# **Technological Innovation: Shaping the Future of Asset Management**

# Franklin Templeton

# **Executive Summary**

The global asset management industry has undergone major transformations in recent decades driven by technological innovation. That pace of change is now accelerating. In this paper, we explore how the blockchain and artificial intelligence are shaping the future of the asset management industry. We also summarize key implications for China, its asset management industry, and its asset management regulation.

### Part 1: Innovation since the 1980s

Innovations in computing and information technology since the mid-1980s have transformed asset management into an industry characterized by scale economies, which has underpinned the sector's consolidation. Innovation has also created new products including derivatives, passive index strategies, and the application of MPT to portfolio management.

### Part 2: Digital Finance and Artificial Intelligence

Digital finance, including the advent of the blockchain, enable more efficient operations. Digital finance also enables the securitization of new assets, including intellectual property and real estate, potentially opening significant new opportunities for investors and asset holders to diversify their holdings. Applications in artificial intelligence (AI) span many dimensions in the asset management industry, offering promise for scalable bespoke investment solutions tailored to client needs, thereby advancing 'Goal Oriented Investing'.

# **Part 3: Implications for China**

China is at the forefront of technological innovation, above all in AI. It is also experiencing rapid growth in its asset management industry, which is crucial given the need to diversify domestic wealth holdings and adjust to the country's demographic transition. Accordingly, China is well positioned to adopt new technologies in asset management.

# Part 4: Regulatory Considerations

The foundation upon which asset management rests is fiduciary trust. Yet rapid innovation can be unsettling. Accordingly, the industry must work with regulators to ensure that client trust is assured. For China, that will require the adoption of comprehensive guidelines and policies in areas of data protection, cybersecurity, and data privacy. China has already made important strides over the past decade in this direction.

### Part 5: Summary and Conclusions

Rapid innovation is underway, driven by increases in computing power and advances in software engineering. Change can be unsettling, but it also offers the promise to deliver valuable new products at lower cost and with enhanced security to the investing public. To realize the promise of new technologies, the asset management industry must work with regulatory authorities to assure public trust in our fiduciary aims. The global investment and wealth management industries have undergone major transformations in recent decades. That pace of change continues to accelerate. In this paper, we explore how technological innovation is shaping the future of asset and wealth management. We also summarize key implications for China, its asset management industry regulation.

# 1. The evolution process: Rapid change since the 1980s

We begin with a summary of the transformation in the global asset and wealth management industries that have taken place over the past few decades. This section establishes the backdrop for even more rapid transformations now underway.

Since the mid-1980s, powerful advances in computing and information technology have driven significant innovations in asset management. Key changes include the adoption of modern portfolio theory—which has led to more diversified and robust investment strategies—the rapid growth of derivative products, and the increasing use of passive index strategies.

In addition, logistics, securities transfer, custody, payments, and investment reporting were revolutionized from the 1990s onward by the adoption of technologically enhanced middle- and back-office systems and platforms.

The adoption of modern information technology, which offered new investment products and improved the efficiency of operations for asset managers, has had three further significant impacts on the industry.

- (1) <u>Scale Economies:</u> The high cost of front-, middle- and back-office systems accelerated the shift from a diffuse industry of small investment management firms toward a smaller number of larger operators (Figure 1). This evolution was driven by the economies of scale now seen in the industry. As firms grew larger, they spread high fixed costs across increased business volumes, which allowed customers to access a wider range of investment opportunities at a lower cost per unit.
- (2) <u>Passive Investing</u>: The growth of passive index funds (enabled by computational power) resulted in an inexorable compression of investment fees, delivering low-cost market access to investors large and small.
- (3) <u>Homogenous Solutions:</u> Armed with a broader and more flexible palette of investment vehicles, the wealth management industry gravitated toward homogenous solutions investment portfolios that do not require frequent adjustments. The guiding principle was that wealth management investors could be segmented into broad categories according to risk and return (e.g., 'growth', 'income', and 'capital preservation'), offering economies of



scale for asset managers alongside a degree of individual customization for investors.

#### Figure 1: Share of AUM of Top 120 Asset Managers

As of September 2023

Source: Franklin Templeton Industry Advisory Services analysis based on "World's 500 largest money managers." Pensions & Investments.

Finally, alongside technological innovation, the industry was transformed by changes in financial regulation. The UK's financial 'Big Bang' in 1986 and the end of Glass-Steagall in the US in 1999 ushered in profound changes across financial services, including in asset and wealth management. De-regulation hastened the development of new products and services, including long/short (hedge fund) strategies, alternatives in private markets, and securities lending. Subsequent re-regulation following the global financial crisis added to the fixed cost structure in asset management, which alongside fee compression has provided yet another impetus to consolidation across the industry.

### 2. Recent innovations and the future of asset management

Over the past two decades, expanding industry economies of scale and the commoditization of public equity and bond markets have put downward pressure on industry fees and margins, and outcome compounded by rising (fixed) cost pressures. According to a McKinsey industry survey, fixed costs for U.S. asset managers increased by \$71 billion over the decade to 2021. While the cost of

managing a dollar of AUM declined from 31 basis points in 2017 to 28 basis points in 2021, this improvement was modest, especially considering that twothirds of the industry's asset growth during that period came from market appreciation. Over the same decade, the industry's cost base expanded by approximately 6% to 7% annually — twice the pace of its organic asset growth — underscoring persistent structural cost pressures despite rising AUM levels.

In response, asset managers have continuously invested in more efficient operating systems, while simultaneously branching out into higher margin alternative investments. They have also endeavored to tap new market segments. Wealth management, for example, has moved into investment-plus advisory services, life-cycle investing, and greater access to alternatives (e.g., via secondaries). Younger generations are also being catered to with mobile and digital wallets, as well as via social media.

Low or negative interest rates that prevailed from 2010 until very recently also spurred demand for liquid instruments offering positive yields, including in duration fixed income, public and private credit, and real estate.

Beyond those trends, two emerging innovations have recently and deservedly attracted considerable attention: Digital Finance and Artificial Intelligence. Both will play major roles in shaping the industry over the remainder of this decade and beyond.

### 3. Digital Finance

Within digital finance, the key innovation has been the blockchain, which offers a decentralized system for storing and exchanging digital assets without the need for a traditional intermediary (i.e., bank or other financial institution). Blockchain technology has enabled the rapid introduction of cryptocurrencies, but its greatest promise for the asset management industry resides in the improvements it will enable in the way that capital markets operate and in the tokenization (i.e., securitization) of previously unmarketable assets.<sup>1</sup>

Blockchain will allow the industry to migrate from today's session and regional based approach to a set of global, 24/7/365 markets. It will enable us to unwind the complex approach to securities processing that developed in the early 1970s and instead settle transactions as they occur, exchanging assets and payments

<sup>1</sup> Tokenization and blockchain technologies are having many impacts across the asset management industry beyond those we highlight in the body of this paper. For example, they are enabling continuous markets, collapsing the importance of geographic trading centers, enabling greater automation of operational functions, reducing the need for collateral holdings to bridge multi-day settlement cycles, and eliminating the need for intermediaries such as central securities depositories. Via the use of digital forms of identification, they can transform the way the industry does 'know your client' (KYC) and 'anti money laundering' (AML) functions.

immediately. This will eliminate tremendous operational risk from the system and free up tremendous amounts of collateral. Costs should also come down as the shift in processing approach and ability for many processes to be automated via smart contracts will force entire sets of intermediaries that today act as toll-takers out of the system.

Tokenization has the potential to become the next big product innovation in portfolio management. Akin to alternatives such as hedge funds or private market offerings, the appeal for investors of tokenized assets is the opportunity to enjoy returns potentially higher and more diversified from those in public equity or fixed income markets. In the context of portfolio construction, tokenization creates assets complementary to stocks, bonds, and other holdings, enabling more robust portfolio construction that can deliver investment outcomes more consistent with long-term investor objectives.

Tokenization provides issuers with a new way to raise equity capital from assets that have typically been illiquid. For example, intellectual property—such as artist royalties, copyright earnings, and scarcity values—has already begun to be transformed into tradable tokens. In the future, commercial and residential real estate, along with other tangible assets, could also be tokenized to unlock liquidity by transferring ownership rights or revenue streams to investors.

The potential size of tokenized assets is significant. For example, the total equity value of US residential real estate is nearly \$35 trillion, more than the size of the US Treasury market of \$26.5 trillion and about 72% of the market capitalization of the S&P 500 Index (of \$48.7 trillion).<sup>2</sup>

Tokenization of real estate also offers an avenue for intergenerational wealth transfer, with potentially significant social advantages. In the West, but also in China, the average individual holds a disproportionate share of their wealth in the form of residential real estate. Traditionally, that wealth can only be extracted via collateralized borrowing (mortgages or reverse mortgages), or via sales. Tokenization, on the other hand, could enable existing homeowners, including those in retirement, to gradually sell their share of ownership in their properties, providing them with financial opportunities to meet their needs for healthcare, living expenses, generational wealth transfer, and other needs.

At the other end of the demographic spectrum, younger generations have been increasingly priced out of homeownership by rising housing costs and a scarcity of affordable housing inventory. A tokenized home equity market could help first-time buyers gradually build up ownership in their homes.

<sup>2</sup> As of September 2024. Source: Federal Reserve, S&P Global, Macrobond.

Growth of tokenization, whether in intellectual property, real estate, or other assets requires sound legal footings and appropriate regulation to establish public trust in new financial instruments. In the final section of this paper, we explore some of the regulatory implications of tokenization and other innovations for the asset management industry.

# 4. Artificial Intelligence

The second significant innovation for asset management resides in the application of artificial intelligence (AI). AI has the potential to transform all aspects of asset and wealth management, including investment performance, operations, portfolio construction, and client-facing activities.

In what follows, our focus is primarily on AI's application to client outcomes.

Over much of the history of asset management, client outcomes have been defined in terms of investment returns. And in more recent decades, attention has focused on generating 'alpha', i.e., returns beyond those delivered by the broad market.

Yet the singular focus on delivering 'alpha' has not necessarily been consistent with the objectives of asset owners, whether institutional or wealth management. At times, it instead reflects a parochial and finance-centric view of what can be readily measured, which does not always correspond to the genuine needs of clients.

That is not to say that asset managers should sidestep their responsibility to deliver superior returns via active or passive management, across public markets and alternatives. Superior return achievement, adjusted for risk, remains a necessity of any asset manager. But that, alone, is not the same thing as delivering on client objectives.

Moreover, and as noted above, in recent decades wealth management has evolved toward the segmentation of clients into broad investment objective categories, such as growth, income, or capital preservation. Artificial intelligence creates an opportunity to shift from broad categories of investment objectives to customized solutions that meet the unique needs and preferences of each investor. While that requires superior performance, it is not solely defined by alpha measures of returns.

Simply put, artificial intelligence represents a critical innovation that shifts the relationship between client and asset manager toward a more highly personalized one. As clients' needs and circumstances evolve, artificial intelligence offers a dynamic process to adjust their portfolios to meet their changing objectives for, say, income, capital appreciation, or liquidity. Life events, anticipated or not, can be addressed in a bespoke fashion for each investor using AI. For the asset or

wealth manager, the economic benefits are significant, as a single fixed cost (artificial intelligence) can be deployed across an unlimited number of client portfolios.

In short, AI does two things:

First, it allows for dynamic shifts in portfolio construction to keep pace with investor needs, which is a revolutionary departure from merely offering 'alpha' and segmenting clients into broad categories.

Second, because the costs of AI are large and fixed, it means that its deployment on a large scale can deliver powerful technology at low cost per client. It is a scale innovation, akin to its predecessors in computing and information technology.

Importantly, AI does not imply that clients will lose contact with trusted human advisors. That critical point of contact remains essential in the financial service industry. Instead, artificial intelligence augments the ability of the client advisor to perform their fiduciary responsibilities in direct contact with investors.

The potential change in the business model of asset management, and in the client experience, is transformative. The asset and wealth management industries of tomorrow will be increasingly characterized by 'Dynamic Goals Oriented Investing' facilitated by AI, which will supplant the anachronistic 'Set It and Forget It' platforms of today.

### **5. Implications for China**

Innovation in financial services, including asset management, is a global phenomenon. While national policies can (and should) shape future outcomes, investors, asset managers, and regulators worldwide will be impacted by the changes we foresee.

That includes China.

What, then, are the implications of our preceding discussion for China?

To begin, the Chinese economy is significant. On a purchasing power parity basis, it now accounts for roughly a fifth of world output. China's economic status is reflected in its importance across many arenas, including trade, investment, and capital markets.

Unsurprisingly, therefore, China's asset management industry is also significant. As per AMAC, China's total asset management value is about 118.66 trillion yuan as of the end of 2023 with about a fourth of it in public funds.



#### Figure 2: China's Asset Management Industry

Source: AMAC.

According to Bloomberg estimates, the size of China's wealth management industry will grow by 80% over the remainder of this decade, with a significant impulse coming from the allocation of individual cash balances.<sup>3</sup> More importantly, China recently announced the nationwide rollout of its private pension scheme, following a two-year pilot trial in 36 cities and regions.

China has also opened its financial markets to foreign investors. Liberalization has resulted in increased competition and has encouraged domestic firms to adopt global best practices, driving the need for technological investment in the sector.

Moreover, China is a world leader in information technology, artificial intelligence, and Fintech. Numerous firms, including some of China's largest information technology companies, have actively entered the domestic fintech market. And, of course, the worlds of finance and technology were jolted earlier

<sup>3</sup> Source: Bloomberg article titled "Outlook: China's world wealth hub Hong Kong could surpass Switzerland", dated October 31, 2024.

this year by the sudden emergence of DeepSeek in the realm of artificial intelligence.

China's asset and wealth management industries will play a crucial role as China addresses its demographic challenge posed by an aging population. By 2040, 26.6% of China's population will be over 65 years old, up from 14.3% as of 2023.<sup>4</sup> Over the next fifteen years China must meet an increasing need to provide financial support for its elder population.

Already, the Chinese authorities have moved on a variety of fronts, including liberalization of the financial sector, the establishment of private pensions, and support for financial innovation. Responsibility for retirement income is shifting to employers and individuals via structures akin to enterprise annuities and Individual Retirement Accounts (IRAs), aimed to complement the basic pension system. Efforts to bolster public confidence in the financial sector include the introduction of sound practices on disclosure and transparency (2018), opening to foreign investment and competition (2019), enhanced audit and supervision (2021), and support for ESG investments (2023).

To meet the aspirations of ordinary Chinese for financial security and to achieve their long-term financial goals, China will need to enhance its asset and wealth management industries in other ways. For instance, Chinese households remain large holders of cash and bonds (Figure 3), which over time constrain opportunities for wealth enhancement and long-term financial security. This raises the significance of modernizing the equity markets. Developing fintech solutions that facilitate seamless trading, improve market accessibility, and bolster data security could be key. Additionally, fostering the use of artificial intelligence and blockchain technology within financial services may enhance both efficiency and transparency. Familiarity with innovation in equity products will eventually enhance the scope for AM to shift to a more balanced asset allocation approach. In addition to greater allocations to public equity, other instruments including alternatives (private markets) and annuity structures will need to comprise a larger fraction of household wealth holdings.

Innovation is also occurring at a rapid pace in China's financial sector, including in asset management. Digital platforms have been introduced by a variety of industry leaders across asset management, pension plans, and insurance services. For example, Ant Financial Services offers mutual fund distribution via its Alipay platform. The WeChat platform provided by Tencent also includes mutual fund distribution services and caters to younger and more tech-savvy investors. Lufax and JD Finance also offer online mutual fund distribution systems.

<sup>4</sup> As of July 2024. Sources: UN World Population Prospects, 2024. Analysis by Franklin Templeton Institute.









Figure 3: Household asset allocation in China

# 6. Regulatory Considerations

QDII = Qualified Domestic Institutional Investor

Innovation is exciting, transformative, and is the foundation for rising living standards. Yet innovation also brings with it disruptive change and can breed uncertainty or even mistrust.

Trust is the foundation of sustainable success in asset and wealth management. That includes the trust investors place in the institutions with which they place their wealth, as well as in the viability of the financial system. Akin to banking and other financial services, the asset management industry thrives when trust is reinforced.

Trust must be earned every day by the industry and by each firm within it. However, trust is also built on a solid legal framework. In this system, regulators act as both mediators and overseers, ensuring fairness and accountability.

Regrettably, the long and distinguished history of finance is replete with instances of fraud, malfeasance, and episodic crises. Wrongdoers are, unfortunately, a reality in the world of finance.

Moreover, trust in the emergent technologies that are now transforming finance has been tested. Scandals in cryptocurrencies and their platforms have done unnecessary harm, potentially impairing the benefits that tokenization and the blockchain have to offer. Cyber-attacks are all too frequent across industries, including in financial services. In all countries, therefore, governments must work alongside industry to use their investigative and enforcement powers to minimize the harm caused by offenders.

Trust is also built and maintained by ensuring best practice across the industry, as well as in promoting transparency. In many cases, trust can be reinforced by global standards and agreements.

More specifically, we believe that for China to reap the full benefits of new technologies in the asset and wealth management industries it must consider additional regulatory reforms, particularly on blockchain technology. Those include:

- <u>Comprehensive Regulatory Guidelines</u> Regulators everywhere should establish comprehensive guidelines for the use of blockchain technology in the financial sector. These guidelines should span data privacy, security, and 'know your client's (KYC) elements. KYC is particularly important, given the otherwise anonymous nature of payer and payee in the blockchain, which invites illicit and criminal usage. Sensible regulation, transparency and disclosure builds trust, which will enable a broader adoption of new technologies, blockchain among them.
- <u>Data Privacy</u> Blockchain transactions are open across distributed networks. Accordingly, robust data protection laws are essential for their adoption and use. All countries should adopt data privacy regulations that protect sensitive personal financial information from breach or abuse.
- <u>Security</u> Strong security standards for blockchain networks are essential to minimize the likelihood of breaches due to cyber-attacks. Those standards help to reinforce the integrity of the financial system. Among the steps regulators and lawmakers should consider include the mandatory adoption of advanced encryption technologies and regular security audits for financial firms using digital and blockchain distribution channels.

### 7. Summary and Conclusions

Innovation is a crucial element of productivity, which ultimately determines living standards. Humans are innately creative and ingenious.

The asset and wealth management industries have been transformed over the past half century by rapid innovation, much of it in computer science and information technology. Today, many industries are on the verge of another wave of innovation, led by digital finance and artificial intelligence. Those innovations are arriving at great speed and worldwide. They will transform asset management.

The potential benefits of these innovations are enormous. They will transform investing by offering new products, complementary to traditional financial instruments, enabling investors to achieve more diversified and rewarding outcomes. They will enable asset owners to unlock equity and liquidity in their holdings. They will allow fiduciaries to dynamically adjust portfolios to meet the changing needs and preferences of their clients.

And that is just the beginning.

But innovation also brings with it rapid change, which is often unsettling. Our industry rests on the bedrock of trust. It is the single most important thing we do every day at work—ensure the trust our clients have in us.

Regardless of the strengths of the asset management industry, strong regulatory support is essential. Such regulation builds the confidence that investors need to entrust their assets to investment professionals.

As innovation arrives, we must work together—industry and regulators to harness its potential and keep the trust.