deals involving firms over $50 billion AUM in six years; Boston Consulting Group 2017). The signs are that there will be more deals in the next 5–10 years. The likelihood of increased specialization by segment is a driving force, particularly in the product manufacturing, distribution, and wealth segments. This anticipated trend also reflects the reduction in dependencies between banks and insurers and their asset management subsidiaries. But asset management mergers are not straightforward—there is generally overlap, disruption in integration, brand and integrity confusion, and limited cost synergies.

[2] In the Parallel Worlds scenario from *Future State of the Investment Profession*, we recognize an increasingly democratized world in which individual expression is possible in all consumption choices.

4. Professionalism increasingly recognized: More professionalism produces greater trust

Professionalism draws on competencies and values while embedding ethics and purpose. These attributes are not always easy to judge or manage. The issue is how to do so in a new technological and socially connected environment to produce benefits for the industry, investors, and society.

NARRATIVE

- The extent to which professionalism confers an explicit edge varies by industry segment and geography. In the Purposeful Capitalism scenario,[3] there is the possibility that professionalism becomes increasingly emphasized by firms and recognized by clients, especially by the growing client segments of millennials and women. In this narrative, the industry adopts an enlightened self-interest mantra—recognizing that putting clients first is good for business and good for society.
- Professionalism is closely related to client alignment, as well as competencies and ethics. As the asset management industry evolves along more complex and transparent lines, a rise in sophistication and, by extension, in professionalism will likely occur in both the business-to-business (B2B) and business-to-consumer (B2C) marketplaces. In this narrative, professionalism's link to value becomes strongly accepted. This dynamic reflects the development of better assessments of culture as measurement methodologies evolve in an era of big data.
- Professionalism is associated with increases in trust. And because trust incentivizes long-term saving and investing, it produces greater value for investors (see *The Next Generation of Trust*, CFA Institute 2018). The stronger the professionalism in markets that are early in their development cycle, particularly Asia, the greater the discretionary flows to these markets.
- Being professional and developing trust require a business model and a strategy that are in sync. First, professionalism is more likely if the organization has relatively few conflicts of interest and manages any conflicts well. Second, profit motivations need to be balanced with the purpose-driven motivation to meet client expectations. Third, time horizons of investment managers and clients need to be aligned and appropriately long term. These alignments are consistent with taking fiduciary responsibility.
- The degree of subjectivity in defining professionalism makes it difficult to integrate into regulation as presently configured. Regulators do see culture as connected to professionalism and critical to outcomes, however, as evidenced by their increased focus on culture.

[3]In the Purposeful Capitalism scenario from *Future State of the Investment Profession*, the state of capitalism evolves to meet society's greater expectations, through regulatory influence and the industry themselves taking enlightened self-interest steps.

5. Brand and reputation increasingly valuable:
Bold leadership bolsters the brand

Reputations are critical in investing and are built on ethics, communications, and fiduciary responsibility. Work on brand positioning can deepen investment firms' differentiation, but all brands are vulnerable to forces that see all finance in a negative light.

NARRATIVE

- In the Purposeful Capitalism scenario, reputation is built less on performance track record and more on trustworthiness, ethics, communication, and transparency. Investment firms could achieve better outcomes for their business and their clients if they increased attention on these areas.
- Data from *The Next Generation of Trust* (CFA Institute 2018) indicate that some of the most important attributes when hiring financial advisers or asset managers are soft factors. "I trust you to act in my best interest"; "you were recommended by someone I trust"; and commitment to ethical conduct top the list, alongside ability to achieve high returns.
- Corporations are increasingly vulnerable to moment-specific issues that go viral, enabled by social media. Warren Buffett said, "It takes 20 years to build a reputation and five minutes to ruin it. If you think about that, you'll do things differently."
- Brand and reputation will draw from foundational thinking and well-socialized values and beliefs. Firms that regularly address and revisit their values and beliefs are able to differentiate themselves externally and create alignment internally.
- A firm's reputation can be strengthened when its leadership has a bold voice on the wider issues, inspired by vision and opportunity. An example here is asset managers that make environmental, social and governance (ESG) issues a significant element in their investment process are likely to build stronger reputations from such a stance. Generally, weak ESG ratings correspond to organizations that have weaker governance and cultural quality. Bottom-quintile ESG-rated companies have three times the idiosyncratic risk incidents (defined as abnormal stock price drawdown) that top-quintile companies have (MSCI 2017).
- Clients worldwide are increasingly using brand as a proxy for trustworthiness. In 2016, only one-third of retail investors said "a brand I can trust" was more important than "people I can count on" when choosing an investment firm, but in 2018, brand importance rose to 46%. The development of stronger brands in asset management is a work in progress. It will emanate from clear and authentic communications from trustworthy leadership. Such qualities have always been powerful but have become even more so with the growth of indexing and systematic investing, as well as solutions mandates.

6. Culture and leadership resonate: Firms should communicate their values publicly

Culture is recognized as a high-impact driver of organizational performance. Leadership is critical to the effective development and exercise of culture, as well as the creation of successful strategies and business models. These co-dependencies, and the syncing of strategy and culture, are central to the future of all investment firms.

NARRATIVE

- In the Purposeful Capitalism scenario, reputation is built less on performance track record and more on trustworthiness, ethics, communication, and transparency. Investment firms could achieve better outcomes for their business and clients if they focused increased attention on these areas. The tacit nature of culture makes it problematic to manage because it is subject to more opinions than facts. Yet, awareness of a firm's culture as a force for good makes it a candidate for improved management attention.
- In the past, investment firms produced only limited descriptions of culture, emanating from leaders who only had a surface-level understanding of the cultural forces at work in their organizations. The industry's future depends on firms' leadership understanding cultural issues and taking actions that are consistent with making cultural forces work positively. In global firms those issues are even more complex, because leaders must understand multiple national cultures and contexts. Cultural factors in Asia vary considerably from cultural factors in the US.
- Models of leadership are set to evolve. Leadership through top-down control is increasingly seen as ineffective for investment firms that are essentially intellectual capital businesses whose people assets respond much better to autonomy than hierarchy. The leadership model that resonates will be one that serves others, distributes responsibility, mediates fairly, and communicates passionately.
- Development of culture is impaired by short-termism that puts pursuit of near-term business results ahead of a far-sighted passion for sustainable client value. A reduction in short-term thinking will be necessary for culture and leadership to harmonize.
- Critical leadership and management concepts, such as methods to analyze the employee value proposition (EVP) and client value proposition (CVP) (see glossary), are likely to emerge and form a growing part of management's toolkit. An effective management model includes the pursuit of clear business objectives, operating with enlightened strategy, syncing with culture, and validation by strong EVPs and CVPs. Investment firms align more to reporting through narrative (particularly Integrated Reporting—see glossary) than financial statements and traditional annual reports.
- Leadership voice must be loud and bold. The CFA Institute *Future State of the Investment Profession* pointed out how end investors and end consumers want corporate leaders to publicly promote their values. This is consistent with the community increasingly requiring investment firms to demonstrate their clean "license to operate." In a world of commoditized offerings, organizations can differentiate themselves by their value systems.

Weak growth in revenues and profits masks differences by geography and segment.

INNOVATION

14%

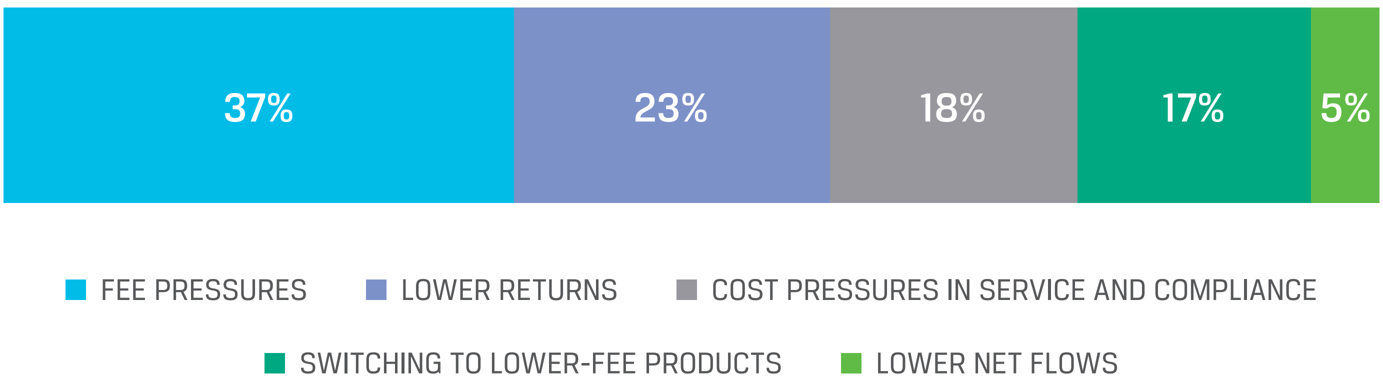
a small minority say their firm has a very large cultural and financial commitment to innovation in products and services

CONSOLIDATION

72%

expect consolidation to speed up significantly or some

THE BIGGEST CHALLENGES FOR INVESTMENT FIRM FINANCIAL PERFORMANCE OVER THE NEXT 5–10 YEARS:



BUSINESS MODEL SHIFTS

INVESTMENT FIRM SHIFTS

Embed organizational agility and client-centric culture

Firm success is contingent on a client-first culture, and on the state of agility in particular.

Good culture involves putting clients first. Good agility reflects the ability to understand the landscape, read the changes ahead, and apply the Shifts needed.

The investment firm of the future will:

Achieve organizational coherence
These qualities will follow from strong leadership, the practice of socialization, and a thorough understanding of the significance of values and beliefs. Organizational coherence includes the communication challenge of making a compelling case to influence others, particularly when change is required.

Build fiduciary culture around client outcomes
Organizations must ensure maximum transparency with respect to exercising fiduciary responsibility, build a better framework for measuring client perceptions of value and outcomes, and communicate early and often.

Have adaptable and inclusive leadership
Organizations must be prepared to change course to deal with tougher and more stressful business conditions. Creativity and vision to increase top-line revenues through new opportunities will differentiate firms from those that focus predominantly on managing expenses in the here and now.

Understand and engage with stakeholders
All investment firms have to view their stakeholders in wider terms and reach out to them to manage their expectations. Stakeholder mapping is critical, with central positions on this map occupied by the workforce and clients, owners, the communities in which the firm operates, and wider society.

INDUSTRY SHIFTS

Governance and culture are upgraded

Governance and culture upgrades by asset owners enhance the value created by the entire industry. This dynamic occurs because the limitations of asset owners affect wider industry practice, and investment firms can legitimately claim that their own practices are limited by weaknesses further up the chain.

In the investment industry of the future:

Fit-for-purpose asset owner governance becomes the norm through successful development of resources and processes.

Asset owners increase their resources by developing internalized capabilities and improving their delegation—in some cases insourcing, in other cases outsourcing.

Governance is able to ensure better coordination across the value chain and exercise better control on outcomes.

Strong investment culture is developed that is purpose-driven and takes full accountability for outcomes.

7. IT models on a spectrum moving forward over time: Technology is integral to a new operating model

IT deployment in investment firms has been substantially reactive, with firms trying to marshal technology to capture efficiencies in the face of legacy issues. The issue going forward is increasingly about developing the skills and procuring the systems to keep up in the technology arms race.

NARRATIVE

- So far, IT has been helpful but not game-changing to investment firms. The Fintech Disruption scenario outlines how we expect smart machines and systems, data analysis, and inference to play a disruptive and at times destructive role in finance's evolution, in the jobs performed, and in ways of working. This is emphatically the case with technology in distribution and strongly the case with technology applied to the investment process.
- The spectrum of IT dependency by investment firms ranges from operating models that are simply IT supported to models where IT is central to the business model. IT dependency will steadily progress from the former to the latter state during the next 5–10 years.
- Among our survey respondents, 31% say technology management is the most important factor in terms of strategic importance for investment firms in the next 5–10 years. In Asia, this figure was 40%.
- Data and analytics strategies cover front, middle, and back office functions. A key decision is whether technology is bought or built. Control over costs is improved by outsourcing, but control over outcome is improved by insourcing, and these issues must be accurately appraised and balanced.
- In this narrative, IT spending across the industry grows faster than revenue or other costs. Firms are likely to incur very high costs when adapting and replacing legacy systems to improve inter-connectedness and weak cyber-security.
- Firms must meet the challenges introduced by fast-moving technology companies—often start ups that develop an innovative technology or process to address a part of the investment value chain in which there are inefficiencies or clients' needs are not met.
- A particular opportunity is for firms to use technology's unparalleled reach to make customer relationships more personal and more service oriented.
- In *The Next Generation of Trust* (CFA Institute 2018), the demand from retail clients for technology was seen to grow in every market and across every age group. In 2018, 48% of investors globally said that in the coming years, they want a tech platform to implement their own strategy more than they want human advisers to help them navigate markets. This is a fast-moving trend that firms ignore at their peril, even if people will still play a critical role.
- A people-plus-technology model adds more value than either the people-only or technology-only models. People skills evolve to deepen situational fluency and machine-friendly interactions. The model is of technology serving the human elements—respect, transparency, communication, knowledge, experience, and trust—rather than trying to unwind or obscure them.

8. Stronger data and analytics strategies emerge: Firms should focus on clearer IT strategies

IT has not generally been the subject of significant strategic thinking in the investment industry. As investment firms look ahead, they will find opportunities to build their competitive edge by amplifying and differentiating their IT initiatives, particularly with respect to data and analytics in the investment process and in the client relationship.

NARRATIVE

- Whichever direction investment firms take with their IT, they need to devise a clear strategy and implementation plan, which have been generally absent. IT must have agile, adaptive features as well as involvement from well-informed and engaged non-IT-specialized leadership. The need for "T-shaped leadership" (see glossary) is acute with leaders who understand the whole spectrum of issues within their business while also having a wide understanding of the investment ecosystem. The new IT imperative is integrating data strategy into the business with economics front of mind.
- In this narrative, IT strategies will be positioned on three major planes:
    - Fintech drives new business models, with regulatory technology (regtech) carrying equivalent force in the regulatory and compliance areas, albeit with less impact.
    - Machine intelligence is applied to portfolios and the investment model, customer-oriented intelligence is applied to the distribution model, and cyber-security is applied across the operating model. These technologies create new risks to be managed according to the degree of AI model autonomy.
    - To be successful, broad-based IT applications must be adaptive in complementing human skills and resources, and vice versa. The strategy choices include buying or building IT systems and off-shoring or re-shoring.
- Fintech will continue to be a loose term associated with advanced technological changes and business model changes. Nearly three-quarters (72%) of those surveyed expect the influence of technology and data on decision-making at investment firms to grow significantly, and this was even higher among respondents in Asia, at 79%.
- IT strategies need both architecture and infrastructure, which consist of resourcing decisions for talent and IT spend; answering "build or buy" questions; meeting legacy challenges; and improving customer interfaces, with the additional costs and risks of managing data privacy, data security, and cyber threats.
- Technology enhancements involve business models that improve scale or efficiency or address needs better. We will find many such opportunities in the next 5–10 years, but the pace of innovation adoption will no doubt be uneven. The speed of diffusion of technological innovation will reflect human factors with significant dependence on the speed and depth of socialization, where socializing means influencing the beliefs, norms, and behaviors of the workforce to adapt to new situations.

9. Further innovation in technology: Firms should watch out for the next wave

The one inviolable innovation truth is that we cannot visualize the next wave of technology. Because technology is so transformative, the issue is how investment firms build innovation infrastructure and culture to keep up with the trends and be adaptive.

NARRATIVE

- Although it is best to be humble in identifying trends as far ahead as 5–10 years, here are three areas to watch:
  - Artificial intelligence (AI) and machine learning (see glossary) will become smarter in hard-to-anticipate ways. This dynamic has implications for governance and ethics, particularly if AI gains wider influence and autonomy.
  - Agent-based modeling (see glossary) is a method of identifying factors affecting outcomes in the investment ecosystem.[4] It has relevance to regulators and industry firms alike.
  - On top of blockchain's (see glossary) ability to distribute trust in many administrative and transaction settings without traditional counterparties, regtech is a particular application of blockchain that could have significant influence, in terms of both what regulators do and how investment firms conduct their compliance.[5]
- AI will have substantial impact. Intelligence in this context is the ability to acquire and apply knowledge and skills that currently lie on a spectrum from a) people doing routine and creative tasks supported by machine intelligence to b) people performing creative intelligence tasks augmented by smart machine intelligence to c) autonomous machines completing creative tasks (e.g., trading strategies).
- It is likely that this new sort of machine intelligence is self-organizing, ever-adjusting, and largely but not wholly autonomous. Across their business and portfolio applications, investment firms will increasingly draw on building blocks of intelligent functions. The prime example is blockchain, which conceptually involves building blocks that create and distribute trust in the system.
- Among those surveyed, 21% say that their firm's top tech priority in the next 5–10 years is the use of machine learning technologies in portfolio construction. The survey showed Asia had greater awareness and familiarity of the technology opportunities relative to other regions.

[4]In *The End of Theory*, Richard Bookstaber (2017) wrote: "We need agent-based economics to create a weather service for the financial markets, to produce some degree of stochastic framing of expectations from markets. The dimensions of complexity demand the use of agent-based models." This work is a particularly significant account of how regulation needs access to much more data on industry participants' actions. It also identifies how an agent-based model has considerable appeal in asset allocation decisions.

[5]See the CFA Institute Research Foundation brief "FinTech and RegTech in a Nutshell, and the Future in a Sandbox." (2017)

10. Investment platforms proliferate:
Platforms dramatically improve client experience

Investment platforms are user interfaces that attract buyers of investment services and facilitate the marketplace for investment products, distributing either in-house investments or open-architecture products. Opportunities lie in both B2B and B2C, and in one-sided and two-sided designs, dependent on one or two types of participants, respectively.[6] These platforms are increasingly automated and drive down costs.

NARRATIVE

- Investment platforms are subject to many of the transformational factors affecting other disruptive technology platforms (think Amazon and Airbnb). Such platforms have innovated their business models to exploit scale, needs, and flows. They use ideas and intangible capital rather than large-scale physical capital. Businesses introducing platforms are both mainstream investment firms and fintech start ups.
- In this narrative, the investment industry develops new investment platforms that bring scale and improvements to the end investor interface (such as customized financial statements unique to client investment goals). Other examples include the robo model platforms developed by The Vanguard Group and Schwab, or asset management exchanges developed by AMX and others to standardize and centralize investment vehicles in order to increase marketplace transparency and efficiency.
- The defined contribution (DC) pension system benefits from platforms that aggregate pension arrangements from multiple employers by providing investment choices, engagement, and administration services. Platform arrangements produce significant scale in the DC marketplace and enable innovation in technology and product design.
- The effects of platforms vary significantly across countries and value chains, largely because of differences in regulatory barriers and the different country-specific evolutions of fintech. But much of the innovation in this narrative comes from outside challenger models that are unencumbered by legacy business models.
- Regulatory authorities influence how far and fast innovation progresses. They are caught between wanting to encourage competition and innovation and needing to provide meaningful oversight of these disruptors. The investment ecosystem's complexity makes regulation increasingly hard, and although regtech can help develop some efficiencies, it is still inevitable that innovation is subject to regulatory friction and logjams.

[6] In *Machine, Platform, Crowd: Harnessing Our Digital Future*, McAfee and Brynjolfsson 2017 describe the concept of platforms in the context of various fields, including finance. The authors show it as complementary to previous technologies but responsive to need and particularly attuned to exploit the scale advantages of networks. A one-sided platform develops the service and provides it to multiple end-users; a two-sided platform brings together multiple service providers and multiple end-users.

11. The growth of goals-based investing: Customization should be synced to outcomes

The desire of end investors for investment products and services that enable targeted outcomes has grown and is referred to generally as "goal-based investing." There is latent demand for investment propositions that reflect consumerist trends set out in the Parallel Worlds scenario. Critically, there is pent-up demand by all investors everywhere for more control over outcomes.

NARRATIVE

- Increasingly, intermediaries prefer investment plans designed to meet investor needs through customized, adaptive solutions that deliver unique investor-directed outcomes. This approach is often referred to as "goal-based investing" (see glossary).
- The scenario is of future integration of new data, much of it from smartphones and wearables, tied to operational data, such as transaction and engagement history. Investment apps on mobile communication devices evolve from add-ons to the central feature in user and application programming interfaces. Consider the following example: Just after a retail purchase, a client receives an update on her progress toward meeting financial goals, and at the end of the day she gets a mobile-delivered update of how much money she has saved toward important goals.
- This narrative is based on the power of big data, enabling the modeling of the end investors' needs and wants at extreme scales. This modeling helps to identify patterns of relevance in both product design and client service. Firms that dare ask their customers what they want, or create useful (perhaps "gamified") questionnaires are best able to develop communications that are useful to clients.
- The investment allocation becomes unique to the individual, like an investing fingerprint. *Future State of the Investment Profession* explains it in these terms: "As goals are achieved, shocks occur, and adjustments are made through modern engagement with biofeedback devices, such as smart watches. Updates to the profile can be made routine to adapt to clients as their lives and consequent preferences change" (CFA Institute 2017).
- The equivalent version in the institutional space is generally referred to as the Total Portfolio Approach (TPA; see glossary).
- The logic of this wish for better control is strong, but the execution may involve considerable errors whereby algorithms misread intentions and preferences. Further, the area is full of agency hazards, where there is over-hyped delivery, and personal biases are exploited.
- In *The Next Generation of Trust* (CFA Institute 2018), 63% of retail investors said they would have interest in more customized products, and of these, about two-thirds would be willing to pay a premium for customization.
- This approach represents a profound change in pension and lifetime wealth management, because it recognizes there is needs fulfillment during all stages of a person's life. It is a paradigm shift from basic investment accumulation accounts in working life (such as 401k accounts in the US) to integrated whole-of-life wealth solutions, with accumulation and drawdown investment phases sitting alongside insurance and healthcare planning.

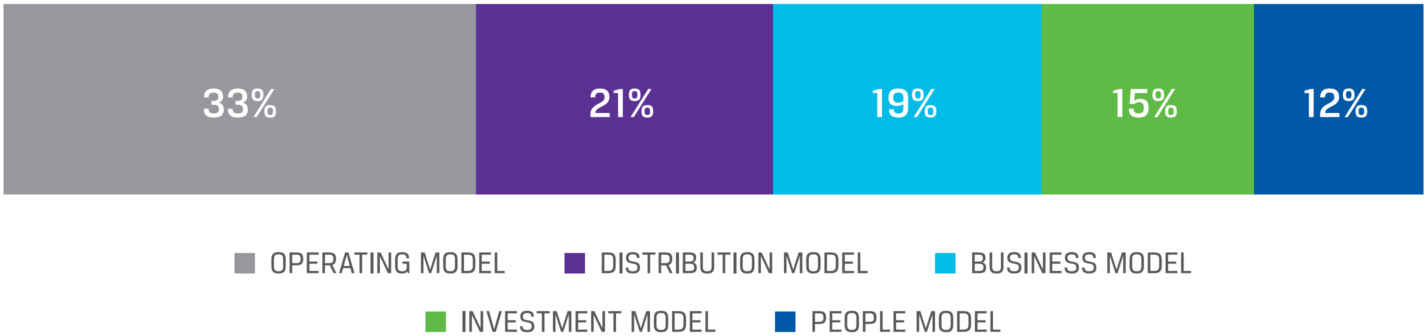
12. The growth of lifestyle finance: Customization should be synced to values

There has been limited appetite from end investors thus far for investment products that are customized to their values, express their values, or even report on impacts relevant to their values. The issue is whether this new paradigm will emerge and whether products can be developed within realistic cost parameters. It seems likely it will emerge, given scale opportunities and millennial preferences for investments linked to lifestyle.

NARRATIVE

- In the Parallel Worlds scenario, we recognize an increasingly democratized world in which individual expression is possible in all consumption choices. Financial services offerings have been largely homogeneous and non-differentiated to date. But the future is likely to be one of personalized, simple, and speedy preferences, and the personalization can be extended to extra-financial considerations related to sustainability and responsibility.
- In this narrative, hyper-customization is possible whereby unique financial goals and extra-financial goals are managed through a customized algorithm with complicated design but noncomplex and user-friendly engagement.
- More than a quarter of survey respondents expect demand for investment products that incorporate personal values to increase substantially, and more than half expect demand to increase slightly.
- In the Parallel Worlds scenario, we bring out the greater importance of these trends to millennials. In wider survey work quoted by the Financial Times, 61% of millennials "feel they can make a difference to the world through their choices," compared with 47% of baby boomers (Daneshkhu 2018; Euromonitor 2015).
- Hyper-customization involves integrating new fulfilment areas into investment products. This includes basic exclusions of investment types or tilts, reflecting positive impacts that an investor wants to express. Previous technologies did not allow that degree of customization. In the next 5–10 years, opportunities in lifestyle finance become scalable—and therefore affordable—and address the growing refinement of consumer tastes.
- These developments represent a widening of the baseline for ESG investing. ESG is developing through symbiosis with the explosion of big data. Investors increasingly require companies to reveal far more explicit data and softer data on their businesses, goals, values and outcomes, and impacts. With access to these data sources, and other data available on companies, investors have a broader range of opportunities. This narrative aligns with the new paradigm referred to in *Future State of the Investment Profession* that extends the two dimensions of return and risk in the investment framework to three dimensions, with the addition of impact.

Which do you think will change most significantly for investment firms in the next 5–10 years?



The new IT imperative is integrating data strategy into the business with economics front of mind.

MACHINE LEARNING

21%

say that their firm's top tech priority is the use of machine learning technologies in portfolio construction

PERSONAL VALUES

80%

expect increased demand for products that incorporate personal values

OPERATING MODEL SHIFTS

INVESTMENT FIRM SHIFTS

Use every tool to differentiate the operating model

Insourcing and buy-or-build decisions are critical to the value chain and use of technology.

Decisions on strategic partnerships and choice of technology and the quality of their execution will increasingly differentiate operating models.

The investment firm of the future will:

Understand comparative advantages to strengthen strategy
All parts of the investment firm's value chain can be managed with internal or external intellectual property. The trick is knowing your comparative advantages and getting the mix right.

Be comfortable with technology
It is hard to be positive about investment firms that fail to benefit significantly from technology. They will surely be operating with an unduly costly infrastructure, given that technology has the potential to transform the value chain.

Make data strategy a comparative edge
IT and data strategy must work with agile and adaptive features implemented by well-informed but non-IT-specialized leadership. The new IT imperative is fully integrating data strategy into all levels of the business.

Exploit investment platforms to build scale
Investment firms should be able to use investment platforms to exploit the opportunities from building scale and addressing client needs. In particular, technology enables platforms to scale their customization models within appropriate cost limits.

INDUSTRY SHIFTS

Technology is firmly embedded

Data strategy, AI, and fintech provide essential collective intelligence. Embedding technology involves moving technology from IT implementation providing business support to data strategy, and AI providing essential collective intelligence in the end-to-end investment process.

In the investment industry of the future:

The application of technology shifts the economics (i.e., lower costs for end investors) and accuracy (i.e., improved control of outcomes) of the investment process.

The inter-workings of technology and people are significantly accretive to the value generated by investment firms and experienced by end investors.

Bias around technology must be managed to ensure successful implementation; although many believe that AI and machine-learning technology mitigate human bias, in many cases they have been found to amplify bias.

The technology used in quantitative and systematic investment approaches produces large-scale improvements in added industry value.

13. Challenges in achieving collective intelligence: Firms need to capture the cognitive diversity premium

Investment firms build collective intelligence from well-trained professionals using disciplined decision processes and effective communications. These models' success hinges on the ability of firms to deepen the range and adaptiveness of their professionals' skills.

NARRATIVE

- Competition will continue for professional talent among investment firms, particularly at the leadership level. This likely takes place in an overall shrinking of industry headcount in Europe and the Americas as costs come under growing pressure. Asset management firms' headcounts likely mirror the trends at sell-side firms but with a lag. The challenge is to use fewer people to achieve more by changing the roles played by people and technology.
- More than 20% of the CFA Institute members surveyed in Asia expect the headcount for investment professionals to grow significantly (more than 3% annually) in the next 5–10 years, whereas only 8% of members in the Americas and EMEA expect the same. In the latter regions, approximately 40% expect the number of investment professionals to decline over that time.
- Changes in the nature of skills and job mappings lie ahead. In *Future State of the Investment Profession*, the attributes identified as critical for future leaders are as follows: ability to articulate a compelling vision for the institution; relationship-building skills; and ability to instill a culture of ethical decision making.
- Asset management firms must turn to a wider diversity of skills in their workforce, such as the following:
  - Creative intelligence: developing unusual and innovative ways to see and solve problems, generating forward-thinking theories, and finding creative ways to respond to new situations
  - Social intelligence: being aware of others' reactions, gaining agreement, persuading others of a course of action, and providing emotional support
  - Situational fluency: having a good grasp of the tacit aspects of organizations, reading wider context accurately and understanding the interconnections at work, and being at ease with technology
- Diversity of skills is key as firms strengthen their decision processes and test decisions in a highly competitive industry.
- Investment firms need to compete more successfully with the largest employers of data science professionals. The particular need is for investment professionals who can understand patterns that may reflect noise more than signal.
- The big question in this narrative is how successfully investment firms compete for, develop, and retain talent, recognizing the evolving needs in their businesses. Important in this regard is a strong culture, particularly how diversity and inclusion are practiced, how much individuals are motivated by purpose, and the degree to which colleagues are valued.

14. The effectiveness of decision making:
Firms can take bias out of key decisions

Group decisions are critical to investment firm organizational effectiveness. Teams, committees, informal groups, and boards rely on the socialization and governance attached to decisions, but biases limit the effectiveness of decision outcomes. With new methods and technologies incorporated, biases can be reduced.

NARRATIVE

- The issue for investment firms is the effectiveness of their decision processes for both investment portfolios and business issues. Subconscious biases exist at a personal level that are often reinforced at the group level. This situation is problematic, not least because one of our subconscious biases is overconfidence. The highest-level decisions are the most challenging, involving complex applications of values and beliefs in situations where such issues are not fully settled or even understood.
- The first line of response is to increase the measurement and benchmarking of results to decisions. Investment portfolios are regularly assessed with tightly specified benchmarks, though interpreting the causes of performance variances relative to benchmarks generally proves difficult. In short, attribution errors—not in terms of measurement but in judgment and inference—are endemic.
- Decisions taken on business issues—from hiring and performance management to longer-term strategic decisions—have less data attached and have looser benchmarks. The absence of data creates most of the problems with interpretation. So, the quality of these decisions can be difficult to assess, largely because their measurement is limited.
- A rational response is to develop better foundational thinking and processes. An example of foundational thinking is ensuring the organization draws on considered and well-socialized values and beliefs. Beliefs have substantial relevance to all investment firm challenges—from portfolios to products, client service, and the business model.
- Given greater awareness of biases, firms can adapt to improve decision accuracy while still incorporating consensus.
- In this narrative, there is a role for change. This role is split into two parts: First, better measurement and big data help inform the quality of actions (an example here is the use of group polling; see Dalio 2017); second, technology itself becomes an integral part of the process (for example, AI methods making assessments of job candidates, which is happening already).
- We should qualify the outcomes from AI and machine learning methods, recognizing there are biases with data sets themselves and with the humans that program them. In short, even with impressive leaps in technology we are vulnerable to "garbage in, garbage out" errors.

15. Progress on diversity and inclusion:
Firms can realize improved performance through diversity

Investment firms have notably weak gender diversity in their workforce composition and poor inclusion practice. They gradually realize the business case for diversity and inclusive cultures, where gender is only one dimension to diversity. They must acknowledge the size of the challenge given present circumstances.

NARRATIVE

- Human ecosystems survive and thrive best when they have robust diversity. Diversity has been demonstrated to lead to greater adaptability and creativity (see Woolley, Aggarwal, and Malone 2015). Firms persuaded by the benefits of diversity look to diversify staff along multiple dimensions, including gender, ethnicity, national origin, knowledge, and educational institution, among others. Doing so helps to create teams marked out by a range of perspectives, knowledge, experience, and ways of thinking.
- Successful future outcomes depend on people crossing frontiers and moving away from the places where they were trained and educated. Put another way, there is more to success than simply being an expert on your own turf. High-level problem solving demands the flexibility to draw on unfamiliar theory and research disciplines, notably management science, including game theory and network theory; evolutionary biology and neuroscience; anthropology and behavioral economics; and systems theory.
- The leadership issues to manage change are considerable, and in order to make a meaningful difference, leaders must be comfortable with and/or passionate about diversity.
- The business case for diversity is growing, and in a recent CFA Institute survey of more than 800 institutional investors, the majority (55%) believed that gender diversity in investment teams leads to better performance through diverse viewpoints. Another 28% simply would prefer to hire an investment firm with a corporate culture that is supportive of gender diversity.
- Similarly, among CFA Institute members, 53% say the business case for improved diversity in the industry is strong or very strong, and this result is similar across geographic regions. Only 14%, however, say the speed of uptake of diversity and inclusion practices will be fast. The majority (58%) say change will happen moderately, and 23% say it will be slow.
- Specifically on gender, the representation of women in investment firms very often resembles an imbalanced pyramid by seniority of 30%/20%/10%—that is, its professional entry cohort is around 30% female, its middle rank is around 20% female, and its senior leadership is around 10% female. Over a 5- to 10-year period, some improvement in the balance is likely.
- One factor influencing the narrative is that gender diversity is attracting regulatory scrutiny, but unintended consequences may arise if firms are tempted to use quick-fix solutions in response.

16. Cultures centered on business results:

Firms should see the link from culture to client outcomes

The typical investment firm has a strong focus on business results. In part, this focus is positive for clients, when the firm uses good results to strengthen its capabilities and better performance occurs too. But issues may arise if a focus on short-term results takes precedence over longer-term factors.

NARRATIVE

- Cultural strength is commonly observed in an ethos that focuses on results, wherein performance management and reward systems support and encourage behaviors consistent with a firm's business model and results. The most common compensation structures among investment firms are linked to short-term business results. Leaders, particularly the chief executive, by and large embody the desired results-oriented culture, and boards see their own responsibility as acting where leaders do not deliver the results expected.
- In this narrative, firms find themselves caught in the jaws of a dilemma—to pursue business results at a potential cost to their clients, or to pursue their clients' outcomes at potential cost to their own results. Investment firms often argue that the two priorities align, but clearly there is often a trade-off.
- Openness and accountability in the face of this dilemma are important at every level. Good governance means putting a focus on these qualities throughout the firm, guided by the mantra of "clients come first", along with "doing the right things" in complex and conflicted situations. An example: moving investors in legacy higher-price share classes into new lower-cost share classes.
- On a broader point, investment firms have an overarching responsibility to promote the organization's success for owners while considering a range of stakeholders, including clients, employees, suppliers, communities, and environments. A successfully managed business considers each constituency. Inevitably, conflicts arise between the interests of different sets of stakeholders. But where there is a broad alignment between their objectives—on how business is conducted and how stakeholders are treated—value creation is mutually reinforced for all parties.
- In *Future State of the Investment Profession*, investors' "license to operate" was a central theme. In return for living up to society's expectations, investment institutions receive from society an implicit license to operate—tacit approval to exist and function. Revocation is possible (through mass redemptions or statutory intervention) if investment organizations do not act responsibly and professionally. This understanding must form a part of the organization's cultural identity.
- Leaders in thinking through these issues are challenged in multiple ways with such a subjective area. The issues involve assessing the culture, judging gaps from desired culture, and identifying actions to bridge the gap. The next 5–10 years will likely bring opportunities to use new technologies connected to big data (or, more specifically, to use soft data—see glossary) to codify and address cultural issues.

17. Client-centered cultural biases:
Firms will benefit from a fiduciary culture

Investment industry cultures vary widely by context and geography. There is one version of culture that has widely succeeded in service businesses, based on extreme commitment to clients and clients always coming first. Such a culture can only increase in demand given increasing client sophistication.

NARRATIVE

- Effective cultures that succeed over time are generally balanced, distinctive, implemented well by leadership, and synced to strategy. According to research on corporate culture (see Groysberg et al. 2018), the three largest elements of focus in a firm's culture are clients, results, and employees. Effective culture is shaped by the balance among these three areas, often with an emphasis on the client-centric ethos—an organization's purpose and drive in serving its clients—which is increasingly recognized and appreciated by a discerning clientele.
- Building a client-centered organization goes hand-in-hand with a fiduciary mindset. A healthy fiduciary culture both protects and generates value. It is therefore important to establish a continuous focus on culture rather than wait for a crisis. The key to the fiduciary mindset is being passionate about client-centered and competency-driven actions.
- Client-centered culture means having a clear client value proposition. This involves empathy, having integrity in all products, keeping a realistic sense of value for money, and wrapping all of these elements with trusting client relationships. Doing so is easier in a business model where conflicts of interest are deliberately minimized, as far as practicable.
- Client-centered culture can be assessed through client audits and client satisfaction scores. The next 5–10 years will generate significantly better methods and technologies to reduce the subjectivity in measuring client perceptions of value.
- Survey respondents rank clients as the highest priority stakeholder (68% overall and 77% from C-suite respondents), compared with 26% who say shareholders and owners came first (15% among C-suite).
- In addition, 38% say that client-centricity is the most important strategic factor, though this varied by region—from a high of 42% in the Americas to just 28% in Asia (where tech was prioritized more).

18. People-centered cultural biases:

Firms will benefit from a culture that prioritizes people and teams

A people- or team-centered culture can be a valuable asset, a source of competitive advantage, and a means to create long-term value. It has particular value to investment firms and their clients because the outputs from these firms derive most of their power from human and intellectual capital.

NARRATIVE

- The edge from a people-centered culture comes in various guises: It encourages maximum creativity, facilitates collaboration, and confers personal recognition; it helps workers develop through training, mentoring, and performance management; and it makes allowances for top talent and high performers, while respecting all professionals. A people-centered culture is also likely to be more ethical and purpose driven relative to one that is single-mindedly driven by results, with greater emphasis on diversity and inclusion as well as stakeholder responsibility.
- Investment firms are people businesses in which talent is intrinsic to success. The factors that secure talent include compensation, but intrinsic motivations often are more significant. These include: autonomy—people like to have flexibilities and clear levels of discretion in their work; mastery—people like to develop deeper skills; purpose—people like work that is meaningful to them; recognition—people like their work to be recognized and appreciated; and good colleagues—people like talented and empathetic colleagues, as well as a sense of belonging.
- Employees with these strong values apply them to client relationships. Other narratives speak to the need for a concerted effort to improve ethics, trust, alignment, and competencies in client relationships. Regulation and sanctions clearly have their place but will not on their own deliver effective behaviors.
- Among survey respondents, 54% strongly agree that they personally have a strong sense of purpose and wanted to do meaningful work, but only 28% say this was true of their firm overall. The gap between the two figures indicates cultural limitations in which strong leadership vision is needed to bolster organizational purpose and better cultural leadership is essential.
- The style of leadership increasingly appreciated in the investment industry is an empowering one that distributes responsibility and accountability but is present to help individuals reach their potential and accomplish their goals. A prominent example of this leadership style is servant leadership (see Greenleaf 1977).

HEADCOUNT

56%

of those in Asia expect the number of investment professionals to grow significantly, but this is the only region where the majority expect headcount growth

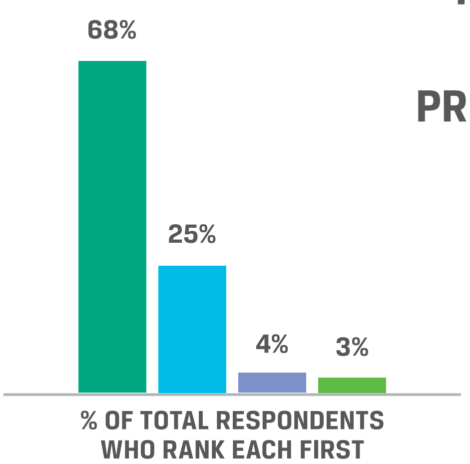
DIVERSITY

53%

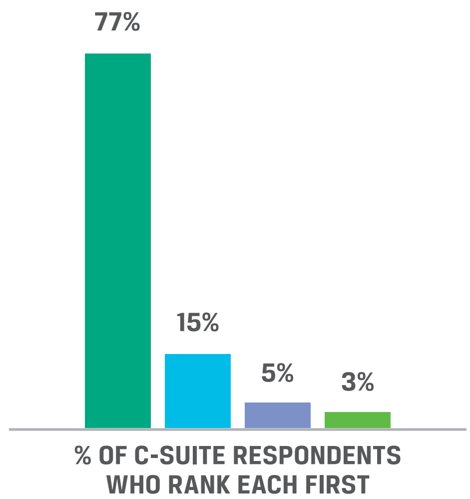
say the business case for improved diversity in the industry is strong or very strong, but only 14% say the speed of uptake of diversity and inclusion practices will be fast

> The central challenge for investment firms is in their increasing wish to use personal data, which leads to the need to balance security with customer convenience and experience.

RANK HOW YOUR FIRM'S CULTURE GENERALLY PRIORITIZES STAKEHOLDERS



- CLIENTS
- SHAREHOLDERS/OWNERS
- EMPLOYEES
- COMMUNITY/SOCIETY



PEOPLE MODEL SHIFTS

INVESTMENT FIRM SHIFTS

People and technology—better together

Collective intelligence that harnesses technology and is built around diverse skills is critical. Investment professionals need deeper situational fluency and emotional intelligence to complement technology. Diversity is a big contributor to better decisions.

The investment firm of the future will:

Build stronger lineups of diverse skills
The complex nature of investment firm business and craft leads to highly specialized professionals. But firms will need more diversity, which calls for more "T-shaped professionals"—those that have both domain-specific specialist knowledge as well as wider understanding and perspective.

Create greater collective intelligence
Investment relies substantially on group decisions. Getting the best possible results from groups involves exploiting their combinatorial elements: governance, process, teamwork, and culture come to the fore, with technology as a new component to add to the mix. We can define the goal as T-shaped teams that successfully merge narrower, specialized skills with wider vision skills.

Have leaders who intentionally build culture
The most sustainable and leading edge cultures are built on people (how people are valued) and clients (how clients are served). They are also aligned to strategy, synced with leadership, and widely owned by all employees. At most organizations, culture resides in the background, but to be truly effective, a firm's culture must have the sustained attention of its leadership.

Recognize the merits of simplicity and the problems of complexity
Investment firms should adopt an "as simple as possible, but no simpler" mantra; understand limits of team size in organizational design; and build out with technologies that simplify the human element.

INDUSTRY SHIFTS

Portfolios benefit from collective intelligence

The required shift involves making investment thinking more rigorous, integrated, and customized. Doing so means taking thinking and acting out of separate silos and creating a unified and integrated portfolio process that considers both industry realities and unique client needs.

In the investment industry of the future:

The required shift involves making investment thinking more rigorous, integrated, and customized. Doing so means taking thinking and acting out of separate silos and creating a unified and integrated portfolio process that considers both industry realities and unique client needs.

"Modern ecosystem theory" will emerge, a unified investment approach that is an open and collaborative competition for capital centered on delivering client/end investor outcomes.

The skills model adds more people that are "T-shaped," those that are adept at reconciling deep-level knowledge and understanding, with a wide perspective across the whole organization, and recognition of the limits of their knowledge.

The people model develops "T-shaped" teams—that is, teams with broad and deep collective intelligence that act using the power of one-team culture and cognitive diversity.

19. Mandates rebalanced between components and solutions:

Outcomes become the new benchmark

Investment products that are simply components in an end investor's strategy lose ground to preferences for mandates that have explicit outcomes attached. There is greater appeal for mandates that offer "solutions": That is, they are closer to a complete answer to an end investor's goals. Such mandates accentuate the fiduciary responsibility implicit in this approach.

NARRATIVE

- Solutions products or outcome-oriented products generally map to a spectrum of mandates: outsourced CIO (OCIO or fiduciary management), diversified growth and other multi-asset, target-date, and liability-driven investment (LDI) mandates. These are investment products in which the benchmark is a specified target outcome (an example is achieving the Consumer Price Index [CPI] plus 4% per annum in a multi-asset mandate). These products stand in contrast to components products, which map to mandates that are specific to an asset class in which the index is the benchmark (an example is outperforming the MSCI All Country World Index in a global equity mandate).
- Data on solutions mandates (see Boston Consulting Group 2017) suggest they amounted to 8% of total asset management industry revenue in 2017 but account for higher growth than other segments.
- The growth of solutions products relative to components products is a central industry trend. One factor in this growth is that end investors may prefer to receive their results in one stage, as close as possible to their ultimate goals, rather than go through a two-stage process involving asset class selection and manager selection. A second factor is the industry reducing its reliance on alpha, which is ultimately unsustainable (less than 50% of managers can outperform the index after costs).
- *Future State of the Investment Profession* summarizes the trend as follows: "Traditional active management community shrinks in size, but active management still flourishes in evolved form." In this narrative, the active core components—historically the largest—decline the most. Private mandates grow, reflecting continuing expectations for better returns coming from private markets. Active specialist mandates lose only modest share, though hedge funds' core strategies, such as long–short, decline.
- The application of fiduciary responsibility seems to resonate most strongly with the solutions area because solutions align so clearly with the fiduciary requirement to be loyal. Compare a solution with a product that is benchmarked against the equity index: Is a manager's loyalty to producing good performance versus the index or to whether the equity performance is aligned to client need? The issue is not clear, for the firm or the regulator.
- Of the different mandates that attract "solution" categorization, OCIO and fiduciary management will likely grow fastest. The OCIO model has the most traction in developed markets, particularly the US and UK, but has the potential to apply in all markets in the next 5–10 years.
- Among survey respondents, 34% say solutions investments would see the strongest growth in product demand in the next 5–10 years, with a similar percentage across all regions. The next most common answer was cap-weighted indexing (i.e., passive) at 20%, followed by alternatives (including liquid alts) at 18%.
- In terms of the rate of growth over this period, 30% think solutions mandates will grow significantly and another 50% expect them to grow somewhat.

20. Systematic investment becomes mainstream: Firms should see the potential for reduced costs

Systematic methodologies are rules-driven processes referencing or tracking indexes that come with particular risk and return characteristics. Their higher-technology element tends to lower costs and require lower governance in their application. These approaches are increasingly attractive in lower-return and higher-complexity times and increasingly become core mandates.

NARRATIVE

- Systematic investment methods include passive cap-weighted mandates—the largest category—as well as factor-based portfolios, smart betas, and quant strategies (see Giamouridis 2017).
- Increasingly, systematic allocations with a large preponderance of cap-weighted indexing are used as a principal core allocation in core-satellite structures. This approach remains widely favored in investment vehicle structuring because it helps in top-down risk management by enabling simple re-weightings of risk allocations to occur as market and client circumstances change.
- Systematic mandates are delivered through different vehicles, with exchange-traded funds (ETFs) the fastest-growing segment at around $4.7 trillion in global allocations at year-end 2017. ETFs have grown at rates around 20% per annum since 2010 and are quite likely to grow almost as fast in the coming 5–10 years (according to https://etfgi.com). The transparency of both portfolio holdings and also the strategy that applies in the ETF model is attractive.
- These approaches by design have relatively low costs and simplified governance, and so should attract the attention of most investment firms. The governance advantages are that systematic approaches are highly transparent in explaining how the underlying strategy is expected to perform; and monitoring the investment process and performance of index portfolios is relatively simple.
- The next 5–10 years will see further evolution in the balance of cap-weighted indexing ("passive") and mandates seeking alpha ("active") in which these factors apply:
    - Current cap-weighted indexing market share is variously seen as currently around 20%–30% for global assets but is set to grow in the next 5–10 years.
    - Because the cap-weighted indexing approach invests proportionately in line with investment opportunities, the investment methodology enables investors in current circumstances to buy the index portfolio in size without the likelihood of significant price distortion or liquidity difficulties.
    - When cap-weighted index investing grows to higher proportions (for example, more than 50% market share versus active investing), however, it can introduce a theoretical vulnerability of the system to inefficient pricing of stocks relative to their fundamentals, which could be negative for the overall health of the financial ecosystem.
    - This vulnerability could present the opportunity for active managers to exploit such anomalies if the market becomes excessively driven by passive flows (suggesting some counterbalancing active flows).
    - Industry perspectives should settle on active and passive being complementary in providing choice as part of a continuum of styles in which diversity is positive for market health.
- CFA Institute member survey respondents were asked about the impact of cap-weighted indexing (passive) for end clients in the next 5–10 years: 52% say the impact would be positive, 29% say it would be neutral, and only 19% say it would be negative.
- Factors remain an area of innovative thinking in the investment model. Expectations in this narrative are for greater use of complex multi-factor and multi-asset approaches, which increase the variety of approaches. The range of possible options is appealing to asset owners that have often been confined to single strategies. It is also likely that the factor template will be applied to ESG characteristics and other thematic tilts.

21. Private market investment becomes mainstream: Firms should see the potential for added value

Investor appetite for returns that match the attractive figures of the recent past increases interest in private markets. For large funds, private market investments have often become the principal satellite allocation that lifts their overall return in Lower for Longer conditions, but overcrowding from investors threatens their future returns.

NARRATIVE

- Satellite structures sitting alongside a larger core component remain widely favored by end investors. Increasingly, private market exposures and, to some extent, hedge funds are used as the principal satellite allocations. High active share public market equity mandates appear in this category, too.
- As described in *Future State of the Investment Profession*, in the next 5–10 years, investors will see an increasing opportunity in private markets but with certain qualifications: "Private markets carry growing weight in capital raising but are disrupted by various failures with opaqueness, illiquidity, and agency and overcrowding issues."
- This suggests a mixed future for private markets, with investor intentions to increase allocations challenged by valuation and liquidity issues as well as by difficulty in finding attractively priced opportunities.
- Meanwhile, there is increasing attraction for private market capital funding for corporations. The world investment opportunity set is currently approaching $50 trillion of public equity and $6 trillion of private equity (according to Willis Towers Watson 2017a), with the ratio of public to private equity set to narrow somewhat in the next 5–10 years.
- Unlisted markets remain the favored financing model for many businesses. These markets remain particularly suited to growth situations, where governance is seen as preferable; in listed markets, the more rigorous governance aspects might deprive a business of an edge or certain key flexibilities and incentives. The application of blockchain methods can improve some aspects of the uneven administration and governance of private corporations by making complicated ownership interests more transparent and streamlined.
- Satellite mandates are typically in higher-alpha areas. Concentrated portfolios continue to be used, as well as specialized mandates with more likelihood of skill being captured in outperformance. Bigger commitments to the illiquid areas of public markets and wider mandates enable more skill to emerge. This dynamic also applies to hedge fund allocations where long-short is likely to decline, but hedge funds can continue to flourish in less liquid areas where they can put significant resources to work to secure comparative advantages.

22. ESG models make progress:
Firms can do more to integrate sustainability into their investment models

The concepts of ESG, sustainable investing, and responsible investing have developed into a spectrum of sustainability models that are currently practiced as an adjunct to the investment model. Future practice becomes more mainstream and standardized. ESG is also complementary to long-horizon investing and system-wide thinking. E, S, and G naturally evolve into individual unbundled investment factors.

NARRATIVE

- In the Purposeful Capitalism scenario, there are trends supporting fresh impetus in the areas of responsible and sustainable investing. The driving forces for new models are complex. Investment decisions involve many moving elements to manage across short-term and long-term horizons, with balances to be struck in this mix. System-wide thinking is used. Think of examples in which consumer trends reflecting social change are moderated by regulatory factors reflecting increasingly populist political systems.
- In investment analysis, the emerging challenge is understanding a fast-changing business landscape with many "VUCA" (volatile, uncertain, complex, and ambiguous) characteristics. The increasing impacts of technology will emerge in multiple fields: for instance, genetics, nano-technology, robotics, energy, communications, and transport all are set for transformational changes. Sustainability in investing should be seen in this context as wider than ESG in encompassing the broad concept of optimizing long-term value while recognizing increasing uncertainty.
- The sustainability spectrum that will evolve in the next 5–10 years is split roughly three ways:
    - ESG is lightly *integrated*.
    - ESG and stewardship are broadly *mainstreamed*.
    - ESG, stewardship, and impacts are tightly *managed*.
- Each of these models corresponds to different convictions and intentions. The convictions reflect beliefs in the materiality and relative pricing of ESG considerations. In a world where business is increasingly made up of intangible assets, pure financial factors are less likely to correlate with long-term value.
- The intentions reflect asset owners' goals. The asset owners of tomorrow increasingly volunteer for, or are pressured into, wider responsibility for their investment footprint, and the two dimensions of returns and risk are joined by a third dimension: accounting for impacts.
- ESG will progress most helpfully as data become more accurate and as standards of use evolve, with regulators and standard-setters playing an important role. Data naturally will be specific to each of the three parts of E, S, and G, and thinking will increasingly differentiate between them while recognizing their connections.
- Universal ownership (see glossary) is increasingly practiced by a few large, long-term funds and managers taking a system-level position and acting in line with the mantra: "We invest recognizing two interdependencies: The returns we need only come from a system that works; the income we generate is worth more in a world worth living in."
- Input from CFA Institute members shows that sustainability in investing is currently being adopted but will take time to reach critical mass. Only 16% of survey respondents say their firm's current commitment to the research of ESG and sustainability issues is high; those serving institutional clients are slightly more likely to say this than those serving a private wealth investor base (18% versus 13%, respectively).
- One-fifth of members expect their firm's commitment to the research of ESG and sustainability issues to be significantly higher in the next 5–10 years, and 52% expect it to be slightly higher.

23. Increased focus on stewardship and governance: Stewardship as the principal alignment tool

Stewardship with respect to investee companies has been a small-scale part of the investment industry to date. The issue is whether this changes and investors play a much bigger part in corporate governance and activism, with accompanying impacts on the performance of corporations and on investors' own performance.

NARRATIVE

- The fundamental issue for investors is dealing with corporations that seem less than fully aligned with a legitimate long-term, sustainable value proposition. Conflicts of interests are a primary source of doubt for investors. Such doubts may grow in the future as corporations face transformation and situations in which corporate assets become stranded. Investors face considerable challenges to be effective in their thinking and their corporate actions.
- There is a current view that the exercise of ownership rights and responsibilities is easier said than done. With ownership stakes in companies so fragmented, it may be difficult for corporations to be constructively influenced by the exercise of investor stewardship. The question is whether stewardship can achieve net positive outcomes. Doubts exist that investors can understand the long-term drivers of value the way that companies' leadership does.
- Just 11% of those surveyed think that the successful implementation of long-horizon investing will progress significantly in the coming 5–10 years. There is a much more positive outlook, however, on the application of stewardship and ownership rights to portfolios, with 64% expecting this to grow during the same period.
- In this narrative, significant influence comes from three investment models: first, increased cooperation among investors; second, the growth of index-tracking portfolios managed by investment firms that take stewardship seriously; and third, the activist model, which may not always have long-term time horizons in mind, and always has capacity constraints, but still has a part to play.
- The purpose of corporations is not a settled concept and has evolved from *shareholder*-centric versions to *stakeholder*-centric ideas. A *Financial Times* editorial on 1 January 2018 expressed a conviction widely shared on this challenge: "Capitalism needs a new social contract…The relationship between business and society requires repair. For businesses, the bottom line is that they have to trade in ways that are competent, ethical, and fair—and be seen to do so" ("A Better Deal between Business and Society" 2018).
- In the Progressive Capitalism scenario, there is a growing ancillary stewardship issue concerning wider responsibility whereby "firms, including investment institutions, try to integrate their wider purpose alongside their profit motivations in business models incorporating corporate social responsibility." In this narrative, there is an optimistic view that stronger versions of stakeholder responsibility will emerge.

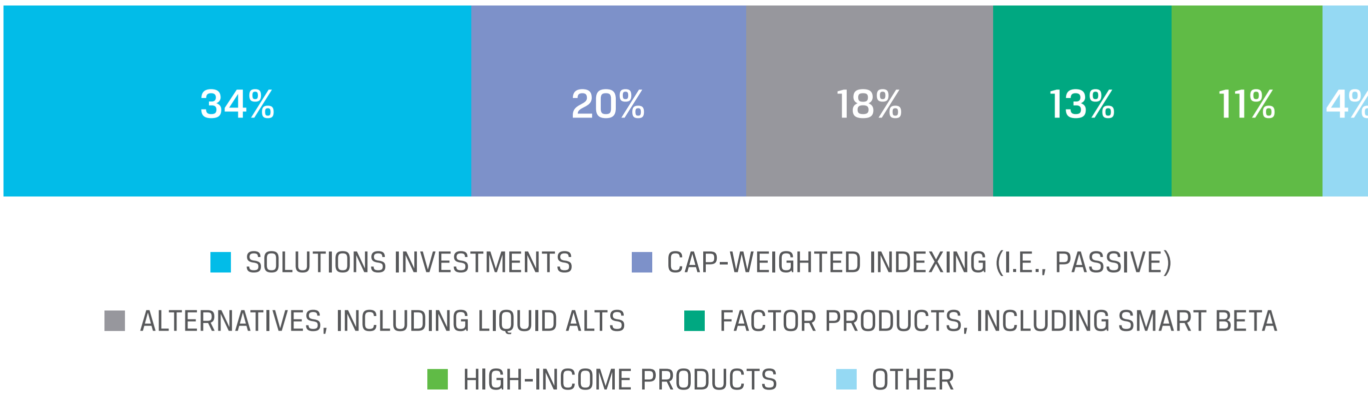
24. Impact positioned alongside risk and return: Firms should manage and master ESG data

Asset owners and asset managers are thinking afresh about the impacts of their investee companies and other assets. What responsibility, if any, resides with owners and managers for these impacts, and how should they account for such impacts? These issues are connected to the asset owner's "license to operate," which is edging toward having regard to wider stakeholder interests.

NARRATIVE

- To investors for whom investment impacts matter, the impacts will need to be placed in a guiding context, such as the UN Sustainable Development Goals (SDGs; see UN 2015). These goals are quickly becoming a widely-accepted version of what national governments and society broadly see as desirable states to work toward. They also define the shape of a sustainable development investment framework that some funds seek to adopt. The focus is on investing in opportunities that meet financial risk and return requirements and support the generation of positive social and/or environmental impact aligned with the SDGs.
- In a world facing shortages of resources, damage to the environment, social fissures, and geopolitical strife, corporations and their owners increasingly consider how to operate in a way that is congruent with sustainable development.
- In most cases, those taking this investing path try to achieve impact goals as a collateral benefit with subsidiarity to maximizing risk-adjusted return. In this narrative, however, some asset managers and asset owners move toward frameworks in which impacts and financial outcomes are managed as a weighted pair.
- Accounting for and reporting on impacts must address the interpretation of soft data (see glossary), which is often the only data type that can be accessed. That is, ESG issues are not generally of the hard data type and so are derived from approximations and proxy measures subject to interpretation and qualifications. Better investment frameworks and expanded data sets are key to effective practice in the next 5–10 years. In particular, stronger processes are needed to deal with the soft data challenge.
- In this narrative, quantitative and qualitative data disclosures are sourced through initiatives such as the Sustainable Accounting Standards Board, Taskforce for Climate-Related Financial Disclosures, and ‹Integrated Reporting›. These developments also stem from pressure in the value chain, particularly from the big asset owners that seek more data to attribute among agents as a means of fulfilling their overall responsibilities and accountabilities.

THE STRONGEST GROWTH IN PRODUCT DEMAND IN THE NEXT 5–10 YEARS



STEWARDSHIP

64%

expect the application of stewardship and ownership rights to portfolios to grow over the next 5–10 years

SUSTAINABILITY

72%

expect their firm's future commitment to the research of ESG and sustainability issues to be higher in the next 5–10 years

> Investment products that are simply components in an end investor's strategy are losing ground to preferences for mandates that have explicit outcomes attached.

INVESTMENT MODEL SHIFTS

INVESTMENT FIRM SHIFTS

Refocus investment processes on outcomes

The control and delivery of client outcomes is a critical new focus—hence the growing emphasis on investment solutions, which are by design aligned to outcomes and so have natural advantages.

The investment firm of the future will:

Build investment edge through advanced intelligence
Firms need to adopt stronger investment practices tied to the disciplines of beliefs, frameworks, processes, and measurement. The need to integrate more elements in the investment model is critical. There are potentially four dimensions to this greater "joining up": short- and long-term, financial and extra-financial, allocation and ownership, and return and impact.

Strengthen investment models
On top of the greater sophistication needed in integrated management, there are other needs. At the top level, this is the need for a better investment model in which leading-edge designs are combined with better analysis. At a more detailed level, we should see better design and use of investment solutions with appropriate alignment to desired outcomes.

Require more precision to achieve client outcomes
Managing to outcomes involves a more complex investment challenge in successfully integrating the different risk and return premia, in particular making market exposures less dominant.

Build stronger investment culture
An investment culture is required that emphasizes investment skill as a craft and a passion and also includes a purpose-driven calling and mindset.

INDUSTRY SHIFTS

Sustainability is woven into the fabric

The adoption of an effective and purposeful long-horizon investment framework is a critical shift for the industry. This involves getting sustainability joined up on multiple dimensions: financial impacts and real-world impacts, short- and long-term, financial and extra-financial factors, allocation and stewardship, and value and utility.

In the investment industry of the future:

Sustainability issues are fully incorporated and integrated into the investment process, building on the risk and return picture and adding an extra dimension in addressing the wider impacts of portfolio positions.

Investors can make and keep commitments to long-horizon principles and exercise discipline in the integration of short-term and long-term considerations.

There is consistency of asset owner practice and decision making on ESG factors via stewardship, and mandates specify clear sustainability goals and metrics.

Universal owners see materiality in their portfolio and stewardship impacts, which they intentionally integrate into their strategies.

The data used in the investment process is consistent and coherent on ESG factors with a blend of accuracy, consistent interpretation, and good judgment.

25. Technology enhances client relationships:

Firms should use technology to know customers better

The use of detailed personal intelligence about customers has been limited in the industry so far. There is significant potential through the application of sophisticated technologies to create customer relationship management (CRM) processes that are personalized, simple, and speedy, drawing on multiple sources of personal data.

NARRATIVE

- Customer data and intelligence are currently based on relatively simple categorizations. Distribution models have discrete issues to consider in institutional, retail, and private wealth segments. It is in retail and private wealth that firms have farthest to travel with new, potentially transformational technologies. Capture of personal data and its application will improve customer delivery in the context of improved communications, targeting, and customizing. Asia is likely the biggest test-bed for the application of new technologies.
- Client data and intelligence on our current industry come from focus groups and surveys, but much is also created from ad hoc assumptions, which are proxies for more accurate, individualized data about consumer behavior. Technology advances make it possible for businesses to access much more data about clients' and customers' real needs and wants, while platforms and user interfaces enable better service.
- Easier product comparisons and more frequent switching mean that provider and end investor relationships for some will become more transactional and require less time. End investors see that digitalized delivery enhances speed and personalization, which then shapes their expectations of the investment marketplace. Considerable work is needed to craft new user interfaces given the potentially complicated issues, including compliance aspects.
- Personalization touches on investment values, and this awareness is growing fast in private wealth business models. The opportunity is for the client platform to "speak the customer's language" in order to develop longer-term, more effective relationships.
- In this narrative, a new business model emerges with significantly different costs. There are potentially large fixed costs in establishing platforms and digital services, and thereafter costs are low per user. Increasingly, investors (particularly younger ones) are swiftly discovering the best platforms, increasing the scale advantages.
- The opportunities grow quickly. With big data, CRM, and hyper-connectivity, investment firms have more opportunities to meet customer needs and improve products, which enhances investor trust. In life and health insurance, wearable computing enables massive advances. Investment firms can integrate savings vehicles and life and health insurance with other opportunities in order to build platform scale.
- Asia is the source of most innovation in this area. Western-centered investment firms can apply Asian resources to act as both catalyst and test-bed for technology innovations, for local and global deployment. As demand increases for specialized technology skills, they become harder to find, and companies that have a foothold in Asia may enjoy recruiting advantages.
- Improvements in financial literacy will generate additional engagement with end clients. But the substantive improvements to be expected in effective distribution and engagement will primarily be the result of uses of technology rather than improvement in the traditional view of financial literacy.

26. Technology enables customized engagement: Client interfaces need behavioral savvy

Client-facing technologies still suffer from legacy issues, in which communications and transaction processes are quite primitive. These must be upgraded so they are nimble enough to deliver a sophisticated product to end clients while simultaneously being sufficiently simple for customer interaction.

NARRATIVE

- The wealth interface that defines the relationship between wealth managers and their clients requires significant change amid widespread technology disruption, with financial services coming to this changing field late relative to other industries. The communication challenge must address mobile devices, PCs, and tablets, as end investors seek engagement wherever they happen to be. Five layers make up building blocks for technology solutions: visualization, data, application programming interface (API), analytics, and location-based delivery.
- At the visualization layer, the client interacts with a self-service dashboard and search capabilities, displayed through advanced visualization tools that generate and present relevant materials to stimulate initial engagement. The visualization layer is integrated into the business processes management where the API interface is engaged.
- The analytics layer does the deeper thinking, using advanced AI techniques to profile and predict behavior and suggest patterns. These techniques then connect with data lakes that form the key layer of the technology solution, acquiring data rapidly from various sources and drawing it into solutions.
- A large part of the scenario relates to the distribution model. Importantly, end clients now expect information to be delivered wherever they are. For example, most personal computing in Asia happens on mobile devices, not on PCs or laptops. Firms can take advantage of a mobile's device's location-based services to deliver contextualized information to clients. Consider this: An end client walks past a store, and a firm's app delivers a thoughtful message to the effect of "Last month shopping there, although fun, put you $300 behind in saving for your leave of absence and trek through Indonesia."
- Technology can be a catalyst to engage defined contribution participants, and 64% of survey respondents expect these investors will become more engaged in the next 5–10 years. The evolution of the DC platform to include post-retirement income and even extending into full personal balance sheet management will depend on the quality of technology that is developed and adopted.

27. Technology enables customized messaging: Expansion of soft data transforms servicing

Current servicing for customers—institutional, retail, and private wealth—is bland and communicates with poorly targeted features. The use of personal data and technology enables much better targeting using more client intelligence, behavioral savvy, nudging, and ultimately empathy.

NARRATIVE

- As described in the Parallel Worlds scenario, product preferences center on personalization, simplicity, and speed. To deliver these specifications, investment firms must improve their communication strategies considerably.
- The use of technology for client engagement is growing quickly, and 51% of survey respondents say that this is their firm's top technology priority in the coming years.
- Financial institutions are already using AI to experiment with service that is far more personalized. The banking sector is ahead of investment firms in using AI-based client advisers, leveraging the operational data from personal profiling, past call history, and previous transactions, which are then combined with AI to improve the understanding of customers' likely needs.
- Soft data, even given the challenges of capturing, validating, and using it, leads to a better understanding of needs. A cautionary note: Soft data may instead be abused to play to clients' personal biases that are wants rather than needs. The influence of regulation will grow to provide some client protections, but ultimately this area will evolve by reference to the industry's ethical condition and the degree to which individual firms act with professionalism.
- In this narrative, AI, machine learning, and customer analytics drive client engagement over the next decade. Financial institutions need to deliver instantaneous and well-connected transactions in which trust in the transaction's security is increasingly strong.
- These are baseline requirements, however, not the subject of differentiation. The best investment firms develop new forms of well-engineered engagement in which sophistication with behavioral finance will be essential.

28. Trust significance grows:

Firms should adopt behaviors and technologies that monetize trust

Because trust is perceived as difficult to measure, most firms connect it weakly to value. But it is tremendously important because trust carries so much potential to extend relationships and to discourage product switching. It has the potential to play a much bigger part in the industry of the future, particularly if technology is used effectively in the mix.

NARRATIVE

- The central issue is how trust might evolve in the context of transformational technology. In a future in which investment firms offer personal, simple, and speedy propositions, can they also achieve trusted engagement? Although technology can create faster, deeper trust in ownership and transactions, it can also be used to the client's detriment and on its own is insufficient to create long-term trust and value.
- Trust as an asset is a subtle challenge, because increasing knowledge of client preferences and biases can be exploited by investment firms that are motivated by sales more than client outcomes. Another possible "miss" is automated communications that are "too intimate" and violate customers' privacy expectations. The manipulation of personal feelings by companies and political factions is a particular phenomenon of our time, and social media is a significant contributor.
- In *The Next Generation of Trust* (CFA Institute 2018), 68% of institutional investors and 40% of retail investors said that the increased use of technology has led them to trust their asset managers/adviser more. Only 7% of retail investors, however, reported that they would trust recommendations of a robo-adviser over those of a human adviser.
- Younger generations place a higher premium on customization than expense when defining luxury, and they are the most eager to receive the best investment engagement opportunities compared with other age groups.
- Trust rises with professionalism and is a key element in the scenario. An investment firm's professionalism can be seen as being supported by: the organizational purpose as captured in its mission and culture; employing more purposeful professionals; technology support; alignment with regulatory principles; and interaction with professional bodies such as CFA Institute.

29. Blockchain use in transaction assurance:
Firms should see blockchain as streamlining transactions

Blockchain has the capacity to influence the way business is done in the investment industry. Its greatest potential seems to be in boosting trust in the system by providing improved transparency to transactions and ownership at much lower costs than the prior systems in which assurances were delivered by intermediary organizations. The issues are how blockchain will be developed and how much trust is given to it.

NARRATIVE

- As outlined in the Fintech Disruption scenario, blockchain can intermediate trust in various areas where our current financial system is effective but uses a clunky central counterparty model. Blockchain removes the need for any kind of third party to facilitate an exchange in a transaction. Trust must exist in the blockchain concept, and people must trust the platform, interfaces, spreadsheets, and time stamps—but trust in another person is not required.
- Through the distributed ledger system, which gives all participants confirmation simultaneously in a so-called consensus process, blockchain systems remove the need for existing intermediation dedicated to confirming authenticity.
- In *The Next Generation of Trust* (CFA Institute 2018), 63% of institutional investors said they think blockchain has potential to increase trust in markets.
- Investment in blockchain and initiatives to develop new applications are growing quickly. The effect of blockchain is to make the investment industry's infrastructure more streamlined and less expensive. Applications include the faster settlement of financial transactions (so-called T0 dealing) and automated contractual agreements.
- A more universal acceptance of the technology must arise before it can make an industry-wide impact. For benefits to materialize, careful construction of contracts that feature universally accepted clauses, extreme clarity on cyber-security, progress on regulatory frameworks, and a fuller understanding generally are necessary.

30. Cybersecurity grows in significance:
Cybersecurity critical to confidence and outcomes

Data is becoming more significant in the investment industry. Investment organizations must develop extremely strong confidence in the security with which data, particularly personal data, is handled. This confidence will be hard to achieve with increased use of mobile technology. But organizations that commit to paying assiduous attention to security and the associated investment in preventive technology will have the best chance of avoiding issues.

NARRATIVE

- Cybersecurity is already important, and it will become even more significant for investment firms and regulators in the future. Investment professionals describe cybersecurity increasingly as a pre-eminent risk relative to others faced by corporations (see PRI 2017; CFA Institute 2018). The central challenge for investment firms is in their increasing wish to use personal data, which leads to the need to balance security with customer convenience and experience.
- Regulatory and corporate governance matters are also important in this scenario because regulators are keenly interested in the new tech-driven products that transcend international boundaries and introduce obstacles to their wider adoption.
- Among the most important cybersecurity vulnerabilities are exposure to third-party vendors; exposure to complex technologies; increased use of mobile technologies in the investment user interface; and cross-border data exchanges.
- In this narrative, cyber problems likely become a much bigger dimension of investment firm performance than in the past. Cybersecurity must carry a much bigger commitment of resources in the future by each firm and by the industry as a whole to prevent issues.
- No system is completely immune to cyber-attacks. Organizations need to prepare for situations and mobilize the requisite resources to manage situations as they arise. Organizations need to commit considerable attention to communication strategies to help contain situations.
- Only 24% of survey respondents say cybersecurity is their top tech priority, but it is a top priority for clients. In *The Next Generation of Trust* (CFA Institute 2018), 82% of institutional investors and 84% of retail investors said that having reliable security measures to protect personal data was important in creating a trusted relationship. Notably, this result was slightly higher than the importance of generating returns similar to, or better than, a target benchmark (78% for both investor types).

DISTRIBUTION MODEL

The central challenge for investment firms is in their increasing wish to use personal data, which leads to the need to balance security with customer convenience and experience.

CYBERSECURITY

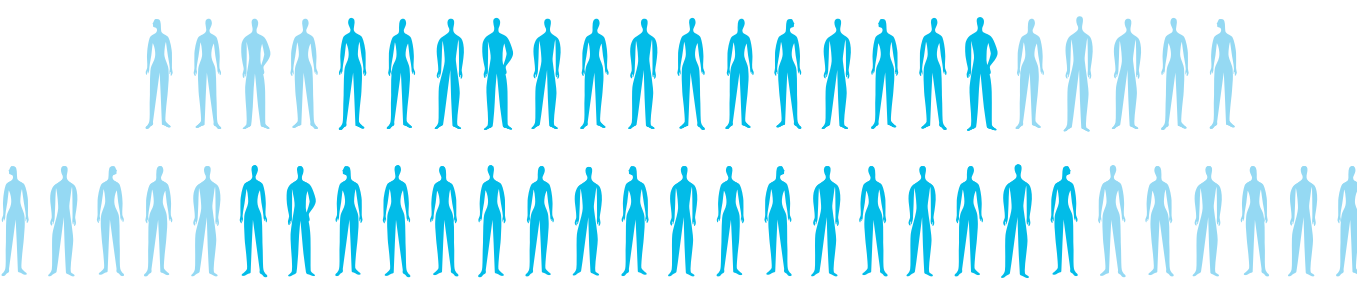
24%

say cybersecurity is their firm's top tech priority

TRUST TECHNOLOGY

68%

of institutional investors and 40% of retail investors say that the increased use of technology by their investment firm has led them to trust their asset managers/adviser more (from *Next Generation of Trust*)



64% EXPECT THAT DEFINED CONTRIBUTION PARTICIPANTS WILL BECOME MORE ENGAGED

DISTRIBUTION MODEL SHIFTS

INVESTMENT FIRM SHIFTS

Find ways to engage clients

Better engagement is needed, using technology in a way that speaks the customer's language. New data provided by clients, customers, and end investors add opportunities for customization. New levels of engagement are possible if new forms of trust can be established.

The investment firm of the future will:

Gain a client edge through client intelligence
Use CRM principles, drawing from extensive customer data, to extend the opportunities for personalized, simple, and speedy engagement. Build trust through excellence in engagement, appropriate use of data, and connection to client-specified goals.

Extend customization into wealth and defined contribution
Seek opportunities to build out customized investment products to wealth and defined contribution business segments using consumerization success principles that are in other sectors (e.g., technology nudges such as "people like you will like products like this").

Speak in an accessible language
The combination of people and technology affords the best opportunities to make the complex into simple propositions that retain sophistication. Such engagement reaches out to customers, drawing on their values-based preferences and using intuitive dashboards. Use of personal data must balance cybersecurity with customer convenience and experience.

Commit more heavily to the creation of trust
Trust has great value to both the saver giving trust and the firm receiving it. Use technology to facilitate trust, as well as client audits and other measurement to help manage trust.

INDUSTRY SHIFTS

Outcomes replace benchmarks

High-precision, outcome-driven mandates become dominant in the industry. Mandates evolve from benchmark-anchored arrangements to outcome-driven frameworks that are comprehensively aligned to end-investor needs and goals.

In the investment industry of the future:

The dominant mandates in the industry are outcome-driven and specified in terms such as "liabilities plus a spread," "CPI plus a spread," or "cash index plus a spread." The precision of these mandates deepens the client dialogue on needs and values.

Mandates specify risk in fundamentally important terms such as drawdown risk and mission impairment, with time horizons front of mind and less emphasis on peer comparisons and tracking error.

The industry favors a total portfolio approach using mandates overseen by CIOs or OCIOs that take overall responsibility for investment outcomes.

Investment industry firms and professionals are motivated more strongly by purpose.

Investment firms operate in wider specified mandates in which strategic partnerships offer clients access to wider intellectual property and investment intelligence.

CONCLUSIONS

The industry has grown up with a habit of trying to understand the future using past data and backward-looking thinking. The approach we advocate stands in contrast to this. The approach used in Investment Firm of the Future is evidence-based, forward thinking, and not data dependent.

Investment firms face a future in which change is accelerating. This requires investment firms to recognize these changes and adapt to them by:

- exploiting technology;
- building greater collective intelligence through teams with deep knowledge and wide perspective;
- doing far more joined-up investment thinking and practice; and
- engaging more with clients by identifying their needs and managing to their desired outcomes.

The future state of the investment industry will reflect investment firms' progress on these issues. We suggest a forward-thinking investment industry that copes well with change will be characterized by:

- holding itself up to clearer, higher standards;
- becoming more proactive and purposeful;
- adding value well beyond the rewards it enjoys itself; and
- making positive contributions to society's deeper-rooted issues.

This attractive picture of the future can become reality if investment firms adopt the principles and strategies outlined in *Investment Firm of the Future*.

The Shifts, representing actions to be taken, are summarized below.

CFA Institute is committed to further consultation with leading industry figures on the issues raised in this report and in particular moving our industry to higher standards of professionalism.

CFA Institute restates its support for the investment industry through credentialing, education, standards, research, and advocacy activities.

As we outline a more forward-thinking future for the industry, we also view this report as a source of thinking for CFA Institute itself to reflect on its vision, strategy, and goals to support its mission "to lead the investment profession globally by promoting the highest standards of ethics, education, and professional excellence for the ultimate benefit of society."

INDUSTRY SHIFTS	**Embed organizational agility and client-centric culture** Firm success reflects state of agility and fiduciary mindset	**Use every tool to differentiate the operating model** Insourcing/buy or build are critical decisions in the value chain and tech	**People and technology—better together** T-shaped diverse skills with tech added are a game changer	**Refocus investment processes on outcomes** The control/delivery of client outcomes changes everything	**Find ways to engage clients** Better engagement using tech in a way that speaks clients' language
FIRM SHIFTS	**Governance and culture are upgraded** Enhance the value created by industry	**Technology is firmly embedded** Data strategy, AI, and tech provide essential collective intelligence	**Portfolios benefit from collective intelligence** Thinking is collective in rigorous, integrated, customized processes	**Sustainability woven into the fabric** An integrated and sustainable long-horizon investment framework	**Outcomes replace benchmarks** High-precision, outcome-driven mandates become dominant

GLOSSARY OF STRATEGICALLY IMPORTANT CONCEPTS

Business Model and Operating Model

agent-based models: An agent-based model simulates the actions and interactions of agents in the financial ecosystem to assess trends in the system as a whole and the effects on its various participants. The method employs various disciplines including game theory, complexity science, and behavioral economics, as well as significant computing power, to deal with multiple combinations and higher-order consequences. *Example: The Bank of England uses agent-based models of corporate bonds and housing in its macro-prudential oversight to build greater understanding of system stresses and for exploring the consequences of policy actions.*

blockchain: Blockchain is a continuously growing database linked and secured using specialized technology to record transactions, property rights, and/or contracts between two parties efficiently and in a verifiable and permanent way. *Examples: Cryptocurrencies; tokenization to streamline private equity ownership*

machine learning: Machine learning is a subset of artificial intelligence that uses statistical techniques to give computers the ability to learn valuable intelligence through providing it with data, without being explicitly programmed. Machine learning is a central part of portfolio selection and trading strategies for some quantitative investment processes.

integrated reporting: Integrated Reporting is a reporting style promoted to corporations to emphasize how value is created in the organization, generally by reference to narrative as well as data, and through consideration of how an organization's strategy, governance, and resources contribute to the creation of value over different time horizons.

employee value proposition (EVP) and client value proposition (CVP): Integrated reporting includes narrative on how value is delivered to employees in the EVP through policies, actions, culture, and leadership that attract, retain, and develop employees and teams. The narrative on how value is delivered to clients is in the CVP through the organization's policies and actions, culture, and leadership that deliver value to clients in all services and products.

soft data: Soft data are measures and assessments that can be qualitative or quantitative but are difficult to assess in terms of accuracy. They may involve extrapolation or estimation from population samples, or they may measure subjective topics. Soft data can nevertheless be extremely relevant and material in decision making. Examples include sentiment indicators, opinion polls, and platforms such as Glassdoor in which employees and former employees review companies' cultures.

Investment Model

solutions products: Solutions products have a benchmark that is a specified target outcome (for example, achieving CPI + 4% per annum in a multi-asset mandate). They stand in contrast to components products, which map to mandates specific to an asset class where the index is the benchmark (for example, the MSCI All Country World Index for a global equity mandate) *Examples of such products include: outsourced chief investment officer or fiduciary management; diversified growth; and other multi-asset, target-date, and LDI mandates.*

outsourced chief investment officer (OCIO): OCIO arrangements (also referred to as fiduciary management) are investment platforms managed for asset owners by third-party investment organizations working under fiduciary responsibilities. An OCIO provides whole-fund discretionary fund management whereby the management scope is bespoke investment advice and strategies allied to implementation and maintenance, including liability and liquidity management, covenant consideration, and use of insurance.

total portfolio approach (TPA): TPA is an investment model for managing a whole fund in which there is a continuous and dynamic focus on the investment objective and the best single portfolio to achieve this objective by a single team working collaboratively by reference to desirable features: adherence to a risk budget; good risk–return trade-off; liquidity and flexibility; investing comparative advantage; resources; simplicity; cost; and sustainability. *Example: "One team, one portfolio, combining a breadth of experience and skills into a collaborative whole creates a meaningful competitive advantage" (Future Fund Australia 2017).*

goals-based investing: Goals-based investing involves adopting a stronger link between the explicit performance goals an end investor wishes to achieve (e.g., achieving a 4% per annum real return) and the investment strategy adopted to meet those goals.

universal owner: Universal owners are large, long-term investors that own a slice of the whole economy and the market. They aim to enhance their portfolios' return prospects through work on the whole system (economy and market). This approach involves managing the value and utility of member wealth and integrates ESG and sustainability considerations. *Example: "We operate as a Universal Owner. We have the inconvenient truth of modern portfolio theory: The more diversified we are, the more vulnerable we are to systematic failure, so we have to pay attention to how the whole portfolio system can be sustainable. It's why we are paying attention to ESG" (GPIF Japan).*

Sustainable Development Goals (SDGs): These 17 goals established by the United Nations Development Programme are meant to drive progress along key dimensions that are relevant for a "more sustainable, safer, more prosperous planet for all humanity." They interconnect and offer a framework that governments, companies, and investors can use to measure impact. The goals include items such as education, healthcare, infrastructure, gender equality, and clean energy.

People Model

cognitive diversity: Cognitive diversity involves differences in perspective or information processing styles across how individuals think, particularly in the context of new, uncertain, and complex situations, which can potentially lead groups to better decision outcomes.

collective intelligence: Collective intelligence is intelligence shared across a group of people that emerges from the group's collective efforts and utilized technology. It is derived from aggregating factors reflecting cognitive diversity and process as well as the individuals' intelligence. *Example: "The ability of groups to improve judgements of factual problems (such as guessing the number of marbles in a jar) is an example of collective intelligence through aggregating independent views" (Surowiecki 2004).*

T-shaped people: The concept of T-shaped persons (and, by extension, T-shaped teams) describes the abilities of people to simultaneously have deep knowledge in a single field or part of the ecosystem (the vertical bar of the "T") and have wider knowledge in other fields or other parts of the ecosystem (the horizontal bar of the "T"), as well as the competencies to connect the two. The term originated at the consulting firm McKinsey in the 1980s.

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About the Report

Unless otherwise noted, data in the report are from a CFA Institute member survey conducted 27 February–8 March 2018. In total, 2,518 responses were received, with a margin of error of +/–1.9%. Respondents had roles such as portfolio managers or analysts (51%), C-level or consultants (20%), financial advisers (11%), and risk managers or strategists (11%); 86% were men and 14% were women. Respondents came from the Americas (60%), Asia Pacific (16%), and Europe, Middle East, and Africa (25%).

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