PRUDENTIAL
INVESTMENT MANAGERS

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Future Shock

ARTICLE SUMMARY

How exponential technology change is impacting human roles in investment management.

Having recently attended the Executive Program at Singularity University in Silicon Valley, it is clear that the traditional human roles in most industries will be substantially different in the next decade. This is especially true for investment managers, who have many exciting opportunities to evolve through the use of technology. Before we look specifically at potential changes in human roles in the industry, I would like to set the scene with a quote from Peter Diamandis, co-founder of Singularity University: “People need to understand how exponential technologies are impacting the business landscape. They need to do some future-casting and look at how industries are evolving and being transformed.”

ABOUT EXPONENTIAL TECHNOLOGY CHANGE

The first step in thinking about the future is to recognise that we are living in a time of exponential technology change. What is this? Simply put, it is when technology doubles in capability or performance over a given period. Computer processing power is an example of an exponential technology we're all familiar with – doubling every 18 months or so (this is known as Moore's Law).

The exponential technologies – Machine Learning, Artificial Intelligence (AI), 3D Printing, Virtual and Augmented Reality, Quantum Computing and Blockchain – combined with big data (very large sets of data that can be analysed by computers to detect patterns, trends, and associations), which acts as the catalyst, are fuelling unprecedented levels of innovation. Innovations are rapidly moving across boundaries, causing traditional definitions and business models to blur and blend. Traditional banking, trading and financial services operating models are being disrupted by new entrants, who are using technology to bypass traditional components of value chains.

Simplistically, today's investment management business models consist of four core components: administration (transfer agency and fund accounting); client functions (including marketing, sales and distribution); the investment team (comprising traders, analysts and investment decision-makers); and corporate support functions (compliance, human resources and finance). Each of these functions has been, and will continue to be, influenced by exponential technologies.

ADMINISTRATIVE ROLES ALREADY MORE AUTOMATED

The most obvious and progressed changes globally are in the administration (transfer agency) and downstream bank (payment) integration processes. The increased use of workflow tools and robotic process automation is changing the role of administrative staff away from manual preparation of transactions and reporting, and towards process-exception management and oversight.

This is resulting in significant efficiencies as fewer people are required to perform more accurate work. Intelligent management is still required to deal with exceptions, and new products, but the days of having staff perform daily repetitive functions are coming to an end.

Globally there are a number of consortiums working to leverage the full potential of Blockchain technology and completely redefine the reconciliation and asset/liability recording aspects of administration, which will result in further efficiencies.

HELP WITH CLIENT SUPPORT, SALES AND ADVICE

We have seen a shift towards the use of technology to better understand our clients' needs and behaviours. Using big data analytics combined with social media means we are able to communicate with our clients and prospective clients in a more targeted and relevant manner.

That said, the human skills required to make the most of this behavioural data analysis and digital marketing are still relatively new to the traditional investment manager, so we expect to see further refinement and development over the next few years.

Distribution is a significant component of an investment manager's value chain. Here we have seen early entrants trying to disrupt the industry through the use of Artificial Intelligence and the introduction of robo-advisers to move from conducting simple sales to incorporating investment advice into the sales process.

Today these models are still in their infancy, but accompanied by the increase in understanding of data and AI pattern recognition, they are likely to become more sophisticated. In addition, distribution platforms and adviser client relationship management (CRM) systems are evolving with technology, and the potential for a fully technologically-based linked investment service provider (LISP) platform is well progressed. Client service models are starting to leverage the capabilities of AI to build-out smart query management systems via machine-driven "chat bots". The impact of all these innovations could ultimately mean that some of the more repetitive staff functions in client and adviser service centres will be replaced by the equivalent of a "google assistant".

Conversely, it also means a rise in the number of staff focused on building-out the technology and equipping it with the corporate communications skills of tonality, brand and technical nuances specific to that manager.

INVESTMENT DECISIONS INFORMED BY AI

That brings us to the heart of the investment manager: the investment team. Index tracking, factor-based quantitative processes and other passive management approaches (based largely on technology) have grown extensively over the past five years, and this trend is likely to continue as processing power and automation improve the efficiencies of these businesses.

Trading has also moved from the traditional human broker to a machine-based algorithm executing the best deals at the highest frequency. In active investment management businesses like Prudential, we are likely to see the increased use of machine learning, robotics and AI to improve the speed and breadth of data that is analysed within the existing investment processes. Internationally there is an emerging trend towards analysis of investor sentiment (what the market "feels" about a company) on open networks like Facebook and Twitter. This information will be analysed by AI and readied for investment decision-making.

In the most extreme future scenario, AI will be used to make the end investment decision and robotics to execute the trade. That said, the most likely outcome is that the combination of AI analysis and human decision-making will drive the best investment results. Early studies conducted on the effectiveness of AI indicate that the best results are achieved when AI supplements human decision-making, as opposed to replacing it – we see the same for investment managers.

GREATER RISK, MORE CHALLENGES IN ADAPTING

Corporate support functions, meanwhile, will be able to leverage technology to operate more efficiently. Blockchain technology and the evolution of smart contracts are likely to have a significant impact on legal, financial and compliance roles. The increased burdens of regulation will be a prime target for future Blockchain solutions.

Given the rapid rate of change in the work environment, there will also likely be an increase in the level of operational risk and uncertainty: corporate risk managers will need to be agile to ensure that they maintain the relevant skills to help the business navigate through the change in a way that ensures stability.

THE GREATEST CHALLENGE: HOW TO MANAGE THE CHANGE

Perhaps the hardest aspect in all of these developments is knowing which ones to invest in, in what order and at what pace. Doing nothing in this fast-moving environment is simply not an option, but then neither is a “scattergun” approach to investing in the latest “cool-tech”.

Ultimately technology is only one enabler of an organisation’s overall strategy. The key is for executives to be clear on the direction of their investment management business, and to invest in those technologies that provide them with competitive advantage to achieve their goals.

Executives will need to build a culture in which collaboration with industry participants and regulators is more frequent and transparent, so as to smooth the journey. The role of human resources departments will be more important than ever: the balance between attracting new talent, reskilling existing talent and retaining corporate identity will be key in helping a business adapt successfully.

So what does that mean for the roles of the investment manager? The answer is simple; they will need to evolve, adapt and in some instances may disappear completely. Financial analysts will need to become more interested in data science and programming so they can partner with AI to produce better investment outperformance. Sales and distribution staff will need to be able to understand client behavioural data and establish a unique human proposition to add value. Administration staff will need to reskill and move from processing transactions to analysing exception processes and bespoke client queries. Service centres will be able to reach a much broader set of clients.

While I don’t hold a crystal ball, it is the rise in exponential technology, the reaction of regulators and ultimately changes in consumer and investor expectations that will have the biggest impact on the investment management industry in the next decade.

Ultimately it is how investment managers react to these changes and manage these expectations that will define how their business and roles are shaped in the future. Technology used appropriately will augment the existing human process, hopefully resulting in a better product and service offering to our investors.