



FUTURE STATE OF THE INVESTMENT PROFESSION

PURSuing BETTER OUTCOMES—FOR THE END INVESTOR, THE INDUSTRY, AND SOCIETY





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Executive Summary



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CFA Institute is the global association of investment professionals that sets the standards for professional excellence. We are a champion for ethical behavior in investment markets and a respected source of knowledge in the global financial community.

Our mission is to lead the investment profession globally by promoting the highest standards of ethics, education, and professional excellence for the ultimate benefit of society.

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PREPARING NOW FOR A DIFFERENT FUTURE

The future of the investment industry is important for the functioning of the global economy, for the approximately 2 million workers it employs, and for the clients and end investors that depend on it to manage around \$100 trillion in assets.

This report, which includes findings from a survey of 1,145 industry leaders, addresses the issues that keep investment management executives up at night; they are the same issues that matter for CFA Institute as the largest association of investment professionals. Major shifts are underway that will likely result in significant change, and leaders need a better way to think through the implications of these shifts in various combinations—for their clients, the health of the industry overall, and the ongoing sustainability of their own firms.

Relevant megatrends include technological advances, redefined client preferences, new macroeconomic conditions, different regulatory regimes reflecting geopolitical changes, and demographic shifts. The industry's potential future state is further complicated by important issues that are very specific to investment organizations, such as trends in digitization and commoditization, downward pressure on fees, pressures from sustainability, new tech-centric business models, and other investment innovations. The scenarios and analysis in the pages that follow offer a road map for leaders in their strategic decision making as they seek to chart a course for the future of their firms.

This report also provides insights for professionals interested in becoming future industry leaders by identifying the traits and abilities that will be prized by future investment management organizations. Finally, it suggests ways that the *possible future states* of the investment industry could be influenced so that the *actual future state* provides the best possible outcomes, by fulfilling client objectives, serving end investors, and contributing to societal wealth and well-being.

Business Model Faces Pressure

84% of investment leaders expect consolidation of the industry

70% expect investors will increase their allocations to passive investment vehicles

52% of CFA charterholders surveyed expect substantial or moderate contraction of profit margins for asset management firms

57% expect institutional investors will look to reduce costs by insourcing more investment management activities

Changing Client Profiles

73% of investment leaders expect environmental, social and governance factors will become more influential

70% of investment leaders expect Asian financial centers will become more influential

Opportunities on the Horizon

55% of investment leaders expect globalization will offer new opportunities for investment professionals

48% of investment leaders expect technology will offer new opportunities for investment

UNDERSTANDING THE INDUSTRY'S PURPOSE THROUGH ITS MANY MOVING PARTS

The fundamental purpose of finance is to contribute to society through increases in societal wealth and well-being. Looking at finance as an ecosystem reveals important interconnections and points of friction in how finance currently works in relation to this purpose. The financial ecosystem is:

- **Connected:** It reflects the multiple diverse participants, people and organizations and their connections with each other and with the wider landscape. While the system is served by many specialists, there is a need to understand the bigger picture.
- **Reflexive:** It incorporates the two-way nature of those connections and dependencies. Specifically, it allows for reflexivity, where landscape changes affect and are affected by participants' beliefs and actions.
- **Non-linear:** It allows for the jumps, or tipping points, that characterize some of the properties of the system and are difficult to explain with traditional theory. Simply put, crises happen.

The financial ecosystem rests on a singular fundamental transaction: those with a surplus of capital but a deficit of ideas (investors) provide capital to those with a deficit of capital but a surplus of ideas (inventors, entrepreneurs, businesses, firms, etc.). When those ideas are successful, then both the providers and users of capital benefit by earning investment returns. CFA Institute argues that an investment industry of enormous value to society has grown from this

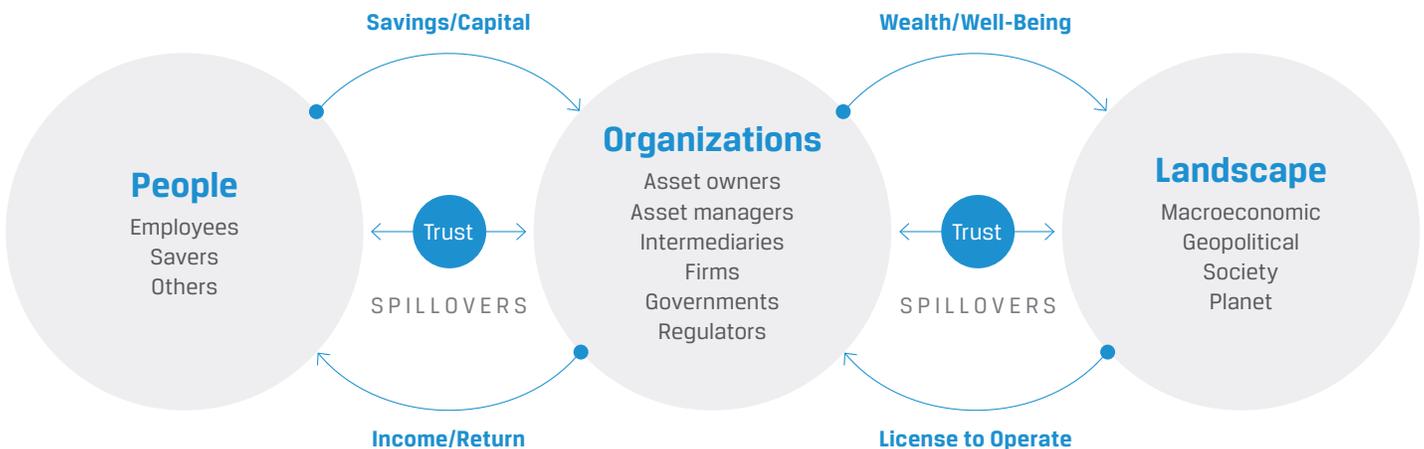
kernel; but its sustainability is dependent on the nature of the value delivered and the quality of trust between the end investor and the organizations involved.

Uncontrollable forces consistently exert influence (sometimes extreme influence) in the financial ecosystem, just as they do in the natural world. The challenges the investment industry will face in the future are currently being shaped by a number of megatrends that already have significant momentum: people are living longer and demographic structure is altering markedly, technology is empowering individuals and organizations, economic imbalances continue to grow in markets and society, the regulatory pendulum is swinging faster, and natural resources are under stress.

Our focus here is on the investment function of finance, which lies alongside the payment, lending, and insurance functions. More specifically, the core purposes of the investment industry lie in two overlapping areas:

- **Wealth creation:** Mobilizing capital for jobs and growth; the capital managed in this chain creates societal wealth and well-being.
- **Savings and investments:** Deploying investment services for wealth and risk management; the savings and investments managed in this chain allow inter-temporal (over time) risk management and increases in wealth.

THE FINANCIAL ECOSYSTEM



THE ART AND SCIENCE OF SCENARIO PLANNING

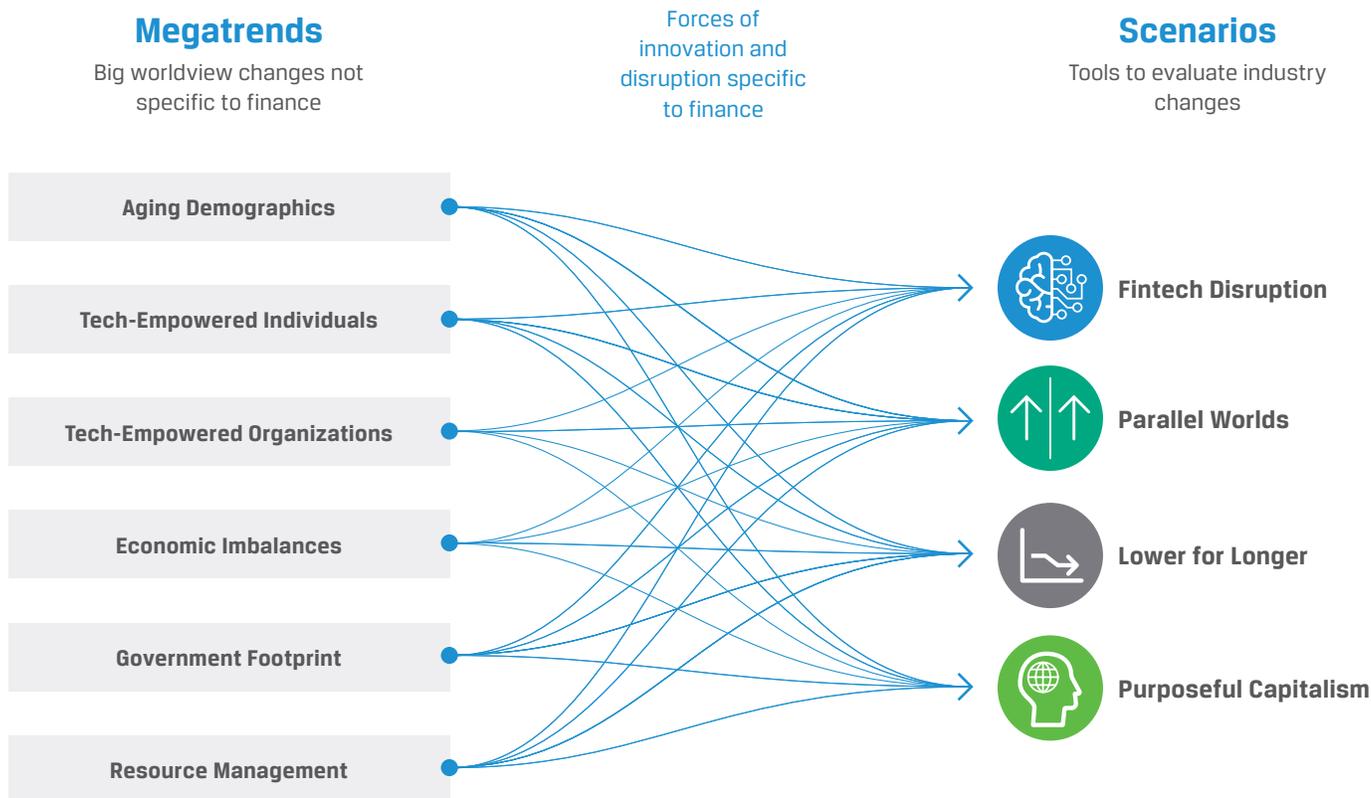
Even when forecasts are directionally correct in finance, they are usually specifically wrong. That is because the future of finance is created by a combination of many moving parts and legions of complex interactions; the result is inherently impossible to predict. Consequently, we use scenario planning to reveal insights about the future state of the investment profession, regardless of what future unfolds.

Our scenarios draw on a number of megatrends—large scale changes in circumstances that are omnipresent in all facets of our world—that are identified as virtually certain to disrupt the ecosystem regardless of how the future unfolds.

The megatrends are mixed with finance-specific forces in different combinations to create unique scenarios in the form of narratives about the future. These narratives are not forecasts; instead, each narrative strives to tell a unique story. With these stories in mind, decision makers are equipped to recognize the narratives as the future unfolds and act early.

Our time frame is 5–10 years, which is long enough to allow business models to substantively change in response to the disruptive megatrends and forces we identify, but not so long as to be overly futuristic.

MEGATRENDS COMBINE FOR POSSIBLE FUTURES



FOUR SCENARIOS FOR FUTURE STRATEGY

These scenarios represent four ways in which the future of investment management could unfold.



Fintech Disruption

New technologies promote new business models; disruption and creative destruction are endemic; challengers do better than incumbents; major disruptions to the world of work

Major Elements

- Quickening flow of disruptions from technological innovation in digitization and digitalization
- Fintech develops globally with a particularly strong Asia-Pacific element
- Regulatory infrastructure in finance gradually integrates technology-driven models
- Disruptions to investment organization business models; success with technological advancement is critical
- Traditional active management shrinks; some growth in alternatives, smart betas, and outcome-oriented solutions
- Smart machines and systems, data analysis, and inference play a disruptive role in finance's evolution
- Financial services becomes highly personalized and digitalized everywhere
- Robo-advice and its "cyborg" variants become preferred style or tool for delivering investment advice



Parallel Worlds

Different segments—by geography, generation and social group—engage in society differently; a higher baseline for financial services participation with wider dispersion; product preferences for personalization, simplicity and speed

Major Elements

- Better worldwide education, healthcare and telecoms increase societal engagement
- Social media carries potency to bring people together and to divide, legitimately and illegitimately
- Potential for mass disaffection; consequences in anti-globalization, populism, and authoritarian nationalism
- New-style financial institutions enabling personalized, simple, and speedy engagement; trust is also needed
- Big data serves customization of investment products to specific segments; more reflection of personal values
- Improvement in financial literacy and empowerment produce better financial participation
- The "have-nots" act upon their disillusionment with the system
- The trustworthiness of the tech model with tangible products and immediate gratification is tested in investment contexts



Lower for Longer

New normal low interest rates and returns become embedded for the foreseeable future (5–10 years), accentuated by lower levels of global growth and higher levels of political instability

Major Elements

- Limited success with interest rate normalization; natural interest rates stay low
- Growth challenges: indebtedness, adverse demography, excess savings, China/EM, companies hoard cash
- Large gaps in pension coverage with longevity; pension poverty
- Moves to lower-cost, higher-tech investment solutions; premium on innovation; industry consolidates
- Private markets carry growing weight in capital raising; issues with opacity, liquidity, agency, overcrowding
- Corporate and public pension costs rise to pay for increased longevity and reduced returns
- Disappointment with outcomes rubs off on trust; investment skill under pressure to demonstrate its value
- Geopolitical instability connects with social instability; inequality fissures; negative feelings deepen; job fears; immigration challenges



Purposeful Capitalism

Capitalism's way of working evolves; the investment industry raises its game with more professional, ethical, and client-centric organizations acting in aligned-to-purpose, lower-cost, and efficient ways

Major Elements

- Governments and firms work toward a more positive direction of travel for capitalism with more respect for wider stakeholders
- Markets for publicly listed equity and private equity are more fair, efficient, and deep over time and grow as a result
- Firms and investment organizations integrate their wider purpose alongside their profit motivations
- Asset owners are more influential; they add focus to longer-term value creation and sustainability
- There is an increased attention to fiduciary responsibility in investment with better alignment
- Fierce competition for leadership talent among investment organizations; diversity and culture are draws
- Investment providers need to have a "clean license to operate" including ESG principles

ORGANIZATIONAL GAME CHANGERS

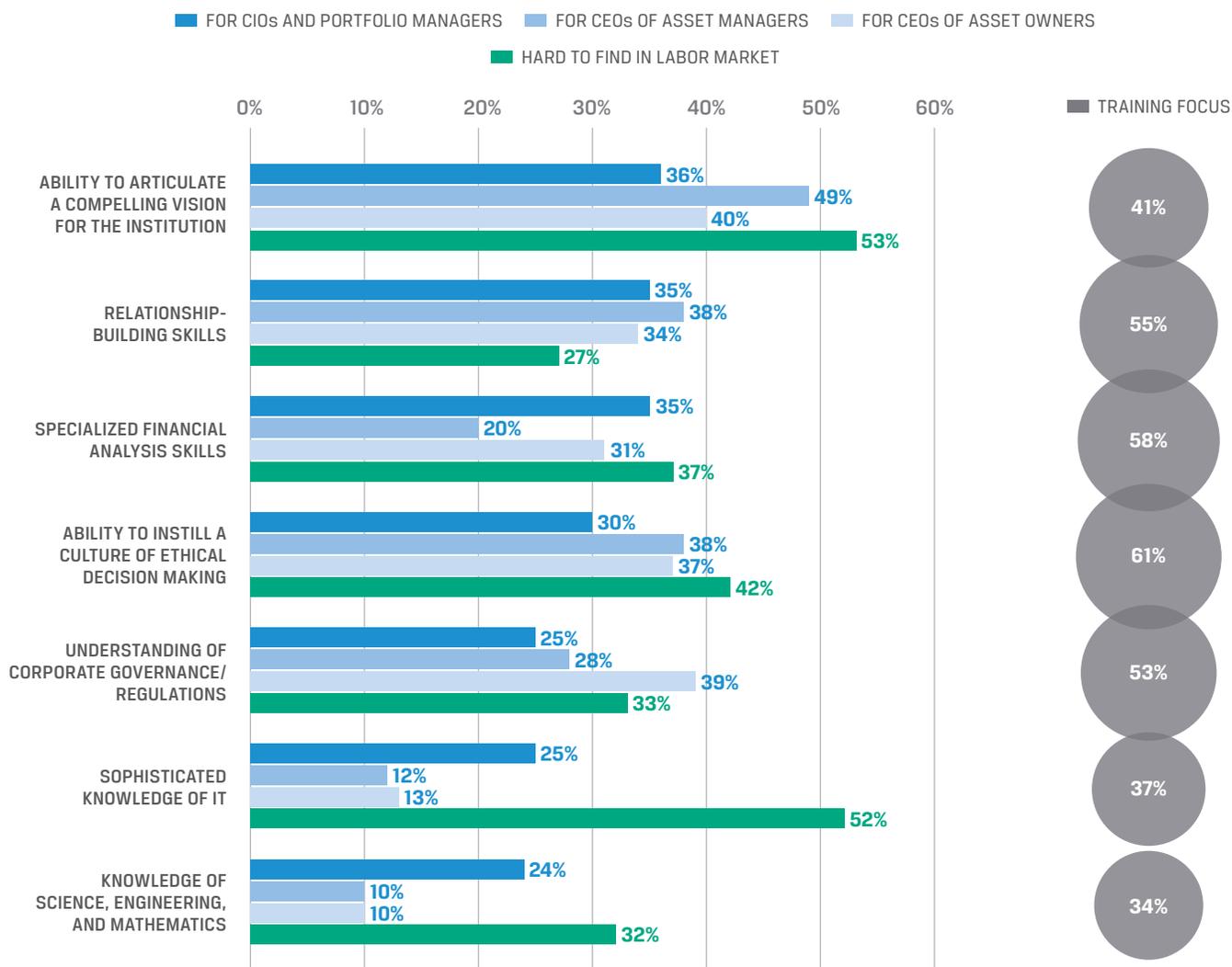
Investment organizations can be divided into asset owners, asset managers, and investment intermediaries. These are all "people businesses," dependent on talented leaders and staff to move forward. Our survey asked about the most important skills for leaders in the future, and the results indicate that investment organizations need to recruit and develop employees along new dimensions.

Investment organizations looking to retool for the future face some challenges. It is particularly difficult to find people with the ability to articulate a compelling vision for the institution and to instill an ethical culture—the two most-valued skills. But financial analysis skills and ethics rank at the top of the list for training.

Game Changer 1: New Skills for New Circumstances

- Increasing need for soft skills, like creative intelligence and influencing skills, given that technology will replace many straightforward human processes
- Adaptiveness to change is needed for increasingly disrupted situations, but this skill is in short supply
- Training requires attention to ethical and professional orientation
- Organizations need to increase their understanding of the interaction of skills in group settings
- There is a critical need for increased diversity both for a business case and improved cultural strength

MOST IMPORTANT SKILLS FOR THE FUTURE

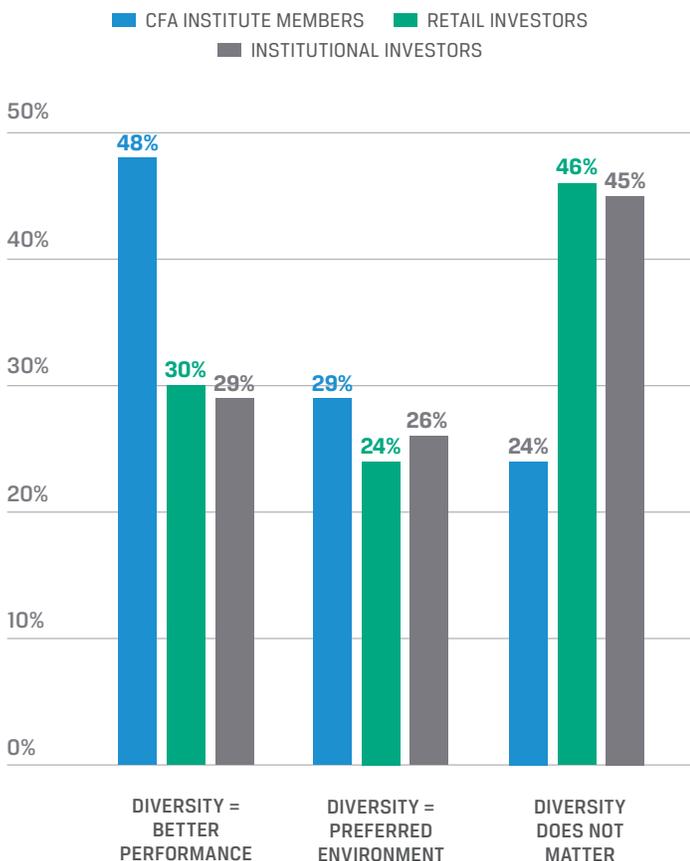


The Role of Diversity

The other major dimension of workforce capabilities will be the contribution of improved diversity. Diverse people are most often identified through surface characteristics (gender, race, national culture, education, sexual orientation, age, etc.), but the business case for diversity is linked to intrinsic individual characteristics, such as values, perspectives, experiences, knowledge, and way of thinking.

Diverse groups benefit from more and different ways of seeing complex problems and, thus, better ways of solving them. A growing body of research has shown the link to better performance and better culture that a gender diverse industry could have. There are opportunities to benefit from cognitive diversity and overcome the risks of groupthink.

WHEN IT COMES TO THE GENDER DIVERSITY OF A TEAM OF INVESTMENT PROFESSIONALS, WHICH ONE OF THE FOLLOWING BEST DESCRIBES YOUR VIEW?



The benefits of gender diversity to improve outcomes are beginning to be understood by the investment community, as indicated by the accompanying chart from earlier CFA Institute research.

These issues warrant increasing leadership attention given that the materiality of behavioral factors to decision outcomes has become clearer, and is in synch with the thinking and methodologies to make progress on this front.

Game Changer 2: New Pensions and Lifetime Savings Models

- Private pension markets are barbelled—adapting the mature markets and developing the immature ones
- Best practice is usually found where there are "win-win" alignments between far-sighted sponsoring firms and well-governed pension funds
- Pension engagement and advice is ripe for disruption—it needs new models that use technology more efficiently
- Increasingly, private pensions will follow the Defined Contribution (DC) model with a flexible investment platform and behaviorally smart design
- Low levels of contributions and low returns produce inadequate retirement income; working later in life is necessary

Game Changer 3: Evolving States of Trust

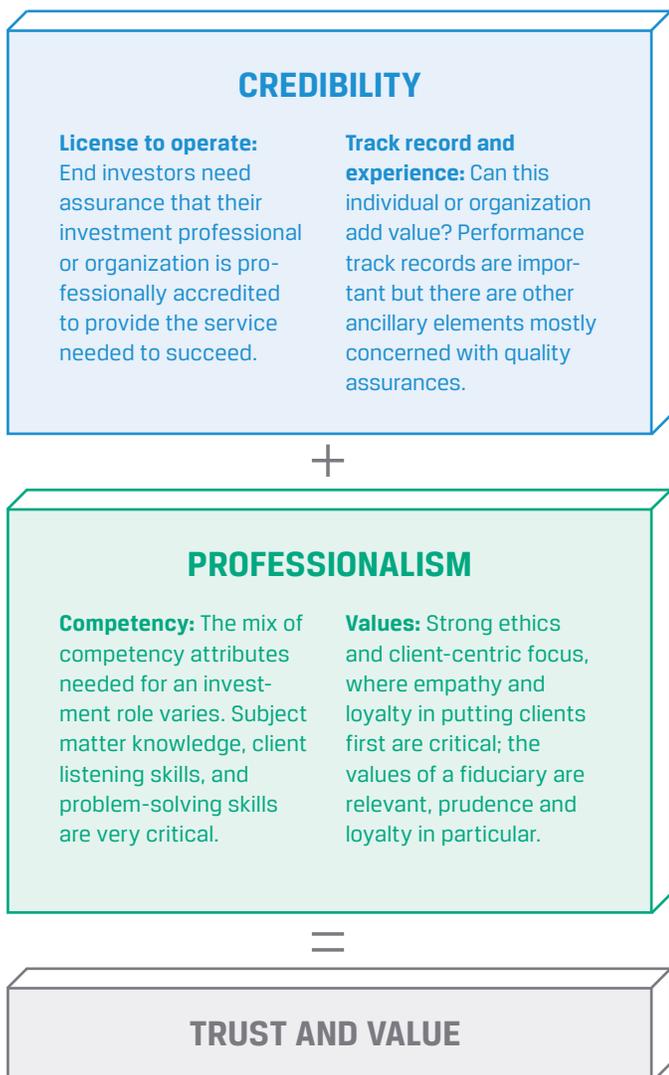
- Trust is mediated by the values, competencies, and transparency of our investment organizations
- Trust reflects a particular type of communication model: communicate early, fully, and often and to fill gaps in understanding
- To build trust, show some societal responsibility; deliver to expectations in competency and ethical practice; add consistent value
- Trust will rise in the industry if selection of future talent emphasizes strong values
- Trust will be influenced in future by innovation in technology—for example, blockchain technology distributes trust

THE TRUST EQUATION

Trust from an end investor is the *dependency on a service provider in a situation of risk over a prolonged period.*

The type of trust expected by an end investor is far more complex and tacit than the trust expected by the end user of most any other product, regardless of its type or business sector of origin. Its importance grows with the size of risks taken and the length of the term of the relationship—making it core to investment service delivery.

Trust and value in investment are interconnected. For the end investor, value will relate to perceptions of outcome relative to expectations. (In other words, do not think first of performance versus benchmarks as these do not represent particularly relevant expectations for most investors.) Value and trust are developed by an individual or an organization by building **credibility** and demonstrating **professionalism** as captured in the **"Trust Equation."**



The Trust Checklist for Organizations

At a simplistic level, a highly professional firm is filled with many highly professional individuals. To achieve this across an entire organization, however, a complex coordination challenge must be met, and its solutions require good culture and an appropriate business model to secure alignment to the necessary attributes of credibility and professionalism. Trust in the context of the investment organization spans a spectrum of critical attributes.

T Transparency

Organizations should display "glass door transparency" of all things, including business processes, limitations of the investment process, risks, performance reporting, fees and their impact on portfolios, and potential conflicts of interest. They should be candid about the mistakes they have made and explain what steps they are taking to correct them.

R Realistic Measures

Firms and their employees need to be realistically measured in relation to financial and non-financial goals over relevant time horizons. End investors are concerned with outcomes.

U United Values

Alignment of values between firms and all of their stakeholders is critical. Organizations build their strongest trust by being aligned in their purpose, objectives, and way of working with those they serve.

S Sustainable and Fair Rewards

Fees and rewards need to be fair and reflect the value clients receive. Trust will best be secured when there are incentives for agents to do their absolute best for their clients.

T Time-Tested Relationships

Good relationships develop over time and allow the client to develop confidence. Research shows that people are much more trusting when working with consistent partners—a situation which offers a chance to build a good reputation through repeated interactions.

TOWARD GREATER SOCIETAL BENEFITS

Aspirations Align with Need

Making a consistent and determined contribution to societal wealth and well-being is not just a nice goal for the investment management profession—it is quite possibly a matter of existential importance. The good news: the research shows that investment professionals aspire to a more positive social contribution.

We offer below a model for creating a healthy investment industry by looking at the potential outcomes from the interaction of differing levels of industry versus societal benefit.

Potential for the Industry

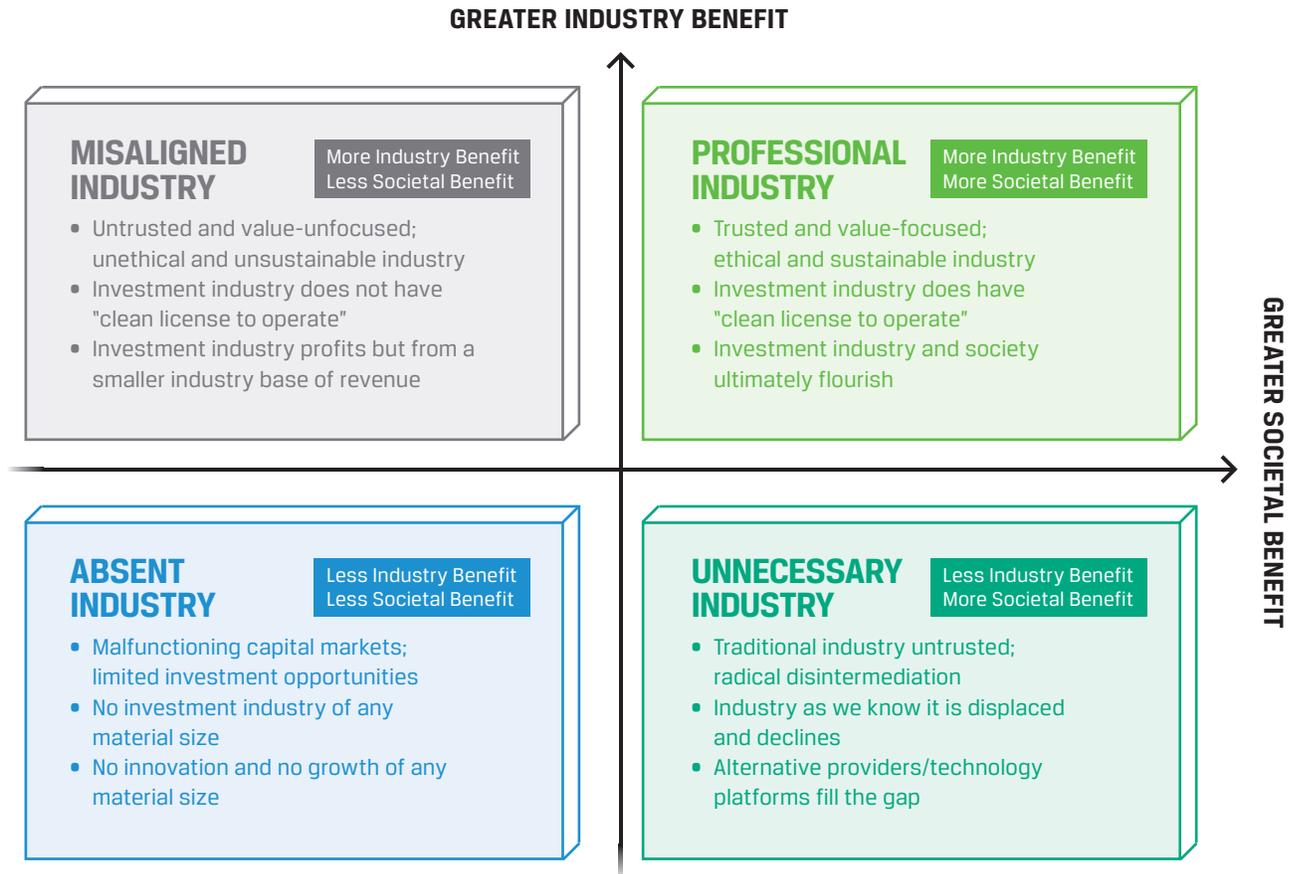
11%

of investment leaders describe the impact of the investment industry as very positive for society today

51%

of investment leaders expect the impact of the investment industry to be very positive for society contingent on stronger principles

FOUR STATES FOR THE RELATIONSHIP BETWEEN INVESTMENT MANAGEMENT AND SOCIETY



IDEAS TO MOVE THE NEEDLE TO A BETTER INDUSTRY

The research that underpins this report tells us that change is coming. We have anticipated how that change might play out in planning scenarios, and what state the industry could end up in depending on how well it adapts to change and to what degree it earns (or does not earn) widespread public trust.

We believe the following "to-do" list and a road map derived from it can be the first steps in the journey toward a future where a healthy investment management profession benefits societal wealth and well-being.

Professional Transformation: Identify What Is Needed to Go from Industry to Profession

An "industry" is defined by the circumstances of producing something of value to a consumer. A "profession" is different; it extends a license to operate to individuals and organizations that is granted and maintained by containing requirements for entry, standards of fair practice, disciplinary procedures, and continuing education for its professionals in conditions of an ongoing relationship. In doing this, the profession combines value and trust. The trust in this arrangement is of considerable value, not least because it creates the conditions for growth in societal wealth and well-being. The open questions are: How can the investment industry evolve so that it shares identifiable and key characteristics in the manner of medicine, law, and accounting? What is the current gap? What benefits could arise from filling this gap?

Fiduciary Implementation: Master the Meaning of "Fiduciary" in a Way That Can Be Effectively Implemented Even with Inherent Conflicts

Fiduciary responsibility in most jurisdictions means putting the interests of beneficiaries first when determining investment strategy, limiting conflicts of interest, and investing to the standard of care of a prudent expert. All investment organizations face the practical issue of balancing these requirements within the context of their own viability. CFA Institute will be conducting further engagement on how organizations should be dealing with fiduciary responsibilities and other issues where legal and regulatory frameworks are at potential conflict with the ambiguities and uncertainties endemic to the investment field.

Stronger Standards: Specify and Influence Culture and Practice with Regard to Values and Costs

CFA Institute successfully introduced standards for presentation of performance records in the form of the GIPS® standards. There may be other areas of practice that could benefit from such an approach. We cite standards for the structure and size of fees and costs as one possible idea. We also believe that the testing of new types of investment products could be the subject of standards in ways that draw on practices in other industries and professions.

Work toward Better Diversity

Diversity is desirable for a combination of cultural and financial values. Research suggests that diverse teams are better at complex decision making and that surface-level diversity issues, such as gender, have a first-level impact, but that cognitive diversity is more deeply impactful. CFA Institute is developing a mix of research, advocacy, and standards to support this developing field.

Leverage the Ecosystem

CFA Institute has more than 146,000 members worldwide, and this vast group is sometimes tapped to achieve a global view on a wide spectrum of issues. We are struck by the potential of networks empowered by new technologies to focus political and social capital in particular areas. Our membership can speak more powerfully for society's benefit through such a mechanism, particularly if it speaks with one bold voice.

A WAY FORWARD

We have put forward a number of steps and ideas by which the investment industry can realize its fullest potential, and we now encourage our members and industry leaders to act to make this a reality.

CFA Institute is committed to further consultation with leading industry figures on the following:

- Creating a road map for moving our industry to higher standards of professionalism, with its implications for fiduciary responsibility and for attaining the status of a profession
- How we can work together on the most pressing industry issues, particularly business models that capture purpose, trust, and value; cultural values that are inclusive; and technological competencies that streamline our industry
- How the CFA Program can maintain its edge in fast-moving industry conditions

The future is a choice to be taken by you applying foresight and coherent actions...not an outcome given to you reflecting uncertainty and compelled reactions

About the Report

In 2016, CFA Institute commissioned the Institutional Investor Thought Leadership Studio to survey members of the investment management profession for an overview of the current and future state of the profession. A questionnaire was distributed to two lists, one drawn from Institutional Investor's database, the other from CFA Institute. There were 1,145 responses (644 from CFA Institute) collected from 8–22 December 2016, with a margin of error of 2.9%. In addition, Institutional Investor conducted interviews with 19 executives in the investment management profession to obtain context and further details about the collected data.

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CALL-TO-ACTION FOR THE INDUSTRY





FUTURE STATE OF THE INVESTMENT PROFESSION

PURSuing BETTER OUTCOMES—FOR THE END INVESTOR, THE INDUSTRY, AND SOCIETY

Investment Industry Ecosystem



THE PURPOSE OF FINANCE AND HOW WE GOT HERE

The Purpose of Finance

CFA Institute believes that finance is a means to an end. In its most simple form, it enables excess funds of savers to be made available to those entities in need of monies to put their ideas into action. Ideally, it produces outcomes in which all the participants in the transaction benefit. This textbook definition can be summarized in a guiding principle for all who lead the investment profession and claim the title of "professional":

The fundamental purpose of finance is to contribute to society through increases in societal wealth and well-being.

Indeed, finance has contributed enormously to economic growth and prosperity in the past. This research analyzes how finance's future societal footprint can be strongest. Our focus here is on the investment function of finance, which lies alongside the payment, lending, and insurance functions of the industry.

Key Takeaways

- Looking at finance as an ecosystem reveals important interconnections and points of friction in how finance currently works.
- Even when forecasts are directionally correct in finance, they are usually specifically wrong. Consequently, we use scenario planning to reveal insights about the future state of the investment profession, regardless of what future unfolds.
- Investment management firms and their professionals need to prepare for several inevitable megatrends, including shifting demographics, disruptive technologies, economic imbalances, regulatory scrutiny, and natural resource constraints.
- Opportunities exist for firms that are adaptive to changing circumstances and focus on their end clients by delivering on their fiduciary duty.

More specifically, the core purposes of the investment industry lie in two overlapping areas:

Wealth creation:

Mobilizing capital for society-wide jobs and growth; the capital managed in this chain creates societal wealth and well-being.

Savings and investments:

Deploying investment services for wealth and risk management; the savings and investments managed in this chain allow inter-temporal (over time) risk management and increases in wealth.

The effectiveness of the industry is best judged in relation to its ability to produce sustainable societal wealth and well-being. Societal wealth is measured directly by financial success, and societal well-being in its widest form maps to sustainable development goals (such as those outlined by the United Nations).

The Problem with the Investment Industry

We believe the investment industry is struggling to recognize these end purposes. Too often the business side is put ahead of the client side, and finance then becomes an end in its own right rather than a facilitator of economic activity. Investors and those who make capital markets work need to reconnect their work with the larger purpose of using capital to be supportive of societal wealth and well-being.

We see this disconnect in the industry's obvious preoccupation with trading claims to wealth, with a lesser focus on actually creating wealth. Although this might be valuable in providing savers with appropriate assets, and plays a role in efficient price discovery, these benefits do not appear to be commensurate with the revenue earned by the industry or its size in the context of the overall economy. Evidence suggests investors are not supplying significant innovation capital in listed equities; the size of the public equity market has, at best, moved sideways in recent times, with share buybacks diminishing the capital stock.¹ There are slightly better signs with increased allocations to private equity, but that has natural limits and, for example, has not extended to filling the huge needs for infrastructure financing.

The second source of evidence that the investment industry's purpose is murky comes from unpacking the value proposition of investors in which the industry scores well on its own account, but much less well on its clients' account. Where is the industry falling short in its value proposition? The assessment should be gauged in terms of the criteria of alignment to purpose, cost, and efficiency. Most experts would agree that the alignment is poor, the costs are excessive, and the efficiency standards could be higher.² At right, we summarize some analysis on this scorecard.

Historical Context

Though our focus is on the future, we can better understand the industry of today and its trajectory if we look back to the asset management industry of the late 1980s and early 1990s.³ In doing so, we see an industry that had the following features:

Smaller

- Fewer assets, less than half of today's values in real terms
- Fewer asset management firms involved; in particular, fewer alternative asset management firms
- Smaller asset owner organizations, which had yet to develop any material scale or organizational capability; reliance on asset management firms was far greater

Narrower in scope

- Simpler business models
- Simpler investment allocations; balanced multi-asset portfolios dominant and largely contained publicly listed securities; asset class choice was around equities and bonds, and much more local than global; alternative assets were quite unusual; simplicity allowed for easy explanation

Culture of a young industry

- More cultural alignments between asset management firms and their clients, with less attention paid to the manager's own financial performance; asset management firms were trusted by their clients
- Less sophisticated and less efficient; technological streamlining had yet to emerge
- Similar costs per unit of value, but costs less transparent to investors

Less regulated

- Lighter regulation, which was less costly; in the intervening years, regulations have been considerably tightened and have become steadily more costly

In sum, the evolution of the industry thus far has been characterized by four important vectors: scaling up, scoping up, evolving the culture, and coping with increased regulation.

Investment Industry Effectiveness

We argue that the overall industry state is best judged by reference to its achievements in producing sustainable societal wealth and well-being. The elements of this are alignment, costs, and efficiency as outlined in the following table.

Notes:

Alignment: By alignment, we mean the extent to which the objectives, roles, and incentives of the participants in the investment value chain align with the interests and goals of the end investor.

Costs: These are percentage costs and their transparency to end investors.

Efficiency: This considers how well resources of the industry are focused and used toward the production of value, looking separately at asset owner and asset manager organizations.

The scores below were derived by asking a panel of 35 Thinking Ahead Institute members to evaluate the industry on these measures.

INVESTMENT INDUSTRY FACTORS	2015 INDUSTRY ASSESSMENT (OUT OF 10)	COMPARED WITH LAST 20-30 YEARS
ALIGNMENT		
- Trust	4½	Weaker
- Process transparency	4½	Stronger
- Ethical condition	5	Similar
- Incentives	3	Similar
- Culture	4	Weaker
- Regulation	4½	Stronger
COSTS		
- Total costs	3	Weaker
- Cost transparency	3	Stronger
EFFICIENCY		
- Asset owner	4	Stronger
- Asset manager	6	Stronger
TOTAL SCORE	4	Similar

Source: Thinking Ahead Institute, "State of the Industry," Willis Towers Watson (2015).

Evolution of the Industry in Scale and Scope

On scaling up, it is a truism that the investment industry is a relatively young one. We take a positive view of the industry's journey through growing pains and adolescence. The level of professionalism in some parts of the industry—such as client service practice, communication, and diversification within portfolios—has markedly improved. We find less evidence of progress, however, in relation to the value of the outcomes that the industry has produced net of the costs incurred.

One reason for this lack of progress is that the gains from diversification have been hard-won because they have largely been achieved by adding to private market investing and other alternative assets, such as hedge funds. Alternative assets are complex to manage and hard to scale. This expanded scope of asset classes has certainly added to investment efficiency through improved diversification, but at a high cost per unit of assets. Moreover, the industry still faces challenges in integrating alternative assets, and they continue to be governed, managed, and measured in inconsistent ways.

Evolution of the Industry in Culture and Regulation

Over the previous two to three decades, we have observed deterioration in some parts of the asset management industry in regard to firm culture, specifically in terms of misalignments with client interests and poor ethical behaviors. We can also find evidence from the Edelman Trust Barometer of low levels of trust in financial services broadly and the investment industry's role in that erosion.⁴

For example, in 2008, 69% of the public said they trusted banks "to do what is right." The level of trust fell to just 36% in 2009 following the financial crisis. Edelman now tracks financial services more broadly, but the level of public trust did not cross the 50% mark again until 2016. In 2017, trust in financial services stands at 54%.

The tacit and deferred nature of asset management products invites the risk of organizations not "putting their money where their mouths are."

Obstacles to trust have been evident in three specific areas:

1. Priorities: Setting priorities and principles within a professional organization should clearly involve putting client interests first and your own second, but this is under challenge through apparent shifts in values. For example, we have observed a self-centered focus of many asset management firms over the past two or three decades, with a rise in commercial self-interest being favored over client interests.⁵

2. Expectations: Investment organizations have not managed expectations appropriately. The tacit and deferred nature of asset management products invites the risk of organizations not "putting their money where their mouths are." Organizations all too often say one thing but do something different and produce a different outcome from what was expected. For example, alpha targets are often both unrealistic *ex ante* and underachieved *ex post*. Many instances of breakdowns of trust are associated with this gap.

3. Time horizons: There is also the trend in which shorter-term pressure on financial performance has been at the expense of longer-term, value-adding actions. Significant, value-adding activities often have lags and uncertainty in their payoffs, both of which are too easily discounted in a short-term world. When quarterly profits become the most important measure of success to organizations and investors, long-term value creation is the casualty. Success on these terms does not signal long-term progress as much as a short-term win, often with compensation attached. The short-termism of investment practice appears to be present in the cultural profile of many institutional investors.

Meanwhile, the efficiency of the investment industry has increased, but transparency has been slow to evolve without regulatory intervention.

Two or three decades ago, regulatory presence in the industry was slight and ineffective; currently, it is much heavier and, in theory, it is able to limit the worst excesses. All the same, its effectiveness is still limited, which is substantially because industry complexity has grown faster than regulators can respond.

When viewed in aggregate, the organizations, people, and relationships described have the classic characteristics of a system in which many interconnected participants and moving parts are motivated by goal-seeking and adaptive behaviors with evolutionary components.⁶ The adaptive and evolutionary elements in which "survival of the fittest" principles apply suggest we can use an ecosystem model to better understand the future of the investment industry.

ECOSYSTEM THINKING AS A SMARTER WAY TO EVALUATE THE FUTURE

To best show the many interconnections within the financial industry, as well as the many exchanges between its participants, we use an ecosystem model. We believe it is more descriptive because it shows important properties not present in other models of the industry.

An ecosystem model is:

- **Connected:** It fully recognizes the multiple diverse participants, people, and organizations and their connections with each other and the wider landscape. While the system is served by many specialists, there is a need to understand the bigger picture.
- **Reflexive:** It incorporates the two-way nature of those connections and dependencies. Specifically, it allows for reflexivity, where landscape changes affect and are affected by participants' beliefs and actions.
- **Non-linear:** It allows for the jumps, or tipping points, that characterize some of the properties of the system and are difficult to explain with traditional theory. Simply put, crises happen.

At its heart, the financial ecosystem involves modeling the interactions of the system's participants (individuals and, particularly, organizations) with each other and with their environment. This requires understanding the motivational forces derived from the participants' functions, values, and beliefs and accompanying business models. See below for more about values and beliefs.

An ecosystem model allows finance to be shown in relation to all the participants, and, in turn, it uncovers elements either ignored or underweighted in most other models—for example, how finance relates to legislatures, regulators, the ideas of academics, the environment, and society. See the box on page 18 for more about the ecosystem framework.

Values and Beliefs

Values are the feelings and preferences that guide the actions of people and organizations. In an organizational setting, values should follow from the mission and goals that identify organizational purpose in the context of the stakeholders and their respective priorities.

Beliefs are working assumptions that relate to the spectrum of issues that confront individuals and organizations. In an investment organization, beliefs will be concerned with investment opportunities and how best to exploit them. Like values, they will act as a guide to behaviors, actions, and decisions.

Beliefs and values are likely to differ across team members and stakeholders, but it is critical to settle on an agreed set. In their presence, organizations can succeed through superior culture. In their absence, organizations are destined to stay in a strategic wasteland of interesting thinking and talking without moving forward.

A good values and beliefs process will surface sensitive issues, encourage constructive thinking, socialize the issues, and settle the differences. The best values and beliefs are smart and edgy (incorporate deep insights), balanced (recognize the trade-off between what is desirable and what is achievable), and thoroughly socialized (widely understood and acted upon).

CFA Institute has a working set of values and beliefs as follows :

- Investment professionals contribute to the ultimate benefit of society through the sustainable value generated by efficient financial markets and by effective investment institutions.
- Good stewardship and high ethical standards are necessary for trust and confidence to be secured and for society to be served.
- Financial markets should afford every investor the opportunity to earn a fair return.
- Financial markets are more effective when participants are knowledgeable.
- High ethical principles and professional standards are essential to positive outcomes; rules and regulations, while necessary, are not sufficient by themselves.
- Investment services will thrive only if principals and asset owners have trust in the system and obtain fair and sustainable results from the services and actions of agents.
- Significant systemic risks arise from the complexity and interconnectedness of markets and instruments, to which effective industry structure and excellent practice are critical.
- Economic and political power is broadening out across a wider range of countries and regions, requiring significant strategic rebalancing.
- Imbalances in the macroeconomic and geopolitical environment present significant opportunities, challenges, and risks.
- Transformational changes in demography, the environment, and the limits to natural resources present significant challenges and opportunities.

Description of the Financial Ecosystem

In essence, the entirety of the financial ecosystem rests on a *fundamental transaction*: those with a surplus of capital (investors) provide their capital to those with a surplus of ideas (i.e., inventors, entrepreneurs, or businesses). When those ideas are economically successful, both the providers and users of capital earn investment returns, and in aggregate terms, societal well-being increases.

The fundamental transaction provides a framework for evaluating the choices of participants (a.k.a. "ecosystem actors") within the ecosystem. If a choice improves the utility of the fundamental transaction, then it is encouraged. Choices that do not increase utility are discouraged (e.g., subprime mortgages to first-time buyers with no down payment and shaky credit history).

Ordering the ecosystem around the fundamental transaction makes the functional roles of participants in the system more obvious—that is, how the actors serve the fundamental transaction. Functions, by definition, are permanent requirements for the workings of an ecosystem and so provide a meaningful framework to consider future innovations.

The Ecosystem Framework

Classic investment models are linear (a response to any shock is proportionate to the size of the shock) and one-way (economic shocks affect investors and their actions and not vice versa), and capture only the primary dependencies in the system (supply/demand, price sensitivity).

The real world evidence is that this is too simple. There are certain abrupt and discontinuous changes following shocks, and economic shocks affect and are affected by investor responses. The system has many secondary and tertiary dependencies that at times are impactful. In summary, the financial system is non-linear, reflexive, and multi-layered in its codependencies.

The financial ecosystem is fundamentally a wealth creation chain in which capital taken from savers is put to work every day through the ideas and energies of multiple businesses in public and private ownership. At the same time, it is an overlapping investment chain that links these savings to investments through institutional intermediation across time horizons, geographies, and population segments.

A number of respected academics and commentators have given support to this way of thinking, but this view of the financial system has not developed an academically rigorous framework. That said, the work of Professor Andrew Lo, and what he describes as the Adaptive Markets Hypothesis, is one widely discussed viewpoint which incorporates an ecosystem that captures the aspects of evolving business models through conceptions of competition, innovation, and natural selection.⁷

Ecosystem Actors

CFA Institute believes investment services only thrive when each of the ecosystem's actors honors the mutually beneficial nature of the fundamental transaction that matches investors with opportunities. Under these conditions, trust is strengthened, value is created, and the sustainability of the industry is ensured.

The table on the next page provides a brief overview of the actors in the ecosystem and their functional and interactive roles. More detailed descriptions are available in Appendix A.

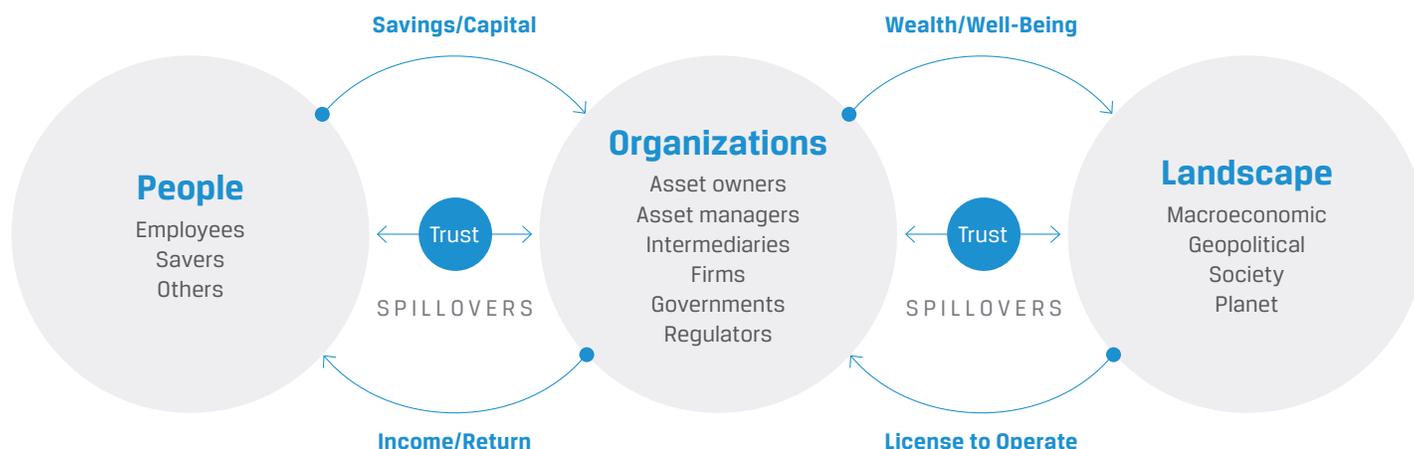
In this report, we take note of the entire financial system to understand context, but we focus on where the investment industry's energies are most concentrated (i.e., asset managers, including private wealth firms, and asset owners).

The benefits of the ecosystem way of seeing the industry flow from improved understanding in a number of places, including

- the wider systemic issues affecting the industry, given that the system has greatly increased global interconnectivity.
- the interplay of public and private goods. A particular example is the concept of passive management, which has both public and private benefits.
- the business models for corporations, and how competition and cooperation are best considered.
- regulations, with multiple consequences, often unintended.
- the integration of ethical and effective practice. Motivational factors can be explored in the context of realistic business models.
- the exploration of the externalities of the system—examples lie in environmental, social, and governance (ESG) aspects.
- the exploration of the connection between investing and corporate wealth creation. Investors invest in things that are growing wealth—as tangents to the wealth creation process—which makes them necessary but far from sufficient to wealth creation and increases to societal well-being.

The main principles at work are that organizations are subject to evolutionary forces and disruptive changes, and their responses to these factors condition their survival and degree of prosperity. As Lo describes, "The hope is that evolutionary ideas [and the ecosystem framework] will become more commonplace as they demonstrate their worth."

THE FINANCIAL ECOSYSTEM



ECOSYSTEM ACTORS

ACTORS	FUNCTIONS	CORE INVESTMENT JOBS
SAVERS Individual investors Pension fund members	Providers of capital	None
ASSET OWNERS Pension funds, sovereign wealth funds (SWFs), foundations, endowments	Fiduciary investors in capital as owners	Investment professionals (investment managers and analysts); investment support roles
ASSET MANAGERS Independent firms, or those owned by banks or insurance companies, private wealth managers	Fiduciary investors in capital as agents	Investment professionals (investment managers and analysts); investment support roles
INTERMEDIARIES Specialist financial companies Providers of investment services Advisers, investment bankers, traders, sell-side analysts	Providers of investment products and services	Investment bankers, traders, sell-side analysts, commercial bankers, brokers, consultants, custodians, exchanges, index providers, data providers
FIRMS Companies, both public and private	Users of capital	None
REGULATORS AND NONGOVERNMENTAL ORGANIZATIONS Central banks, self-regulatory organizations, professional bodies, lobbyists, business schools	Controlling/influencing actors that exercise various forms of authority	None

The Investment Professional's Role in the Ecosystem

The breakdown of actors principally deals with organizations, but of course, each organization is directed by the individuals within them. (See the "Organizational Game Changers" chapter for more on these.) Given our focus on the investment industry, we are particularly interested in those individuals who are influential in allocation decisions in such areas as investment strategy, portfolio construction, and trading.

These investment professionals are the central actors in the investment ecosystem, and they make intellectual capital contributions in several ways, including in the following critical functions:

- **At a macro level**, investment professionals highlight return and risk opportunities across markets and asset classes, and allocate capital accordingly. In doing so, they facilitate the fundamental transaction taking place in an environment of rationality and trust.
- **At a micro level**, investment professionals give opinions and allocate capital based on the nature and quality of the ideas of the users of capital/providers of ideas, as well as contribute to other aspects of the fundamental transaction, such as asset/security specific issues.
- **At a trading level**, investment professionals aid price discovery and liquidity.

Investment professionals, by our definition, are at work in multiple types of organizations: asset management organizations, including the asset owner, asset managers, and alternatives firms (private equity, real estate, hedge funds) as well as private wealth and investment advisory

firms. They also by our definition work in organizations we term "intermediaries," including sell-side firms, independent research firms, ratings firms, and by extension, economic think tanks and publications.

The Ideas and Forces That Influence the Ecosystem

Ideas and concepts that permeate the financial ecosystem inform the functioning of it. For example, certain investment ideas can come into vogue among investors, while others go out of fashion. These ideas and concepts influence the behavior of each of the financial ecosystem actors, as well as the evolution of the system itself.

Influential forces include trends, industry structure, business models, and incentives. A particularly important point here is how much incentives matter. To understand incentives, consideration must be given to each part of the industry and their interconnectedness. It is our belief that finance at its best grounds its ideas and philosophies in values, beliefs, and norms that serve the health of the entire financial ecosystem, and it builds institutions to uphold and to advance these values.

Therefore, values are the DNA of the industry. When values lead and institutions are in service to and alignment with them, then magic happens in the form of sustained value that benefits the entire ecosystem. It is a virtuous circle. If, however, values are meant to serve the institutions themselves rather than their clients, then imbalances occur in the ecosystem, and it eventually suffers.

Disruption

In a review of many financial industry monographs, white papers, and presentations, we noted many uses of the word disruption. Few, however, endeavored to actually define the word, which leads to confusion for readers.

We accept that disruption may be simply the reference to abrupt and significant change. But the critical context for using disruption in this report is in its effects on organizations. In the financial ecosystem, "organizations" means asset owners, asset managers, other intermediaries, and firms.

Normally, there are two types of disruption:

- **Adaptive disruption:** Existing organizations adapt to new business models to curb the opportunities of new organizations.
- **Destructive disruption:** Organizations with new business models destroy existing organizations.

Implicit in both types is that disruption should be evaluated at the organizational level. That is, who will win: new organizations, or old? Furthermore, the outcome will be determined by the

innovation(s) used. Therefore, we should always consider disruption alongside innovation.

The use of scenario planning rather than forecasting is desirable because the goal is to open minds to large possibilities, not to narrow them to incremental probabilities. When we speak of disruption we mean it to be the effects of megatrends and the forces of change over the time frame considered. It is then the effects on the respective business models of the industry that we need to anticipate.

In this definition, the focus is on the disruptions themselves, and the types of innovation involved, rather than on which organizations are likely to survive.

The parts of the investment industry that are ripe for disruption generally involve grumpy clients that feel no trust for or empathy with their providers, or clunky business models that have value-for-money issues and other gaps.

The innovations may involve doing new things, but more often they are likely to involve finding new ways of doing old things.

MEGATRENDS & OTHER DISRUPTIVE FORCES

We now turn our attention to the many changes and disruptions occurring in the investment industry. We consider the possible ramifications of these changes for each ecosystem actor in the context of multiple unique scenarios. (See previous page for more on disruption.)

We prefer scenario planning to forecasting, which typically represents a "best guess." Scenario planning is about opening minds and painting pictures of the future that decision makers can refer to when digesting current news and making investment and business decisions.

Our scenarios draw on a number of megatrends—large scale changes in circumstances that are omnipresent in all facets of our world—that are identified as virtually certain to disrupt the ecosystem regardless of how the future unfolds.

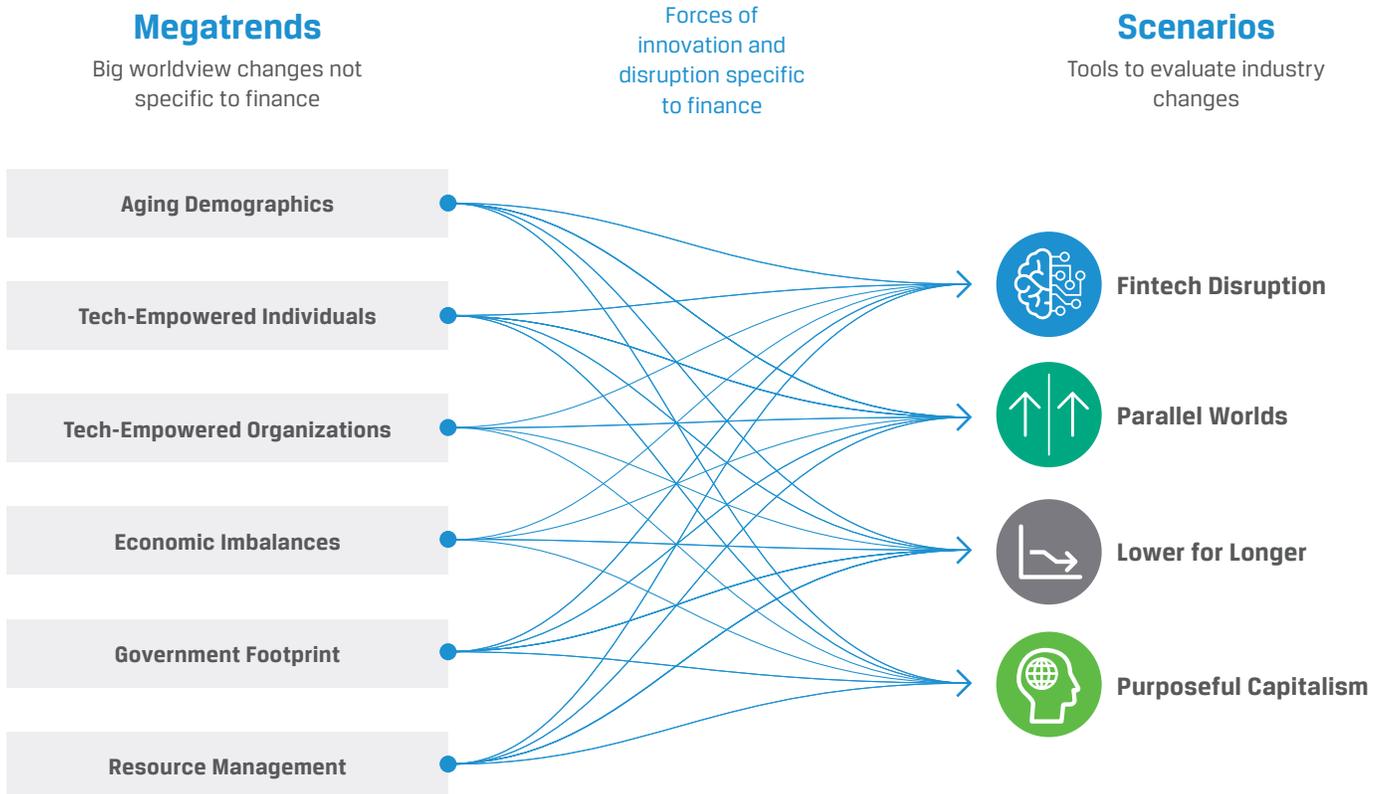
Our scenarios then draw on other finance-specific forces that may disrupt the ecosystem in as-yet unidentified ways.

Finally, the megatrends are mixed with these finance-specific forces in different combinations to create unique scenarios in the form of narratives about the future. These narratives never take the form of most likely/outperform/underperform scenarios. That, after all, would just be forecasting in disguise. Instead, each narrative strives to tell a unique story. With these stories in mind, decision makers are equipped to recognize the narratives as the future unfolds, thus providing them with actionable harbingers.

In scenario planning, the time frame must be explicit. Our time frame is the medium term (i.e., 5–10 years). This time period is long enough to allow business models to substantively change in response to the disruptive megatrends and forces we identify, but not so long as to be overly futuristic.

An example of how scenario planning differs from forecasting may be instructive. In a traditional discounted cash flow model, an

MEGATRENDS COMBINE FOR POSSIBLE FUTURES



analyst identifies her most likely scenario for the prospects of a business. However, she also recognizes that certain things may be better or worse for the business. Revenues, for instance, may come in higher or lower than forecast. Consequently, the analyst creates three models of the future: most likely, outperform, and underperform. Definitively, this is not scenario planning.

In successful scenario planning, narratives about the future of the business are created. One may be, for example, the business-as-usual scenario, in which the preceding discussion on discounted cash flow forecasting would be a part. But another scenario may be: What if the founder and CEO abruptly leaves? While another scenario may be: What if the company's products are made irrelevant by a new technology? Notice that each of the possible narratives represents unique and separate disruptions affecting a company, rather than just variations of the same disruption, as in forecasting.

In summary, every scenario includes the same megatrends, but they differ in their narratives based on how, and which, forces are preeminent.

Forecasting typically represents a "best guess." Scenario planning is about opening minds and painting pictures that can help decision makers.

Megatrends

In our view, there are six overarching trends that are important to society, the environment, government, companies, and across the investment industry. For a comprehensive look at the investment ecosystem we should consider this wider context.

In our opinion, and consistent with other studies, such as those of the National Intelligence Council, the most important among possible megatrends for the investment industry are demography and technology.

Aging Demographics

- Very few young countries, high dependencies, migration, urban
- Savers/dissavers balance creates capital imbalances
- Intergenerational issues, Baby Boomers through Millennials

Economic Imbalances

- Effects of deleveraging following peak of debt supercycle
- Lower rates for longer stemming from excess capital and insufficient return
- Growth outlook affected by aging and technology outcomes

Tech-Empowered Individuals

- New "isms": nationalism/populism fed by knowledge, realism, gaps
- Tech empowers nonstate actors, reveals inequality issues
- Work pattern disruptions create class divides

Government Footprint

- Geopolitical multipolar/weak global governance
- Nationalist and factional influences create conditions of uncertainty
- Business/financial regulation affected by ideological climate

Tech-Empowered Organizations

- Interconnectedness among governments, workforces, consumers, society, environment
- New technologies, fast clock speed
- Disruptions from change; firms adapt or get stranded

Resource Management

- Degradation of natural capital, water, food, and so on
- Climate change, growth, societal conscience nexus
- Evolving energy industry with less carbon, more renewables

Aging Demographics

Our knowledge of the world's population and increasingly sophisticated actuarial tables makes demographic projections relatively simple, incorporating trends that are not easily reversed. Furthermore, the number of people in a country and their place in the financial life cycle (as consumers, savers, or investors) has a significant impact on financial outcomes.

Graying of Almost Every Major Economy

As shown in table, global GDP at the end of 2015 stood at \$73.4 trillion, with the top 10 economies contributing 79.8% to the total.

GLOBAL GDP AND GDP OF TOP 10 ECONOMIES

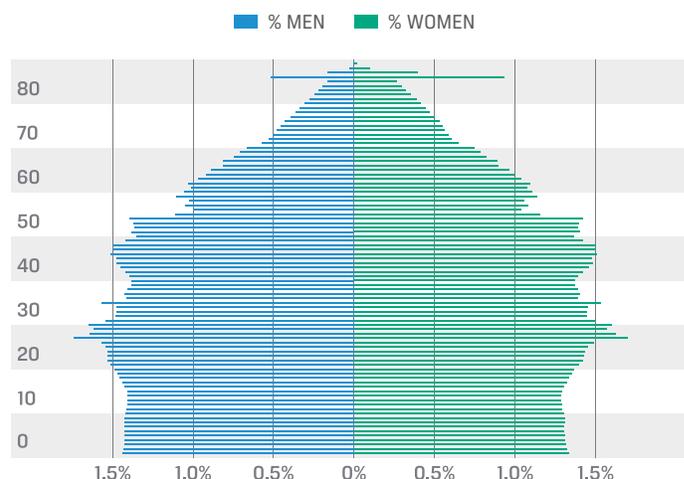
Countries	GDP (trillions)	%
Global	\$73.4	100.0%
1 United States	\$17.9	24.4%
2 European Union	\$16.2	22.1%
3 China	\$10.9	14.8%
4 Japan	\$4.1	5.6%
5 India	\$2.1	2.8%
6 Brazil	\$1.8	2.4%
7 Canada	\$1.6	2.1%
8 Republic of Korea	\$1.4	1.9%
9 Australia	\$1.3	1.8%
10 Russian Federation	\$1.3	1.8%
Total	\$58.6	79.8%

Source: Data are from the World Bank, and as of the end of 2015.

Unfortunately for the investment industry, these economies are also aging rapidly, as the population picture makes clear. It shows the size of each age group, ranging from 0–100+, and the split between the male (left) and female (right) population in the top 10 economies at each age.

In an ideal situation, the population picture would range from the shape of a pillar to that of a pyramid. A pillar shape, for example, means that younger generations are similarly sized to older generations, and such

TOP 10 ECONOMIES POPULATION PICTURE



Sources: Based on data from the US Census Bureau and CFA Institute.

economic obligations as public pensions, health care, and other social programs, as well as economic growth of the "more mouths to feed" variety, are shared equally by a culture. Put another way, it means there is not an intergenerational wealth imbalance, where younger generations are overburdened by older generations' promises, because equal numbers of younger generations can support their forebears.

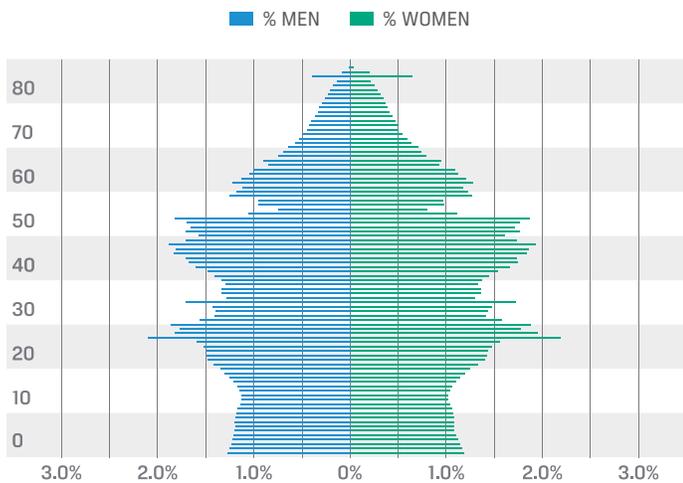
A pyramid shape indicates that younger generations are larger than older generations, and assuming even a modicum of economic growth, it means that they can contribute to, and support, consumption and government spending (GDP = consumption + investment + government spending + net exports) without strain, assuming that real economic growth is at least the same as that of preceding generations.

In the case of the world's top 10 economies (79.8% of total GDP and 55.5% of total population), there are three important trends to notice. First, notice the significant bulges in the demographics at ages 26–34, and again at 42–54. These groups of people are large enough to support preceding generations, although the gap in the middle (35–41) helps to explain flagging GDP growth subsequent to the 2008–2009 recession.

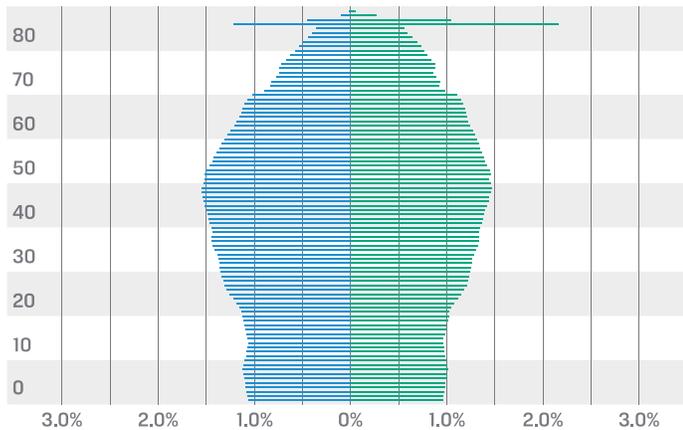
Second, and more importantly, notice the significantly smaller population that constitutes the 0–24 age group in these economies. This cadre is likely to be overburdened by preceding generations, in terms of paying for government entitlements. These entitlements sponge up excess capital that could otherwise be directed toward generating returns on capital, not returns of capital.

Third, another way of examining these graphs is to look at the population of successive generations—that is, the height. Notice that the size of the 0–24 generation is nearly the same size as subsequent generations. This means that even if a sudden uptick in birth rate should occur, this generation is likely to experience slower economic

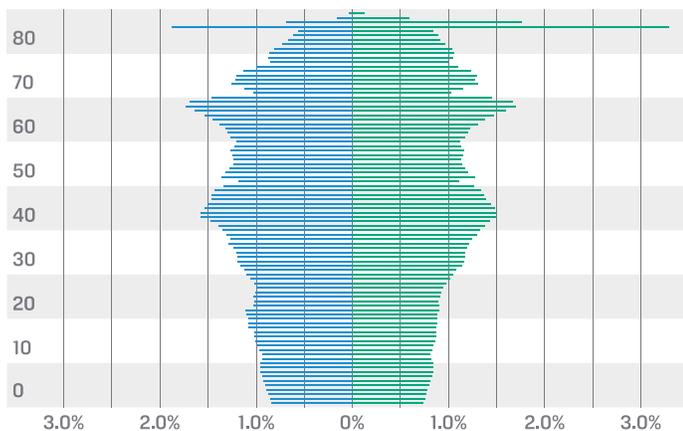
CHINA POPULATION PICTURE



EU POPULATION PICTURE



JAPAN POPULATION PICTURE



growth than previous generations. Barring a global tragedy, such as a pandemic or war, these global population demographics are likely to remain stable and to influence the entirety of the financial industry.

The combined population picture mutes some of the more pressing challenges at an individual economy level. For example, China, the EU, and Japan, together making up 42.5% of global GDP in 2015, each have top-heavy population pictures, as the breakouts by country illustrate. One way of interpreting these pictures is to draw vertical lines from the edges of those aged 0 up to the top of the image.

Any excess population straying outside of those lines indicates the possibility for economic dislocation. Clearly, this possibility is true in each of the population pictures here and has ramifications for the finance industry globally.

In fact, of the top 10 global economies, only India and Brazil (which combined are just 5.2% of global GDP) have favorable population demographics (i.e., pyramid shapes), with the United States being neutral (i.e., roughly pillar shaped, and 24.4% of global GDP).

In short, economic growth on an absolute basis is likely to slow globally due simply to slowing population growth. For financial services, this slowing has a number of consequences, ranging from underfunded pensions to a lower capital stock to slowing consumption, and, therefore, more slowing of economic growth.

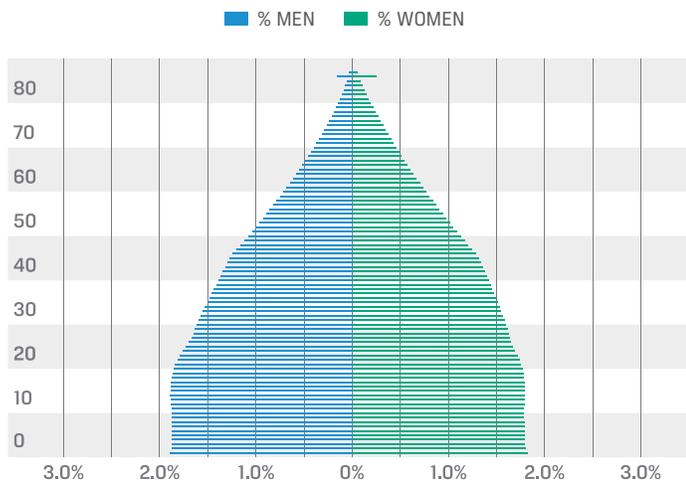
But this is just the quantitative part of the story. The data also paint a challenging picture qualitatively, with significant intergenerational differences in economic preferences. The following differences are noteworthy:

- In North America and Europe, younger generations (e.g., "Millennials") are displaying a higher inclination to save than their forebears.
- China is transforming its cultural preferences for savings toward more consumer-oriented habits.
- The affinity for technology distinguishes all Millennials, and presumably the Generation Z that follows them.

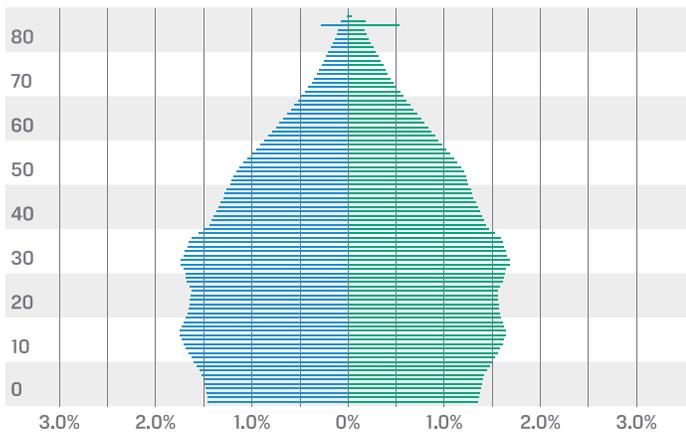
Among the top 10 global economies, only India and Brazil (a combined 5.2% of global GDP) have favorable population demographics.

Sources: Based on data from the US Census Bureau and CFA Institute.

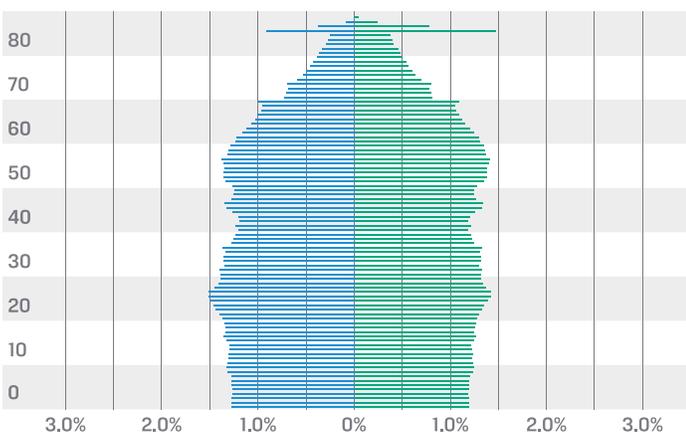
INDIA POPULATION PICTURE



BRAZIL POPULATION PICTURE



US POPULATION PICTURE



Implications for Financial Ecosystem

- Defined benefit pension design will struggle to support the intergenerational trust implicit in that pension model, and a major transition to defined contribution pensions will result.
- There will be increases in the needs of lifetime wealth management, given declining state pension availability and increasing numbers of retirees.
- Workplace savings will operate in more empowered ways, requiring greater use of behavioral science (applying "nudge" principles).
- There will be increased appetite for income producing assets—for example, infrastructure—because of retirement needs.
- The social, economic, and political significance of urbanization that is moving the world population quickly from 50% urbanized to 60% is influencing how work is organized and supported by infrastructure.

Although demographic change happens slowly, we are living through an unprecedented period of such change, and its implications are fundamental to all actors and to the state of the financial system.

Economic growth on an absolute basis is likely to slow globally due simply to slowing population growth. The consequences of this trend include underfunded pensions, lower capital stock, and slowing consumption.

Sources: Based on data from the US Census Bureau and CFA Institute.

Technological Megatrends

Technology as a megatrend comprises a number of fast-moving elements:



IT-enabled: Devices and services with rapid uptake and diffusion likely because equipment costs will decrease as demand increases.



Big data: Used to drive increasingly sophisticated systems and processes; robotics, smart algorithms, machine intelligence, and artificial intelligence (AI) increasingly automate processes and services in concert with the data availability explosion.



Social media feedback loops: Internet technology creates more efficient service intermediation (like Uber and Airbnb); consumer models similarly streamlined (similar to Amazon and Netflix).



Energy technologies: Growth in the renewables area, particularly solar; ways of reducing carbon deposits, such as carbon capture and storage; energy storage and management.



Biotechnology: Developments in combating disease, increasing food production, reducing pollution, and enhancing the quality of life.



Materials technology and nanotechnology: Prime example, 3D printing.



Online education: Rise of open universities and peer-to-peer learning supporting new models of skills acquisition and delivery.



Interdisciplinary sharing: Boundaries between disciplines, such as natural sciences and computer science, become increasingly blurred, enabling greater application of methodologies.

Although space does not allow us to give much coverage to each of these as broad megatrends, we will give illustrations of technology's application in the financial sector. The key elements are that individuals are becoming empowered by technology, and successful organizations are adaptive to technological improvement.

In a survey of CFA Institute members, we asked them what financial technology they thought would have the greatest impact on the industry in one to five years. Robo-advisers were at the top of list, with blockchain and peer-to-peer lending being second and third.

Big Data and Machine Intelligence

Big data refers to the emerging trend of gathering, parsing, and using increasing amounts of data across increasing numbers of categories of data. For example, the Computer Sciences Corporation estimates that by 2020 data production and storage will be 44x greater than it was in 2009. All parts of business life are being affected, especially the sectors in which a systems perspective is most relevant. Finance clearly lands in that category.⁸

Within the financial ecosystem, intermediaries (such as investment banks, commercial banks, investment companies, insurance companies, securities exchanges, trading desks at investment banks, and so forth) have long relied on proprietary information in order to contribute value to the system. In addition, much data gathering is now done by independent third parties, and the data can be stored in the cloud—that is, vast data storehouses accessible via the internet.

Traders, who match demand and supply of securities, are also ecosystem actors that rely on large data gathering. As data becomes easier to gather and parse, it is likely to lead to a narrowing of bid-ask spreads and increased liquidity.

In a world where the cost of information discovery races to almost zero, the speed of parsing this data also increases far beyond human capability. Enter machine intelligence. Combining these things with consistency and freedom from human bias is a recipe for significant disintermediation.

The informational gains from big data can flow from natural language query, plus the combination of predictive and prescriptive analytics, driven by computers whose hardware and software architectures are designed to emulate human thinking. In short, if what a financial professional does relies on a formula, then it is ripe for disintermediation and margin erosion as machine intelligence, coupled with big data, takes over. Examples of formulaic activities in finance include financial statement analysis, reading annual reports, listening to earnings calls, valuation, and trading.

Of course, finance has always relied on judgment and drawing valid inferences from data, which is the good news for financial jobs. But finance professionals do suffer from cognitive biases and limitations, and machine learning is designed to de-bias subject matter. "Technology is an asset," says a CFA charterholder who manages a \$20 billion portfolio at a Canadian asset management firm. "It doesn't have to be a threat. You should be strong enough in your convictions to be able to use that technology to better service your clients."

Big data, when coupled with sophisticated computing, also likely increases the ability of regulators to better execute timely and accurate scrutiny of the quality of regulatory filings, trading activity, and global capital flows. Regulators benefit from machine intelligence as well because it allows their staffs to scale up their regulatory efforts so that they are no longer solely reliant on whistleblowers and auditors' sampling techniques to discover improprieties.

Technology-Enhanced Consumer Models, Including Robo-Advisers

The innovations that eBay, Uber, and Airbnb have introduced all involve a combination of fast, personal, and trustworthy systems that address consumer needs in markedly more efficient ways than their predecessors. Something similar is potentially developing in finance: Robo-advisers are basically a class of financial adviser/intermediary that provides portfolio management with minimal human intervention. Instead of human-based active portfolio management and asset allocation, extensive customer questionnaires about finances, coupled with passive management strategies and asset allocation algorithms, are used to construct investment portfolios.

Implications for Financial Ecosystem

- Financial analysis and investment banking with far fewer people.
- With commercial and investment banks disintermediated, effects follow on the money multiplier; so, reducing the systemic risk of traditional banks, but increasing the need for effective underwriting before loans are issued.
- Investment in technology increases and becomes more specialized.
- New levels of specialization of financial products emerge, such as hyper-customized asset allocations.
- Omnipresent risk management and enforcement with real-time financial analysis of the entirety of a business' financial performance.
- Peer-to-peer trading of securities, like an eBay for financial securities, both liquid and illiquid.
- Increasing allocations to energy technology in the impact investing category.
- Creation of transnational currencies (like bitcoin).

Although demographics and technology are the two megatrends with the largest effects on finance, other megatrends—economic imbalance, the size of governments and regulatory frameworks, and resource management—also figure into scenarios.

Economic Imbalances

The macroeconomic environment is challenged from the effects of deleveraging after the peak of the debt supercycle. This environment has led to historically low sustained interest rates, stemming from excess capital and insufficient return. Meanwhile, the growth outlook is affected by aging demographics, reducing consumption, and technology that is disinflationary.

In addition, technological advances tend to benefit a few innovators while disrupting many others in lower wage roles. Income inequality is another related factor; in the developed world, inequality has increased on a relative basis. On an absolute basis, the numbers of the middle class globally are growing. Another way of looking at the data is to see that although the ceiling is getting higher (the rich are getting richer), the floor is also rising, just not as fast. The uneven

distribution of benefits from the growth of global economy creates tensions in politics, both nationally and internationally as well as within businesses.

Government Footprint

In this area, we focus on two main areas: the level and type of regulation and actions by politicians that impact the investment industry. In both, we see increased levels of activity as the industry has struggled to earn the trust of investors or the public, so investor protection is invoked, especially after the 2008–09 recession.

As a result, industry groups, and even individual investment firms, have expanded their lobbying efforts in Washington, DC, and Brussels. The predominance of national jurisdictions in finance creates attractions for regulatory arbitrage.

Meanwhile, geopolitical rifts in the EU and elsewhere have weakened global governance. The hegemonic influence of the United States has declined and in its place a world of multipolar politics has emerged, or a G–0 world, in the words of geopolitical expert Ian Bremmer.⁹ The 2017 World Economic Forum revealed a disjointed political order and a lack of clarity around ways to move forward. This comes with nationalist, populist, and factional influences that are creating conditions of uncertainty, and a recognition of the downsides of globalization.

Resource Management

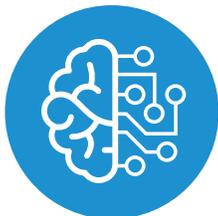
Across industries, issues of resource management are growing in importance, and thus have direct and indirect effects on the investment industry. Although a cataclysmic event is not likely soon, the impact of climate change, regardless of its causes, has been noticed by markets. The increase in insurance premiums for beachfront properties, for example, shows that the risk calculations have changed. Environmental regulations, and such agreements as COP21, also add requirements that are changing corporate product mixes.¹⁰

Other effects will likely include conflicts over food, water, and other sources of natural capital. Mitigating factors include improvements in renewable energies, like solar and wind and including energy storage, improvements in energy efficiency, desalination of water, and others.

Scenarios

Having combined the omnipresent megatrends with certain finance-specific forces, we can now provide structure to the following scenarios about the future state of the investment industry. These narratives are constructed as tools to help decision makers recognize the indications of change around them prior to the entirety of a scenario playing out. Ideally, decision makers craft strategies that work well no matter which scenario unfolds.

SCENARIOS



Fintech Disruption

New technologies promote new business models; disruption and creative destruction are endemic; challengers do better than incumbents; major disruptions to the world of work.

Summary

- Quickening pace of technological innovation in digitization and digitalization, with the potential to evolve or disrupt people, businesses, and governments.
- Fintech develops globally, with a particularly strong Asia-Pacific element.
- Regulatory infrastructure in finance gradually integrates technology-driven models.
- Many financial organizations choose pure-play business models; some emphasize vertical integration. In both cases, success with technological advancement is critical.
- Traditional active management community shrinks in size, but active management still flourishes in evolved form in private equity, real estate, infrastructure, and hedge funds as well as pure beta/smart beta indexing and outcome-oriented/solutions areas.
- Smart machines and systems, data analysis, and inference play a highly disruptive and destructive role in finance's evolution, in jobs, and in ways of working.
- Financial services becomes highly personalized and digitalized everywhere, but has particular impact on Asian markets via voice recognition.
- Robo-advice and its variants become preferred style or tool for delivering investment advice and execution to much of the retail/private wealth segment.

Among the major forces shaping this scenario, peer-to-peer lending is a financial example for which the internet is used to connect lenders (savers) and borrowers (companies and governments). Interest rate quotes are driven by algorithms that compare the supply and demand for debt between lender and borrower, while evaluating such nontraditional factors as educational achievement and social network connections in credit analysis, to construct mutually beneficial securities.

Lending is not the only traditional business line in finance disrupted by peer-to-peer technologies. Equity underwriting can also be handled via peer-to-peer networks (crowdsourced funding).

In the finance area, we highlight blockchain technology as particularly disruptive. Blockchain is parlance for a fully distributed and open digital ledger. In other words, participants in a blockchain network unanimously agree to the terms of transactions within the network, and with full transparency. Benefits of this thinking and technology include lower transaction costs, increased access to capital markets globally, and enhanced security. Transfer agents currently provide blockchain-like functions, yet the parties to a transaction are reliant on a third party, the transfer agent itself, to verify title, funds, and transfer. In the not-too-distant future, securities transactions are likely to be executed by blockchain.

One lens used to make sense of this scenario is where organizations fall on the thriving, surviving, and dying spectrum of business competition.

Challengers ascendant. One possibility is that specialist fintech firms deploy superior technology, such as big data, machine intelligence, robo-advisers, peer-to-peer, blockchain, mobile, and social media, so rapidly as to engage the large Millennial demographic, with their well-known preference for technology, transparency, purpose, and speed. Here these firms outflank the leaders of 20th-century finance and margins are driven to near zero, making finance a predominately low-cost, volume-driven business.

Incumbents resplendent. Another possibility is that established investment organizations, recognizing the growing impact of their fintech competitors, acquire competitive expertise. This is done by deploying their rich capital reserves to develop their own versions of these technologies, but sold to their significantly larger and more

intimate customer base. Or, alternatively, the incumbents acquire the expertise by purchasing fintech firms themselves. In this scenario, margins still race to the bottom, but volumes are maintained.

Perhaps incumbents are so threatened by the new challengers that they begin offering truly tailor-made products for individuals' niche goals. Alternatively, differentiation comes from a highly customer-service-oriented investment delivery, for which the skills are listening, interviewing, empathy, and creativity, rather than rapid absorption, analysis, and execution of data. It could be that some firms become concierges for their clients, handling all manner of financial decisions, such as rent versus buy, vacation or staycation, education or vocation, and so forth.

Muddy Muddling. Finally, it is possible that fintech challengers compete head-to-head against incumbents, with neither side ever gaining much of a permanent advantage. Here, fintech firms seek differentiation in their product offerings by offering their spin on old products, such as investment banking, trading, and analysis. Here also, incumbents seek differentiation by altering their product portfolios to look like those of the fintech entrants, including such products as free passively managed funds, proprietary peer-to-peer networks, and so forth. Again, margins still shrink, but volumes are evenly shared. In all likelihood, a permanent arms race develops in which gimmicky customer offerings are invented to gain a temporary advantage over the competition. But the competition quickly catches up with its own version of the gimmick. Given the emphasis on marketing as a differentiator, the doors for ethical misdeeds open, and regulations likely stiffen under this version of fintech.

We asked in the 2016 CFA Institute Fintech Survey about the benefits and drawbacks to investors related to automated financial advice. Lower costs and greater access were cited as positives, product choice was mixed, and the risks were market fraud/mis-selling and quality of service.

Due to the lack of human intervention, these services can be offered for very low costs with large disruption to the traditional ecosystem intermediaries.

Given the global Millennial preference for technological and ethical solutions, it is likely that robo-advising becomes a preferred method of investing in some segments. In some versions of this scenario, passive management becomes commoditized, with a race to near-zero-cost expense ratios.

Given the powerful combination of big data, combined with machine intelligence, it becomes very easy for highly refined, goal-specific asset allocations to become possible. For example, imagine a world in which the unique risks identified by a customer are mitigated by a customized, algorithm-created, derivative product with a complicated design but noncomplex and user-friendly engagement.

Impact of the Fintech Disruption Scenario

- Passive funds are offered as loss-leaders to attract customers to value-add products, such as asset allocation, retirement planning, estate planning, and so on.
- Active funds become specialty shops for which the fees are much lower than today. Basically, active managers deploy energy and expertise to areas where there is poor digitization of data, there is poor liquidity, and price discovery is more art than science.
- Robo-fund models and variants become substantially core to the private wealth management field.
- Credentialed financial professionals likely find themselves in a wider array of job titles and functions than in 20th-century finance. Finance as a career becomes less attractive for new graduates, especially those who are money-motivated.
- Regulators could constrain fintech by clinging to regulations designed for 20th-century finance. However, given the supranational, hyper-distributed nature of blockchain, regulators' influence could be diminished over time. The issue of regulatory arbitrage comes up as well, and some jurisdictions may see first-mover advantages.

Blockchain technology is particularly disruptive in this scenario, driving lower transaction costs, increased access to capital markets globally, and enhanced security.



Parallel Worlds

Different segments—by geography, generation, and social group—engage in society differently; a higher baseline for financial services participation with wider dispersion; product preferences for personalization, simplicity, and speed.

Summary

- Better worldwide education, with the "haves" getting access to better health care and telecommunications, which produces increased amounts of innovation.
- Social media carries potency in a number of new channels: to spread legitimate disaffection with political issues (e.g., Arab Spring); to incite illegitimate expectations, notably on immigration, public services, social infrastructure (e.g., fake news); and as a superficial and transactional part of the political process.
- Antiglobalization feelings increase, which can carry over into authoritarian nationalism.
- Investment products become more customized and targeted at specific demographic segments; more reflection of personal value systems in successful investment products and services.
- Big data has bifurcated effects, improving speed and lowering cost of meeting personal needs, yet allowing manipulation of personal feelings by companies and political factions.
- Improvement in financial literacy and in widely available technologies produce better financial participation in some segments.
- The "have-nots" act on their disillusionment with the system through support for nationalism and populism, with anti-elite overtones and financial services disengagement.
- The trustworthiness of the tech model, in tangible products and immediate gratification contexts, is tested in investment contexts, where the outcomes are highly tacit and slow to emerge.

Social media allows the previously disenfranchised to peer into the lives of others and to see how others live, including their economic opportunities and moral values.

The societal segmentation is starkest at the "haves" and "have-nots" level when it comes to direct participation in what society can offer generally, and finance's particular offerings.

In this scenario, economic actors previously not fully included in the golden marriage of capitalism with democracy see increasing participation on an absolute population basis. Examples include: women; minorities within countries with clear majorities; and, undeveloped regions, both politically and economically. The driver for this change is the universal dispersion of social media, and other nontraditional media, such as texting, that builds confidence through simple and immediate access to worldview perspectives, consumer products, and over time, financial services.

These technologies allow huge numbers of the previously disenfranchised to peer into the lives of others and to see how they live, including their economic opportunities and moral values. In turn, this causes a refusal to remain disenfranchised and a "reaching up" to new opportunity. Additionally, those fortunate enough to be franchised also peer into the worlds of the disenfranchised, leading to increased "reaching down" to include as many people as possible in the golden marriage. The emphasis on "activities with purpose" by the Millennial generation serves as a catalyst in this regard.

The increasing usage of social media cannot be viewed as a positive trend in all contexts. It is often the case that people do not consider views dissimilar from their own, or worse yet, are not interested in understanding others, and thus they can get an incorrect picture of reality. It is apparent that social media can accentuate differences of perspectives, rather than helping to integrate them, because of the choices that can be made to take advice from peers online rather than traditional authority figures. Taken to an extreme, social media can border on pure propaganda and detract significantly from its benefits in disseminating information and perspectives.

All technologies hold out promise and challenges for the financial industry, but most notably mobile technology and social media. Both technologies connect people and institutions into seamless, hyper-distributed networks. Consequently, information finds its intended audience with little effort and for nearly zero cost. Here, traditional aggregations of power, such as governments and businesses, are simply other nodes, or peers, within the overall network. In other words, they are viewed less in a hierarchical fashion, and more as just one of billions of other participants. Yet, to the businesses that adapt to the network node world, there is vast potential to reach customers and to do so exactly where they want to be reached, as

indicated by their social media networks. In sum, it is a marketer's dream come true.

When it comes to the "have-nots" in the financial services realm, they remain angry at the exclusivity of capitalism. When the "Occupy" and "99%" movements launched in 2011 and 2012, they captured an initial zeitgeist. In this scenario, that outpouring from pent-up feelings plays out in much greater social resentment of those in positions of power and wealth.

Income and wealth inequality on a relative basis may still grow, which will deepen societal tensions. Schisms by class and gender are likely, with support for nationalist and populist causes as a result.

As is traditionally the case, generational divides in this scenario remain large and lack intergenerational understanding. This is even truer in a world whose complexities and possibilities are increasing at a quickening speed. For example, the developed world's Millennials demonstrate lower levels of consumption and higher levels of savings than previous generations. Another significant difference is in consumption preferences. Younger generations consider luxury to be possessions that are customized to their unique preferences, whereas in previous generations, luxury was understood to be more about the expense of an item. Due to the ubiquity of inexpensive and sophisticated technology that measures preferences, and the rapid decline in the cost to manufacture and distribute customized products, notions of luxury are changed.

China and Japan historically have populations that are savers rather than consumers, regardless of generation, but now China, in particular, is shifting its people from savers to consumers. That said, in most projections, much of the world's growth in savings comes from the growth of the Chinese middle class.

More optimistically, the greater enfranchisement of the majority in the benefits of capitalism and globalization leads to more universal access to basic quality of life goods and services. This does not mean that people are happy about their economic lot, just that the floor on quality of life rises, even if not as fast as the ceiling rises. Interactions between firms and regulators vary greatly in this scenario, as some are accorded special access.¹¹

There are also improvements in the utility of meeting personal values and needs as exact segments are served. This shows up in many areas, for example customization of financial services for women, Millennials, and Generation Z. In general, financial services become cheap and available to many more segments of global society. These products range from microfinance to on-demand mobile asset allocation.

Here, much of the economic opportunity is of a "low-hanging fruit" variety: the building of economic infrastructure, education, telecommunications, and so forth. In the undeveloped world, there is the opportunity to skip generations of economic evolution and begin using current technologies. For example, those in sub-Saharan Africa do not need to build land-based phone lines and can instead

emphasize internet and wireless telephony. One leverage point is the rise of the ability to rent, rather than buy, many things, allowing more segments to compete in access to goods and services. In this scenario, if more of the world's people become better educated, through the emergence of a global middle class with access to better health care and telecommunications, then in all likelihood a follow-on effect is increased amounts of innovation supportive to economic growth.

There is a special place for organizational superstructure in this growth. New technologies and social media platforms are driving change in how value is created. Current examples are the FANGs (Facebook, Amazon, Netflix, Google) in network capabilities, collective intelligence, and interconnectedness. Such organizations and their adaptive successors will likely have a footprint in financial services in the future. (A good current example of that footprint is the Alibaba Yu'e Bao \$90 billion deposit platform, created in less than a year.)

The trustworthiness of these tech giants has been demonstrated in tangible products and immediate gratification contexts. The test will be the extent to which they can transfer this trust to the service-oriented and long-term-outcome contexts of saving and investment success.

Impact of the Parallel Worlds Scenario

- Individual empowerment, where vast coalitions form rapidly around context and moment-specific interests and memes, leaves corporations very vulnerable to reputational damage.
- Technology should serve the human elements—respect, transparency, communication, knowledge, experience, and trust—and not try to unwind or obscure them.
- Luxury is defined by customization more than price tag.
- Women become increasingly large players in capital formation and allocation, with different skills and preferences.
- The talents of hundreds of millions of people previously limited by societal and economic systems are unleashed, leading to an acceleration of innovation.
- Governments try to adapt to the plurality of needs, but governments' importance in raising living standards is less than the effect of profit-driven corporations.
- Uncertain geopolitics, in which the promised benefits of globalization are not fully realized by those at the center of populist movements.



Lower for Longer

New normal low interest rates and returns become embedded for the foreseeable future (5–10 years), accentuated by lower levels of global growth and higher levels of political instability.

Summary

- Central banks have limited success with interest rate normalization.
- There are headwinds to growth from indebtedness, excess savings, reduced benefits from connectivity growth, adverse demography, lesser growth from China, limited labor market reform, and companies hoarding cash versus reinvesting. Geopolitical and financial instability also hamper growth.
- Deepening pension crises, large gaps in pension coverage, and increased longevity combine to create prime conditions for pension poverty offset by longer working lives.
- Costs are seen as an unacceptable drag on returns precipitating transitions to lower-cost, higher-tech investment solutions, and putting a high premium on innovation; significant margin pressure causes asset management firms to consolidate.
- Private markets carry growing weight in capital raising but are disrupted by various failures with opaqueness, illiquidity, and agency and overcrowding issues.
- Corporate and public pensions costs rise to pay for increased longevity, and reduced returns; this deepens deficits, which often can only be fixed by pension reductions.
- Trust in financial firms stays at low levels given the disappointment with outcomes, particularly if bubbles and crashes emerge; investment skill is under pressure to show its value.
- Geopolitical instability connects with social instability and produces deeper inequality fissures; negative feelings deepen around job fears, immigration, inequality, and getting a fair share of a nonincreasing pie.

In this scenario, multiple "lows" combine to extend the long period of low economic growth in the aftermath of the global financial crisis, with a world awash in too much capital, leading to low returns. There are many headwinds, but government and private indebtedness, excess savings, and demographic imbalances are central. The tailwinds from technology or inflationary fiscal policies are insufficient to counter these. Central bank interventions are seen as necessary and stay around longer even as their influence diminishes.

Financial instability from low rates creates a mispricing of risk with consequences for booms, bubbles, and busts as investors reach for return to escape negative yield conditions. Bubbles and troubles spread intergenerational and intersegmental strife with the potential to generate secular stagnations.

Corporate and public pension costs rise to pay for increased longevity and make up for the return premiums previously expected, producing further declines in corporate values and increasing pension fund deficits.

The most common path chosen to address the fragile recovery is one that avoids a public investment surge to limit future public indebtedness. In this scenario, we see central banks continue low interest rate and negative interest rate policies in their attempt to spur aggregate demand. Yet, lying just beneath the surface are the low growth in working age population, and low demand for capital, that are the fundamental drivers of low economic growth.

Furthermore, in an age of low costs of capital, there is little incentive for new radical innovations that might spur on economic growth. After all, capital projects are evaluated on returns compared with costs, relatively; and when capital is cheap, there is less reason to risk capital in game-changing ideas. These low returns on capital, in turn, lead to low pricing power, which leads to arithmetic, not geometric, economic growth—which brings us back to low interest rates.

In the very long run, there is the possibility of economic growth in the aggregate stalling because of the "more mouths to feed" problem (i.e., favorable demographics) and inflation. The "more mouths to feed" problem is that much economic "growth" is really just growth in "output." More children equal more demand for clothes, food, housing, cars, schooling, and other necessities. But this is not true economic growth when viewed on a per capita basis—that is, getting more from the same set of resources, or getting the same from a smaller set of resources.

There are consequences to this lower economic growth in the aggregate. In a world of shrinking population growth, there is stranded capital in fixed assets, such as real estate and infrastructure. In turn, this creates dislocations for policymakers stuck in old ways of thinking about how to drive output and not productivity.

Another possible manifestation in "lower for longer" is continued growth on a unit basis, but declines in returns coming from positive price appreciation. In other words, the consumer surplus grows while corporate profits shrink, despite actually producing more. As demographics start to improve, some of the characteristics of "lower for longer" begin to ameliorate. However, the diffusion of lower prices for consumers globally and for bare essentials leads over time to increased quality of life parity. That is, larger numbers of consumers have nearly identical access to food, shelter, transportation, communication, computing, and other goods and services.

These conditions are all highly disruptive to investment institutions because the underlying arithmetic supporting their sustainability is structurally altered and in material ways. The need is for innovation to adapt, and there are a number of opportunities:

- Streamline asset owner governance and allow more management to be efficiently handled internally; use lower-cost vehicles, pooled funds, and exchange platforms
- Lower-cost commoditized offerings (where forms of passive investing will continue to grow)
- Further expand factor and thematic investing with greater systematic components
- Allocate more capital to developing economies and those where demographics and demand for necessities continue to grow
- Emphasize the importance of the very best active management, which can produce a higher proportionate impact on net returns
- More outcome-oriented products and solutions
- Improved whole life products; fulfillment during all ages of a person's life, rather than delayed fulfillment at the end

Pension reform continues as an evergreen theme in this scenario, with regulators addressing improved investor protections, safe harbors, solvency requirements, and fiduciary duty. The integration of government benefits with employer-sponsored arrangements will no doubt undergo further tinkering. The likelihood of sufficient political will to address the core challenges with pension systems seems remote given shortening political horizons. The application of globally systemically important financial institutions to asset owners and asset managers will be settled one way or another.

Impact of the Lower for Longer Scenario

- Asset management margins are compressed by lower returns and lower fee rates, which must vie with naturally increasing costs in compliance and marketing.
- Asset owners turn increasingly to internal forms of management to manage their net returns.
- Fund flows from institutional assets turn negative. Fund flows from private wealth management remain positive.
- Cash continues to accumulate on balance sheets and leads to many businesses becoming self-funding. Economic innovation is largely of an incremental "good idea" kind and not of the "amazing idea" variety.
- Listed markets are much more limited in their uses. Capital is raised more through unlisted markets than listed markets.
- Many capital providers turn to unusual sales and marketing efforts to incentivize users of capital to transact with them. In turn, this leads to increased scrutiny on the part of regulators.
- In a low-return world, participants in secondary markets trade more frequently, commensurate with reducing costs to trading, in an attempt to capture the limited amounts of alpha. This bias toward action may not actually improve outcomes.
- Financial markets become more efficient, in terms of nearly instantaneous and artificially intelligent price discovery, but less liquid due to a lack of acceptable returns on capital.

Headwinds in this scenario include government and private indebtedness, excess savings, and demographic imbalances. Technology and inflationary fiscal policies are insufficient to counter these.



Purposeful Capitalism

Capitalism's working evolves; the investment industry raises its game with more professional, ethical, and client-centric organizations acting in aligned-to-purpose, lower-cost, and efficient ways.

Summary

- Governments and regulators aim for a more purposeful, societally conscious capitalism with stronger stewardship; finance's purpose aligns behind achieving increases in societal wealth and well-being through mobilizing capital for jobs and growth.
- Central banks and regulatory authorities focus particularly on making organizations trustworthy, managing systemic issues, and reducing risks of financial crashes and crises.
- Markets for publicly listed equity and private equity are more fair, efficient, and deep over time. Corporations seek more capital for pursuing innovative ideas rather than hoarding cash.
- Firms, including investment institutions, try to integrate their wider purpose alongside their profit motivations in business models incorporating corporate social responsibility.
- The asset owner institutions adopt a bigger role in the investment ecosystem through greater collaboration and alignment with longer-term value creation and attention to sustainability/ESG/ impact investing
- Attention to fiduciary responsibility increases, with tighter fiduciary alignment between investment institutions and clients.
- There is competition for professional talent among investment organizations, particularly on the leadership level; diversity and culture are factors in employee value propositions
- Individuals increasingly want their financial services providers to demonstrate a "clean license to operate," with pressure to demonstrate empathy and to work under ESG principles.

This scenario concerns the continuing tussle between a capitalist system that progresses more inclusively (finance serving everyone's benefit) and a version that stays self-serving to those in finance. The investment part of finance will play out its own struggle between developing a stronger value proposition by working through more professional, client-centric organizations or remaining an industry in which the value created continues to disappoint.

This scenario recognizes that the world is a fast-changing, interconnected place. Market-based economies seem to be adaptable, but when finance is viewed as an ecosystem, the tight coupling of its participants and the forces that drive them demonstrate many vulnerabilities.

The market-based chain of intermediation from savings to investment is long and growing longer as an aging demography develops, adding costs along the way. Furthermore, in a world facing shortages of resources in energy, rare earth elements, water, food, productive space, and land, corporations and the institutions that own them must consider how to operate in a way that is congruent with sustainable development.

Attempts are made in this scenario to improve the markets' moral compass and mechanisms consistent with the fundamental tenet that financial markets should be fair and efficient. This scenario takes an optimistic view that recent declines in public market issuance do not turn into lasting damage. The system requires a healthy balance of listed and unlisted capital to support the fundamental transactions that support innovation. The system is stronger with diversity of thinking and actions.

As discussed earlier, one essential for participants in the ecosystem is the economic exchange of trust. Without trust, the costs of conducting business in finance are either higher, or transactions do not occur at all. Trust is thus a powerful, positive force, and a stronger and more purposeful system will require improvements in the weak current starting position. (Evidence of this can be found in two large scale surveys CFA Institute conducted with Edelman in both 2013 and 2016.¹²)

The other major disruption lies in giving increased attention to sustainability issues within institutional portfolios, a movement that is currently nascent. The issues of sustainability are tangled, but can be straightened out in this scenario's evolution. First, this factor is about shaping clearer and more far-sighted investment beliefs. Second, there is a mission-related consideration because of the evolving nature of fiduciary duty and institutional legitimacy.

Although fiduciary responsibility places "hard" financial considerations in the prime position, there are still certain "soft" ancillary considerations to be integrated with respect to investor responsibility. This factor is about values. Are portfolios' exposures to externalities just about financial risk because any pro-social issues lie with governments? Or should financial institutions "taint" their pure financial views with more than a trace exposure to the pro-social issues? All institutional investors have their own sustainability premised on a "license to operate," and keeping that license "clean" must entail management of reputational issues. Inevitably, there is a conflation of these issues; the financial and extra-financial factors need to come together in one investment strategy.

The evolution of the purposeful capitalism scenario has to deal with the difficulty of trade-offs. That is, are asset owners willing to trade possibly lower returns for improved long-term system sustainability? In essence, this requires a shift in mindset, in which asset owners and investors take a holistic view of investing, applying ecosystem thinking over a long-term horizon. As an example, with a more integrated perspective, it is clearly suboptimal for an asset owner to simultaneously own tobacco and health care stocks because of the negative spillovers. Interestingly, integrating values in the investment process embeds human beings into the investment process because only they can make sense of the conflicts of, and contest for, contexts and values. This contrasts sharply with pure factor investing and clinical asset allocation that generally ignore those values.

Within the strong collaborative processes that large asset owners increasingly undertake together in this scenario, there is the need for extensive thinking on longer-range investment issues and what constitutes risk—both instances where stranded assets and the wider sustainability area are particularly relevant. The financial materiality of ESG is uncertain, but its consideration, and possibly also its size, is set to rise in this scenario.

The key idea is that the mission of any asset owner needs greater clarity with respect to their responsibilities to stakeholders and the time horizons that matter. This brings into consideration the particular place of so-called "universal owners," very long-term owners of portfolios that are large enough for their actions (singly or through collaboration) to influence markets and companies. In their ecosystem position, they recognize that through their portfolios, they own and will always own a slice of the whole economy. After all, their flexibility to sell is significantly limited by their size, but they can adapt their actions to try to help the whole economy/market to a more prosperous and sustainable future. They are simply thinking about effective long-term finance. This thinking comes from understanding changing circumstances and particularly the spillovers and externalities involved, including those that affect other portfolio companies and society more widely. Their ability to reduce their portfolio exposures to society's externalities will often represent both a private gain and public good.

Thus far we have been mostly focused on the big asset pools, particularly pensions. We should be clear that there are almost exact parallels in the retail investing and private wealth areas where

fiduciary thinking is evolving, and individuals' freedom to express their values in investment products are becoming democratized.

All of these issues involve multiple strands and legions of judgments. In this scenario, the opportunities for leadership from investment institutions are significant. What crystallizes in this scenario on the spectrum of outcomes depends on the quality of leadership that emerges.

Impact of the Purposeful Capitalism Scenario

- Debates become increasingly expansive regarding what responsibilities companies (particularly large multinationals) should assume.
- Investment organizations demonstrate public leadership; such institutions are more trusted by their stakeholders for their readiness to express convictions that resonate.
- Investment organizations differentiate themselves with reference to values and culture.
- ESG and stewardship become completely mainstream as a component of risk management; regulatory framing and enforcing of ESG and stewardship are stronger.
- Developments in trust in the investment industry and its products affect the wider reach of investment organizations.
- The skill profile of investment professionals will have to develop in both ability to understand deep-rooted technological development, and with respect to softer skills.
- A more professional and value-adding investment industry can emerge that at its core operates closer to the parameters of a profession. A profession, by definition, "extends a public warranty that it has established and maintains conditions of entry, standards of fair practice, disciplinary procedures, and continuing education for its particular constituency."¹³

Trust is a powerful, positive force. Without it, the costs of conducting business in finance are either higher, or transactions do not occur at all.

SUMMARY AND WAY FORWARD

Key components of this chapter include an ecosystem framework, forces that are driving change, and four scenarios that are critical to the future state of the investment profession.

- **Ecosystem actors:** asset managers, asset owners, firms, intermediaries, regulators and other nongovernmental organizations, and savers.
- **Megatrends:** worsening demographics, increases in disruptive technology, persistent economic imbalances, depth and breadth of regulation, and strains on resources.
- **Fintech Disruption:** New technologies promote new business models; disruption and creative destruction are endemic; challengers do better than incumbents; major disruptions to the world of work.
- **Parallel Worlds:** Different segments—by geography, generation, socioeconomic group, and values—engage in society differently; a higher baseline for financial services participation with wider dispersion; major impact on business models, particularly for products requiring personalization, simplicity, and speed.
- **Lower for Longer:** New normal low interest rates and returns become embedded for the foreseeable future (5–10 years) accentuated by lower levels of global growth and higher levels of political instability.
- **Purposeful Capitalism:** Capitalism's working evolves; the investment industry works to raise its game with more professional, ethical, and client-centric organizations acting in aligned-to-purpose, lower-cost, and efficient ways.

This chapter provides a foundation for "Organizational Game Changers," which makes significant references to the scenarios.

As a reminder we aim to shape not just the actions of CFA Institute, but also the actions of the investment industry to create the best possible outcome for the end investor, the industry, and society.

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10. See www.cop21paris.org/about/cop21 for more information.
11. For more about this special access, see Elin Cherry and Robert Dannhauser, *Corrupt or Collaborative? An Assessment of Regulatory Capture* (Charlottesville, VA: CFA Institute, 2016).
12. CFA Institute, *CFA Institute & Edelman Investor Trust Study* (2013); CFA Institute, *From Trust to Loyalty: A Global Survey of What Investors Want* (2016).
13. Credited to C. Stewart Sheppard, founding executive director of the Institute of Chartered Financial Analysts, which became CFA Institute.



FUTURE STATE OF THE INVESTMENT PROFESSION

PURSuing BETTER OUTCOMES—FOR THE END INVESTOR, THE INDUSTRY, AND SOCIETY

Organizational Game Changers



DEFINING INVESTMENT ORGANIZATIONS

Following the framework adopted in the "Investment Industry Ecosystem" chapter, we suggest that investment organizations can be subdivided into three broad categories: asset owners, asset managers, and investment intermediaries—essentially, other investment organizations, particularly sell-side firms, investment advisers, investment banks, data providers, and other research providers. All of these are very much "people businesses," dependent on talented leaders and staff to move the organizations forward.

Size of the Market for Investment Professionals

In our classification we see "investment professionals" as those individuals who are influential in allocation decisions through such areas as investment strategy, portfolio construction, and trading. Their job titles include portfolio managers, strategists, research analysts, and financial advisers.

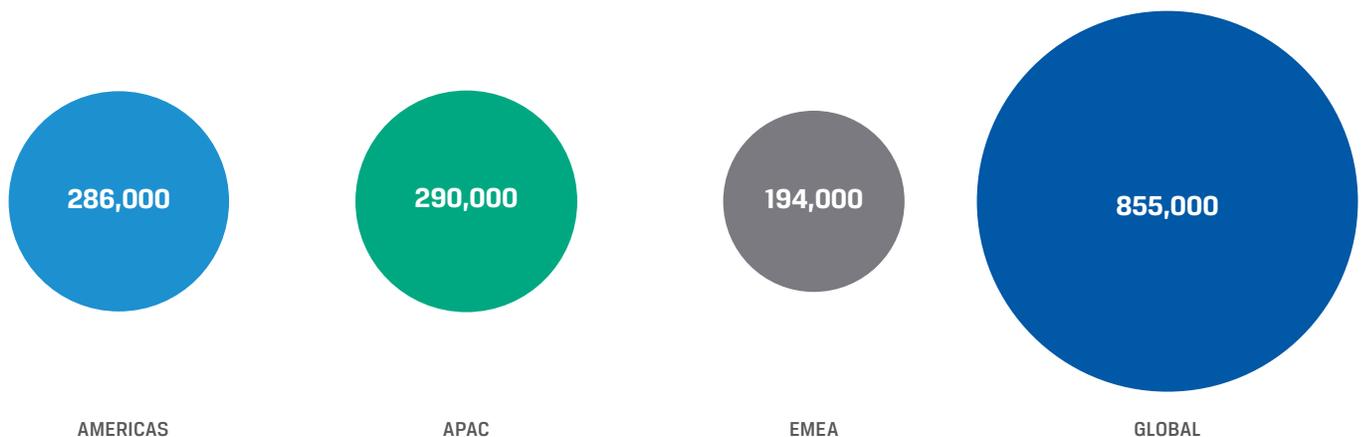
In addition, we see "investment support professionals" as those individuals who are closely associated with the investment function but not influential in the decisions or advice. Their job titles include client services and administrative roles.

Although this list is not exhaustive, it should provide a general understanding of the scope of our analysis. (In fact, in research conducted by Mercer for CFA Institute that examined job titles and postings from online sources, they found that titles in the investment space especially lack standardization versus other industries.)

In 2015, CFA Institute commissioned Mercer to conduct a study to ascertain the size of the market, and it revealed that financial services overall has approximately 32 million workers globally. Of these, only 1.3 million employees work in investment management, with about 1 million at asset managers, 200,000 at wealth managers, and 100,000 at asset owners. The roles involved cover investment professionals, investment support professionals, and other professionals. In follow-up research, they estimated that about 1,500 new graduates take on "investment professional" roles in the United States each year.

When investment roles alone are considered throughout financial services, they total approximately 855,000. Globally, about 9% are CFA charterholders, with the largest penetration in the Americas (18%), followed by 6% in Europe, the Middle East, and Africa (EMEA), and 4% in Asia-Pacific (APAC). (The CFA Institute membership base is larger than this would imply, but not all CFA Institute members work in the investment industry.) To become a CFA charterholder, an

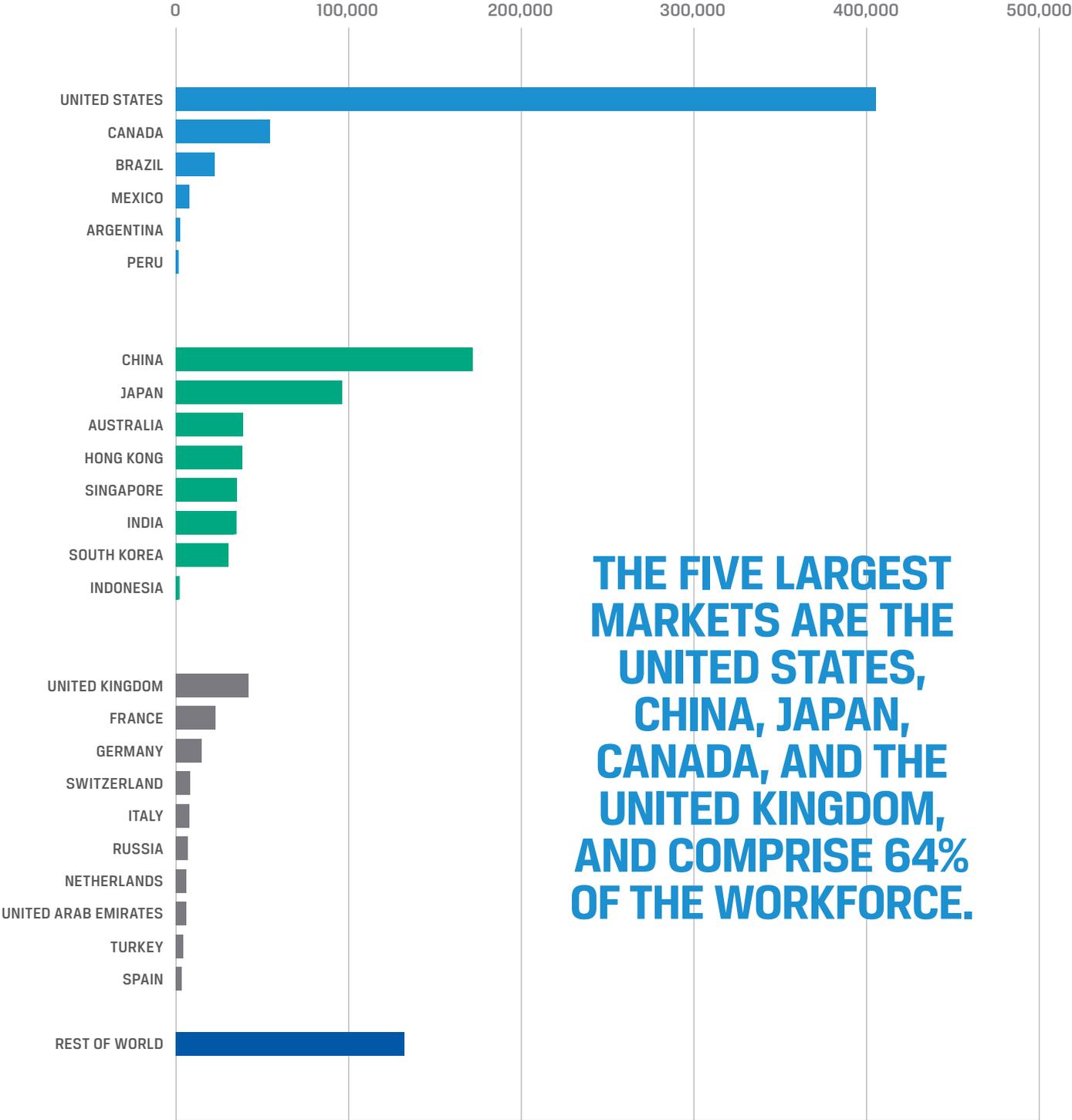
INVESTMENT INDUSTRY PROFESSIONALS



Note: Regions include only major markets and global includes estimate for rest of world.

INVESTMENT INDUSTRY WORKFORCE AT ASSET MANAGERS, WEALTH MANAGERS, AND ASSET OWNERS

AMERICAS APAC EMEA REST OF WORLD



THE FIVE LARGEST MARKETS ARE THE UNITED STATES, CHINA, JAPAN, CANADA, AND THE UNITED KINGDOM, AND COMPRISE 64% OF THE WORKFORCE.

Body of Knowledge and Practice Analysis

CFA Institute has developed a Global Body of Investment Knowledge (GBIK) that includes the subjects that well-informed investment professionals should know. A subset of the GBIK is the Candidate Body of Knowledge (CBOOK), which is the testable material suitable for the CFA exam. This body of knowledge is re-evaluated on a rolling basis through a program of Practice Analysis, in which we ask practicing investment management professionals, university faculty, and regulators what critical competencies they believe are needed in an investment role today and how those should be translated into exam weights. CFA Institute conducts this analysis through panels, focus groups, online platforms, and surveys.

During the most recent Practice Analysis cycle, the following were the top three trends:

- Risk factor-based asset allocation
- Negative (low) interest rate environment
- Pension funding shortfall

Other trends observed in Practice Analysis:

- An increase in portfolio allocations to alternative assets
- An understanding of the importance of financial market history
- An acceptance of the role of environmental, social, and governance (ESG) factors in the investment decision-making process
- An increase in supply and demand for private wealth management
- A rise in the use of passive versus active investment management
- A growing preference for investment professionals trained in soft skills
- A recognition of the role of big data in financial analysis

The Practice Analysis process includes the following:

- In-depth conversations with investment management professionals about their job roles and professional practices.
- Discussions with employers about the challenges they face in recruiting and retaining competent investment professionals.
- Ongoing dialogue with regulators about ethical and professional practice standards designed to protect the public.
- Discussions with university faculty about recent advances in applied investment analysis and portfolio management research.
- The use of annual, global surveys of investment management professionals.

individual must hold a bachelor's degree, possess four years of work experience as an investment professional, provide three professional references, and pass three levels of a rigorous exam, each with pass rates of 40%-50%. These exams are meant to provide a generalist foundation for those who want to enter the industry. In addition to technical skills, the exams also cover the CFA Institute Code of Ethics and Standards of Professional Conduct.

The five largest markets are the United States, China, Japan, Canada, and the United Kingdom, which comprises 64% of the workforce.

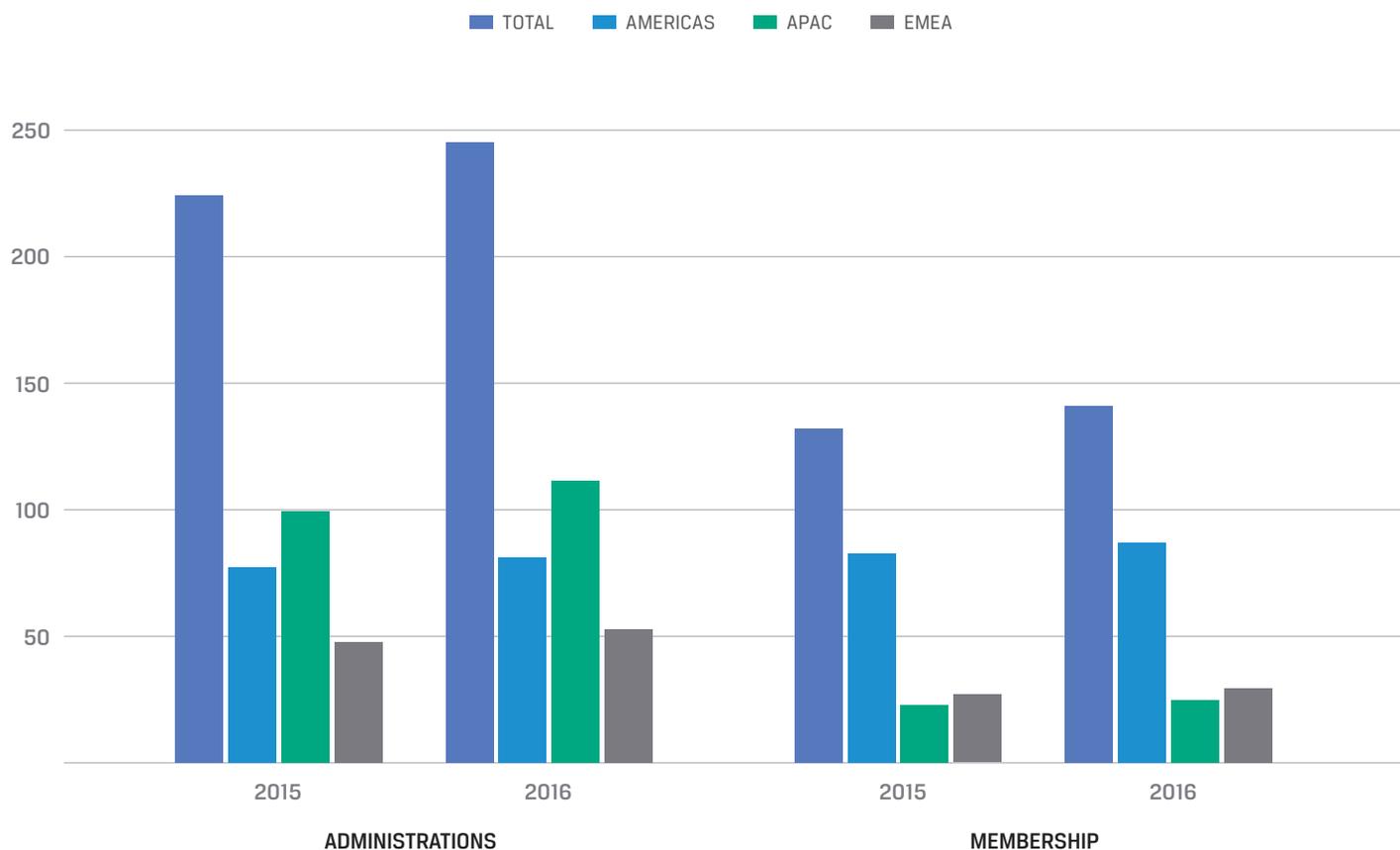
Trends in the Market for Investment Professionals

The growth trends in CFA Institute membership provide a view into demand for these skills and the availability of them by region. The number of candidates has grown in recent years, which offers interesting data on the pipeline of the profession and interest levels in investment management as a career choice. For several years, the total number of candidates has been highest in the APAC region, although by country, the United States was still the largest. However, as reported in the fiscal 2016 CFA Institute Annual Report, "Notably, for the first time ever, new Level I CFA Program administrations in China overtook the United States in volume, reflecting a changing demographic in program demand, and a potential shift in future geographic membership distribution."

Supply of Skills for New Entrants

More than 200,000 people each year take the CFA exam in order to advance their careers in the investment industry. The CFA charter has become recognized as "the gold standard" in education for investment professionals, and it provides transferability of skills across markets. The fact that the exam is conducted in English tells future employers that a CFA charterholder is also comfortable speaking about financial concepts in English. Mercer examined more than 8,000 job postings and found that a preference for a CFA charterholder was noted in 46% of investment analyst postings, 35% of research analyst postings, and 16% of personal financial adviser postings. In particular, job postings for personal financial advisers seek CFA charterholders in a greater proportion than is available in the private wealth marketplace.

CFA PROGRAM ADMINISTRATIONS AND MEMBERSHIP BY REGION (THOUSANDS)



Career Paths in Investment Management

In the Mercer research, they also examined typical career paths and found that across countries, career paths are similar, although in growing markets, such as China and Hong Kong, career paths are shorter (i.e., there are younger investment professionals in more senior roles). Job roles are most specialized in the United States, United Kingdom, and Canada. In Brazil, firms hire very few investment professionals via job postings; these positions are mostly filled by internal hires or by referral. In China, state-owned banks are a training ground before moving on to asset management firms (the opposite pattern of migration does not happen). The United States is the only major market in which the research analyst role is prevalent as a long-term career versus a transitional role.

ORGANIZATIONAL GAME CHANGERS

As we turn our attention to a more detailed view of the future for investment organizations, we review three large game-changing factors that will have significant impact on the future landscape for investment organizations, and on the scenarios described in the "Investment Industry Ecosystem" chapter in particular.

These three areas are

- the new skills for new circumstances,
- the future state of the private pension and lifetime savings models, and
- the evolving state of trust between providers and end clients.

Game Changer 1: New Skills for New Circumstances

The results of our survey of 1,145 investment leaders (see Appendix B for details) revealed perspectives on the skills and attributes that will propel investment professionals to the top of their profession. This is a key part of improving investment outcomes, which is one of the key focus areas for CFA Institute and its Future of Finance initiative.

Our survey group ranked the importance for success of certain skills for three key investment roles—chief investment officers (CIOs) and portfolio managers, CEOs of asset manager organizations, and CEOs of asset owner organizations.

RANKING OF SKILLS NEEDED FOR SUCCESS IN CIO AND CEO ROLES

MOST IMPORTANT SKILLS	CIOs/PORTFOLIO MANAGERS		CEOs OF ASSET MANAGERS		CEOs OF ASSET OWNERS	
	RANK	%	RANK	%	RANK	%
ABILITY TO ARTICULATE A COMPELLING VISION FOR THE INSTITUTION	1	36%	1	49%	1	40%
RELATIONSHIP-BUILDING SKILLS	2	35%	2	38%	4	34%
SPECIALIZED FINANCIAL ANALYSIS SKILLS	3	35%	8	20%	5	31%
ABILITY TO INSTILL A CULTURE OF ETHICAL DECISION MAKING	4	30%	3	38%	3	37%
UNDERSTANDING OF CORPORATE GOVERNANCE/REGULATIONS	5	25%	4	28%	2	39%
SOPHISTICATED KNOWLEDGE OF IT	5	25%	9	12%	9	13%
KNOWLEDGE OF SCIENCE, ENGINEERING, AND MATHEMATICS	7	24%	10	10%	10	10%
CRISIS MANAGEMENT SKILLS	9	23%	5	27%	6	29%
CONSULTATIVE SELLING SKILLS	8	23%	6	23%	8	17%
INTERNATIONAL AND CROSS-CULTURAL SKILLS	10	15%	7	21%	7	20%

Note: Responses to question: Which of the following skills will be more important in the next 5–10 years? (choose three).

■ TOP THREE RANKED SKILLS ■ BOTTOM THREE RANKED SKILLS

The following are the 10 skills we asked respondents to rank:

- Ability to articulate a compelling vision for the institution
- Ability to instill a culture of ethical decision making
- Consultative selling skills
- Crisis management skills
- International and cross-cultural skills (including foreign languages)
- Knowledge of science, engineering, and mathematics
- Relationship-building skills
- Sophisticated knowledge of IT (e.g., programming, artificial intelligence)
- Specialized financial analysis skills
- Understanding of corporate governance/regulations

For all three leadership roles considered, there was agreement on the importance of the following top-ranked skills:

- Ability to articulate a compelling vision for the institution
- Relationship-building skills
- Ability to instill a culture of ethical decision making

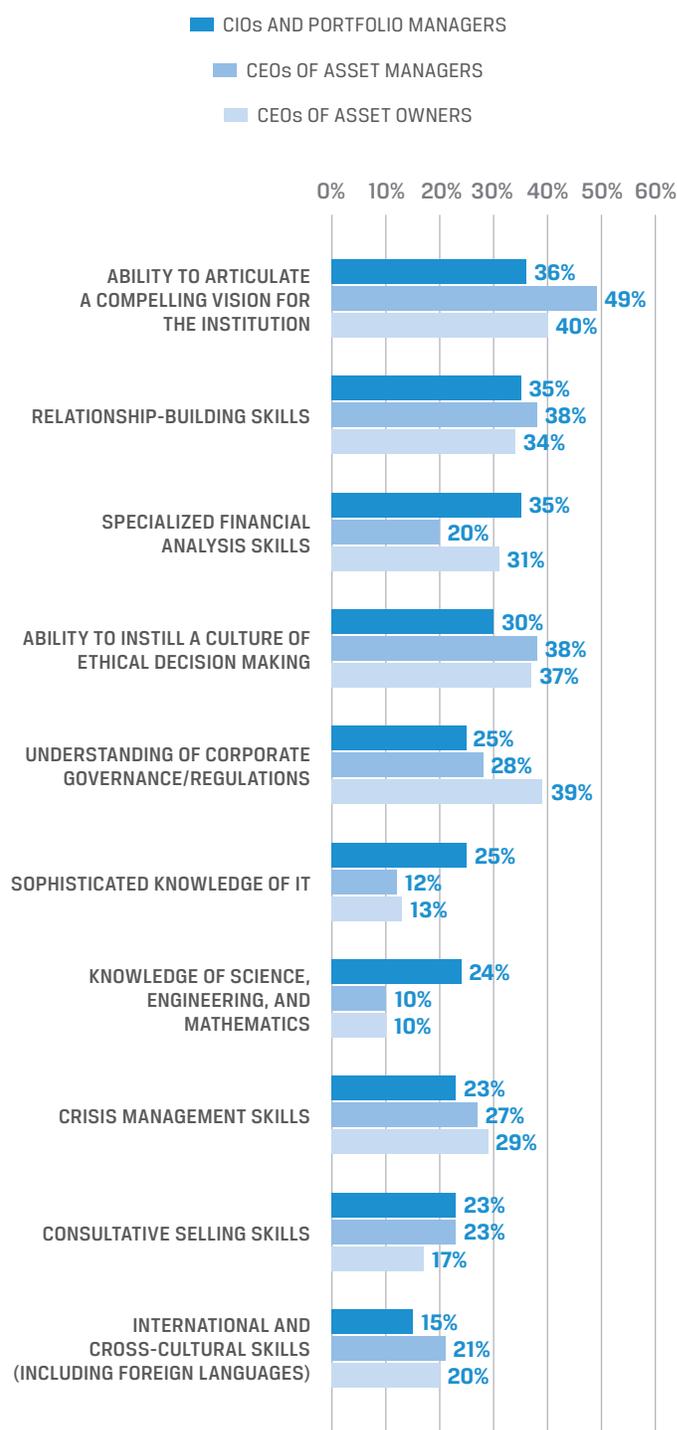
These results confirm the view that surfaced in our scenarios that investment organizations need to recruit and develop employees along new dimensions, such as creativity, empathy, and judgment in complex situations. John Kay, a *Financial Times* columnist, expresses this thinking this way: "The only thing we know about the future world is that the capacities to think critically, judge numbers, compose prose, and observe carefully will be as useful then as they are today."¹ We can summarize this view as fluency with situations and contexts.

By contrast, there was also agreement across the roles on the lesser-ranked skills: knowledge of science, engineering, and mathematics; sophisticated knowledge of IT; and consultative selling skills. Again, what emerges is a sense that leaders of investment organizations need to become more human, not less, in order to compete.

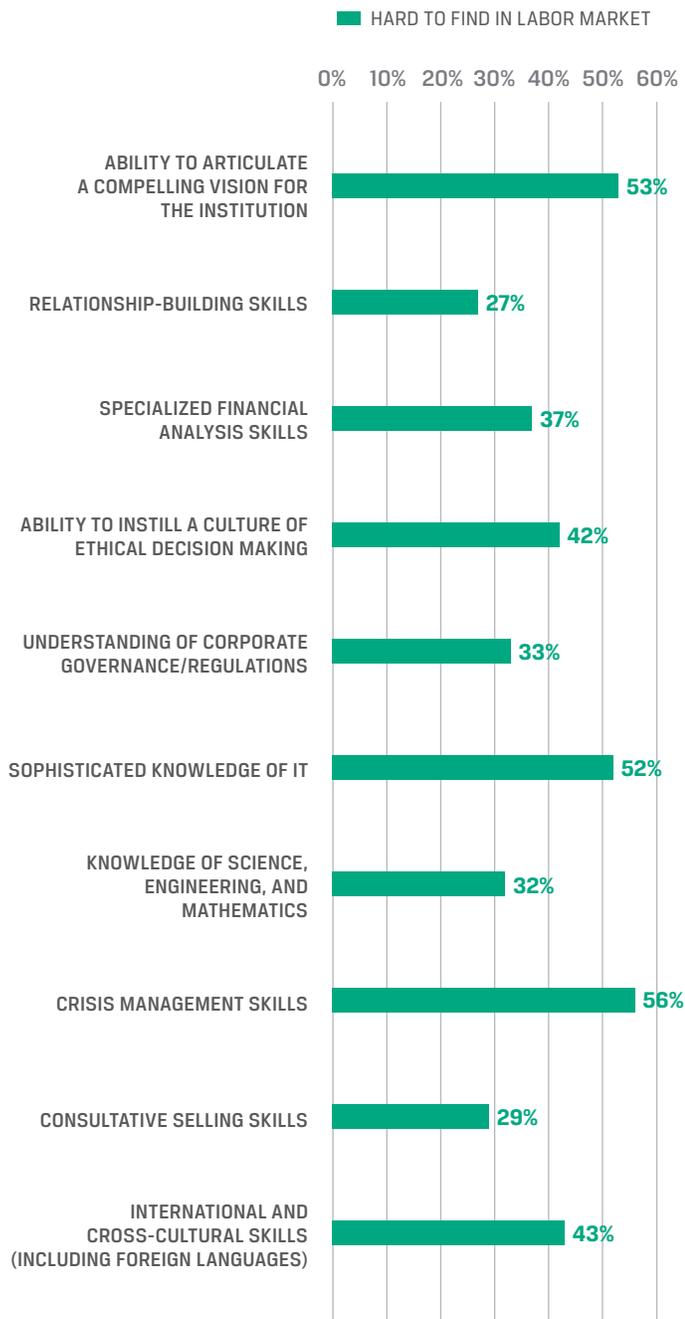
"You need the traditional skills to understand the implications of market events, but you need the interpersonal skills to relate that to others," says an emerging markets strategist. "Interpersonal skills are directly related to leadership."

Success as a CIO or portfolio manager over the next 5 to 10 years will require an ability to articulate a compelling strategic vision, say 36% of respondents around the world. "For the frontline investment adviser, there is an increasing need for people with business management skills," says a consultant to registered investment advisers. With the business model in the industry having moved from large broker/dealer firms to a firm with many smaller independent businesses, these organizations are now growing and maturing, and they can no longer afford to have a principal who is wearing many hats, juggling client relationships, and trying to run the firm. "It's going to require operations managers, chief operating officers, and people who can not only implement strategy, but come up with their own vision for strategy—leaders," he says.

MOST IMPORTANT SKILLS FOR THE FUTURE



THE DETERMINANTS OF SUCCESS ARE OFTEN THE HARDEST TO FIND



Survey respondents also note the importance of specialized financial analysis skills, particularly for CIOs, portfolio managers, and leaders of asset-owning institutions. "The investors that we look for need to have technical rigor, interpersonal skills, the ability to communicate effectively, the ability to create partnerships, and they need to have leadership skills," says the director of research at a US mutual fund provider. The head of manager research at a retirement services provider agrees: "Technical skills are the most important—you need to be able to use the tools to evaluate performance and evaluate and analyze data."

And perhaps in response to the tepid endorsement of asset managers' business practices, survey respondents selected the "ability to instill a culture of ethical decision making" as one of the top skills required for executive leadership. "Also important is being ethical," says the head of manager research at a retirement services provider, by which he means having a moral framework to recommend the best product to an investor over the higher revenue product. "For client-facing investment professionals, that is going to be critical, and fortunately, the industry is already moving in that direction," he says.

An increase in regulatory requirements also affects the skills needed for future success. Compliance costs overall have been escalating, and with that is the need for staff to manage compliance rules. According to Thomson Reuters, two-thirds (67%) of financial services firms expect senior level compliance staff to cost more because of high demand in the marketplace and the volume of regulatory change.²

Most Important Skills Are Often Hard to Find

Investment organizations looking to retool for the future face some particular challenges at the personnel level. According to our survey respondents, two of the most valued skills in executive-level investment professionals are difficult to find in the talent marketplace: the ability to articulate a compelling vision for the institution and the ability to instill a culture of ethical decision making.

From our survey, 53% say it is hard to find people in the marketplace with the ability to articulate a compelling vision for the future, and yet it is ranked as the most important skill for success in each of the three roles we examined. The ability to instill a culture of ethical decision making is also a top priority, yet 42% say it is difficult to find this skill. Perhaps refreshingly, 73% of respondents believe that professionals with relationship-building skills, another top skill, are somewhat or readily available in the talent pool.

These more general leadership skills play out in a distinct way in the investment industry. "This is a hard job, and the first thing we look for is confidence and a passion for investing," says the head of global equity at a mutual fund provider. "It requires an element of diligence and perseverance, a psychological perspective on investing, and a willingness to understand the markets and expectations around it," he says. "Investing requires an ability to figure out what's important, a maturity to understand patterns, and the conviction to develop a differentiated point of view."

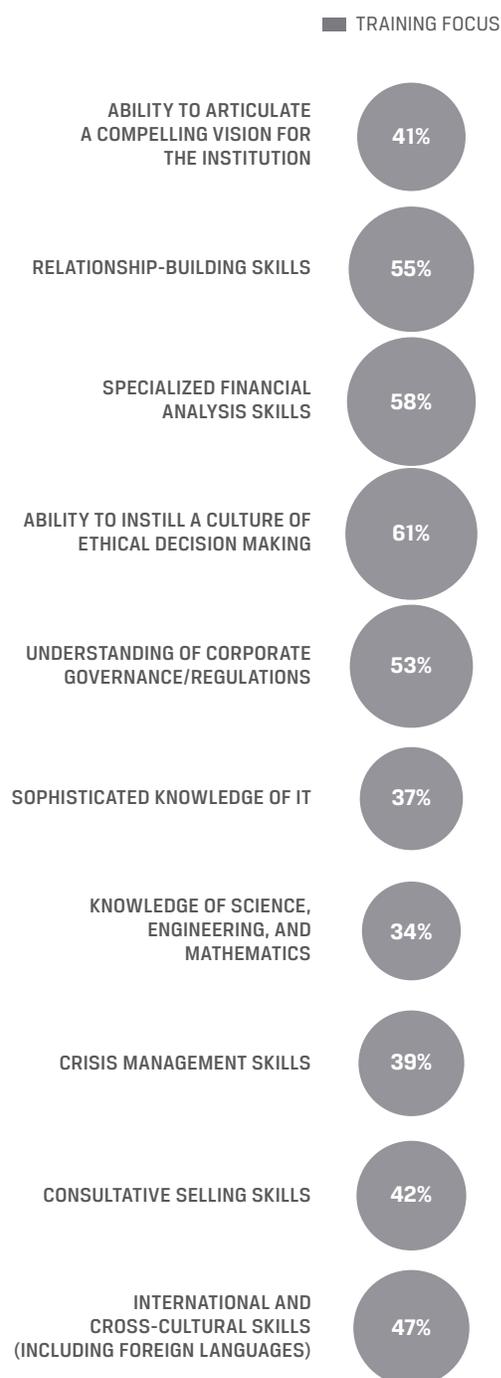
Training

How organizations build their talent pool for the next five years will depend on training, and our survey results indicate where organizations should most productively focus their training budgets. Survey respondents believe that the core training budget requirements should be focused on ethics and specialized financial analysis.

More than 60% of respondents chose ethical decision making as a priority for employee training programs, a greater proportion than any other skill mentioned. The growing acknowledgement of the need for ethical decision making is not simply a matter of good behavior, but also one of good business, say respondents. "The industry is more ethical," says a registered investment adviser consultant. "It is not necessarily because advisers are good people, although they generally are, but they also understand that being more ethical means a more profitable, successful business." He believes that higher ethical standards and regulation will be driven by market demand.

Leadership requires going against consensus at times, and as a fixed-income portfolio manager says, "It is hard to find people who are comfortable having strong opinions." Confidence develops with experience and success, so it can be difficult for younger professionals to speak up.

ETHICAL DECISION MAKING THE TOP TRAINING PRIORITY



The Role of Diversity

The other major dimension of workforce capabilities will be the contribution of improved diversity.

Diverse people are most often identified through surface characteristics (gender, race, national culture, education, sexual orientation, age, etc.), but the business case for diversity is linked to intrinsic individual characteristics, such as values, perspectives, experiences, knowledge, and way of thinking. With the complex problems faced in many investment decisions, it is easy to see how a sameness of thinking due to limited diversity can result in roadblocks to solving problems. With increased diversity, ways through the blocks can emerge.

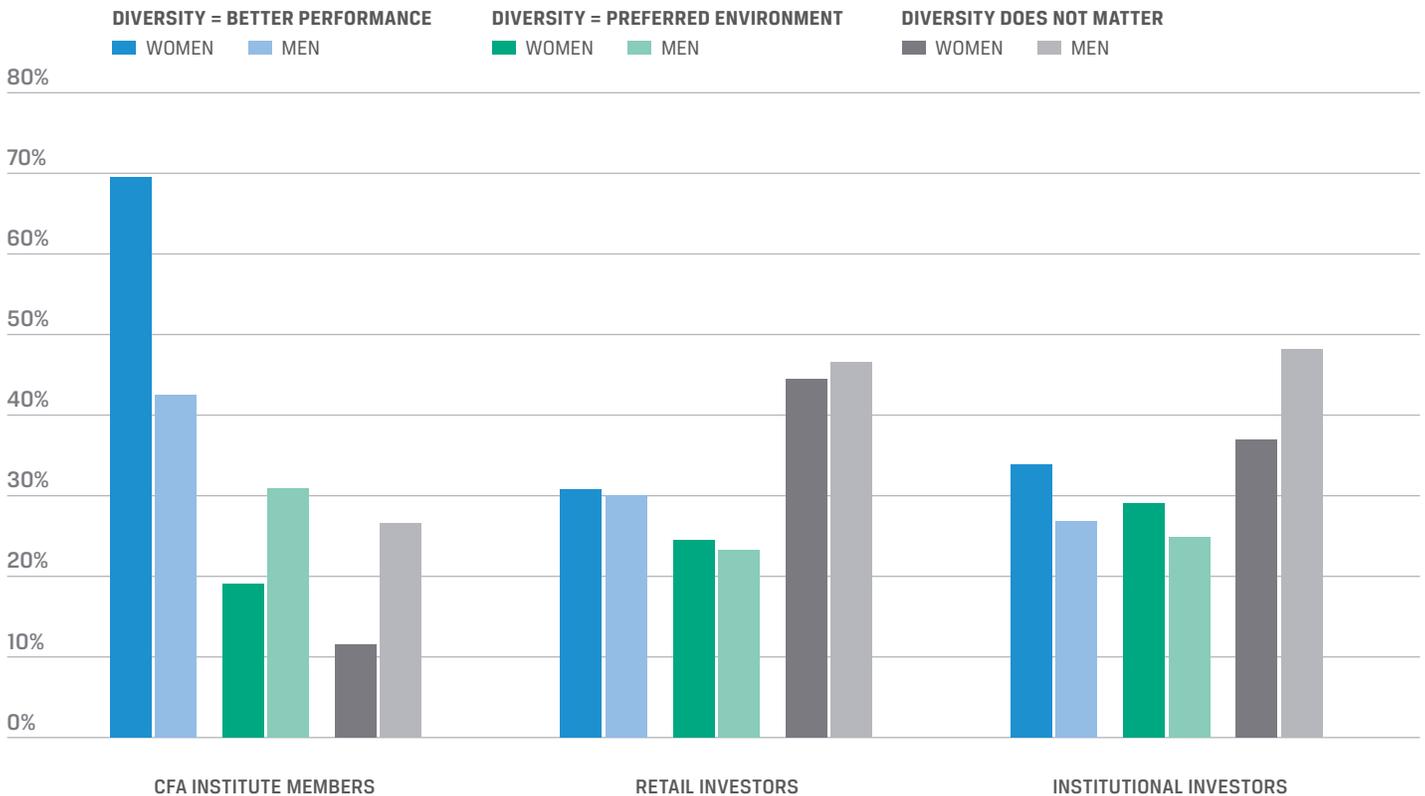
The business case for diversity is that diverse people provide more and different ways of seeing complex problems, and thus diverse teams often find better ways of solving challenges. In particular, a

growing body of research has shown the link to better performance and better culture that a gender diverse industry could have.³

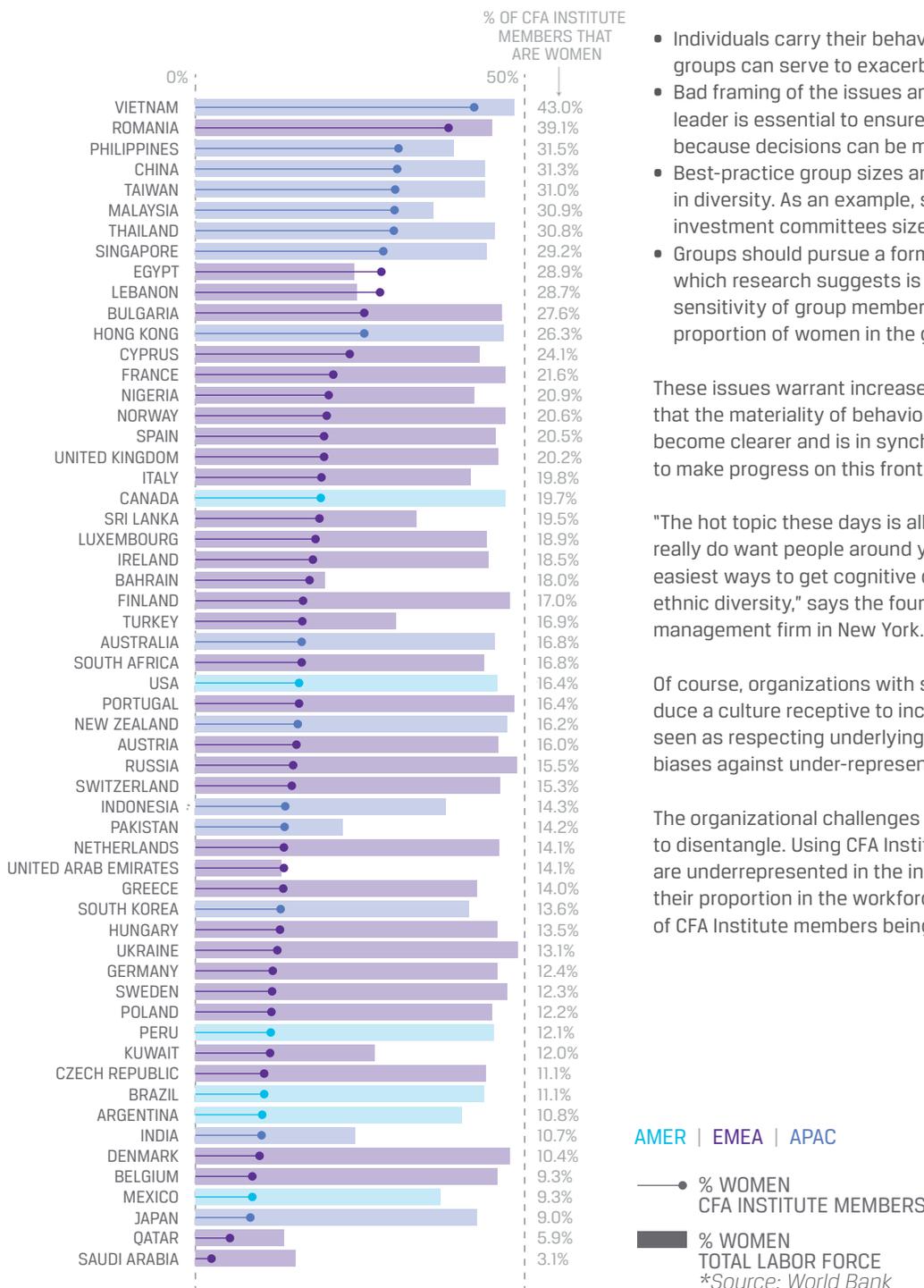
"The trends toward more fragmented regulations and markets will require diversity," says an alternative investment consultant and CFA charterholder in Belgium. "People with a broad knowledge of different cultures and different local laws and regulations will have a competitive advantage. I see more of the benefits to people who have a diverse geographical and educational background."

One survey respondent believes gaining diverse viewpoints goes hand-in-hand with training. "We define training as exposing yourself to new themes and ideas—networking with people in different roles and locations who perhaps have a completely different perspective," says a fixed-income portfolio manager at an insurance company. "It does not focus strictly on the development of an individual skill."

WHEN IT COMES TO THE GENDER DIVERSITY OF A TEAM OF INVESTMENT PROFESSIONALS, WHICH ONE OF THE FOLLOWING BEST DESCRIBES YOUR VIEW?



PERCENTAGE OF WOMEN IN TOTAL LABOR FORCE VS. PERCENTAGE OF WOMEN CFA INSTITUTE MEMBERS (BY COUNTRY)



Source: Reprinted from CFA Institute Research Foundation (2016).

Good group decisions are no easy task, but there are opportunities to benefit from cognitive diversity and overcome the risks of groupthink. There are a number of issues to balance, including the following:

- Individuals carry their behavioral biases into group situations, and groups can serve to exacerbate and validate these biases.
- Bad framing of the issues amplifies biases, and a strong group leader is essential to ensure that differing views are heard because decisions can be made only with shared information.
- Best-practice group sizes are important to hitting the sweet spot in diversity. As an example, some evidence exists to support investment committees sized between six and eight people.
- Groups should pursue a form of collective intelligence (C factor), which research suggests is correlated with the average social sensitivity of group members, conversational turn-taking, and the proportion of women in the group.⁴

These issues warrant increased attention from leadership given that the materiality of behavioral factors to decision outcomes has become clearer and is in synch with the thinking and methodologies to make progress on this front.

"The hot topic these days is all about cognitive diversity, so you really do want people around you who think differently. One of the easiest ways to get cognitive diversity is by gender diversity and ethnic diversity," says the founder and CIO of a \$550 million asset management firm in New York.

Of course, organizations with strong values around fairness introduce a culture receptive to increased diversity. The organization is seen as respecting underlying merits over conscious or unconscious biases against under-represented groups.

The organizational challenges in gender diversity are quite difficult to disentangle. Using CFA Institute membership as a proxy, women are underrepresented in the investment industry compared with their proportion in the workforce in almost all countries, with just 18% of CFA Institute members being women.⁵

AMER | EMEA | APAC

● % WOMEN CFA INSTITUTE MEMBERS
 ■ % WOMEN TOTAL LABOR FORCE
 *Source: World Bank

Indeed, the investment industry compares poorly with the legal and accounting industries in terms of entry and the pipeline to C-suite positions, which prompted CFA Institute to launch the Women in Investment Management initiative in 2015.

The significance of women's familial responsibilities, when applicable, is a factor that should be considered in the context of work flexibility within the investment industry. Evidence from CFA Institute sources suggests these broad categories of flexibility in the following table.

SOURCE OF WORK FLEXIBILITY	INVESTMENT PROFESSIONALS
Flexibility to take time off to take care of personal or family matters	Worse off than other professionals
Flexibility to change daily starting and ending times	Better off than other professionals
Flexibility to reward compensation and promotions without regard to long-hours cultural norms	Worse off than other professionals

Sources: Fender, Adams, Barber, and Odean (2016); Thomas Philippon and Ariell Reshef, "Wages and Human Capital in the U.S. Finance Industry: 1909–2006," *Quarterly Journal of Economics*, vol. 127, no. 4 (November 2012): 1551–1609.

Investment industry firms have had an unnecessary and unrecognized constraint on talent. Firms that can more fully realize the potential of the talent available to them will have an advantage.

Perhaps the most telling is the strength of the "long-hours culture," which has contributed substantially to the current weak "brand" of the investment sector as a career choice for university-qualified new entrants.

If investment organizations want to achieve an increase in diversity culture and practice needed for the future, significant attention needs to be given to these structural human resources issues, with strong support from firm leaders themselves.

Summary: New Skills for New Circumstances

- There is an increasing need for soft skills, particularly given the increasing effectiveness of technology to replace straightforward human processes.
- Leadership skills overall, and the ability to adapt to change and deal with challenging organizational settings, are in short supply. These skills together are often referred to as situational fluency.
- Training particularly needs to focus on ethical and professional orientation. Training will also be needed to support technical proficiency, which is naturally more complex than in prior experiences.
- It is critical to achieve more diversity for a business case and for improved cultural strength.
- Organizations need to increase their understanding of how to optimize human skills in group settings organized to address complex problems (such as within boards and committees).

Game Changer 2: Pensions and Lifetime Savings Models

Managing lifetime wealth is a core focus of CFA Institute and the Future of Finance initiative.

The demographic megatrend described in the "Investment Industry Ecosystem" chapter encompasses increasing aging and proportionately smaller workforces in most economies. These issues are among the most difficult of our time. Pension funds are one of the most important ways to deal with these challenges, but there is evidence that they will have to adapt significantly to play their part.

The data suggest that managing lifetime wealth is where the majority of the investment industry applies its craft, and pension funds lead this investment segment.

- Pension funds are the largest single category of assets under management, amounting to around \$40 trillion at the end of 2016 (see country breakdown in the table).
- There are 300 funds that make up 50% of pension fund assets, with asset size amounting to sums between \$15 billion and more than \$1 trillion. Conservative estimates suggest that there are more than 100,000 pension funds overall, with the vast majority of funds by number being less than \$100 million in asset size.
- In the lifetime wealth management segment, private wealth is estimated to be worth \$32 trillion.
- The insurance (\$28 trillion) and mutual fund (\$28 trillion) segments include significant assets designated for retirement; the sovereign wealth fund segment (\$6 trillion) includes a small amount of assets designated for retirement.

Source: Willis Towers Watson and secondary sources.

¹ Only includes pension assets from closed entities.

² Only includes Enterprise Annuity assets.

³ Only includes pension assets for company pension schemes.

⁴ Does not include the unfunded benefit obligation of corporate pension plans (account receivables).

⁵ Only includes autonomous pension funds. Does not consider insurance companies.

⁶ Includes IRAs.

PENSION FUND ASSETS BY COUNTRY

COUNTRY	2016 TOTAL ASSETS (USD BILLIONS)	ASSETS/GDP
AUSTRALIA	1,583	126.0%
BRAZIL ¹	251	14.2%
CANADA	1,575	102.8%
CHILE	172	73.0%
CHINA ²	141	1.2%
FINLAND	199	83.2%
FRANCE	146	5.9%
GERMANY ³	415	11.9%
HONG KONG	133	42.0%
INDIA	105	4.7%
IRELAND	130	42.2%
ITALY	153	8.2%
JAPAN ⁴	2,808	59.4%
MALAYSIA	190	62.7%
MEXICO	154	14.5%
NETHERLANDS	1,296	168.3%
SOUTH AFRICA	207	73.8%
SOUTH KOREA	575	40.9%
SPAIN	39	3.1%
SWITZERLAND ⁵	817	123.3%
UK	2,868	108.2%
US ⁶	22,480	121.1%
TOTAL OF 22 COUNTRIES	36,435	62.0%
ESTIMATED GLOBAL TOTAL	39,000	NA

There are three main attributes that pension organizations will require in the future:

- A strong governance model, with transparency and efficiency being central factors.
- A progressive investment model that emphasizes a barbell strategy, which combines growth investing for long-term liabilities and income investing for short-term liabilities.
- Effective collaboration with the sponsoring employer. This collaboration is a form of social capital that depends on the shared values, beliefs, and purposes in pension arrangements. This social capital will be strengthened by good engagement, communication, and mutual trust, with both parties seeing value in the arrangements.

Much has been written about the decline of defined benefit (DB) pension funds in most developed economies. This decline seems likely to continue because of eroding trust in DB pensions given the loss of pension security when deficits cannot be corrected. DB pensions will likely become an area of increasing litigation, with further implications for trust.

There are multiple causes for problems with DB pensions, but the decline in the social capital between employer and employee—the

Pension engagement and advice are ripe for disruption—it has an outdated business model that workers do not trust. The private pension system can rebuild itself, but it must pay attention to new models that use technology more efficiently.

key win-win payoff—has often been a contributory factor. Corporate sponsors of pension funds have lacked faith that they can successfully meet the unpredictable costs of DB pension deals when times get tough, and increasingly they see the deal as win-lose. But there is a design they do like—the alternative of defined contribution (DC) plans—largely because it produces predictable costs and can fulfill the trust principle.

Central to successful DC plans is how the governance is designed to manage the pursuit of complex organizational goals with multiple parties involved, as well as how it provides extreme clarity of expectations, high-level stakeholder management to achieve efficiency and fairness, clarity of communication, and meaningful measurement.

In all institutional settings, we like to measure processes through to their ultimate outcomes. But pension funds are an evergreen vehicle, so the measurements must be focused on progress and inputs as much as outcomes.

In the investment model, there is much to admire about the innovations developed in global best practices. These include global investing that enables greater diversification relative to home-biased approaches, exposure in private markets, and investing through passive funds and risk factors. One particularly important innovation is the barbell design in which earlier life accrual of returns is complemented by later life generation of income. In DB pensions, this is liability driven investing. In DC plans, this is lifecycle investing in default funds.

DC investing presents a particular challenge for communication. We see best practice as giving an authentic account through an array of measures and indicators. There are temptations toward partial accounts that are light on facts and heavy on opinions, but a strong fund is effective in telling a clear and authentic story.

Both governance and investing also need a stronger member engagement model that addresses the obvious limits of financial literacy. Better answers lie in harnessing a mixture of technology, social media, and behavioral finance. A good example is the auto-enrollment design, which successfully encourages pension savings. Pension fund members do not expect much engagement, but they do expect some empathy with their circumstances along with fair treatment.

Much of the weak engagement we see in DC plans is also evident in the post-retirement arena. Opportunities abound for private sector products to innovate successfully by integrating longevity insurance and health care costs into later life pension savings.

There is one further critical feature of future pensions: How pension funds create trust. The pension commitment is in play over a lifetime. In fast-changing times, it is understandable if people doubt that the commitments made to them at the outset will be honored. Who knows what can happen? Trust in the system and the funds themselves varies widely, but it is not spectacularly high anywhere.

Trust generally reflects recent experiences. Countries that have been shortsighted in not honoring past promises pay a price in trust, as do overhyped funds. Without trust, pension contributions will lag, as will retirement income, wealth, and societal well-being.

Technology and leadership are also needed. Technology should be used to lower the high costs in the current funds and sharpen the personalization of the offering through the quality of the investment platform. Leadership should be used to extend the reach of efficient pension delivery and increase the trust.

The pension system obviously cannot be left to market forces alone, and some regulatory protections are necessary. What is critical is that public pension policy be the result of good dialogue and process and properly reflect the views of state and pension industry entities.

Of course, the central missing piece in successful private pensions is the level of contributions. For adequate retirement income, the requisite working lifetime contribution experts suggest should at least average 10% of lifetime pay. The average contribution levels attained currently fall well short of this figure.

Under most scenarios, this shortfall will be difficult to fix. If all workers raise their savings by the amount necessary to retire on half of their final working income at 65 or even 70, GDP would fall by an amount that would easily match the last recession. It would be a bit better if they were to work to age 75, but are there the jobs or the desire and/or capability to support that?

Alternatively, and more likely, if workers continue to spend and save as they have, their retirement income will meet a fraction of their goals, reducing future income. Spendable income ultimately falls in this case, and again, with recessionary consequences. And, of course, as people live longer, the societal cost goes on for longer.

Regulatory machinery is part of the problem, and not yet part of the solution in this regard. For pensions to play the significant part they can in addressing the demographic challenges, pension policy needs to take a big step toward creating the conditions in which they can succeed.

There are some examples of countries doing good things—the best example is probably Australia. Every national pension system has its own unique context, but the design of DC plans has many universal features. Pensions regulators would do well to follow the principle of global best practices when possible and local practices when necessary.

The new order and disorder in pension winners and losers will generate societal anger and produce public policy dilemmas and the desire for populist fixes. With too much left to chance, large gaps in pension coverage and many longevity issues are prime conditions for pension poverty to emerge. The only apparent offset is later retirement.

Although the cloudier picture is in private pensions, the brighter part of the picture is that with a larger global middle-class, lifetime savings should be expected to grow in the wealthier segments. The lifetime saving and wealth model will increasingly be a case of individual choice. The key issue is how effective this system can be. This effectiveness will be critically determined by how much trust is produced, which is our third game changer.

Summary: New Pensions and Lifetime Savings Models

- Experiences with pensions are widely dispersed among countries that have sizable private pension assets and those that do not. The track records of governments developing effective pension policy have been mixed. Much smarter policies are necessary.
- Best practices are usually found where there is a win-win between employers and pension funds, and where trust and strong institutional governance are in place.
- Pension engagement and advice are ripe for disruption—it has an outdated business model that workers do not trust. The private pension system can rebuild itself, but it must pay attention to new models that use technology more efficiently.
- Increasingly, private pensions will follow the defined contribution model, in which the flexibility of the investment platform and the behavioral facets of investment design are critical drivers of success.
- Low levels of contribution and low returns produce inadequate retirement income, requiring longer working lives.
- Investment organizations of other types of savings and wealth become more prominent to fill any pension fund gaps. Whatever model of lifetime wealth is used, trust is critical to the model.

Pensions regulators would do well to follow the principle of global best practices when possible and local practices when necessary.

Game Changer 3: Evolving States of Trust

Establishing trust between end investors and their asset managers is a key part of putting investors first, an area of CFA Institute focus in its Future of Finance initiative.

A key trend in the investment industry is how investment clients and customers are increasingly looking for personalized, simple, and speedy products—consistent with their experiences with new technology. But this requires trust, which has to work effectively over prolonged periods.

In previous research, CFA Institute focused on how trust works in the investment industry by studying

- changing investor preferences and the implications for investment management.
- factors in investor trust levels in financial services relative to previous levels, and how these are changing over time in different geographies.
- how investment firms can differentiate themselves along dimensions of performance, costs, client service, firm operations, personalization, ethics, and reputation.

Trust in financial services remains low relative to other industries, ranking 9th out of 12 industries. The latest figures from Edelman confirm this weak relative state, but there is some recent encouragement. Since CFA Institute and Edelman conducted the Investor Trust Study in 2013, investors' trust in the financial services industry to do what is right has generally increased. In addition, investors have a slightly more favorable view of the industry (61% for retail investors, 57% for institutional investors⁶) versus the general public surveyed in the 2016 Edelman Trust Barometer (51%), but in both groups, financial services remains in the bottom tier of trust relative to other industries.

Globally, trust levels for the financial services industry are converging, possibly reflecting greater interconnectivity of the financial sector in global markets.

Edelman's analysis suggested that industry providers should recognize new avenues for developing organizational trust. The ideas relevant for the investment industry include the following:

- Increasing the societal impact of the organization's activities
- Expressing the organization's values more actively
- Igniting the natural advocates of all organizations: their employees
- Engaging stakeholders on their concerns and interests

It is a relatively new idea that to build trust, investment organizations should demonstrate increased societal responsibility. Values are particularly important in forming trust, with 79% of respondents in the 2016 Edelman Trust Barometer survey saying that a CEO's personal values are important in building trust. In addition, a majority of respondents believe companies focus too much on short-term results and too little on positive long-term impact.

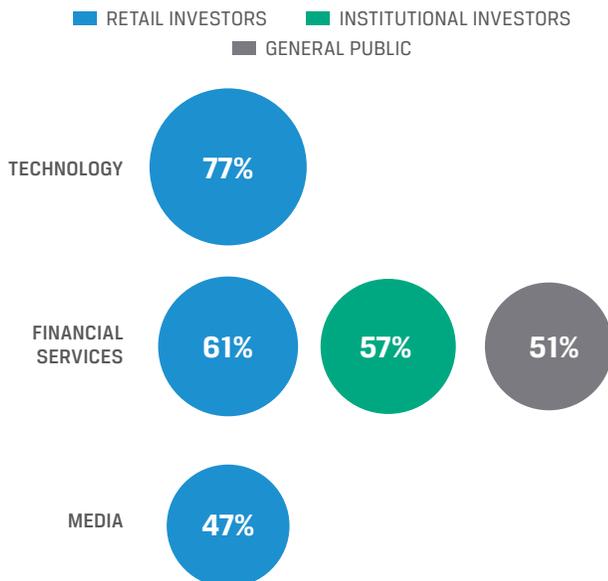
There are particular opportunities for organizations to differentiate themselves by being more purpose driven, which is increasingly something that CEOs are being asked to do. Trust depends on areas in which leaders' presence is key, including alignment of interests between the organization and its clients; strong organizational values, particularly excellence and integrity; and support for communications and transparency.

Trust is helped by the application of fiduciary duty in which agents act to prioritize the interests of their clients by upholding ethical codes or regulatory standards. The strength of fiduciary duty remains inconsistent across geographies and customer segments, but over time it appears that more investment activities will be held to this standard. Building a professional organization goes hand-in-hand with a fiduciary mindset.

To help develop a client-serving culture where the organization's professionals "do things right and do the right things," it is essential that leaders instill and champion a professionalism framework and fiduciary mindset. The CFA Institute *From Trust to Loyalty* study found that in the top attributes in working with an investment firm, many are connected to that fiduciary mindset, as shown in the following graph.

TRUST LEVELS BY INDUSTRY

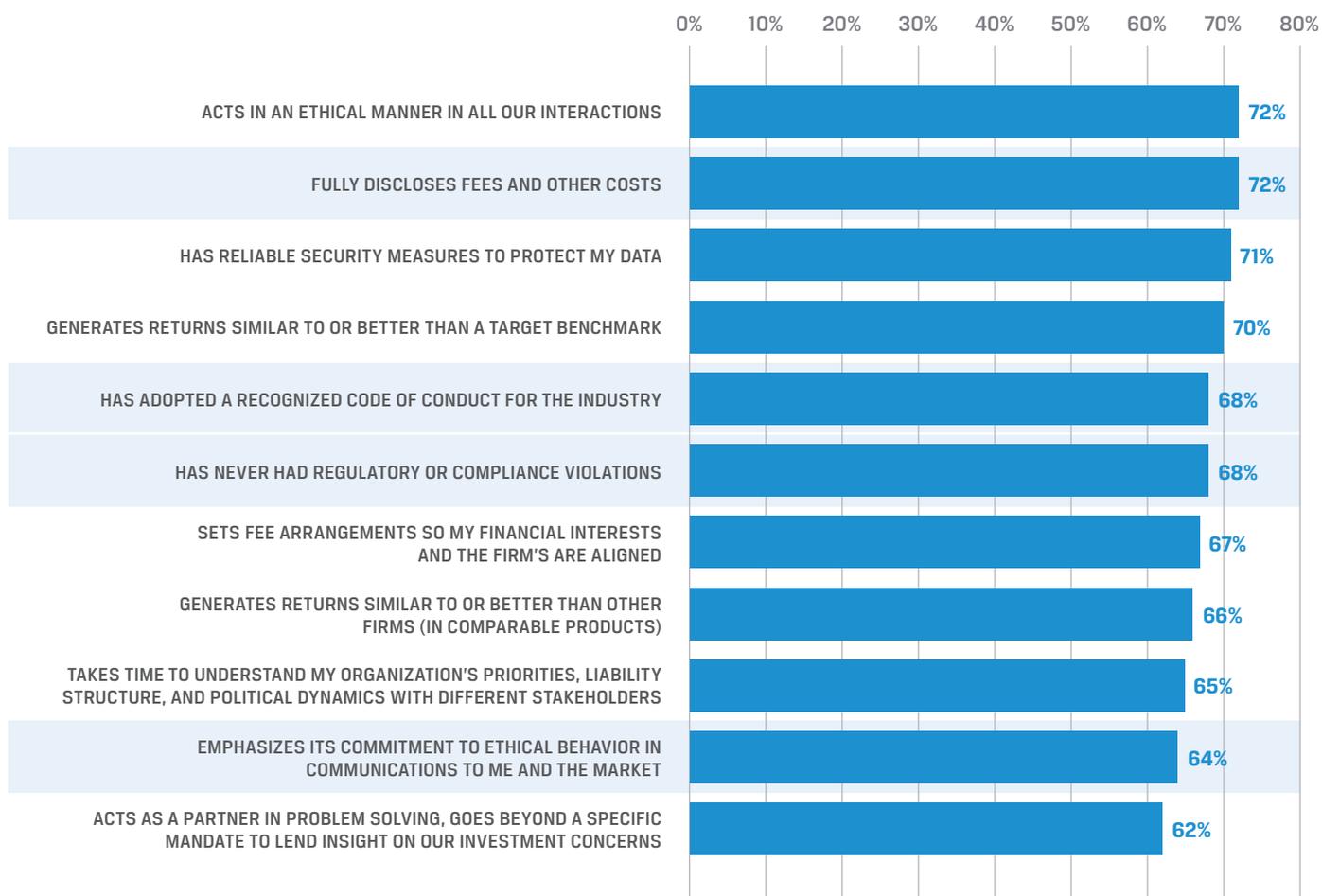
QUESTION: HOW MUCH DO YOU TRUST BUSINESSES IN EACH OF THE FOLLOWING INDUSTRIES TO DO WHAT'S RIGHT?



Sources: CFA Institute, *From Trust to Loyalty: A Global Survey of What Investors Want* (2016) and 2016 Edelman Trust Barometer.

HOW IMPORTANT ARE THE FOLLOWING ATTRIBUTES WHEN IT COMES TO WORKING WITH AN INVESTMENT FIRM?

RESPONSES BY INSTITUTIONAL INVESTORS

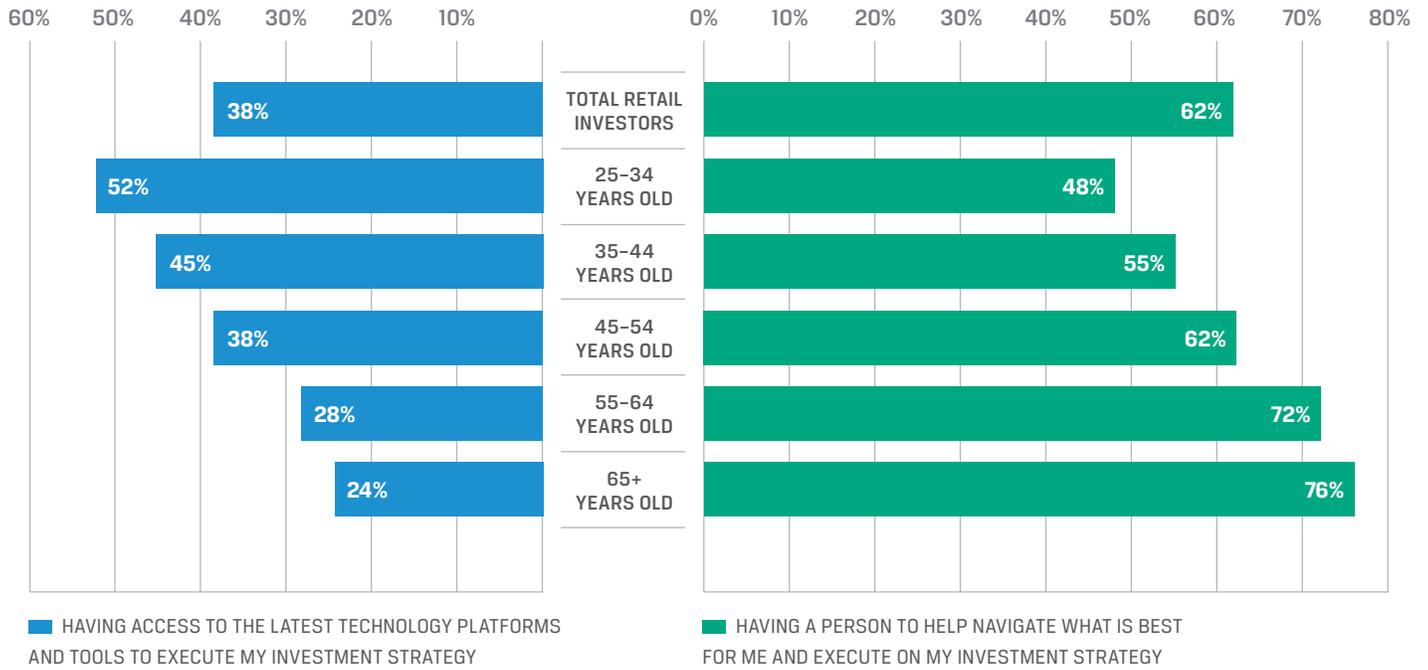


Source: CFA Institute, *From Trust to Loyalty: A Global Survey of What Investors Want* (February 2016).

The impact of technology on trust needs to be considered as well. Although many older buyers of investment services will only give their trust to people, an increasing demographic segment views this differently. Their trust in technology can be extended into their purchase of investment services. The data in the *From Trust to Loyalty* study show that more than half of those 25–34 years old are more positive about technological methods of receiving advice relative to the personal approach. Their experiences over time will matter in how well this trust model develops.

The use of new technologies, such as blockchain, applies in the intermediation of trust in various facets of the financial services spectrum. Blockchain removes the need for any kind of third party to facilitate an exchange in a transaction. The trust must exist in the idea, and people must trust the platform, the spreadsheets, and the time stamps, but trust in another person is not necessary in the traditional sense. *The Economist* described blockchain as the "great chain of being sure about things."⁷ The implications are massive, and the place of technology in trust is very clearly a new paradigm for the future.

IN THREE YEARS' TIME, WHICH OF THE FOLLOWING DO YOU THINK WILL BE MORE IMPORTANT TO YOU?

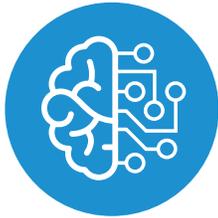


Source: CFA Institute, *From Trust to Loyalty: A Global Survey of What Investors Want* (February 2016).

Summary: Evolving States of Trust

- Trust is mediated by the values, competencies, and transparency of investment organizations.
- Better levels of trust reflect a particular type of communication model: communicate early, fully, and often and communicate to fill gaps in understanding. Disclosure is not enough.
- To build trust, show societal responsibility. Deliver to expectations in competency and ethical practice, and add consistent value in clients' savings and wealth.
- Trust will reflect the trustworthiness of investment industry professionals, and trust will rise in the industry if it makes its selection of future talent based on professional values.
- Trust will be influenced in the future by innovation in technology, such as blockchain.

INVESTMENT ORGANIZATIONS UNDER EACH SCENARIO



Fintech Disruption

New technologies promote new business models; disruption and creative destruction are endemic; challengers do better than incumbents; major disruptions to the world of work.

New technologies allow new business models and new businesses into the investment industry. The success of these new models and new players determines the level of disruption and disintermediation. There is much potential for innovation and disruption, creation and destruction.

Nearly half of the respondents to our survey to inform this report believe that new information technologies provide an opportunity for their organizations.

We apply again one of the key principles of the ecosystem and we should consider the impact in the segments. Of course, asset owner organizations are not overly affected, asset manager organizations are most affected, and other organizations that play the supporting roles must adapt.

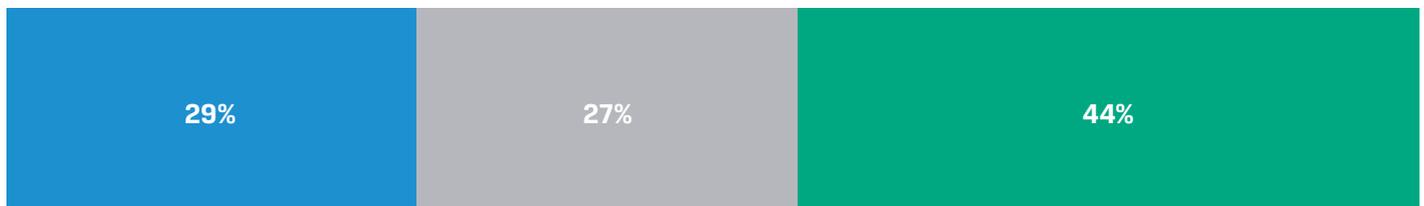
For all companies, the rise of fintech means lower cost of capital. This holds true wherever information is digitized, large, and easily assessed. However, providers of capital face classic challenges, such as credit and liquidity risk, where there is poor digitization and dissemination of data.

Investment banks and commercial banks are severely threatened by fintech because their "spread" business models look increasingly less like agency and brokering and more like rent extraction. Put another way, if algorithms can identify possible fundamental transactions, analyze fundamental transactions, and create fundamental transactions at scales much larger and done much faster than 20th-century finance, then who needs a bloated intermediary?

The world of work has some of the greatest adaptations to make. Algorithms can very often substitute for cognitive tasks in an era of thinking about the world in computational, programmable, designable terms. The collection of enormous quantities of data will enable modeling of social systems at extreme scales and help uncover new patterns of relevance in both idea generation and client service. One key human value task, however, that of making sense of things, remains sticky.

IN THE NEXT 5-10 YEARS, NEW INFORMATION TECHNOLOGY IN THE INVESTMENT MANAGEMENT INDUSTRY WILL...

■ POSE A STRATEGIC THREAT TO ORGANIZATIONS LIKE MINE ■ NEUTRAL ■ OFFER STRATEGIC OPPORTUNITIES TO ORGANIZATIONS LIKE MINE



DC funds will find fintech useful in putting more computerized content into delivery models, notably the significant use of big data with members, and the redesign of DC user interfaces recognizing the power of behavioral economics to influence better decisions.

The new work model is essentially cyborg in nature (person plus machine), with human skills being critical in soft skill areas. Humans will remain in demand for their situational fluency, social intelligence, innovation, creativity, and social media savvy. Roles in information technology remain a growth area for specialists, as will interdisciplinary, cross-cultural, statistical, and creative design areas.

"The most successful firms will figure out how to make fintech work to their advantage and not see it as a threat," says a research director and consultant focused on investment advisers. "They will use it to combine what they are doing on the relationship side and leverage it to make for a higher-quality client experience overall. They will also get more mileage out of the scarce labor resources that they have to draw on within their own firms."

As fintech firms enter the marketplace, traditional firms will need to adapt, so leaders will need a clear vision to determine a way forward. Financial advice is at obvious risk from algorithmic processes, as robo-advice has shown. The CIO of an asset management firm says, "[Wealth managers] will just have to change the way they do business and explain their value proposition to end clients." One key to thriving amid disruption is an awareness of the shifts in professional capabilities required to prevail and to lead in the future.

Those firms that decide to purchase fintech firms or otherwise expand their technology platforms will need to hire experts with

knowledge of science, engineering, math, and information technology. Even though the role of CEO will not likely require hands-on technical work, leaders with technical backgrounds in this area will have an edge. CIOs may find a greater need to learn these skills directly to understand the models applied to their portfolios.

Algorithms can substitute for nonroutine cognitive tasks, but they have their limits. Portfolio management has a natural use for big data along with a high risk of substitution in terms of asset allocation tasks. In addition, human cognitive processes have behavioral biases that algorithmic processes do not, aside from any biases within models themselves.

Some skilled activities in the investment industry, however, remain at low risk for substitution:

- **Creative intelligence:** Developing unusual and innovative ways to see and solve problems, forward-thinking theories, and 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

In terms of the 10 skills discussed earlier, we believe the most necessary ones for investment organization success in competing in the Fintech Disruption scenario are

- the ability to articulate a compelling vision for the institution,
- the ability to instill a culture of ethical decision-making,
- knowledge of science, engineering, and mathematics,
- sophisticated knowledge of IT (e.g., programming, artificial intelligence), and
- understanding of corporate governance/regulations.

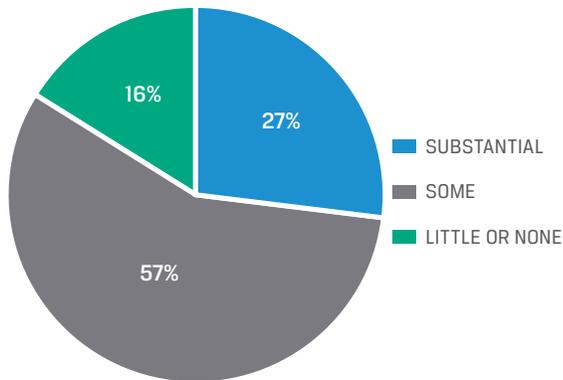
An equity portfolio manager at an insurance company notes, "The most important skill will always be critical thinking. Technical skills are not necessarily the most important. Increasingly, you can find them externally and use them to augment your own critical-thinking abilities."

RISK OF ROLE REPLACEMENT

ROLE	LIKELIHOOD OF REPLACEMENT (PERCENTILE)
CHIEF EXECUTIVES	10
ACTUARIES	30
FINANCIAL ANALYSTS	31
OTHER FINANCIAL SPECIALISTS	35
ECONOMISTS	40

SOURCE: FREY AND OSBORNE (2013).

EXPECTATIONS FOR CONSOLIDATION OF PEERS AND COMPETITORS IN THE NEXT 5-10 YEARS



An equity portfolio manager at an insurance company notes, "The most important skill will always be critical thinking. Technical skills are not necessarily the most important. Increasingly, you can find them externally and use them to augment your own critical-thinking abilities."

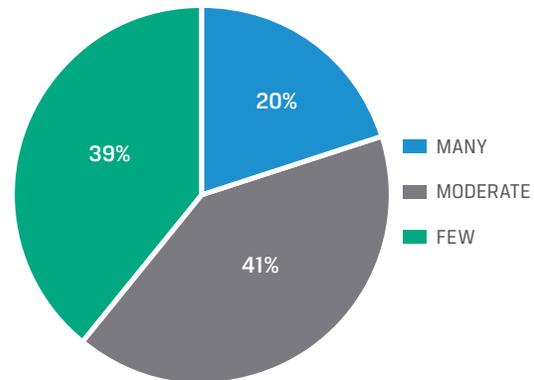
Overall, research conclusions place investment management in a relatively low-risk category for susceptibility to computerization impact among 702 occupations.⁹ The CEO and CIO need particular skills to be persuasive with others in collective settings, such as with boards and investment committees. The skills are consistent with the soft power that politicians use to channel others' thinking in directions that seem positive to both.

Although some will desire low-cost, tech-centric advice, many clients have more complicated situations and need real guidance. They may pay more, but they will get more. "So instead of everybody just charging one percent, it is going to become more complicated—more like menu pricing," says a portfolio manager at a regional registered investment adviser firm, noting that squeezing the costs out of managing smaller accounts will become an absolute necessity. "You need to have the technology to be able to manage money efficiently so that you can focus that valuable human time—those highly educated, credentialed people who don't come cheap—on the more custom situations, the highest and best use."

Regulatory and corporate governance matters are also important in the Fintech Disruption scenario because regulators are keenly interested in these new tech-driven products. Regulatory scrutiny and cybersecurity risks pose obstacles to wider adoption.

Traditional asset manager organizations may respond to the multiple pressures by surrendering old business models. At first, this response looks like cutting expense ratios, navigating to the less disintermediated places, and consolidating to preserve financial viability. Most respondents in our survey believe that consolidation will be a big factor in the future, with 88% believing there will be some or substantial consolidation.

EXPECTATIONS FOR NEW COMPETITORS AND MARKET ENTRANTS IN THE NEXT 5-10 YEARS



"Fees have to come down, obviously, because of the discrediting of active management. But with more robust technology, we will not need to hire as many people to pick stocks actively," says a CEO of an asset management firm. He notes that lower fees will weed out those managers that do not have a global platform and will force them to find solutions through mergers and acquisitions. "When this process is over, in a couple of decades, we will be left with only one or two dozen players that will probably be able to dictate the terms," he says. Few respondents—just 16%—foresee little or no consolidation. Similarly, 59% of respondents expect many or a moderate number of new competitors to enter the industry in the next 5-10 years.

As time goes by, though, the old business models wither and die, and there is a growing switch to automated products. This move should involve more surface simplicity, but not at the expense of less sophistication. Higher levels of artificial intelligence coupled with big data, and large asset scale, lead to new and very sophisticated product innovation. Two thought experiment examples may help to explain this possible new reality.

Annaka engages a robo-adviser and begins the relationship by answering a highly sophisticated personality questionnaire, or through a headset brain scan. Preferred time horizons are a portion of this information, along with risk intelligence. This trove of excavated data is then used to construct financial products that are unique to Annaka: Hyper-focused and beta-type strategies that deliver capital returns in service to those carefully delineated goals.

William is a DC participant who uses his pension fund platform based on similar excavated data methods to track his journey toward a planned retirement income. He gets his progress report through his personal device and periodically adjusts his contributions to keep on track.

Here investment—returns relative to risks—become unique, like an investing fingerprint. 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.

The service checks the new boxes: personalized, simple, speedy, and trustworthy.

Other fintech technologies related to intermediaries become commonplace to deliver that trust, such as trade settlement, real estate, credit card purchases, and so forth, and are handled by a handful of blockchain networks with vast acceptance among regulators, governments, and transnational authorities (e.g., the International Monetary Fund, World Bank, and OECD).

Technology allows for customized approaches akin to an "investment fingerprint."



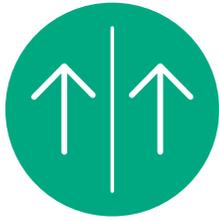
This story is about investment delivery organizations—those that assemble and distribute. When it comes to traditional investment management organizations that are component providers to the assembly organizations, where do they come in given the natural move toward betas, both bulk and smart? There is still active management that survives in this scenario as a boutique luxury product. In particular, in the developing world, large opportunities remain for active managers where there is poor digitization of data and lack of market structures to provide liquidity. In other words, active management does what it has done well since the earliest days of capitalism—provide intelligence and wisdom in emerging situations.

How do organizations deal with capital formation? It is decentralized in networks based on technology rather than traditional investment banking relationships, with a decline in the high-margin middleman. Analysts are still charged with evaluating the quality of deals, but they are also robo, as techniques of financial statement analysis, valuation, and even evaluating executives' qualities are largely automated. Software currently exists to evaluate the candor and veracity of statements issued by management, both in text and live. Troves of data are likely to be created to help support traditionally difficult-to-evaluate businesses, such as distressed and illiquid assets, and early-stage firms with angel investors, seed funding, or venture capital backing. Traditionally, analysis has relied on benchmarks and experience, but with big data and artificial intelligence, it becomes easier to ascribe value to these situations.

Lastly, an important issue for consideration when much of fiduciary responsibility is built into sophisticated information technology architectures and products is who is responsible when things go wrong? In other words, an exploration of ethics and governance nuances is likely to be needed in this scenario.

Impact on Investment Organizations in the Fintech Disruption Scenario

- Technology provides many opportunities for more efficient practice in the industry. But although costs can be contained, margins are significantly reduced for traditional portfolio management as pricing pressures develop. Value add and margins are created by hypercustomized and personalized client products.
- Traditional mutual fund products are offered as loss-leaders within these products.
- Active management becomes a boutique offering and succeeds where digitization of information and liquidity is poor.
- Financial services is set for declines in the size of its workforce, with an impending moment of peak employment. The number of investment professionals within the industry reaches that moment probably a few years later, given its greater reliance on soft skills.



Parallel Worlds

Different segments—by geography, generation, and values—engage in society differently; a higher baseline for financial services participation, but with wide dispersion; product preferences for personalization, simplicity, and speed.

Broader Involvement in Markets, But Differing Opinions Are Magnified

In this scenario, actors that are currently not fully included in capitalism see increasing equality. Examples include women, minorities within countries with clear majorities, and less-developed regions, both politically and economically.

In our survey results, we found a mix of views between those who agree with this statement on equality (50%) and those who are uncertain (32%). A minority of 18% disagree. What would the implications of these results be?

The driver for this change is the universal dispersion of social media and other nontraditional media, such as texting. These technologies allow huge numbers of the disenfranchised to peer into the lives of others and to see how they live, including their economic opportunities and benefits, as well as their moral values. It offers some hope of a better life to those with fewer resources, but also creates resentment as issues of fairness arise. Fundamentally, people can view fairness as either equality, or as earning equal rewards for the same effort.⁹ The role of circumstance—for example the location of

one's birth and family wealth—becomes more evident as the world becomes more interconnected.

As previously mentioned, and particularly relevant to investment organizations, a quality of life parity emerges globally as the difference in access to necessities blurs between economic classes. Significantly, younger generations place a higher premium on customization than expense when defining luxury. Investment organizations should thus strive to facilitate customized financial products.

Innovation and Product Development

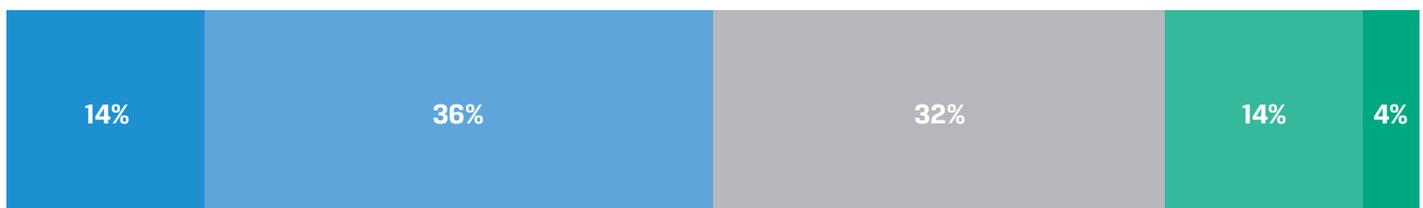
Meanwhile, if more of the world's people become better educated, it is likely that increased levels of innovation will follow. Thus, accelerated global economic growth is a possibility. A very positive result for finance then is the emergence of a global middle class with these new economic entrants needing their large savings to be invested.

The Parallel Worlds scenario recognizes the benefits of customization and personalization across segments, starting with gender, age, and geography, but with the potential to reflect more of the investor's personal value system in investment products and services.

This change requires investment firms to structure their organizations to offer personal, simple, speedy, and trusted engagement in investment products, which is enabled by the use of big data. The

ECONOMIC ACTORS WHO ARE NOT FULLY INCLUDED IN CAPITALISM TODAY WILL SEE AN INCREASING EQUALITY OVER THE NEXT 5-10 YEARS

■ STRONGLY AGREE ■ AGREE ■ NEUTRAL/NO OPINION ■ DISAGREE ■ STRONGLY DISAGREE



IN THE NEXT 5-10 YEARS, GLOBALIZATION IN THE INVESTMENT MANAGEMENT INDUSTRY WILL ...

■ POSE A STRATEGIC THREAT TO ORGANIZATIONS LIKE MINE ■ NEUTRAL ■ OFFER STRATEGIC OPPORTUNITIES TO ORGANIZATIONS LIKE MINE



possible efficiency is unprecedented but also allows for manipulation of personal feelings by companies and political factions.

Developed world economies also benefit in this scenario because large-scale infrastructure rebuilding projects are undertaken, which is done to not only preserve and grow economies but also to provide opportunities for people.

Global Opportunities and Risks

The emergence of a global middle class, particularly in Asia, provides opportunity. Furthermore, these new economic entrants need their lifetime savings to be managed both in an accumulation phase and then in a drawdown phase along with needs for longevity protection.

Investment management firms bring sophisticated qualitative and quantitative analysis to bear on the discovery of information where there is poor transparency. Analysts return to the roots of investment management by pulling out their analytical magnifying glasses to evaluate investment opportunities far flung from the busy rush of London, Hong Kong, Tokyo, and New York.

Just more than half of our survey respondents believe that globalization is an opportunity for their firms, and only 18% view it as a threat.

Given the potential for globalization to benefit investment organizations, the Parallel Worlds scenario is a particularly important one. Additional value add for the investment industry in this scenario is in helping to form secondary markets in nations and regions that are lacking them. These markets lead to better price discovery and liquidity, and, in turn, to accelerated capital formation for the benefit of the previously disenfranchised. Customers for these services exist at the level of nations, such as sovereign wealth funds, but also among an emerging middle class that seeks traditional financial services, too.

The Parallel Worlds of Retirement

In the retirement space, a Parallel World environment has existed for many years, as some enjoy generous benefits and many have no coverage. This subject varies greatly across countries. In China and India, for example, the family structure has to date been set up to provide for intergenerational support. The concept of retirement in the West has been a relatively recent construct. The challenges with defined benefit promises has meant that most of the younger generation does not have this benefit or does not put much faith in receiving it in its entirety.

Asset owners will need to adapt how they work with beneficiaries, and on the defined contribution side they need to use more tactical encouragement to attract contributions, such as auto-enrollment and auto-escalation, trends that are already underway.

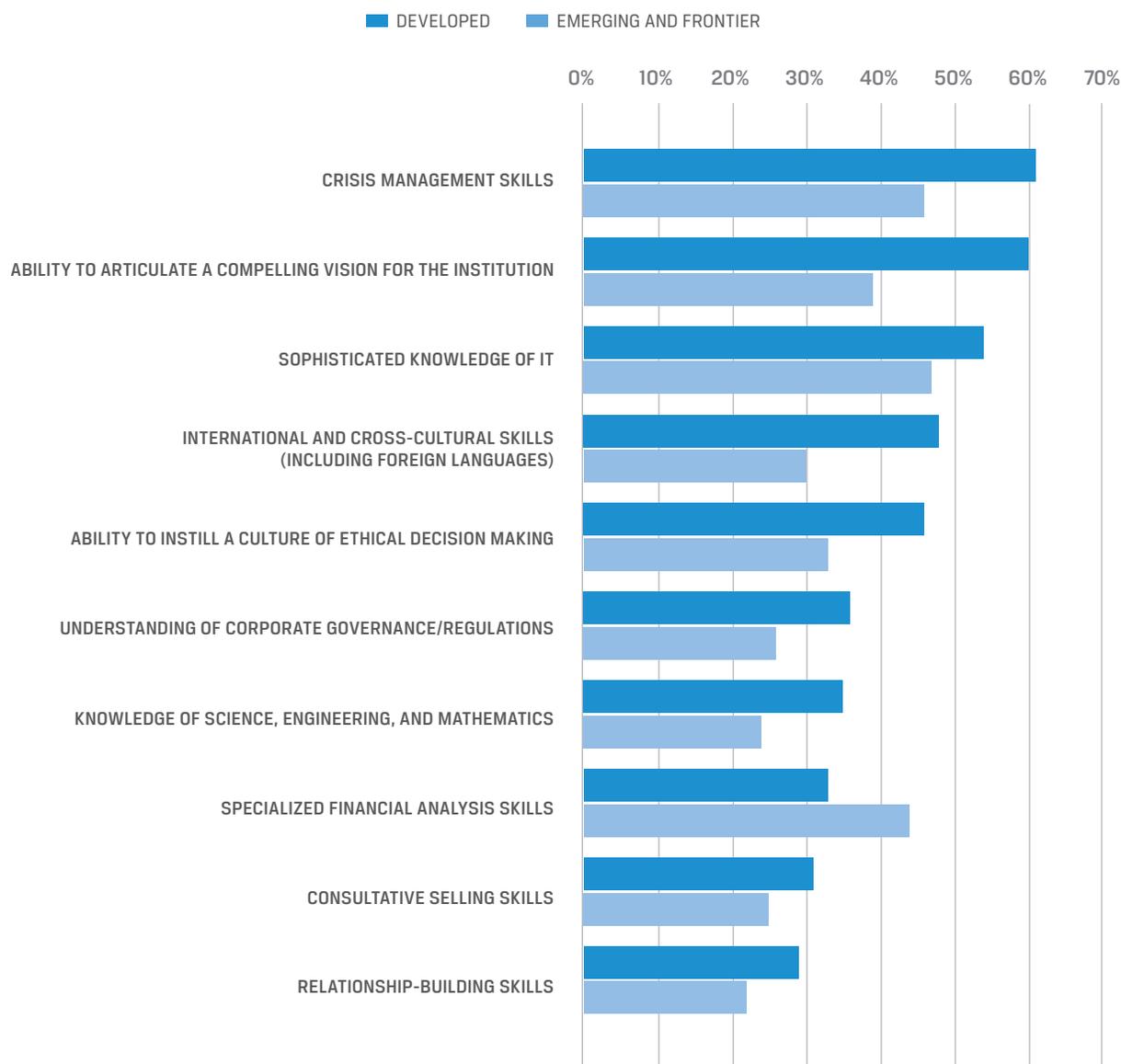
We see the developments occurring in various new models: fiduciary management and the outsourced CIO model, pension fund zombies, defined contribution platforms, and defined benefit/defined contribution hybrid organizations, among others.

Skills Needed for Success

There may be big opportunities for asset managers and private wealth firms that discover how to be large-scale international organizations and human at the same time; with less human interaction overall, it becomes more critical to do it well.

In the Parallel Worlds scenario, all organizations become more socially aware and consider new ways of managing their stakeholder responsibilities, but with quite wide dispersion and differentiation in missions and business models. At one end are B corporations and other organizations that passionately pursue a greater pro-social orientation, and at the other end are firms looking to these broader issues for preservation of stock price and reputation.

HARD-TO-FIND SKILLS: RESPONDENTS FROM DEVELOPED VS. EMERGING/FRONTIER MARKETS



In terms of the 10 skills discussed earlier for future investment professionals, we believe the most necessary for investment organization success in competing in the Parallel Worlds scenario include the following:

- Ability to articulate a compelling vision for the institution
- Consultative selling skills
- International and cross-cultural skills (including foreign languages)
- Relationship-building skills
- Sophisticated knowledge of IT (e.g., programming, artificial intelligence)

Because this scenario envisions an industry that creates customized products and services for various segments of the population, the consultative selling skills and knowledge of IT go hand-in-hand. The use of big data to assess client needs is a necessary input, and from that a sales force can describe the value proposition more clearly for potential clients.

The ability to articulate a compelling vision is important because in this scenario, the investment industry is likely to face more resistance from populist sentiment, and it is necessary for leaders to explain the good the firm is doing and how it benefits its clients and society.

"The future lies in people crossing the traditional boundaries of what they have been trained and educated in. There is more to success than just being an expert on your own turf."

International and cross-cultural skills are very important as well, and we see interesting differences in the value of various skills and availability of them by region. Several criteria for success emerge as especially important among respondents in developed markets and emerging/frontier markets. The ability to build relationships and to manage crises are among the top three skills for CIO/portfolio manager success among respondents from emerging and frontier markets. In addition, 42% of respondents from emerging and frontier markets chose relationship building as a top skill that will be more important in the next 5–10 years, whereas only 32% of their peers in developed markets hold this view. Similarly, the potential volatility of emerging/frontier markets drove 32% of respondents from these regions to see crisis-management skills as increasingly central to success—far more than the 18% of respondents from developed markets who selected crisis management.

A majority of developed market respondents (56%) selected the ability to articulate a compelling vision as increasingly central to asset manager CEO success, compared with only 34% of respondents from emerging/frontier markets. Further illustrating the nascent state of the investment management business in less developed markets, respondents from emerging/frontier markets are substantially more likely to identify crisis management and specialized financial analysis as increasingly important skills for CEOs of asset managers and asset owners compared with their peers from developed markets. Thus, the ability to develop and articulate a strategic vision is especially important for leaders in the mature markets of the most developed economies. The investment management business in emerging/frontier markets is less mature and less structured, but poised for growth amid the volatility inherent in such markets.

Respondents from emerging/frontier markets placed more weight on sophisticated financial analysis skills as increasingly important—by 10 percentage points or more—for senior positions, such as CIOs and CEOs at asset managers and asset-owning institutions. For example, 34% of emerging/frontier market respondents see financial analysis skills as increasingly important for the success of an asset manager's CEO; far fewer respondents from developed economies (14%) see that skill as central to CEO success. Accordingly, it is these financial skills that are in short supply in emerging/frontier markets, and they are less worried about the other skills in comparison. Among respondents from emerging/frontier markets, 44% say specialized financial analysis skills are very or somewhat hard to find.

The best investment analysts actually can help to bridge parallel worlds by understanding how things are connected. "For example, if we are thinking through the impact of tax reform, you have to think through how the effects on the US economy will ultimately have a global impact" says an investment analyst for an insurance company. "I do not think everyone who works in investment management, or even in research, can connect local factors to global factors and have a good grasp of the big picture."

"The future lies in people crossing the traditional boundaries of what they have been trained and educated in," says a regulatory consultant and former accountant. "There is more to success than just being an expert on your own turf." An accountant by training, he found that his colleagues in the public accounting profession needed a better understanding of financial analysis and investment management. Conversely, he found that financial analysts tend to have an insufficient knowledge of reporting. The issue is particularly important to alternative investments and other financial instruments that are hard to value, such as real estate and commodities.

Impact on Investment Organizations in the Parallel Worlds Scenario

- An increased middle class in need of financial services.
- Millennials and Generation Z create a growing new marketplace for financial services that is considerably more at ease with trust in technology than prior generations.
- Product utility favors personalization, simplicity, and speed.
- Trust and brand are critical organizational assets. Media transmits content on moment-specific interests and memes; corporations need to be proactive to address reputational issues.
- The importance of large corporations grows in relative terms in societal contexts; the impact of investment industry organizations also grows.



Lower for Longer

New normal low interest rates and returns become embedded for the foreseeable future (5–10 years), accentuated by lower levels of global growth and higher levels of political instability.

Among the scenarios in our survey, support for the Lower for Longer scenario is quite strong at the 61% level.

Whatever the precise outcomes on market returns, more investment control is likely to be committed to asset owner internalization of activities; and increased control of costs will develop through increased passive allocations.

The Lower for Longer scenario is bad for virtually all business models in the investment industry. In particular, asset owner organizations are left without the returns that they need to meet liabilities and other targets. Asset management organizations cannot rely on portfolio growth to produce increases in assets under management, and their clients are increasingly resistant to paying previous era fee levels because they represent too dear a cost against lower gross returns.

There is a strong belief among our respondents that these factors will affect margins of asset management firms in the future, especially among more experienced and credentialed respondents. The most senior survey respondents—those with 20 years or more experience—are more than four times as likely to expect contracting profit margins rather than growth in profitability. In addition, the majority of CFA charterholder respondents (52%) expect contracting margins, versus just 22% of other respondents.

Although fee pressure has been coming from asset owners, the majority of asset owner respondents (53%) say they still expect growth in asset manager margins, whereas only 36% of asset managers are that optimistic. The smallest asset managers (less than \$100 million assets under management, or AUM) are the most concerned, with only 14% expecting growth in margins.

Margin contraction could strike hardest among firms in developed markets. Respondents from developed markets in North America, Europe, and Asia are far more likely (43%) to anticipate contracting margins compared with their peers in the world's emerging and frontier markets (26%). Of those from emerging/frontier markets, 54% expect moderate or substantial growth in asset manager profitability, using segmentation based on the MSCI market classification index.

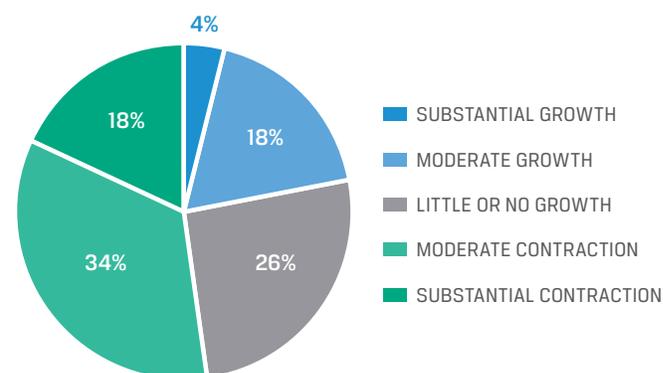
Asset management margins have been relatively resilient in previous times of adverse economics, but it is hard to make an optimistic case

given low growth in new money, lower returns, and reducing fee rates. Some costs may be contained better through technology, but other costs, including those related to compliance, appear set to rise.

Lower for Longer also likely results in various pension fund difficulties because of a combination of lower numbers of young people to support the pensions of older generations and lower returns on capital. Although many are forecasting such an outcome, various factors can be applied to manage the worst effects, including lengthening the retirement age and a reduction of benefits where this can be achieved. These scenarios are opportunities for innovative investment organizations to begin selling something other than the promise of retirement. Deferred promises, which have gone unfulfilled for many who planned to retire in the last decade, have contributed to the industry's poor reputation. Notably, firms could reorient themselves to providing fulfillment during all ages of a person's life, rather than delayed fulfillment toward the end of life; and the solutions could increasingly blend the investment and insurance components needed in later life.

With this change in orientation comes the expansion of asset managers' role in clients' lives from a passive product provider to an essential adviser on many important life events, not just retirement. Value-add products might include monthly budgeting, credit card arbitrage, asset disposal, and goal fulfillment at the short- and medium-term time horizons (e.g., vacations, auto purchases, continuing education).

ASSET MANAGER PROFIT MARGINS IN THE NEXT FIVE YEARS (CFA CHARTER HOLDER RESPONDENTS)



In terms of the 10 skills future investment professionals need, we believe the most necessary for investment organization success in competing in the Lower for Longer scenario are the following:

- Ability to articulate a compelling vision for the institution
- Crisis management skills
- Relationship-building skills
- Specialized financial analysis skills
- Understanding of corporate governance/regulations

In this scenario, investment returns are exceedingly difficult to generate consistently, which leaves investment firms in an existential crisis of sorts. A strong leader with a clear vision can help to guide the firm through these times. In particular, asset owners will find that their targets are difficult to meet and beneficiaries will be troubled; this may actually require crisis management skills at the extreme.

These scenarios are opportunities for innovative investment organizations to begin selling something other than the promise of retirement. Notably, firms could reorient themselves to providing fulfillment during all ages of a person's life, rather than delayed fulfillment toward the end of life.

In this scenario, the quality of communications to clients and stakeholders becomes much more significant. Relationship-building skills are important to manage client relationships during a low-return environment, and this environment is one in which excellent customer service can be a differentiator.

Along these lines, because the economic pie is not growing, it will put pressure on regulators to challenge firms, so leaders must know how to navigate regulatory rules and apply high standards of corporate governance to avoid punitive outcomes. There is a natural likelihood that weak investment returns will map to increases in regulation and even regulatory overshoot.

If investment results turn out particularly low, this outcome will likely map to shrinkage in the investment industry workforce. Most leaders have built their experience in tailwind conditions. Managing through headwinds calls for a different set of skills.

Impact on Investment Organizations of the Lower for Longer Scenario

- Too much supply of capital (caused by too low interest rates) combines with slowing demand for capital because of aging demographics in the developed world, resulting in prolonged and slow economic growth.
- When the pie is not growing, the whole finance sector struggles; institutional flows into pension funds are curtailed as pension savers recognize the deterioration in outcomes that are likely in a condition of financial repression.
- Leadership is critical in adverse circumstances; strife around global entitlements, including pensions, is likely, so asset owners will need to renegotiate terms with beneficiaries, and set proper expectations for the future.
- Success for investment organizations means getting more intimately involved with clients and their many daily financial decisions.



Purposeful Capitalism

Capitalism's way of working evolves; the investment industry works to raise its game with more professional, ethical, and client-centric organizations acting in aligned-to-purpose, lower-cost, and efficient ways.

Investment organizations finding themselves amid conditions calling for more purposeful capitalism are likely experiencing a fast-moving, vastly disintermediated and networked, and poor-governance world. They are also likely experiencing difficulties communicating their sanguine intentions to regulators, their clients, and the general public, especially younger customers. In this scenario, complexity and the limitations of top-down management reign.

These factors challenge the industry's value add. The survey results show that only half of respondents agree that asset management fees generally reflect the value provided to clients, although the results are better in emerging/frontier markets, with 62% believing fees reflect the value provided. "Ultimately the narrative needs to be about value," says the head of global equity at a US mutual fund provider. "If you generate excess performance, how much does the manager deserve to capture? There are very clear pressures on fees relative to passive and relative to value." Only 39% of CFA charterholder respondents agree that fees reflect value provided, versus 69% from all other respondents.

One possible response to the megatrends and forces likely to affect investment organizations is to adapt the model of capitalism itself. In this scenario, investment organizations have the choice to seek

alignment with the complex, interconnected, super-distributed world rather than operate against it. This approach requires organizations to change their mindset from a hierarchical, cause-and-effect structure to one that emphasizes hiring purpose-driven, ethical, highly educated talent. The benefit is an ability to push decision making to the edges of the network in shorter decision-making cycles. This situation is also aided by sophisticated information technology infrastructures that increase support for decision making and personalization and transparency for customers.

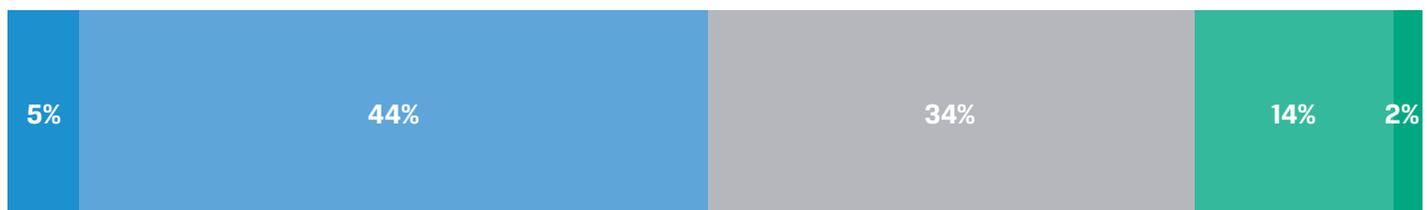
Also important to increasing alignment of investment organizations with their operating environment is managing each of the relationships and the capital for production implied by their income statements. The relationships for investment organizations are with

- investee enterprises,
- customers (revenues),
- suppliers (cost of goods sold),
- employees (general and administrative),
- debt holders (interest expense),
- the public (tax expense), and
- shareholders.

In the context of the organization's use of capital, its aim should be to integrate development and future path. Communication about risk with external stakeholders should attract significant attention. This may be joined with ideas coming from the Integrated Reporting (<IR>)

ASSET MANAGEMENT FEES GENERALLY REFLECT THE VALUE PROVIDED TO CLIENTS

■ STRONGLY AGREE
 ■ AGREE
 ■ NEUTRAL/NO OPINION
 ■ DISAGREE
 ■ STRONGLY DISAGREE



initiative, which aims to help key stakeholders form a holistic view of the organization and the risks that it faces and targets to exploit.

Integrated reporting is explained through integrated thinking that investment organizations' decisions have spillover effects, including on natural capital. How do the resources and inputs (land, labor, and capital) used by a business (investment) affect outputs and outcomes? This view requires a change in mindset in which systems thinking and transparency can improve capital allocation, with long-term sustainability paramount.

Success in this environment also demands investment organizations recognize that disclosure and transparency are not the same thing. Transparency is ensuring that stakeholders are aware of the ramifications of decisions and share contexts with investment organizations. Otherwise, the moral hazards are likely to persist.

Success also demands that organizations recognize that having a code of ethics, and ethics training, is not the same thing as operating ethically and professionally.

It is the asset owners that most need fair and efficient markets and who have the most to gain or lose. They have the opportunity to do much to address this challenge through the influence of the huge sums they oversee. We might focus particularly on the 50% of global institutional invested capital drawn from around 300 well-resourced (mostly pension) funds, with assets of more than \$15 billion. Asset managers will also play a part in this evolution, particularly the large ones, where 30 organizations have about 50% of the global AUM. In this scenario, however, we draw out the influencing power of asset owners acting like principals as being greater than asset managers acting as agents.

Another possible response is for investment organizations to address the frictions between themselves and global regulators.

The place of regulation in a more societally inclusive capitalist system is seen equivocally. Regulation may be able to guide some of the practices in good directions, but the perils of unintended consequences in complex situations are always lurking. Regulation may be able to help with forms of mis-selling, which are present in current conditions.

In this scenario, regulators and financial institutions work to jointly address the low levels of trust in the industry and put in place practices and communications that produce improved levels of trust. If there is success in these respects, we should witness increases in the connections of all financial institutions to their fundamental purpose. Investment organizations that demonstrate their value will be trusted more. This achievement is both a private good to the asset owner and asset manager organizations and a public good to society as their reach draws in more beneficiaries.

A majority of respondents (56%) agree that clients are often sold inappropriate financial products. "I still see a lot of products that are what I call 'sold and not bought,' and this is where I have an ethical issue," says a CIO of a wealth management firm who had a client come to his office with two versions of the same annuity sold by two different people. "The client says, 'We thought this was a good investment because it guarantees an 8% return,'" he says describing the scene. "I said, 'Well, that is not possible,' and we went through a huge prospectus that detailed caps and floors, and it was really complicated." What struck him, he says, was that the client not only heard what he wanted to hear, but he heard the same thing from two different people. "It was a high-commission product, one of those with five, six, seven percent commission upfront," he notes. "So there is still stuff like that going on—even with all of the transparency now. People are selling the product that is the most beneficial to them instead of what is beneficial to the client." Furthermore, we find that despite the increase in regulations in developed markets, a core issue remains: 63% of respondents from developed economies agree on the prevalence of mis-selling, versus just 40% in emerging/frontier markets.

FINANCIAL MARKETS/INVESTMENT MANAGEMENT ARE TOO COMPLEX AND DYNAMIC TO REGULATE EFFECTIVELY

■ STRONGLY AGREE ■ AGREE ■ NEUTRAL/NO OPINION ■ DISAGREE ■ STRONGLY DISAGREE



CLIENTS ARE OFTEN SOLD INAPPROPRIATE FINANCIAL PRODUCTS

■ STRONGLY AGREE ■ AGREE ■ NEUTRAL/NO OPINION ■ DISAGREE ■ STRONGLY DISAGREE



For firms to be leaders, it requires following the spirit as well as the letter of the law. It requires a focus on fiduciary responsibility as a critical success factor. However, it does not call for naïveté about the complexities of the system, such as sloganeering ("The client is always right!"). Instead, it calls for firms to anticipate the collision of their interests, their employees' interests, their clients' interests, and the interests of the public as represented by regulators.

Purposeful capitalism also calls on investment organizations to be proactive, rather than reactive, in helping solve the world's problems, but to remain grounded in good sense on materiality. To do so likely includes product innovations, collaboration with competitors, and possibly new constituents, such as local governments. It also requires focus on total systemwide returns on capital rather than just a localized focus. For example, in traditional capitalism, if sea levels rise, there is money to be made by investing in the engineering firm that builds resilient sea walls. But in purposeful capitalism, it is recognized that this a destruction of capital rather than the creation of capital. After all, if you want to drive up the profits of your publicly traded hospital, just shoot yourself in the foot, literally.

The survey data affirms the growth in ESG attention that will build on a steady incremental profile over the next two decades. This is consistent with a CFA Institute member survey done in 2015 on ESG that showed 73% of investment professionals use some ESG factors.¹⁰

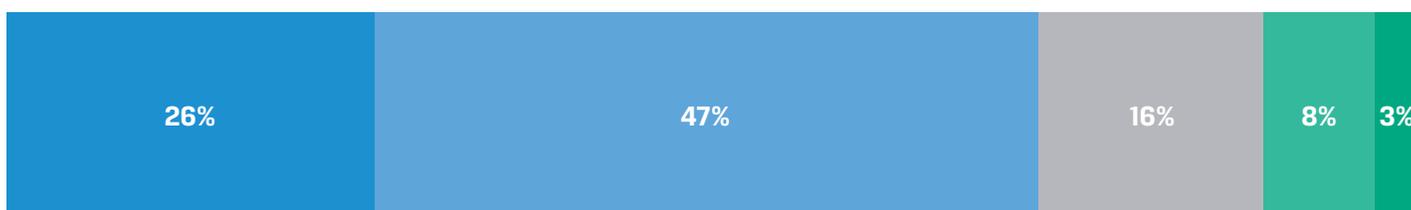
In terms of the 10 skills for future investment professionals, we believe the most necessary ones for investment organization success in competing in the Purposeful Capitalism scenario are the following:

- Ability to articulate a compelling vision for the institution
- Ability to instill a culture of ethical decision making
- Knowledge of science, engineering, and mathematics
- Relationship-building skills
- Specialized financial analysis skills

This scenario envisions the strongest leadership of the industry and a proactive approach to engaging with markets, so in it there will be fierce competition for professional talent among investment organizations, particularly on the leadership level. In addition, diversity and culture are big factors in attracting and retaining employees. This

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE FACTORS WILL BECOME INCREASINGLY IMPORTANT TO INVESTMENT DECISION MAKERS IN THE NEXT 5-10 YEARS

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means leaders in this scenario must be able to articulate a compelling vision, and this ability is closely tied to ethics, professionalism, and the ability to build relationships.

Leaders who are comfortable with diversity will surely be required in this scenario. Natural ecosystems survive and thrive best where there is greater diversity. The reason is because diversity has been demonstrated to lead to faster and greater adaptability. Firms interested in the positive benefits look to diversify along multiple dimensions, including ideas, gender, ethnicity, national origin, knowledge, and educational institution among others. The challenges with diversity are difficult to address because they represent biases that have often been institutionalized and reflect conscious and unconscious thinking. Leaders that find their way with diversity have to be very surefooted with respect to the values and beliefs that drive the case. There are various organizational constraints that arise in which inflexibilities with work practice and long-hours culture are dominant as they often are in the investment industry.

As organizations seek to demonstrate their purpose, many firms will face pressure to demonstrate empathy and value and to work to ESG principles. Incorporating these principles is not a simple task; it means making judgments about risk, which is a specialized financial analysis skill. At the same time, science can be useful to understand investment implications in the physical world.

These skills require wider application of many other disciplines. We call out the applications of how systems and complexity theory can provide a better interpretation and understanding of the behavior of financial markets. A high-level formulation has the flexibility to draw on other theory and research disciplines, notably management science, including game theory and network theory; evolutionary biology and neuroscience; and anthropology and behavioral economics.

Making ESG principles a factor in investing is a new and necessary technology in the investment process, with new methods and tools to be applied. As we gradually get the fuller data on companies in this regard, it enables ESG factors to be integrated effectively. This application will need more "human bits" of the ESG challenge, which involves courage and leadership, some imagination and vision, and some quality in organizational culture.

The principal nature of the purposeful capitalism journey in our analysis relies on strengthening the professionalism of the investment industry, which requires devoting more intensity to trust and value.

Impact on Investment Organizations in the Purposeful Capitalism Scenario

- Firms must align themselves with a rapidly changing, disintermediated and networked world, where governance issues are challenges—often weakly understood and hard to fix.
- Organizational diversity is recognized as a key ingredient for surviving and thriving in an increasingly complex operating environment.
- Asset owner institutions adopt a more influential role in the investment ecosystem through greater collaboration; they focus more on longer-term value creation and give greater attention to sustainability.
- There is fierce competition for talent among investment organizations, particularly at the leadership level; diversity and culture are big factors in attracting employees.
- Firms focus on stakeholders and incorporate systems thinking to better understand the ways that they affect the environments in which they operate. Investment organizations manage themselves to improve the quality of value and overall trust in the investment ecosystem and are increasingly transparent in these parameters through integrated reporting.
- Identifying preventable surprises and managing to avoid them is given increasing attention, reflecting greater hazards in the complexity and interconnectedness of managing investment organizations.

SUMMARY AND WAY FORWARD

Key components of this section are applying the four scenarios to the understanding of the investment organizations and investment professionals that are critical to the future state of the investment profession.

We discuss the 10 core skills that will need to be harvested by the investment organization of the future.

We also discuss three game changers in the context of the future organizational landscape:

1. The evolved skills organizations will require
2. The future state of the private pension and lifetime savings management model
3. The evolving state of prevailing trust between providers and end clients

This chapter links to the final chapter, "Benefits to Society," in which we explore the actions of the investment industry and CFA Institute to shape and create the best possible outcomes for the end investor and society.

ENDNOTES

¹ John Kay, "The Benefits of a Liberal Education Do Not Go Out of Date," *Financial Times* (25 August 2015).

² Thomson Reuters, Cost of Compliance 2016.

³ See www.cfainstitute.org/WIM for more research in this area.

⁴ A.W. Woolley, C.F. Chabris, A. Pentland, N. Hashmi, and T.W. Malone, "Evidence for a Collective Intelligence Factor in the Performance of Human Groups," *Science*, vol. 330, no. 6004 (29 October 2010): 686–688.

⁵ Rebecca Fender, Renée Adams, Brad Barber, and Terrance Odean, *Gender Diversity in Investment Management: New Research for Practitioners on How to Close the Gender Gap* (Charlottesville, VA: CFA Institute Research Foundation, 2016).

⁶ 2016 Edelman Trust Barometer (17 January 2016).

⁷ "The Great Chain of Being Sure About Things," *Economist* (31 October 2015).

⁸ Carl Benedikt Frey and Michael A. Osborne, "The Future of Employment: How Susceptible Are Jobs to Computerisation?" (Oxford Martin School, September 2013).

⁹ Jonathan Haidt, *The Righteous Mind: Why Good People Are Divided by Politics and Religion* (New York: Vintage Books, 2012).

¹⁰ Rebecca Fender, Usman Hayat, and Matt Orsagh, "ESG Issues in Investing: Investors Debunk the Myths" (CFA Institute 2015).



FUTURE STATE OF THE INVESTMENT PROFESSION

PURSuing BETTER OUTCOMES—FOR THE END INVESTOR, THE INDUSTRY, AND SOCIETY

Benefits to Society



ENVISIONING THE INDUSTRY OF THE FUTURE

The actual impact of disruptive forces facing the investment management industry as described thus far in this report is inherently uncertain. It will, after all, reflect the changes made by the industry itself. In addition to the strategies and tactics put in place to best position firms and individuals to take advantage of most likely potential future states, there are changes that might be made to benefit society's wealth and well-being.

A commitment to enlightened self-interest is one direction of travel to consider. This philosophy demonstrates that under certain conditions, persons who act to further the interests of others will ultimately serve their own interests. Advocates of enlightened self-interest believe

that companies will increase in value if they identify and respond to the needs of society. The following discussion reflects a vision of how enlightened self-interest on the part of the investment industry could benefit society more broadly as well as investment industry participants. It reflects the potential of the industry to serve its clients better and at the same time provide more significant and evident benefits to society. As more of an aspiration, the direction of travel we describe in a more purpose-driven industry might set the stage for an evolution in the investment management industry to reach the potential to operate with the status of a *profession* with the attendant obligations (and benefits) that such a status confers.

This distinction is important. There are many industries; the MSCI and Standard & Poor's Global Industry Classification Standard (GICS) identifies 157 sub-industries, one of which is asset management within the capital markets industry. But professions are a rarer breed and are characterized by

- a common body of knowledge that is widely accepted;
- certification that individuals possess such knowledge before practicing;
- a code of ethics and code of professional practice, with compliance monitoring;
- a code of discipline with sanctions;
- a requirement for its professionals to be subject to continuing professional development; and
- a commitment to use knowledge for the public good.

It can be argued that investment management has some of these components, particularly the first four, which are provided by CFA Institute, but it lacks the last two components. The development of the CFA designation, in fact, was prompted by Benjamin Graham in 1945 when he advocated for such a program, writing in the new *Analysts Journal*: "The crux of the question is whether security analysis as a calling has enough of the professional attribute to justify the requirement that its practitioners present to the public evidence of fitness for their work."¹

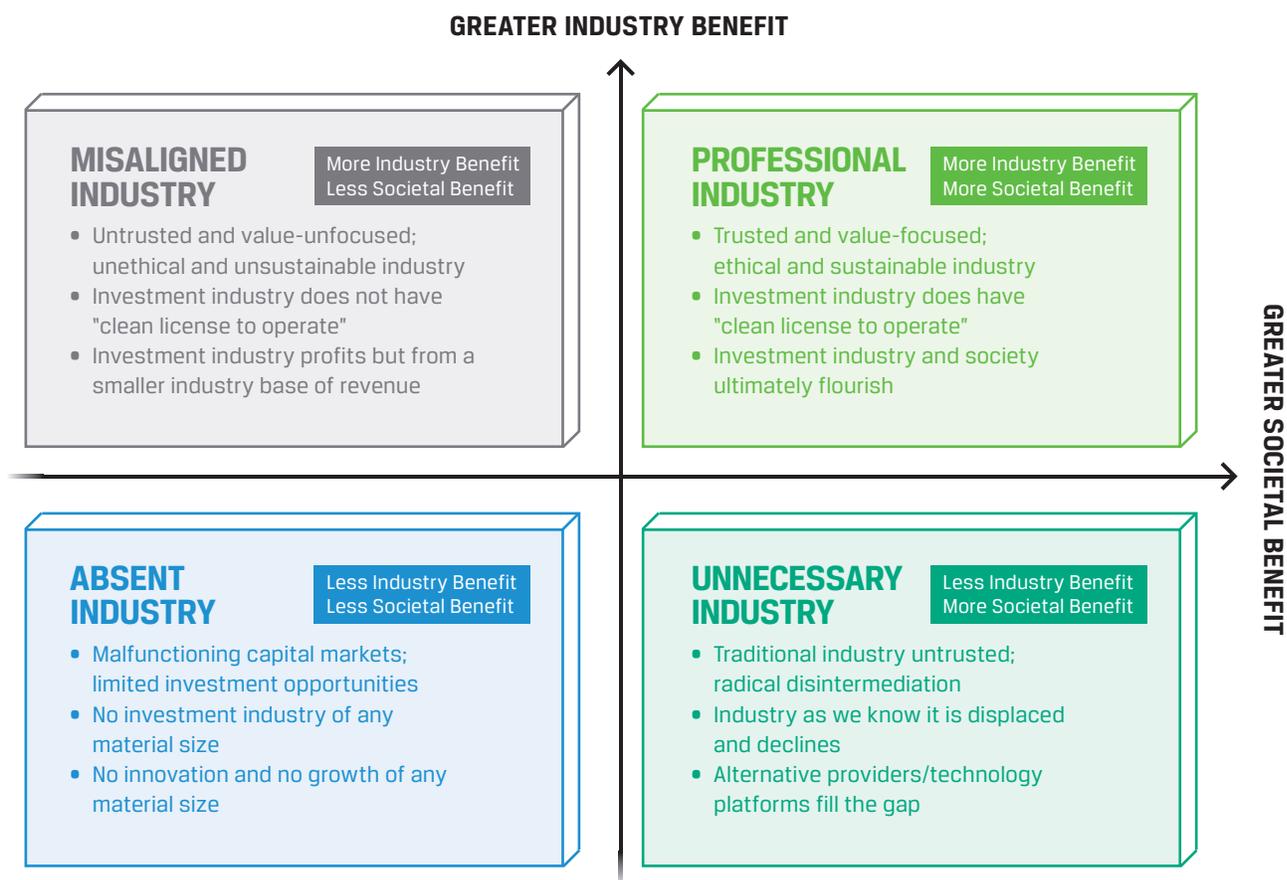
Here, we are putting forward versions of the future under business-as-usual (assuming some continuity in industry behaviors and conditions) and business-beyond-usual (assuming some interventions and changes of behavior to create better conditions).

There are two fundamental questions about the business-beyond-usual picture. Is it a vision that those in the investment industry will embrace? And exactly what actions and effort will produce such a transformational change? On the first point, the data are encouraging. Our survey asked three related questions about how the investment industry benefits society:

Key Takeaways

- In return for living up to society's expectations, investment institutions receive from society a license to operate—a tacit approval to exist and function. But it can be revoked, and investment organizations must act responsibly and professionally to avoid that happening.
- We have outlined four possible future states of the investment management industry, with a mix of benefits accruing to the industry and/or to society. The highest aspiration of these scenarios is to become more professional, with significant benefits to both the industry and society.
- We suggest that trust and value in the investment industry are inextricably linked, and we describe a model for trust and value, bringing together credibility and professionalism.
- We provide further practical suggestions for building organizational trust, combining transparency, realistic measures, united values, sustainable and fair rewards, and time-tested relationships.
- There is a role for industry associations, such as CFA Institute, to help build professionalism within firms and with individuals.
- We promote the development of a road map by which the industry can navigate itself toward higher standards of professionalism.

FOUR STATES FOR THE RELATIONSHIP BETWEEN INVESTMENT MANAGEMENT AND SOCIETY



- When asked to evaluate the *current* impact of the investment industry on society, just 11% of senior level investment professionals think the impact is very positive.
- When asked to evaluate the *potential* future impact of the investment industry on society, only a few more (14%) expect it to become much more positive.
- Finally, when asked to evaluate the potential impact of investment management on society *contingent on incorporating higher principles*, 51% of senior level investment professionals think it can be very positive.

On this last point, it is worth noting that CFA Institute members were more optimistic than non-members, with 94% of CFA Institute members saying the impact could become somewhat or very positive, versus 84% for other respondents. And, perhaps indicating that the professional ethos of the industry may have slipped over time but could be recovered, the longer the respondent's tenure in the industry, the more positive he or she was on this point.

A New Model: Benefits to Society and the Industry

Recognizing the backdrop of the scenarios and megatrends described in the "Investment Industry Ecosystem" chapter, we offer a model for a healthy investment industry by looking at the potential outcomes from the interaction of differing levels of the industry versus societal benefit.

The diagram above is fairly simple, and in reality, the industry should be segmented by country and investor type to provide meaningful labeling. In practice, we believe the investment management industry in most countries, and in most capital markets and segments, is in an area more than halfway up the vertical and somewhere toward the center in the horizontal. There is, however, the potential to go in any direction from here.

What are the distinguishing characteristics of each quadrant?

The Absent Industry

In this quadrant, without access to any healthy capital markets, there is an absence of both an investment industry and the innovations that produce growth. The absent industry describes an environment where there is little societal, investor, or industry benefit being produced.

This set of circumstances most closely maps to the preindustrial world, although some emerging economies have until recently had elements of this picture. It would be hard to point to any place currently where there is an absolute absence of financial or investing activity. However, there are places where there is significant dysfunction in the markets that impedes the development and utility of both the industry and the societal benefit. These represent situations in which the negative effects and externalities resulting from the lack of a functioning market are evident, reinforcing the point that the industry serves a vital role in a healthy economy and society.

There is one other dimension in this set of circumstances: The absent industry could also describe the results of an extended Lower for Longer scenario, which was presented in the "Investment Industry Ecosystem" chapter. Continued periods of very low returns, which cannot support the weight of fees, may significantly reduce the utility of investment activity for both the industry and society. This situation could prompt some investors to simply disengage from the capital markets altogether and pursue alternative ways to create income or utilize capital. There is a thought experiment that if the return from a sensible amount of long-term risk for a pension saver produces a negative real return after costs, the rationale for pre-funding pension liabilities is brought into question.

Turning this issue around, the virtuous association between pension funds and the deepening of an economy's markets, which shows up in positive growth, cannot be expected to be as positive in an era of financial repression in which returns to savers are held below "fair" levels.

The Unnecessary Industry

In this set of circumstances, there is diminished value, perceived or real, in engaging with established investment organizations (what we might term the "industry as we know it") because they have been made irrelevant by new firms and solutions. In this model, the new challengers are able to win the majority of investment activities and to provide the promise of significant financial and social returns through the substitution of alternative solutions.

This situation presents a potential disengagement from traditional investment organizations, with the disintermediation carried out by new types of firms that deliver the new required services. Basically, new entrants provide substitutes in terms of investment methods and solutions and disrupt the ecosystem. Traditional financial institutions cease to be seen as necessary or relevant. This situation, and its potential impact, are mentioned in the Fintech Disruption scenario presented in the "Investment Industry Ecosystem" chapter.

In this quadrant, we see organizations with excellence in digitization and digitalization applying formula-driven investment practices to produce attractive investor experiences and outcomes. The following are some examples:

- Using an investment model that incorporates crowdfunding, the Chinese saving and investing platform Yu'e Bao (a subsidiary of Alibaba, a new-style internet retail platform) is disrupting traditional bank savings, and consequently, potential state-supported investments, by offering a much higher rate on deposits than competing banks.
- Robo-advice firms, such as the US firm Betterment and the UK firm Nutmeg, have business models markedly different from traditional firms. Their way of working is fundamentally different from traditional investment firms, their vehicle of choice is significant portfolio allocations to passive strategies and exchange-traded funds, and their ability to provide a credible and reliable substitute service to tech-savvy Millennials provides perceived better experiences at a lower cost.

Currently, asset management is ripe for disintermediation by the Millennial generation because, as CFA Institute CEO Paul Smith, CFA, believes, "The investment profession has a robust and compelling proposition to offer these younger investors, yet it often fails to articulate it."² At present, there may well be an appeal gap between the technological solutions (personalized, simple, and speedy) and the ponderous style of more traditional investment services.

Wealthfront, an online investment service, estimates that Millennials will control more than \$7 trillion by 2019. Disintermediation is also possible because investors look for people they know when they select financial service firms, but fewer Millennials are choosing investment management as a career. In 2015, 36,000 US-based adviser trainees entered the industry—but nearly 30,000 who entered as trainees over the preceding five years opted out of the industry.³

The traditional segments of the investment industry also face leakage to substitute or nontraditional methods of financing. The three-year average growth rate of the European alternative finance market, which includes crowdfunding and peer-to-peer activities, is 115%.⁴ Since the global financial crisis, unregulated shadow banks, or nonbanks, have been providing liquidity while the increased regulation and balance sheet issues have required conventional banks to curtail lending. The Chinese shadow banking sector grew at an average annual rate of 35% from the beginning of 2010 through the end of 2012, attaining an equivalent of 50% of the total bank loans and 70% of China's GDP.⁵

Based on data from the Financial Stability Board, the total assets of nonbank financial intermediaries as of the end of 2013 equaled \$75 trillion, or approximately 120% of global GDP and approximately 56% of total bank assets.⁶

In summary, in the Unnecessary Industry, there are several ways that traditional investment practices can be made irrelevant.

The Misaligned Industry

Many view the investment industry this way: too much self-enrichment and not enough societal benefit.

Within traditional capitalism, there is a figurative accord between institutions and society; a social contract that is guided by the public's expectation of an institution's role in society. In return for living up to society's expectations, institutions receive from society a license to operate—a tacit approval to exist and continue their work. In the common parlance, the license needs to be "clean," and each scandal tarnishes it to a degree.

University of Chicago Professor Luigi Zingales summarizes it this way: "The positive role that finance can play in society is very much dependent on the public perception of the industry. Without public support, the best form of finance—the competitive, democratic, and inclusive finance—cannot operate."⁷ The financial ecosystem and its institutions cannot be expected to endure unchanged if they continuously face significant public opposition. As resentment increases, investors will begin to disengage from the capital markets or shift to alternative services or approaches they trust and believe will still help them reach their financial goals. This disengagement is a consequence in the Parallel Worlds scenario, presented in the "Investment Industry Ecosystem" chapter, in which we see some segments of society already rejecting the investment industry's license to operate. The investment industry has had natural associations with the elite segment of society—after all, money management requires money—and all elites have generated considerable discontent among the younger segments and particularly in class segments. Whether this discontent grows or not will be affected by the actions of the industry going forward.

There are a multitude of reasons for the strained relationship between finance and society. The nearly continuous media coverage of regulatory fines and misdeeds of the participants in finance (banks being principal among them) reminds the public of the break in trust that can occur, and forms the basis for perfect Hollywood villains. The private and often guarded nature of financial firms adds an element of mystery and suspicion, especially when approximately 15% of the *Forbes* list of billionaires are from the financial industry.⁸

In large part, the investment industry can be seen as being faint-hearted in its communication of and even its commitment to the purpose of linking end investors and savers to opportunities. The industry loses some credibility when the system does not function as intended and does not do enough to support jobs, growth, and societal well-being.

We see a number of examples that provide evidence of this situation today. There are limited capital allocation opportunities in the primary listed market because corporations now rarely use it as a means to secure capital. The IPO market, initially used to attract capital for growth and expansion, is now the preferred exit strategy of entrepreneurs looking to settle terms with venture capitalists and maximize the value of their ownership shares. Many corporations also seem to lack innovative strategies to create wealth, and they

have fewer opportunities to utilize their least expensive source of capital: internally generated funds. Some have begun multiyear share buyback programs or increased dividends to put cash back into the pockets of shareholders, sparking criticism by investment industry leaders who see this move as being contrary to long-term value creation. In 2016, BlackRock CEO Larry Fink wrote in a letter to corporate CEOs, "We certainly support returning excess cash to shareholders, but not at the expense of value-creating investment. We continue to urge companies to adopt balanced capital plans, appropriate for their respective industries, that support strategies for long-term growth."⁹

We can expect that unlisted markets will do more to fill these gaps in innovation and growth capital. But we have described in our scenarios the improved conditions and practices needed for this to be effective.

Meanwhile, the rise of financial engineering, increased use of derivatives, and access to private markets have offered new ways to manage risk and produce better returns. But the complexity of these products can make them opaque and difficult to explain to clients and investors.

Trust in the financial industry is difficult, due in part to the fact that the main product of the industry—making money—is less tangible and slower to experience than almost any other product that influences our daily lives. There is a big contrast with the highly trusted technology industry, for example, in which trust is earned when a product instantly works the way it is expected to work. All investment management roles require an ongoing relationship versus a transactional relationship, so sustained trust is important. Again, finance is a means to an end.

Without addressing its issues, what can a Misaligned Industry expect over time? First, it likely faces increased regulation on unfavorable terms. Regulators are increasingly focused on topics of culture and conduct, which have always proved difficult to regulate but obviously matter a great deal for an industry that is not aligned-to-purpose. Governments across the globe are enacting new investor protection regulations. If implemented in their original form, two of the more recognized regulatory programs, the fiduciary rule of the US Department of Labor and the EU Markets in Financial Instruments Directive (MiFID), would triple the assets in individual portfolios worldwide that are subject to stricter fiduciary standards.¹⁰

Second, capital market disengagement would also be a result of the continued erosion of investors' and the public's confidence in the industry, reducing the sources and uses of capital. Flows into institutional funds have been slowing worldwide as defined benefit pension funds decline in use. With reduced saving, we have the associated longer-term issue of where future growth will be generated.

In the Misaligned Industry, a lack of purpose and ethical focus produces a weak value proposition for both industry participants and society.

The Professional Industry

We believe that the Professional Industry, in which the industry and society benefit, is attainable with much dedicated work. In the following, we outline how this might occur through a combination of actions and circumstances.

According to the Edelman Trust Barometer, 80% of citizens worldwide agree with the statement that "A company can take specific actions that both increase profits and improve the economic and social conditions in the community in which it operates."¹¹

This statement does not mean profits are not a prime focus, but rather expresses a general belief that economic growth and societal well-being are positive spillovers of healthy companies. This thinking aligns with the mantra that an undue preoccupation with profit is unlikely to be the mark of long-lasting, sustainable firms. The idea that there is a form of enlightened self-interest in which for-profit firms work to multiple shared values¹² has become established and has diminished the fundamental capitalism ethos in which shorter-term shareholder value is dominant.

Many of the factors associated with a professional investment industry connect with the Purposeful Capitalism scenario, presented in the "Investment Industry Ecosystem" chapter. To achieve its ultimate potential to serve the interests of society, the investment industry must not only regain the trust of investors and the public, but retool institutions and services to demonstrate significant value in fulfilling society's needs. The fundamental requirement is to address the *value* of the industry and re-establish *trust* in the industry.

To achieve its ultimate potential to serve the interests of society, the investment industry must not only regain the trust of investors and the public, but retool institutions and services to demonstrate significant value in fulfilling society's needs.

Changes in this direction of travel must surely include changes to industry structure. We believe four areas will be important.

Asset owner influence: The relative influence of asset owners compared with asset managers needs to rise. Asset owners have two natural advantages in advancing a stronger-principled industry. They work under a profit-for-members business model, and they can claim legitimately to be close to being a "principal" in status and alignment. These attributes enable the exercise of a longer-term orientation to capital allocation and to ownership rights and responsibilities. Large asset owners have become increasingly effective in allocating capital effectively in private markets, resulting in more attendant growth. And although they are certainly involved with the reshuffling of property rights in public markets, their actions are increasingly concerned with using their ownership interests responsibly and productively. We have drawn attention to the universal ownership principles as a promising new influence in the Purposeful Capitalism scenario.

New business models: The second area of opportunity lies in investment industry organizations shifting their business models toward new organizational superstructures, as described in the Parallel Worlds scenario. These models include the mutual model successfully used by Vanguard and the B-Corporation model used by some private wealth firms (see, for example, Veris Wealth Partners in the United States and MASECO Private Wealth in the United Kingdom). We see new design of organizational superstructure being an adaptive mechanism to help financial institutions address the Millennials' wish list in investment products, combining digital personalization, simplicity, speed, and trusted engagement.

Better regulations: Well-conceived regulations—which take costs into account—should have more potential to act as a structural route to improved behaviors. The enactment of new investor protection regulations in the United States and Europe is significantly strengthening fiduciary protections for end investors. Considerable attention is being given to advancing other protections in costs and transparency. Quite naturally, the robo-advice model will need appropriate measures aimed at creating a sweet spot where these streamlined innovations work effectively for investors under the Fintech Disruption scenario. Regulations are agreed and applied in national settings and rarely move in lockstep, but in general we see a consistent philosophy around these matters. In addition, many governments are seeking routes to streamline capital markets for long-term innovation and infrastructure requirements, although efforts to date have not proved especially successful. Yet, there is considerable support for the principle of a public-private partnership to bring private goods to investors and public goods to society in innovation, energy, and particularly, infrastructure.

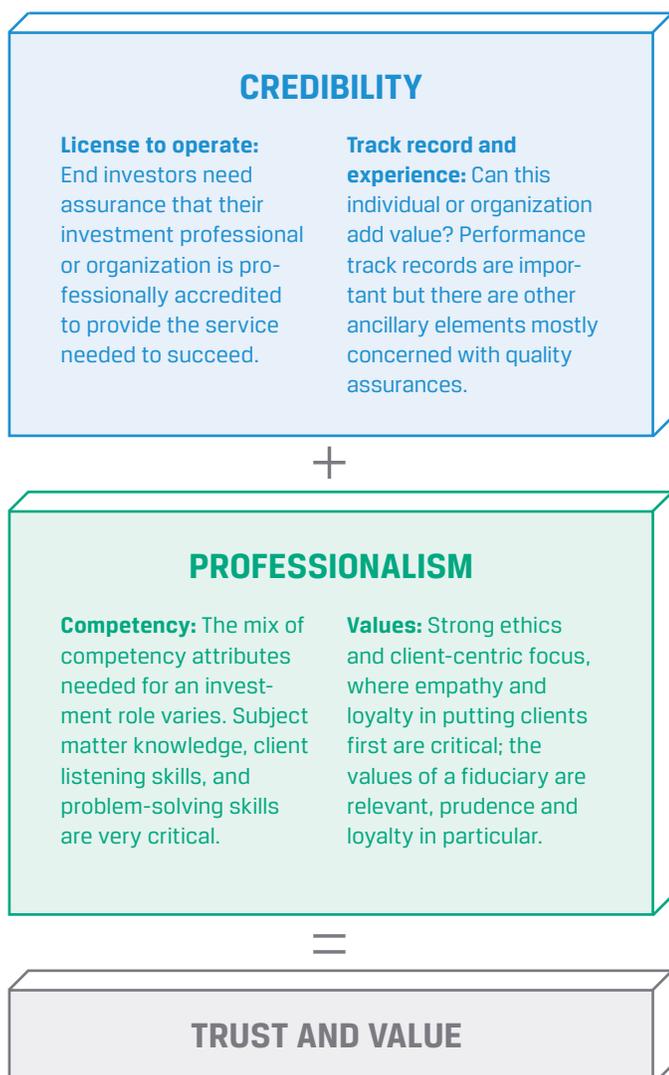
Stronger leaders: Finally, this change will occur only with the right people, particularly in leadership. We need more people in our professional ranks who have strong ethical values and a sense of purpose—people who see the investment management career as a way to do a lot of good, as well as a way to earn a good living. We need people in the investment industry who are motivated by doing good in the world far above the cause of making money.

THE TRUST EQUATION

Trust from an end investor is the *dependency on a service provider in a situation of risk over a prolonged period*.

The type of trust expected by an end investor is far more complex and tacit than the trust expected by the end user of most any other product, regardless of its type or business sector of origin. Its importance grows with the size of risks taken and the length of the term of the relationship—making it core to investment service delivery.

Trust and value in investment are interconnected. For the end investor, value will relate to perceptions of outcome relative to expectations. (In other words, do not think first of performance versus benchmarks as these do not represent particularly relevant expectations for most investors.) Value and trust are developed by an individual or an organization by building **credibility** and demonstrating **professionalism** as captured in the "**Trust Equation**."



The Trust Checklist for Organizations

At a simplistic level, a highly professional firm is filled with many highly professional individuals. To achieve this across an entire organization, however, a complex coordination challenge must be met, and its solutions require good culture and an appropriate business model to secure alignment to the necessary attributes of credibility and professionalism. Trust in the context of the investment organization spans a spectrum of critical attributes.

T Transparency

Organizations should display "glass door transparency" of all things, including business processes, limitations of the investment process, risks, performance reporting, fees and their impact on portfolios, and potential conflicts of interest. They should be candid about the mistakes they have made and explain what steps they are taking to correct them.

R Realistic Measures

Firms and their employees need to be realistically measured in relation to financial and non-financial goals over relevant time horizons. End investors are concerned with outcomes.

U United Values

Alignment of values between firms and all of their stakeholders is critical. Organizations build their strongest trust by being aligned in their purpose, objectives, and way of working with those they serve.

S Sustainable and Fair Rewards

Fees and rewards need to be fair and reflect the value clients receive. Trust will best be secured when there are incentives for agents to do their absolute best for their clients.

T Time-Tested Relationships

Good relationships develop over time and allow the client to develop confidence. Research shows that people are much more trusting when working with consistent partners—a situation that offers a chance to build a good reputation through repeated interactions.

Steps to Trust and Professionalism

Asset managers, institutional asset owners, industry associations, and academics must develop ways to demonstrate value and integrity to help regain credibility and trust. The following describes considerations for each of these institutions for building trust and value to support the investment industry and aid it in rehabilitating its position with investors and the public.

There are three key things that leaders of the investment industry can do to support the highest standards of professionalism—address the business model, improve the culture, and seek collaboration across the ecosystem.

Business Model Alignment, Agility, and Adaptability

The leaders of an organization need to understand, buy into, and implement a mission and strategy, and then direct resources accordingly. They need to be well-versed in the organization's comparative advantage and the ability to lower opportunity costs. Through knowledge of comparative advantage, the organization can achieve coherence and consistency in its thinking and actions.

Being professional and developing trust require a business model and a strategy that are in synch. This will vary, but it is likely to be easier if

- the organization has relatively few conflicts of interest and manages those conflicts well.
- motivations to create profits are well-integrated with purpose-driven motivations to meet client expectations.
- time horizons that matter in decision making are appropriately balanced between the long term and the short term.

Alignment

Performance evaluations of asset managers against a quarterly benchmark for both individuals and organizations are at odds with the need to think long term. A longer investment horizon could be seen as a fairer basis for assessments and may be preferred by investment professionals. A recent study reported that 39% of investment professionals would be pleased to have performance bonus incentives based on a two-to-five-year cycle versus the typical annual bonus.¹³

Rethinking monetary and non-monetary incentives are part of the same picture. Most short-term contingent rewards conflict with long-term client and organizational objectives. The economics 101 is "people respond to incentives."

Professionals should understand how their rewards relate to long-term client and organizational goals. Improved transparency concerning the incentive structures of asset managers will also go a long way toward guaranteeing investors that the interests of their managers correspond to their own.

In addition to integrating integrity and the primacy of client interests into the DNA of investment firms, fiduciary duty also relates to understanding expected client outcomes and committing proper resources to achieve them.

Outcomes must also be evident in the client experience, which requires the development of specific key performance indicators that describe observable and measurable characteristics or changes in related outcomes. Identifying performance indicators and setting targets for performance based on progress measures and outcomes help organizations to determine the impact they have had on clients.

The goal of developing a firm-wide customer-oriented mindset and culture is to be aligned in goals, objectives, and actions. To ensure a true alignment with customer needs, asset management firms and institutional asset owners need to create an environment that encourages long-term investing and trains professionals as managing fiduciaries and where all business processes and functions endeavor to put investors' interests first when making decisions. That encompasses integrating different interests. Giving primacy of interests to the client is clear, but that cannot be to the exclusion of the interests of the firm or the associates in the firm—organizations achieve sustainability through balance.

As soon as customers are confident that their incentives align with those of service providers, trust increases. A true customer orientation should also demonstrate value over the long term by reinforcing both competency and reliability. Unlike faceless companies that have few real interactions with customers, the personal relationships built between investment professionals and clients provide asset management firms with a unique opportunity to build trust.

Agility and Adaptability

Agile organizations can identify issues with strategy and then adapt or change direction as needed. Ultimately, the quality of leadership will determine how well organizations adapt. Leaders must take the time to listen to employees and other stakeholders to determine the effectiveness of decisions and to adapt plans that are not achieving desired outcomes.

Increased agility suggests greater simplicity in the way organizations are governed and operated. The investment industry values complexity and does not always appreciate the merits of strategies and tactics that are easier to communicate, understand, and implement. By limiting transparency and candor, there is a danger that overly complex or bureaucratic organizations can keep key participants, including the CEO, from understanding what is happening at all levels of the business.

The organization that effectively adapts to changing circumstances, trends, environments, and client objectives should be in a position to produce better client outcomes. In the pursuit of greater trust, adaptable firms are more credible and reliable.

Build Stronger Cultures

The most common definition of culture is norms of behavior or "the way we do things," but the concept should extend to *why* things are done that way (mostly about values and beliefs) and *how* things are done that way (mostly through the influence of leadership and incentives). When it comes to trust and professionalism, the presence of good culture and leadership is enormously important.

Asset management firms have an opportunity to foster greater investor trust by demonstrating integrity. They must also substantiate a value proposition that does not simply argue benefit for fees charged, but one that is evident through the firm's focus on improving investor outcomes and designing services to fulfill client objectives. For many firms, the objective of demonstrating value and building trust will require a radical transformation in corporate mentality, especially for those that have been overly focused on short-term profit goals and have developed the culture to achieve them. The process of moving from a profit-focused to a client-centric business model will also require a firm to reconceive and reorient its purpose, its culture, and the environment in which its employees work, all toward fulfilling long-term investor needs.

The changes necessary to achieve a truly customer-oriented business require the new corporate mentality to be internalized by individuals at all levels of the firm, and at all positions within the value chain. Although certainly not solutions in themselves, there are several essential cultural changes that leaders need to consider in order to reorient their organizations toward greater customer alignment. Among them, fiduciary culture is the most important.

Fiduciary Culture

Building a professional organization goes hand-in-hand with a fiduciary mindset. At an organization in excellent fiduciary condition, employees take their fiduciary role seriously, and not just because it may be mandated by regulation.

To achieve this, leaders must develop and communicate a compelling vision of the future that centers on fulfilling client objectives. Leaders who openly and passionately communicate such a vision can motivate employees to act with passion and purpose, thereby ensuring that everyone is working toward shared goals.

Surprisingly, only 15% of professional investors strongly believe their leaders articulate a compelling vision.¹⁴ Although many investment professionals have great passion for what they do, it is also clear at some asset management organizations that professionals either do not have a sense of purpose or have a purpose that is geared toward something other than adding value to clients.

Similar to vision, firm-wide beliefs and values must be developed, communicated, adopted, incentivized, and then reinforced through shared experiences. A set of core beliefs that everyone in the organization supports and is accountable for creates a framework for how

Building a professional organization goes hand-in-hand with a fiduciary mindset. At an organization in excellent fiduciary condition, employees take their fiduciary role seriously, and not just because it may be mandated by regulation.

decisions are made, how people interact, and their attitudes and actions toward clients.

The State Street Center for Applied Research and CFA Institute collaborated on *Discovering Phi: Motivation as the Hidden Variable of Performance*, which advocates for leaders to rebuild the culture of their firms toward greater purpose-driven motivation. This type of motivation contributes to long-term organizational performance, client satisfaction, and employee engagement. "Phi" is derived from the motivational forces of purpose, habits, and incentives that govern behaviors and actions.

To help develop a client-serving culture in which the organization's professionals "do things right and do the right things," it is essential that leaders instill and champion a professionalism framework and fiduciary mindset. Codes of ethics are less likely to shift culture, but rather they are seen as a compliance effort. There is a subtle but important difference between ethics and professionalism. Ethics is more akin to a competency that can be learned—the application of rules and principles that go beyond legal prescriptions—whereas professionalism depends on frameworks and acquired wisdom to help direct actions appropriately even in situations that are new and complex.

One such framework available to the industry is the CFA Institute Asset Manager Code, which cannot only define a firm's expectations for employees and customers, but also demonstrate the importance the firm places on putting investors' interests first.

According to studies conducted by CFA Institute and Edelman, trustworthiness, ethics, communication, and transparency are the top attributes that investors value, and they lead to the building of trust and long-term relationships with investment managers. The qualities valued and expected by clients relate to integrity, not just performance, and should be the qualities prioritized in an ethical code and in firm culture. In fact, institutional investors ranked the most important attribute of a firm as acting "in an ethical manner in all our interactions."¹⁵

Work in Collaboration across the Ecosystem

The investment industry touches many parts of society through its work for pension schemes, endowments, sovereign wealth funds, insurance companies, foundations, charities, and individuals. This report is skewed toward the role and influence of the investing institutions, both asset managers and asset owners. Because of this connection to society, the burden of regaining trust does not fall on the shoulders of these organizations alone, but on every organization and institution that has a stake in a more influential ecosystem that produces significant societal wealth and well-being.

As mentioned in the Purposeful Capitalism scenario, there are particular leadership opportunities for asset owners to exercise the greatest positive effects. A key notion is the ability of these owners, often in cooperation with others in the ecosystem, to encourage specific environmental, social, and governance (ESG) goals within the companies they own. Their influence extends to the workings of capital markets themselves, and they can have a positive impact advocating for improved regulatory effectiveness.

A prominent investment industry can help investment organizations and their employees become highly self-disciplined and competent, which requires support from regulators. The development of more effective regulation is certainly one of the preconditions for a more successful industry. The ambition should be for regulators to listen carefully to the industry and to practitioners in finance, but still be able to filter out the messages that carry undue bias to industry self-interest.¹⁶

Some of these elements are consistent with ambitions set by non-governmental initiatives. Such groups as the PRI, with its focus on responsible investing, and Focusing Capital on the Long Term, which brings together influential asset managers and asset owners in an attempt to shift the mindset of the industry, can be effective agents in helping build a self-disciplined and competent industry.

So, the question is, What are the tangible steps that could be taken by investment organizations that could create a move toward a professional industry?

CFA Institute believes that rules and regulations, although necessary, are not sufficient by themselves. High ethical principles and professional standards are essential to positive outcomes. Industry associations, such as CFA Institute, have an ability to help firms improve their fiduciary condition by setting professional codes and standards.

THE CFA INSTITUTE COMMITMENT TO BUILDING PROFESSIONALISM

In this final section, we look at ways that CFA Institute seeks to come alongside the industry to help shape a profession, beginning with existing activities that can be incrementally leveraged to greater effect (business as usual), and then offering some new ideas to make an impact (business beyond usual).

The CFA Designation and Program

CFA Institute has a unique role to play in increasing the competence and integrity of investment professionals given that the CFA designation is currently considered the gold standard in the industry.

According to CFA Institute CEO Paul Smith, CFA, "Investment managers should pursue the best qualifications if society is to trust our competence to serve their investing needs. We all have a personal responsibility to spread the word about the need for well-trained people throughout the investment management value chain."¹⁷

With the privilege of the CFA charter's influence comes responsibility. Maintaining the relevance of the charter in fast-moving conditions requires awareness of the need to quickly understand new practices, to be ready for change in all its manifestations, to understand the complexities of the financial system, to differentiate enduring changes from fads, and to be able to use supporting evidence from multiple sources.

CFA Institute believes that the CFA Program is an essential part of a successful investment profession. But there are other contributions that it can make that align with the CFA Institute mission to lead the investment profession globally by promoting the highest standards of ethics, education, and professional excellence for the ultimate benefit of society.

Standards

The ethical and professional responsibilities that investment professionals owe to their clients are made clear in the CFA Institute Code of Ethics and Standards of Professional Conduct.

All candidates in the CFA Program study the Codes and Standards at each of the three stages of the examination process, and every member annually attests to abide by and adhere to them. Self-regulation is assured through a peer-review disciplinary process and the work of a Disciplinary Review Committee that directs investigations into disciplinary cases, determines violations, imposes sanctions, and discloses violations.

Advocacy

Both directly and through its numerous member societies, CFA Institute carries out advocacy efforts to increase professionalism within the investment management industry. It acts as a resource to regulators and other standard setters worldwide to aid in the design and implementation of professional guidelines. It conducts hundreds of outreach meetings annually, resulting in strong recognition and awareness of the policy positions of CFA Institute among the world's top regulators, who often reference and cite the work of CFA Institute in their rule-making process.

CFA Institute also offers its members and other industry professionals extensive tools to support their commitment to ethical and professional practice, notably a substantial continuing education program.

Research and Thought Leadership

CFA Institute conducts research and publishes thought leadership, such as this report, to bring industry issues and potential solutions to light. Our intention is to update this report periodically to continue the dialogue with stakeholders and to underscore new thinking and trends that may impact the profession.

Financial Literacy

As an educational organization, CFA Institute should also act as a resource to help the industry develop the next generation of savers and end investors. CFA Institute believes that financial markets are more effective when participants are knowledgeable. In attempting to build investment knowledge, it is important to encourage financial literacy programs that teach people strategies for the accumulation and utilization of capital.

Because financial literacy programs can be most effective when implemented locally, CFA Institute provides educational content and financial resources in supporting many of its local member societies that are actively engaged in offering financial literacy programs directly or through other financial literacy partners.

It is important, however, to remember that financial literacy programs can go only so far in solving problems that are the result of a myriad of issues, including the complex challenges inherent in engaging the unmotivated. CFA Institute conducts research into behavioral finance methods to design practical tools and innovative products to help savers and end investors navigate the financial decisions they must make to achieve better outcomes.

IDEAS TO MOVE THE NEEDLE TO A BETTER INDUSTRY

The research that underpins this report tells us that change is coming. We have anticipated how that change might play out in planning scenarios, and what state the industry could end up in depending on how well it adapts to change and to what degree it earns (or does not earn) widespread public trust.

We believe the following "to-do" list and a road map derived from it can be the first steps in the journey toward a future where a healthy investment management profession benefits societal wealth and well-being.

Professional Transformation: Identify what is needed to go from industry to profession

As described earlier, an "industry" is defined by the circumstances of a provider producing something of value to a consumer in a transaction. A "profession" is different; it carries a seal of approval and authority by society, which is granted and maintained by containing requirements for entry, standards of fair practice, disciplinary procedures, and continuing education for its professionals in conditions of an ongoing relationship. In doing this, the profession combines value and trust. The trust in this arrangement is of considerable value, not least because it creates the conditions for growth in societal wealth and well-being. The open questions are: How can the investment industry evolve so that it shares identifiable and key characteristics in the manner of medicine, law, and accounting? What is the current gap? What benefits could arise from filling this gap? For the industry? For clients? For society? CFA Institute intends to lead a consultative discussion on this.

Fiduciary Implementation: Master the meaning of "fiduciary" in a way that can be effectively implemented even with inherent conflicts

Fiduciary responsibility in most jurisdictions is defined by the principles of loyalty, prudence, and care. This means putting the interests of beneficiaries first when determining investment strategy, avoiding conflicts of interest, and investing to the standard of care of a prudent expert. This is not a black and white issue, and thus is difficult in a legal framing that seeks to create unambiguous standards. So, all investment organizations face the practical issue of balancing these requirements within the context of their own organizational sustainability. CFA Institute intends to conduct further research and engage in industry consultation on how organizations should be dealing with fiduciary responsibilities and other issues where legal

and regulatory frameworks are at potential conflict with the ambiguities and uncertainties endemic to the investment field.

Stronger Standards: Specify and influence culture and practice with regard to values and costs

CFA Institute successfully introduced standards for presentation of performance records in the form of the GIPS® standards. There may be other areas of practice that could benefit from such an approach. We cite standards for the structure and size of fees and costs as one possible idea. We also believe that the testing of new types of investment products could be the subject of standards in ways that draw on practices in other industries and professions (e.g., the pharmaceutical industry). We also think that good culture itself could be given some support through a standards or guidance framework; at least we believe that such an ambition should be discussed. Such a discussion would overlap with how well standards have evolved in relation to ESG and sustainability.

Work toward better diversity

CFA Institute is an advocate for diversity across many dimensions. Diversity is desirable for a combination of cultural and financial values. Research suggests that diverse teams are better at certain types of decisions, particularly the complex ones that are ever-present in investing. This research sees surface-level diversity issues, such as gender and a number of others, as having a first-level impact, but recognizes cognitive diversity as more deeply impactful. CFA Institute is considering what mix of research, advocacy, and/or standard-setting should be adopted.

Leverage the ecosystem

The CFA Institute membership currently acts as a valuable resource for polling on a wide spectrum of issues, drawing from the views of the organization's more than 140,000 members. We are struck by the potential of networks empowered by new technologies to focus resources and attention in particular areas. Our membership can speak more powerfully for society's benefit through such a mechanism, particularly if it speaks with one bold voice.

SUMMARY AND WAY FORWARD

In closing, we give a view that the investment industry has not been as positive of a force for society as it could or should be. Left to business-as-usual thinking and practice, we see some increasing challenges for our industry. Under alternative pathways, with business-beyond-usual interventions and influences, we believe we can successfully overcome these challenges and emerge stronger. We can shape an industry that clearly recognizes and acts on its societal purpose and generates trust and value in enduring ways.

This focus on purpose and societal benefit can produce parallel gains for the organizations that commit to this pathway. As John Kay reminds us, "paradoxical as it sounds, goals are more likely to be achieved when pursued indirectly."¹⁸

We have put forward a number of steps and ideas by which the investment industry can realize its fullest potential, and we now encourage our members and leaders of the industry to endeavor to make this a reality.

CFA Institute is committed to further consultation with leading industry figures on the following:

- Creating a road map for moving our industry to higher standards of professionalism, along with its implications for fiduciary responsibility and for attaining the status of a profession
- Working together on the most pressing industry issues, particularly business models that better capture purpose, trust and value, cultural values that are inclusive, and technological competencies that streamline our industry
- Maintaining the CFA Program's edge in fast-moving industry conditions

"Money might make money. But money does not create value. People create value with their ideas and hard work." –Horst Köhler

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FUTURE STATE OF THE INVESTMENT PROFESSION

PURSuing BETTER OUTCOMES—FOR THE END INVESTOR, THE INDUSTRY, AND SOCIETY

Appendix A



APPENDIX A: ECOSYSTEM ACTORS

Savers and Investors: Providers of Capital

Functionally, these are the actors with the surplus of capital described in the fundamental transaction.

The primary examples are investors and savers who may channel their wealth either directly without intermediation, indirectly with the intermediation of collective vehicles (particularly asset owners, such as pension funds and insurance companies), or through private wealth management.

Asset Owners: Investors of Capital

These actors operate between providers and users of capital providing an investment management collective vehicle that facilitates the fundamental transaction. The collective vehicle is owned by the underlying members of the fund concerned. Although strictly speaking asset owners are agents of these members, they generally operate like principals in a mutual structure (that is, their profits are shared by their members).

The primary examples are pension funds, endowments and charities, and sovereign wealth funds.

Asset Managers: Investors of Capital

Like asset owners, these actors operate between providers and users of capital providing investment management services that facilitate the fundamental transaction. They are differentiated from asset owners through the nature of their function generally being the agent to the asset owners. They do not assume balance sheet risk the way that the asset owner or the end investor does. They also generally operate in a for-profit structure (profits are shared by their shareholders). We include private wealth firms here, although there is a case to include them as asset owners (in the case of family offices) or intermediaries.

The primary examples are asset management entities—generally independent asset management firms, banks, and insurance companies. This category also includes shadow banking system actors, like venture capitalists, private equity, hedge funds, and special investment vehicles.

Financial Intermediaries

These actors operate between providers and users of capital providing services that facilitate the fundamental transaction. Functions provided by financial intermediaries in service of the ecosystem are brokering the relationship between providers and users of capital; gathering capital from multiple providers so that users of capital can attain scale; performing due diligence on users of capital, legal underwriting, and creation of assets/securities; and so on.

Examples include investment banks, commercial banks, brokers, consultants, custodians, exchanges, index providers, data providers.

Firms: Users of Capital

These are the actors with the deficit of capital and surplus of good ideas described in the fundamental transaction. Their function in the ecosystem is to provide return opportunities for the benefit of all actors. These actors end up as asset issuers making use of capital markets. They also act as sponsors of pension funds. Because asset management companies are firms, some overlaps exist.

Examples include: inventors, entrepreneurs, and businesses. The largest examples are publicly listed companies. Examples of assets/securities issued in exchange for capital include stocks, bonds, preferred stocks, mortgages, and private loans.

Regulators and Nongovernmental Organizations

These actors have influence over the entirety of the financial ecosystem. They have the authority to affect the nature of the fundamental transaction, as well as the actions of all actors in the ecosystem. Functionally, these various organizations ensure that the integrity of the fundamental transaction is maintained, that protection is assured for each actor, and that the ecosystem has minimum quality standards.

Examples include governments that make laws regulating the financial ecosystem; central banks that set monetary policy for the ecosystem; regulators that enforce the laws governing the ecosystem; securities regulators that enforce rules governing how capital and assets are exchanged; stock exchanges that set listing requirements and trading protocols; and quasi-regulators, such as self-regulatory organizations (e.g., FINRA in the United States).

Other examples include legal systems, such as criminal codes that protect investors against fraud and other illegal activities; taxation authorities; transfer agents, who ensure the smooth, legal, and timely execution of buy and sell orders; the International Monetary Fund, World Bank, and OECD, each of which has the power to influence the entire ecosystem with their international economic policies; activists or lobbyists, who agitate for changes to the ecosystem; and business schools, who educate those who participate in the financial ecosystem.

These organizations operate across the entire ecosystem space, including that on which all of the other actors' institutions are built. CFA Institute is one such organization, given the universal acceptance of its CFA Program and its influence over its members in ethics and professional practice.

Finally, there is the natural environment itself, and its representatives, which are considered a part of the ecosystem because natural capital both constrains and inspires economic growth.

MEGATRENDS IMPACT IN THE SCENARIOS

	FINTECH DISRUPTION	PARALLEL WORLDS	LOWER FOR LONGER	PURPOSEFUL CAPITALISM
DEMOGRAPHICS	<p>Demographics + fintech = next generation investors expect to do more via technology.</p> <p>Global Millennial predilection toward technology = preference for robo-advising + passive management.</p>	<p>In general, financial services become cheap and available to many more segments of global society. These products range from microfinance to on-demand mobile asset allocation.</p> <p>Women become increasingly large players in capital formation and allocation, with different priorities, perspectives, and preferences.</p>	<p>Deepening pension crises create large gaps in pension coverage with longevity. Collectively, these create prime conditions for pension poverty, partly offset by later retirement.</p> <p>In a world of shrinking population growth, stranded capital in fixed assets, such as real estate and infrastructure, create dislocations for policy-makers stuck in old ways of thinking about how to drive output and not productivity.</p>	<p>The world is fast changing and interconnected, with less stability and equilibrium in the financial system. This comes at a time when the importance of the market-based chain of intermediation from savings to investment grows to unprecedented size as aging demography develops.</p>
TECHNOLOGY	<p>Innovations evolve with the potential to positively or negatively disrupt individuals, society, businesses, and governments. Also plays a highly disruptive role in finance's evolution, in its jobs, and in ways of working.</p>	<p>New technologies allow huge numbers of the previously disenfranchised to peer into the lives of others and to see how they live, including their economic opportunities and moral values.</p> <p>Social media helps spread legitimate disaffection with political issues to incite illegitimate expectations, notably on immigration, public services, and social infrastructure as a superficial and transactional part of the political process.</p>	<p>Costs are seen as an unacceptable drag on returns, precipitating transitions to lower-cost, higher-tech investment solutions and putting a high premium on innovation.</p>	<p>The skill profile of investment professionals will have to develop in both ability to understand deep-rooted technological development and also with respect to softer skills.</p>

MEGATRENDS IMPACT IN THE SCENARIOS, CONTINUED

	FINTECH DISRUPTION	PARALLEL WORLDS	LOWER FOR LONGER	PURPOSEFUL CAPITALISM
ECONOMIC IMBALANCES	The new work model is essentially cyborg (person plus machine), with critical skills in soft areas. Humans remain in demand for their situational fluency, social intelligence, innovation, creativity, and social media savvy.	The ceiling on income rises, and the floor rises, just not as fast. The uneven distribution creates tensions in politics and within businesses.	Geopolitical and social instability produce deeper fissures of inequality. Job fears, immigration, and desire for a fair share of a nonincreasing pie, all contribute to the fissures.	The reach of investment institutions is extended to include more people, driven by the growth of the middle class and a more value-producing investment industry.
GOVERNMENT FOOTPRINT	Regulators can hinder fintech disruptions by clinging to regulations designed for 20th-century finance, but hyper-distributed technologies like blockchain could limit their influence.	The "have-nots" act on their disillusionment with the system through support for nationalism and populism with anti-elite overtones and financial services disengagement. Governments' importance in raising living standards is less than the effect of profit-driven corporations.	Central banks are unable to move interest rates up as much as desired to spur aggregate demand because of sovereign and consumer indebtedness.	Governments, regulators, and firms collectively work toward a more societally conscious capitalist ideology with stronger stewardship. Central banks and regulatory authorities help make organizations trustworthy, manage systemic issues, and reduce risks of financial crashes and crises. Regulators and financial institutions make progress improving levels of trust.
RESOURCE MANAGEMENT	The rise of fintech permanently lowers costs of capital for all companies. Opportunities increase to deploy efficient resource-sparing technologies.	Firms find a new balance in stakeholder responsibility, with the growth of B corps and other organizations that passionately pursue a greater pro-social orientation.	The diffusion of lower prices for consumers globally and for bare essentials leads over time to larger numbers of consumers having nearly identical access to food, shelter, transportation, communication, computing, and other goods and services. A need arises for more capital to be allocated to developing economies and economies where demographics and demand for necessities continue to grow.	Serious shortages of resources, such as energy, rare earth elements, water, food, space, and land, require corporations and the institutions that own them to operate in a way that is congruent with sustainable development. Individuals increasingly want financial services providers to demonstrate a "clean license to operate." The financial materiality of environmental, social, and governance related factors is uncertain, but likely to rise.

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FUTURE STATE OF THE INVESTMENT PROFESSION

PURSuing BETTER OUTCOMES—FOR THE END INVESTOR, THE INDUSTRY, AND SOCIETY

Appendix B



D1. What is your title?	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Chief investment officer	15%	8%	13%	16%	17%	20%	14%
Chief operating officer	8%	5%	3%	18%	6%	20%	9%
Director of research	7%	6%	5%	8%	6%	11%	6%
Managing director	14%	17%	16%	14%	13%	9%	15%
Portfolio manager	25%	22%	34%	21%	24%	17%	29%
Research analyst	12%	20%	11%	11%	8%	17%	11%
Other	20%	21%	18%	13%	26%	5%	16%
Total	100%	100%	100%	100%	100%	100%	100%

D2. For how many years have you worked as an investment management professional?	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Less than 2 years	4%	9%	3%	3%	2%	5%	3%
2-10 years	39%	46%	39%	63%	24%	64%	48%
10-20 years	32%	31%	38%	25%	34%	25%	33%
20 years or more	24%	14%	20%	9%	40%	5%	16%
Total	100%	100%	100%	100%	100%	100%	100%

D3. Do you hold any of the following credentials?	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Chartered Financial Analyst (CFA)	63%	60%	60%	39%	80%	29%	52%
Certified/Chartered Public Accountant (CPA)	6%	8%	5%	5%	5%	7%	5%
Chartered Accountant (CA)	5%	3%	5%	10%	3%	9%	7%
Certified Financial Planner (CFP)	4%	3%	4%	4%	5%	5%	4%
Chartered Alternative Investment Analyst (CAIA)	4%	2%	3%	3%	5%	6%	3%
Financial Risk Manager (FRM)	5%	4%	6%	6%	4%	5%	6%
Master of Business Administration (MBA)	45%	38%	42%	54%	42%	68%	47%
Juris Doctor (JD)	2%	1%	2%	2%	2%	1%	2%

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Advanced degree in a technical discipline such as mathematics or a natural science	8%	10%	6%	9%	7%	15%	7%
Other graduate degree	23%	26%	21%	26%	23%	15%	23%
Other degree or professional designation	10%	6%	9%	3%	14%	6%	7%
Total	100%	100%	100%	100%	100%	100%	100%

D4. What type of institution do you work for?	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Insurance company	10%	13%	11%	8%	10%	11%	10%
Public pension	4%	5%	4%	5%	2%	5%	5%
Private pension	4%	1%	5%	8%	2%	9%	6%
Family office	8%	2%	6%	14%	8%	15%	9%
Asset management firm	33%	40%	36%	34%	28%	32%	35%
Foundation	2%	0%	1%	1%	4%	5%	1%
Endowment	2%	0%	0%	2%	3%	5%	1%
Financial advisory firm focused on private investors	17%	12%	14%	10%	24%	8%	13%
Financial advisory firm focused on institutional investors	10%	14%	14%	11%	7%	6%	13%
Other	11%	12%	10%	8%	13%	3%	9%
Total	100%	100%	100%	100%	100%	100%	100%

D5. What are your institution's assets under management (in USD)?	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Less than \$100 million	13%	15%	11%	11%	17%	1%	11%
\$100 million to \$250 million	4%	5%	2%	2%	5%	1%	2%
\$250 million to \$500 million	9%	18%	5%	13%	5%	13%	8%
\$500 million to \$1 billion	10%	7%	10%	17%	7%	22%	13%
\$1 billion to \$10 billion	24%	20%	23%	29%	23%	28%	25%
\$10 billion to \$50 billion	16%	11%	18%	20%	15%	20%	19%
\$50 billion or more	24%	23%	30%	8%	28%	15%	22%
Total	100%	100%	100%	100%	100%	100%	100%

D6. Where is your position located?	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Argentina	2%	0%	0%	0%	0%	16%	0%
Australia	1%	7%	0%	0%	0%	0%	0%
Austria	0%	0%	1%	0%	0%	0%	1%
Bahrain	0%	0%	0%	0%	0%	0%	0%
Bangladesh	0%	0%	0%	0%	0%	0%	0%
Belgium	0%	0%	2%	0%	0%	0%	1%
Brazil	2%	0%	0%	0%	0%	20%	0%
Bulgaria	0%	0%	2%	0%	0%	0%	1%
Canada	10%	0%	0%	0%	23%	0%	0%
Chile	2%	0%	0%	0%	0%	16%	0%
China	1%	6%	0%	0%	0%	0%	0%
Colombia	1%	0%	0%	0%	0%	13%	0%
Croatia	0%	0%	0%	0%	0%	0%	0%
Czech Republic	1%	0%	4%	0%	0%	0%	3%
Denmark	1%	0%	5%	0%	0%	0%	3%
Egypt	1%	0%	0%	11%	0%	0%	4%
Finland	1%	0%	3%	0%	0%	0%	2%

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
France	1%	0%	4%	0%	0%	0%	3%
Germany	2%	0%	9%	0%	0%	0%	5%
Ghana	0%	0%	0%	2%	0%	0%	1%
Greece	1%	0%	5%	0%	0%	0%	3%
Guatemala	0%	0%	0%	0%	0%	1%	0%
Hong Kong	2%	10%	0%	0%	0%	0%	0%
India	3%	15%	0%	0%	0%	0%	0%
Indonesia	1%	5%	0%	0%	0%	0%	0%
Ireland	0%	0%	1%	0%	0%	0%	1%
Italy	1%	0%	5%	0%	0%	0%	3%
Japan	1%	8%	0%	0%	0%	0%	0%
Jordan	0%	0%	0%	1%	0%	0%	0%
Kuwait	0%	0%	0%	2%	0%	0%	1%
Luxembourg	0%	0%	1%	0%	0%	0%	1%
Malaysia	1%	7%	0%	0%	0%	0%	0%
Malta	0%	0%	0%	0%	0%	0%	0%
Mexico	2%	0%	0%	0%	0%	20%	0%
Netherlands	1%	0%	4%	0%	0%	0%	3%
New Zealand	0%	1%	0%	0%	0%	0%	0%
Nigeria	0%	0%	0%	1%	0%	0%	0%
Norway	1%	0%	3%	0%	0%	0%	2%
Pakistan	0%	0%	0%	0%	0%	0%	0%
Peru	1%	0%	0%	0%	0%	11%	0%
Philippines	1%	5%	0%	0%	0%	0%	0%
Poland	0%	0%	1%	0%	0%	0%	1%
Portugal	0%	0%	0%	0%	0%	0%	0%
Qatar	1%	0%	0%	11%	0%	0%	4%

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Republic of China (Taiwan)	0%	1%	0%	0%	0%	0%	0%
Romania	0%	0%	0%	0%	0%	0%	0%
Russia	1%	0%	3%	0%	0%	0%	2%
Saudi Arabia	2%	0%	0%	18%	0%	0%	7%
Serbia	0%	0%	0%	0%	0%	0%	0%
Singapore	3%	14%	0%	0%	0%	0%	0%
Slovenia	0%	0%	0%	0%	0%	0%	0%
South Africa	4%	0%	0%	32%	0%	0%	12%
South Korea	1%	3%	0%	0%	0%	0%	0%
Spain	1%	0%	6%	0%	0%	0%	4%
Sri Lanka	1%	6%	0%	0%	0%	0%	0%
Sweden	1%	0%	4%	0%	0%	0%	2%
Switzerland	2%	0%	10%	0%	0%	0%	6%
Thailand	1%	6%	0%	0%	0%	0%	0%
Trinidad and Tobago	0%	0%	0%	0%	0%	1%	0%
Tunisia	0%	0%	0%	1%	0%	0%	0%
Turkey	1%	0%	3%	0%	0%	0%	2%
Uganda	0%	0%	0%	1%	0%	0%	0%
Ukraine	0%	0%	0%	0%	0%	0%	0%
United Arab Emirates	2%	0%	0%	21%	0%	0%	8%
United Kingdom	4%	0%	21%	0%	0%	0%	13%
United States	32%	0%	0%	0%	77%	0%	0%
Uruguay	0%	0%	0%	0%	0%	1%	0%
Venezuela	0%	0%	0%	0%	0%	1%	0%
Vietnam	0%	2%	0%	0%	0%	0%	0%
Yemen	0%	0%	0%	2%	0%	0%	1%
Total	100%	100%	100%	100%	100%	100%	100%

D6. Region	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Asia-Pacific	18%	100%	0%	0%	0%	0%	0%
Europe	19%	0%	100%	0%	0%	0%	62%
Middle East and Africa	12%	0%	0%	100%	0%	0%	38%
North America	42%	0%	0%	0%	100%	0%	0%
Latin America	10%	0%	0%	0%	0%	100%	0%
Total	100%	100%	100%	100%	100%	100%	100%

D7. Are you female or male?	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Female	14%	17%	14%	13%	13%	18%	13%
Male	84%	82%	86%	86%	85%	82%	86%
Prefer not to say	1%	1%	0%	1%	2%	0%	1%
Total	100%	100%	100%	100%	100%	100%	100%

SKILLS FOR THE FUTURE

Q1. Please indicate which of the following skills will be more important for the success for (a) chief investment officers/portfolio managers, (b) CEOs of asset management firms, and (c) CEOs of asset owning institutions in 5-10 years.

A. Which of the following skills will be more important to the success of CIOs/portfolio managers in 5-10 years?

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Specialized financial analysis skills	35%	41%	44%	27%	31%	31%	38%
Knowledge of science, engineering, and mathematics	24%	22%	26%	24%	23%	27%	25%
Sophisticated knowledge of IT (e.g., programming, artificial intelligence, etc.)	25%	26%	24%	34%	19%	34%	28%
Consultative selling skills	23%	23%	22%	27%	20%	36%	24%
Relationship-building skills	35%	32%	32%	41%	35%	45%	36%
Crisis management skills	23%	27%	26%	34%	14%	32%	29%
Ability to articulate a compelling vision for the institution	36%	31%	31%	32%	42%	34%	31%
Understanding of corporate governance/regulations	25%	24%	29%	30%	22%	22%	29%
Ability to instill a culture of ethical decision making	30%	36%	19%	26%	34%	23%	21%
International and cross-cultural skills (including foreign languages)	15%	17%	23%	14%	12%	15%	19%

B. Which of the following skills will be most important to the success of CEOs of asset management firms in 5-10 years?

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Specialized financial analysis skills	20%	26%	22%	34%	9%	36%	27%
Knowledge of science, engineering, and mathematics	10%	10%	11%	15%	6%	22%	12%
Sophisticated knowledge of IT (e.g., programming, artificial intelligence, etc.)	12%	12%	14%	17%	10%	15%	15%
Consultative selling skills	23%	26%	23%	21%	21%	26%	22%
Relationship-building skills	38%	40%	39%	40%	35%	42%	39%
Crisis management skills	27%	31%	29%	37%	18%	39%	32%
Ability to articulate a compelling vision for the institution	49%	40%	46%	40%	61%	32%	44%
Understanding of corporate governance/regulations	28%	31%	29%	25%	27%	31%	27%

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Ability to instill a culture of ethical decision making	38%	38%	33%	34%	44%	27%	33%
International and cross-cultural skills (including foreign languages)	21%	24%	21%	27%	15%	28%	23%

C. Which of the following skills will be most important to the success of CEOs of asset owning institutions (pensions, foundations, endowments) in 5-10 years?

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Specialized financial analysis skills	31%	30%	33%	32%	25%	48%	33%
Knowledge of science, engineering, and mathematics	10%	7%	12%	12%	9%	18%	12%
Sophisticated knowledge of IT (e.g., programming, artificial intelligence, etc.)	13%	12%	12%	20%	11%	13%	15%
Consultative selling skills	17%	20%	20%	29%	10%	24%	24%
Relationship-building skills	34%	33%	33%	37%	32%	43%	34%
Crisis management skills	29%	35%	30%	34%	22%	37%	32%
Ability to articulate a compelling vision for the institution	40%	35%	36%	35%	46%	35%	36%
Understanding of corporate governance/regulations	39%	42%	39%	33%	41%	33%	37%
Ability to instill a culture of ethical decision making	37%	45%	36%	32%	39%	19%	34%
International and cross-cultural skills (including foreign languages)	20%	22%	16%	21%	18%	29%	18%

Q2. How available are each of the following skills in the labor pool of prospective employees?

Specialized financial analysis skills	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	4%	2%	3%	6%	4%	4%	4%
Somewhat hard to find	33%	36%	31%	48%	27%	41%	38%
Somewhat available	43%	42%	47%	35%	43%	47%	43%
Readily available	20%	20%	19%	11%	26%	8%	16%
Total	100%	100%	100%	100%	100%	100%	100%

Knowledge of science, engineering, and mathematics	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	8%	9%	8%	5%	8%	8%	7%
Somewhat hard to find	24%	20%	27%	19%	27%	18%	24%
Somewhat available	36%	36%	36%	38%	39%	22%	36%
Readily available	32%	35%	29%	39%	27%	52%	33%
Total	100%	100%	100%	100%	100%	100%	100%

Sophisticated knowledge of IT (e.g., programming, artificial intelligence, etc.)	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	14%	17%	10%	6%	17%	10%	9%
Somewhat hard to find	38%	34%	46%	35%	38%	39%	42%
Somewhat available	38%	39%	36%	47%	36%	41%	40%
Readily available	10%	11%	8%	13%	9%	10%	10%
Total	100%	100%	100%	100%	100%	100%	100%

Consultative selling skills	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	4%	3%	3%	5%	5%	1%	3%
Somewhat hard to find	25%	23%	26%	30%	25%	22%	27%
Somewhat available	48%	50%	49%	48%	45%	51%	49%
Readily available	23%	24%	22%	17%	24%	26%	20%
Total	100%	100%	100%	100%	100%	100%	100%

Relationship-building skills	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	4%	5%	2%	4%	5%	3%	3%
Somewhat hard to find	23%	20%	25%	18%	26%	19%	22%
Somewhat available	53%	51%	50%	60%	51%	58%	54%
Readily available	20%	24%	23%	18%	18%	20%	21%
Total	100%	100%	100%	100%	100%	100%	100%

Crisis management skills	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	18%	20%	20%	8%	20%	12%	15%
Somewhat hard to find	38%	42%	36%	31%	43%	24%	34%
Somewhat available	32%	28%	32%	44%	29%	38%	37%
Readily available	12%	10%	13%	17%	8%	26%	14%
Total	100%	100%	100%	100%	100%	100%	100%

Ability to articulate a compelling vision for the institution	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	18%	21%	19%	9%	21%	5%	15%
Somewhat hard to find	35%	34%	34%	34%	40%	21%	34%
Somewhat available	36%	36%	38%	44%	30%	46%	40%
Readily available	11%	9%	8%	13%	8%	28%	10%
Total	100%	100%	100%	100%	100%	100%	100%

Understanding of corporate governance/regulations	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	4%	3%	4%	4%	5%	2%	4%
Somewhat hard to find	29%	31%	31%	17%	32%	25%	26%
Somewhat available	51%	52%	49%	56%	50%	50%	52%
Readily available	16%	15%	16%	23%	14%	24%	19%
Total	100%	100%	100%	100%	100%	100%	100%

Ability to instill a culture of ethical decision making	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	11%	13%	11%	6%	13%	3%	9%
Somewhat hard to find	31%	38%	38%	22%	31%	18%	32%
Somewhat available	43%	34%	38%	55%	43%	55%	45%
Readily available	15%	15%	12%	17%	14%	24%	14%
Total	100%	100%	100%	100%	100%	100%	100%

International and cross-cultural skills (including foreign languages)	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very hard to find	11%	14%	6%	6%	15%	4%	6%
Somewhat hard to find	32%	32%	27%	26%	39%	15%	26%
Somewhat available	36%	37%	47%	31%	33%	36%	41%
Readily available	21%	18%	20%	38%	13%	45%	27%
Total	100%	100%	100%	100%	100%	100%	100%

Q3. What other skills do you think will become increasingly important for executive success in 5-10 years?

Q4. Over the next 5-10 years, which of the following skills should employers cultivate through structured training programs with their new employees?	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Specialized financial analysis skills	58%	63%	60%	63%	49%	75%	61%
Knowledge of science, engineering, and mathematics	34%	31%	30%	49%	26%	59%	37%
Sophisticated knowledge of IT (e.g., programming, artificial intelligence, etc.)	37%	38%	40%	42%	32%	45%	41%
Consultative selling skills	42%	39%	45%	51%	38%	50%	47%
Relationship-building skills	55%	55%	46%	53%	56%	73%	49%
Crisis management skills	39%	48%	39%	51%	29%	53%	44%
Ability to articulate a compelling vision for the institution	41%	45%	38%	44%	36%	55%	40%
Understanding of corporate governance/regulations	53%	55%	56%	58%	48%	61%	56%
Ability to instill a culture of ethical decision making	61%	70%	55%	60%	59%	65%	57%
International and cross-cultural skills (including foreign languages)	47%	53%	49%	66%	33%	72%	55%

STRATEGIC THREATS AND OPPORTUNITIES FOR THE INDUSTRY

Q5. We're interested in your views on how technology and globalization will affect investment management professionals and the firms that employ them over the next 5-10 years.

A. In the next 5-10 years, new information technology in the investment management industry will ...	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Pose a threat to the employment of professionals like me	3%	3%	2%	2%	4%	3%	2%
2	20%	16%	27%	17%	21%	14%	23%
3	28%	29%	24%	33%	27%	35%	27%
4	37%	37%	37%	40%	37%	35%	38%
Offer new opportunities for professionals like me	11%	15%	10%	8%	11%	14%	9%
Total	100%	100%	100%	100%	100%	100%	100%

Score (1-5)

B. In the next 5-10 years, new information technology in the investment management industry will ...	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Pose a strategic threat to financial institutions like mine	3%	4%	3%	2%	4%	2%	2%
2	26%	23%	26%	37%	20%	42%	30%
3	27%	23%	30%	24%	28%	22%	28%
4	32%	32%	32%	26%	35%	24%	30%
Offer strategic opportunities to financial institutions like mine	13%	18%	8%	11%	13%	11%	9%
Total	100%	100%	100%	100%	100%	100%	100%

C. In the next 5-10 years, globalization in the investment management industry will ...	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Pose a threat to the employment of professionals like me	2%	1%	3%	1%	2%	2%	2%
2	16%	13%	20%	17%	15%	24%	19%
3	27%	21%	25%	24%	31%	28%	25%
4	38%	36%	38%	37%	40%	34%	37%
Offer new opportunities for professionals like me	17%	30%	13%	22%	13%	13%	17%
Total	100%	100%	100%	100%	100%	100%	100%

D. In the next 5-10 years, globalization in the investment management industry will ...

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Pose a strategic threat to financial institutions like mine	1%	1%	2%	1%	1%	1%	2%
2	17%	15%	17%	23%	15%	17%	19%
3	31%	22%	32%	27%	35%	37%	30%
4	32%	32%	33%	29%	34%	24%	32%
Offer strategic opportunities to financial institutions like mine	19%	31%	16%	20%	15%	21%	17%
Total	100%	100%	100%	100%	100%	100%	100%

Q6. We'd like to know your outlook for consolidation, competition, and profitability for institutions like yours over the next 5-10 years.

A. In the next 5-10 years, I expect...

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Substantial consolidation of the peers and competitors of my institution	27%	28%	35%	21%	29%	13%	30%
Some consolidation of the peers and competitors of my institution	57%	58%	47%	60%	58%	62%	52%
Little or no consolidation of the peers and competitors of my institution	16%	14%	17%	19%	13%	25%	18%
Total	100%	100%	100%	100%	100%	100%	100%

B. In the next 5-10 years, I expect...

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Many new market entrants and competitors of my institution	20%	28%	23%	22%	16%	18%	23%
A moderate number new market entrants and competitors of my institution	41%	40%	44%	32%	45%	29%	39%
Few new market entrants and competitors of my institution	39%	32%	33%	47%	39%	53%	38%
Total	100%	100%	100%	100%	100%	100%	100%

C. In the next 5-10 years, I expect...	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Substantial growth in profit margins among asset management firms	16%	13%	12%	31%	8%	43%	19%
Moderate growth in profit margins among asset management firms	21%	30%	16%	27%	19%	19%	20%
Little or no growth in profit margins among asset management firms	22%	22%	25%	13%	24%	15%	21%
Moderate contraction in profit margins among asset management firms	28%	24%	31%	20%	33%	15%	27%
Substantial contraction in profit margins among asset management firms	13%	11%	16%	9%	15%	7%	13%
Total	100%	100%	100%	100%	100%	100%	100%
Growth (net)	37%	43%	28%	58%	27%	62%	39%
Contraction (net)	41%	35%	47%	29%	49%	23%	40%

THE BIG PICTURE

Q7. To what extent do you agree with the following statements about the role of the investment management profession on society at large?

A. The investment management profession's current impact on society is...	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very positive	11%	15%	10%	8%	11%	10%	9%
Somewhat positive	68%	68%	67%	76%	66%	74%	70%
Somewhat negative	19%	16%	19%	17%	21%	16%	18%
Very negative	2%	1%	5%	0%	2%	0%	3%
Total	100%	100%	100%	100%	100%	100%	100%

B. The investment management profession's future impact on society is...	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Much more positive than today	14%	16%	12%	20%	10%	19%	15%
Somewhat more positive than today	54%	52%	58%	38%	63%	30%	51%
Somewhat less positive than today	31%	30%	29%	41%	27%	45%	34%
Much less positive than today	1%	2%	1%	1%	1%	5%	1%
Total	100%	100%	100%	100%	100%	100%	100%

C. The investment management profession's potential impact on society contingent on incorporating higher principles could be ...	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Very positive	51%	50%	41%	47%	54%	62%	44%
Somewhat positive	39%	41%	46%	37%	40%	22%	43%
Somewhat negative	9%	9%	11%	15%	4%	14%	13%
Very negative	1%	0%	1%	1%	1%	3%	1%
Total	100%	100%	100%	100%	100%	100%	100%

Q8. To what extent do you agree with the following statements about the investment management industry?

A. Asset management fees generally reflect the value provided to clients.	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	5%	7%	5%	8%	4%	4%	6%
Agree	44%	40%	42%	56%	39%	66%	47%
Strongly disagree	34%	34%	33%	25%	39%	22%	30%
Disagree	14%	15%	17%	11%	16%	6%	15%
Neutral/no opinion	2%	4%	3%	2%	2%	2%	2%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	50%	47%	47%	63%	43%	70%	53%
Disagree (net)	48%	48%	50%	35%	55%	28%	45%
B. Clients are often sold inappropriate financial products	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	19%	19%	13%	13%	26%	8%	13%
Agree	37%	35%	46%	31%	41%	17%	40%
Disagree	22%	28%	21%	26%	17%	26%	23%
Strongly disagree	18%	16%	17%	28%	10%	46%	21%
Neutral/no opinion	4%	3%	2%	3%	6%	2%	3%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	56%	53%	59%	44%	67%	25%	53%
Disagree (net)	40%	43%	39%	53%	27%	73%	44%

C. Financial markets/investment management are being regulated effectively.

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	21%	18%	20%	26%	21%	24%	22%
Agree	39%	39%	45%	31%	41%	27%	39%
Disagree	26%	26%	21%	22%	31%	21%	22%
Strongly disagree	11%	15%	11%	19%	4%	25%	14%
Neutral/no opinion	3%	3%	3%	3%	4%	4%	3%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	60%	56%	64%	56%	62%	51%	61%
Disagree (net)	37%	41%	33%	41%	35%	45%	36%

D. Over the next 5-10 years, financial markets and capitalism will contribute to increasing economic equality.

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	14%	14%	10%	21%	11%	25%	14%
Agree	36%	34%	35%	36%	37%	37%	36%
Disagree	32%	35%	37%	27%	32%	26%	33%
Strongly disagree	14%	14%	15%	14%	14%	12%	14%
Neutral/no opinion	4%	4%	3%	2%	7%	1%	3%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	49%	48%	45%	57%	47%	61%	50%
Disagree (net)	46%	48%	52%	41%	46%	38%	47%

E. Environmental, social, and governance factors will become increasingly important to investment decision makers in the next 5-10 years.

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	26%	38%	26%	22%	21%	33%	24%
Agree	47%	43%	50%	38%	53%	29%	45%
Disagree	16%	10%	16%	21%	17%	18%	18%
Strongly disagree	8%	8%	7%	17%	5%	19%	11%
Neutral/no opinion	3%	0%	2%	3%	4%	1%	2%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	73%	81%	76%	59%	74%	62%	70%
Disagree (net)	24%	18%	22%	38%	22%	37%	28%

F. Meaningful increases in interest rates, economic growth, the equity-risk premium, and other macroeconomic indicators will occur in the next 5-10 years.

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	14%	11%	14%	14%	14%	16%	14%
Agree	47%	52%	42%	40%	49%	47%	41%
Disagree	22%	25%	25%	23%	21%	15%	24%
Strongly disagree	10%	9%	11%	20%	6%	20%	14%
Neutral/no opinion	7%	4%	8%	4%	9%	2%	6%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	61%	62%	56%	54%	63%	64%	55%
Disagree (net)	33%	34%	36%	42%	27%	35%	38%

G. Investors will continue to increase their allocations to passive investment vehicles over the next 5-10 years.

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	22%	21%	22%	24%	21%	24%	23%
Agree	48%	44%	49%	44%	56%	29%	47%
Disagree	18%	24%	16%	17%	17%	16%	16%
Strongly disagree	9%	8%	8%	14%	4%	26%	10%
Neutral/no opinion	3%	3%	4%	2%	3%	5%	3%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	70%	65%	72%	68%	76%	53%	70%
Disagree (net)	26%	32%	24%	30%	21%	43%	26%

H. Financial centers in Asia will have increasing influence in the investment industry in the next 5-10 years.

	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	20%	35%	20%	14%	16%	22%	18%
Agree	50%	44%	51%	47%	56%	35%	49%
Disagree	16%	14%	21%	17%	15%	17%	19%
Strongly disagree	8%	7%	6%	17%	4%	23%	10%
Neutral/no opinion	5%	0%	2%	5%	9%	3%	3%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	70%	79%	71%	61%	72%	57%	67%
Disagree (net)	24%	21%	26%	34%	19%	40%	29%

I. Institutional investors will look to reduce costs by insourcing more investment management activities.	All	Asia-Pacific	Europe	Middle East and Africa	North America	Latin America	EMEA
Strongly agree	15%	19%	11%	22%	10%	31%	15%
Agree	42%	51%	47%	35%	40%	32%	43%
Disagree	26%	19%	26%	21%	31%	25%	24%
Strongly disagree	7%	7%	8%	17%	4%	10%	11%
Neutral/no opinion	9%	4%	7%	5%	15%	3%	6%
Total	100%	100%	100%	100%	100%	100%	100%
Agree (net)	57%	70%	58%	57%	50%	63%	58%
Disagree (net)	34%	26%	34%	38%	35%	35%	36%

CFA Institute

CFA Institute is the global association of investment professionals that sets the standard for professional excellence and credentials.

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