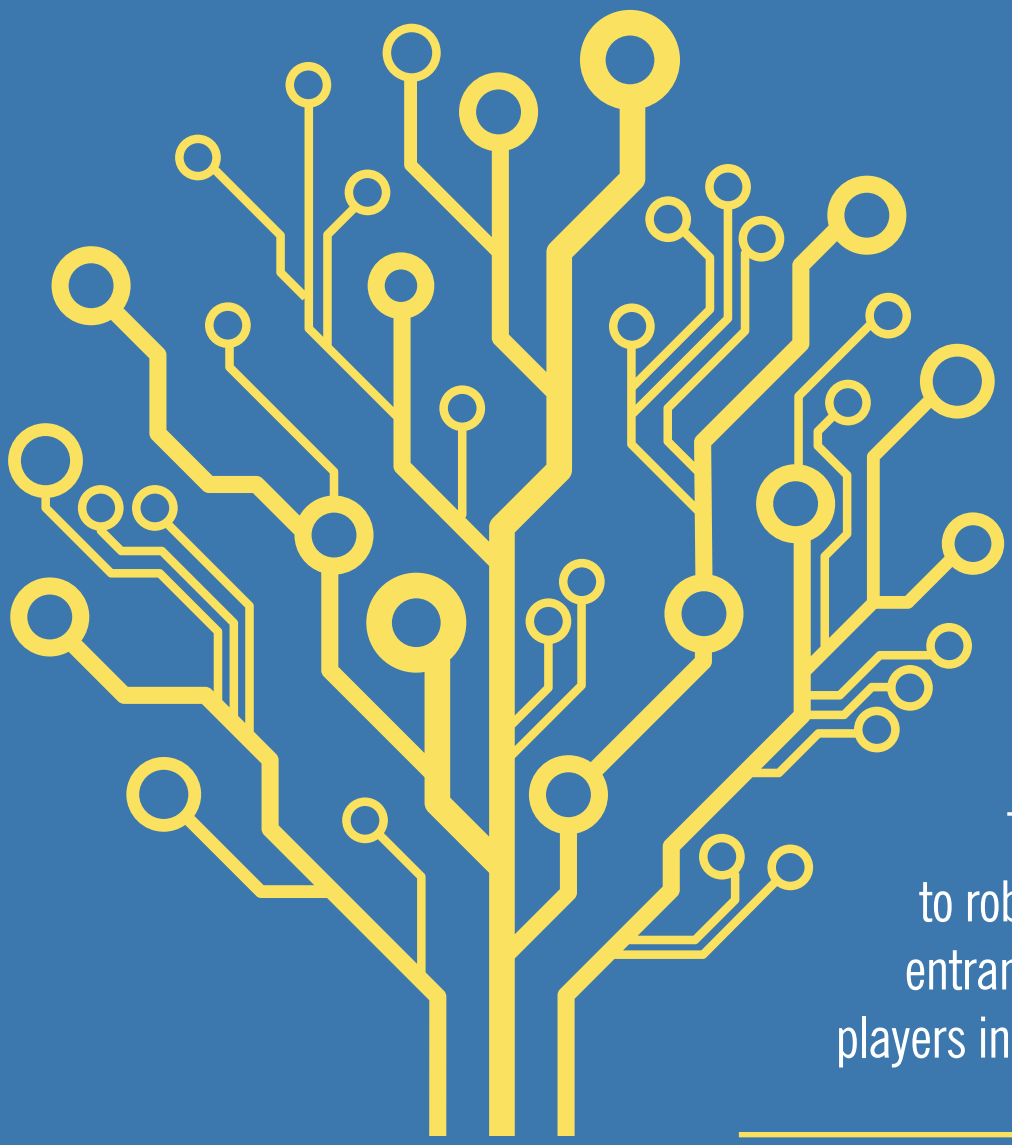
FinaMetrica®

THE ROBO REVOLUTION

ROBO-ADVICE MARKET COMMENTARY AND ANALYSIS



The essential guide to robo advisors for new entrants and established players in the global industry

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November 2015

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SECTION 1

INTRODUCTION AND EXECUTIVE SUMMARY

1.1 READER'S GUIDE

WHO NEEDS THIS RESEARCH?

People who need and use this research are in, or getting into, the robo-advice business and need a reference and strategy guide to help them build, buy or implement an automated-advice system. They are:

- Financial services companies who see automated advice encroaching on their traditional turf and need to formulate a response;
- Technology companies and other outsiders to the financial services industry, who see robo-advisors as a low-barrier-to-entry launching pad to the financial services marketplace;
- Investment managers, who will inevitably end up in relationships with automated advice platforms; and
- Agents of change who maintain an expertise in the technological drivers of financial advice.

QUESTIONS ANSWERED

This research and analysis will help you understand robo-advisors and recognize the opportunity or threat they pose to your business. We answer these critical questions:

- What is a robo-advisor?
- What is driving robo-advisors in the marketplace?
- What do good robo-advisors look like?
- What disruptions will robo-advisors bring to the financial advice business model?
- Who will make money from robo-advisors?

MARKETS COVERED

We analyze the robo-advisor markets in the US, UK and Europe.

BENEFITS FOR READERS

- Detailed references of research into the automated-advice marketplace;
- Explanations of robo-advisors;
- A categorized table of robo-advice industry players;
- Analysis of challenges for robo-advisors;
- Strategic analysis of a robo-advisor's impact on the financial advice market; and
- A framework for assessing a robo-advisor for the suitability of advice.

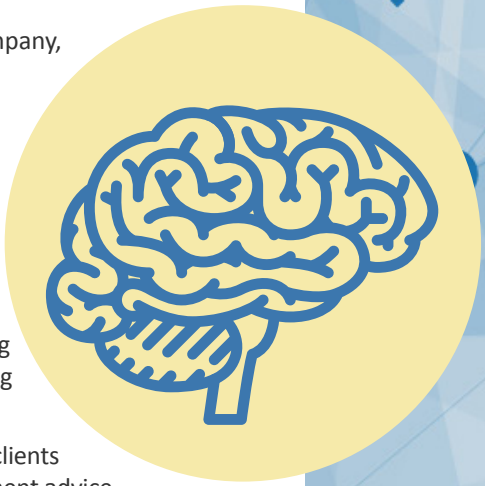
1.2 INTRODUCTION

Robo-advisors are a seismic event in financial services distribution. Just like an earthquake, their shock waves will travel great distances and change many landscapes beyond recognition.

I believe that robo-advisors are the most significant development in the delivery of financial advice in the past three decades. Not because they will rule the world, because they won't. But they will change it in so many, often subtle, ways that it will soon be hard to imagine the way the world was before they existed – just as the internet did two decades ago.

The number of people working on building, buying or implementing a robo-advice solution is growing by the day and will continue to grow as the competitive threat posed by robo-advisors increases.

A number of them come knocking on my door as my company, FinaMetrica, supplies a critical section of the 'brain' that a robo-advisor needs to operate. Without a scientifically accurate risk-tolerance process, like the one we supply, robo-advisors are at risk of recommending investments that are not suitable for their clients. That exposes the robo operator to the risk of expensive legal action or intervention, sanction from regulators and reputation damage.



FinaMetrica expects a growing demand for quality suitability processes from robo advisors. No robo can afford the loss of confidence that accompanies legal claims from dissatisfied clients. With this understanding FinaMetrica has developed a suitability plug-in Investor Profiler for existing and aspiring robos to enable them to provide the best-possible solutions.

Advisors rely on FinaMetrica's award-winning risk profiling process to help clients stay invested and achieve their financial goals by delivering suitable investment advice. Launched in 1998 and proven through market cycles, FinaMetrica is used by thousands of leading advisors around the globe to scientifically assess their clients' risk tolerance, incorporate those assessments into the financial planning process and frame expectations more realistically. Over 850,000 FinaMetrica risk profiles have been completed to date. We know the industry well and understand the rapid changes.

Repeatedly, we observed that people working on, or with, robo-advisors were operating in a vacuum. They often struggled to find information about how the robo space around them was evolving. Their world was ending at the edges of their whiteboards and they were calling out for someone to provide a broader perspective.

This guide is our answer to those calls. It has detailed analysis and reference resources to allow you to make an informed, considered, strategic response to the rise of the robo-advisor.

We apply greater intellectual rigour to the strategic discussion about robo-advisors. We go far beyond the 'Terminator' question, which asks 'will this be the rise of the machines and the end of the humans?' (In this case, the human advisor) because, strategically, this is a secondary issue. Undoubtedly, some human roles will be replaced by automation, but that is happening in all industries all the time.

The more important strategic questions revolve around the strategic opportunities and threats that robo-advisors pose for established financial services players, new entrants and disrupters. No one knows where robo-advisors will lead us, which is what makes them so simultaneously exciting and threatening.

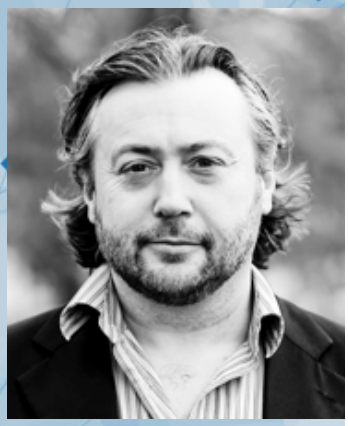
But of one thing I am certain – robo-advisors are likely to be as great a disrupter to the delivery of financial advice as Uber is to public transport. It could be an expensive mistake to make an uninformed decision to operate a robo-advisor or to choose to disregard or dismiss them.

Robo-advisors are definitely the flavour of the month. With a tiny market share of less than 1% of assets under management (AUM) they regularly make headlines in the financial press and many different businesses are spending up big to quickly get into the game.

This report will help you understand why and work out how your business can grab, or protect, a share of the market.

Paul Resnik

Author, November 2015



RESEARCH

Stuart Erskine MA | Research

Stuart Erskine has an academic background in behavioral economics, he understands human behavior and has been involved in the development of technology to enhance and improve online technology to improve consumer outcomes, particularly in the financial services sector. Stuart has been working recently with a team of leading academics in the area of online risk systems. He has a breadth of experience having worked in senior roles in financial services distribution, manufacturer and outsourcing sectors, particularly in the space of technology. He has a track record of successfully helping organizations select and develop their technology and implement innovative strategies. Stuart has a wide range of clients involved in robo strategy, including start-ups and established players.

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1.3 EXECUTIVE SUMMARY

'How are we to assess a robo-advisor?' is a top-of-mind question for anyone considering building, buying or implementing a robo-advisor process along with other questions such as:

- How do we ensure this doesn't get us sued?
- How do we comply with various rules to ensure regulators don't sanction us?
- What framework or guidelines can we point to in order to demonstrate that our robo gives suitable advice?
- Is this going to be a commercial success?

We have constructed an intelligent framework that will allow robo-advisory processes to be assessed for:

- Business risk;
- Regulatory risk;
- Investment suitability risk; and
- Commercial success.

We find suitability to be a very useful overriding term for establishing an assessment framework, as it captures the two critical questions:

1. Have you made suitable inquiries of your client to know enough about them to be able to make a recommendation relevant to their circumstances?

2. Is the recommendation you make suitable to them? The standard proxy for suitability includes the person's risk tolerance.

To help robos overcome suitability challenges, FinaMetrica has developed a suitability solution, its Investor Profiler, aimed at existing and aspiring robos to enable them to provide the best-possible solutions.

Our suitability solution is built on a:

- Market proven 12- or 25-question psychometric risk tolerance test.
- Market proven investor profiling methodology, which brings together risk tolerance with analysing clients' capacity for loss and time horizon issues.
- Market proven ability to frame investment expectations through our Risk and Return Guide.

The scientific risk tolerance test and a jointly created set of questions and scoring takes into account investors' time horizons, capacity for loss, risk tolerance, knowledge of investments and investment experience. This helps robos meet the commercial imperative and regulatory requirement to deliver advice that suits investors' needs.

Robo-advisors are changing the financial advice landscape. This is not a distant future possibility; it is today's reality.

Robo-advisors themselves are very impressive in their ability to do 'process' work in the relative blink of an eye, to a consistent standard and at a low cost. Their scalability makes them both an opportunity and a threat to those involved in financial services distribution and manufacture.

Initially, at least, automated advice systems face six broad and significant challenges to overcome:

1. Changing perceptions of financial advice;
2. Establishing trust;
3. Meeting advice and guidance gaps;
4. Economic influences;
5. Cost of acquiring clients; and
6. Behavioural biases.

The cost of acquiring clients is a crucial issue for robo-advisors, just as it is for the rest of the financial advice industry. Without customers or investors, a robo-advisor is merely lines of computer code gathering dust on a server.

We foresee that one of the greatest threats to existing financial services businesses from robo-advisors will be the ease with which they allow new entrants to rapidly enter the market using white-label robo products.

Marketing your robo service to customers can be very expensive. Yet this point is seldom raised during discussions about robo-advisors.

In their quest to find clients, we see robo-advisors as being as disruptive to the financial services sector as Uber is to public transport. Robo-advisors will allow and help world-changing things to happen. Robo-advice systems allow many other things to be built on the foundations they create.

Currently, robo-advisors are limited in function and scope – we still need people when things get complex or 'outside the algorithm'. But this is changing as robo-advisors become more sophisticated. We see in the near future the emergence of a range of robo processes that will target specific areas of financial complexity.

America is the epicenter of the robo-advisor boom. Any serious discussions about robo-advisors and their impacts are rooted in the US experience. The US has the technological savvy to develop robo-advisors and the lighter-touch regulatory settings to allow them to flourish.

Robo-advisors are not as yet flourishing in the UK; in part strict regulations there may make them suitable only for limited, less complex advice. Europe as a region is more encouraging, but is a slow-growth region compared to the US.

The robo-advice industry is characterized by extensive activity among the existing large players, with existing client bases in financial services and the emergence of well-funded start-up robo-advisor businesses such as Betterment and Wealthfront which are marketing heavily to win new clients.

We foresee that one of the greatest threats to existing financial services businesses from robo-advisors will be the ease with which they allow new entrants to rapidly enter the market using white-label robo products.

Robo-advisors bridge the traditional moats around advice businesses and allow a new entrant to crash into the market. Branded robo-advisors can be quick and economical to deploy if you can supply the customers – for example, through a church community, user group or even a sporting club. A robo-advisor may let you lead your community off the traditional financial services grid, away from established industry players.

SECTION 2

THE RISE OF ROBO-ADVISORS

2.1 INSIDE A ROBO-ADVISOR

Robo-advisors at the most basic level simply automate the financial advice process including:

1. Collecting data about a client's identity, their financial situation, the goals and – importantly – their risk tolerance;
2. Using an algorithm containing risk tolerance, financial data and goals to produce an investment recommendation that is suitable for the client; and
3. Implementing the recommendation by managing the purchase and ongoing operations of the investments.

Robo-advisors don't do anything new that humans are not doing already. But robo-advisors do the work in the blink of an eye, to a consistent standard and at low cost and their processes are easily scalable.

WHAT ROBO-ADVISOR MEANS

The term 'robo-advisor' emerged in 2002, when Richard J. Koreto coined it as the title of his article in Financial Planning magazine. In more recent years it has been widely adopted as the standard term to describe financial advice processes that are:

- Automated with little, or no, human interventions;
- Delivered online;
- Self-service;
- Use algorithms to match portfolios to clients, based on assessed risk tolerance and other factors such as age; and
- Confined to relatively simple portfolio construction matters, including allocating investments to assets classes, rebalancing, tax optimization and account aggregation.

Robo-advisors don't do anything new that humans are not doing already. But robo-advisors do the work in the blink of an eye, to a consistent standard and at low cost and their processes are easily scalable.

Processes that involve the use of technology in support of a human interaction – for example, an advisor using an automated data-gathering questionnaire with clients – are not robo in nature. These hybrid human/technology systems are better described as cyborg (half human, half machine). Robo-advisors will certainly play an important part in the cyborg world, but the bigger story is what they can achieve on their own.

Depending on your definition, it can easily be argued that robo-advisors have been with us for around a decade. Nonetheless, we generally consider this a relatively new growth area, with around half of all robo-advisors coming into existence in the last two years.

WHAT ROBO-ADVISORS DO

Robo-advisors are good at producing the process-driven investment recommendation and implementation that we described. Robo-advisors excel in situations that are simple, where the variables are common enough to be factored into an algorithm.

At this stage, robo-advisors do not, generally, stray into more complex scenarios involving complicated financial advice – for example, cash-flow management or retirement income planning. Such matters are still the domain of face-to-face financial planning because:

- The variables to be considered are so wide, complex and random that they defy being easily coded into algorithms that produce meaningful results; and

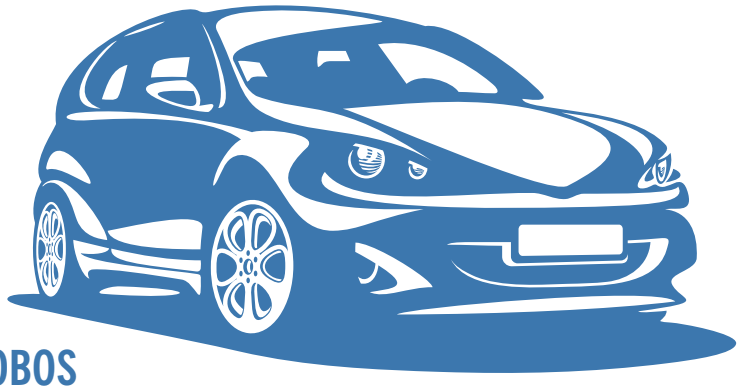
- In these more complex scenarios people appear to value human interaction which allows for 'live' explanation of concepts with specific answers to specific questions about their own unique circumstance.

However, robo-advisors are rapidly catching up. Some can already handle relatively complex, but highly focused, situations – they are, essentially, specializing in one aspect of complexity. We cannot assume that robo-advisors will remain 'dumb' – we must anticipate that robo-advisors will become increasingly more sophisticated in their abilities and scope.

We see the development of many different robo-advice systems where different robo-advisors have algorithms skewed towards the issues of a particular broad grouping. For example, there may be a robo-advisor for young, high-earners, another for retirees and one for blended families where complex estate planning needs might require different parameters in the algorithm.

We recognize the existence, and ongoing prosperity of some boutique robo-advisors that only do steps 1 and 2 in the process described above – they are, essentially, selling the wisdom of their algorithm's asset allocator for a fee. The client may then implement their own solution how they see fit.

But these robo-advisors are operating at the fringe. The main game in robo-advisors is building funds under management (FUM).



WHAT DRIVES ROBOS

The 'brains' (decision-making logic) that make a robo-advisor work will be familiar to most people in financial services. Sometimes robos are built from scratch, but many of the modules inside a robo-advisor are bolt-ons or modifications of existing financial software and involve the re-purposing of widely used portfolio management and risk profiling software that has been in the marketplace for many years. The main difference is that the user interface (UI) and user experience (UX) for robo-advice has been specifically created for self-service use by retail investors.

FinaMetrica operates in the robo space. We supply robo-advisors with a very important piece of the 'brain' they need to properly assess risk tolerance so the robo-advisor can recommend suitable investments to their clients. FinaMetrica has moved towards integrating software and providing off-the-shelf robo solutions for new entrants and established players.

CLASSIFYING ROBO-ADVISORS

Robo-advisors all share common characteristics. At their heart (if, indeed, a robo-advisor can be said to have one?) are algorithms with many components that can differ in many subtle, or even extreme, ways. Robo-advisors do different things well, classifying them can aid understanding of the marketplace and the options available.

The most useful way to approach this classification is to analyze:

1. The extent of services the robo-advisor provides; and
2. How the advice is delivered.

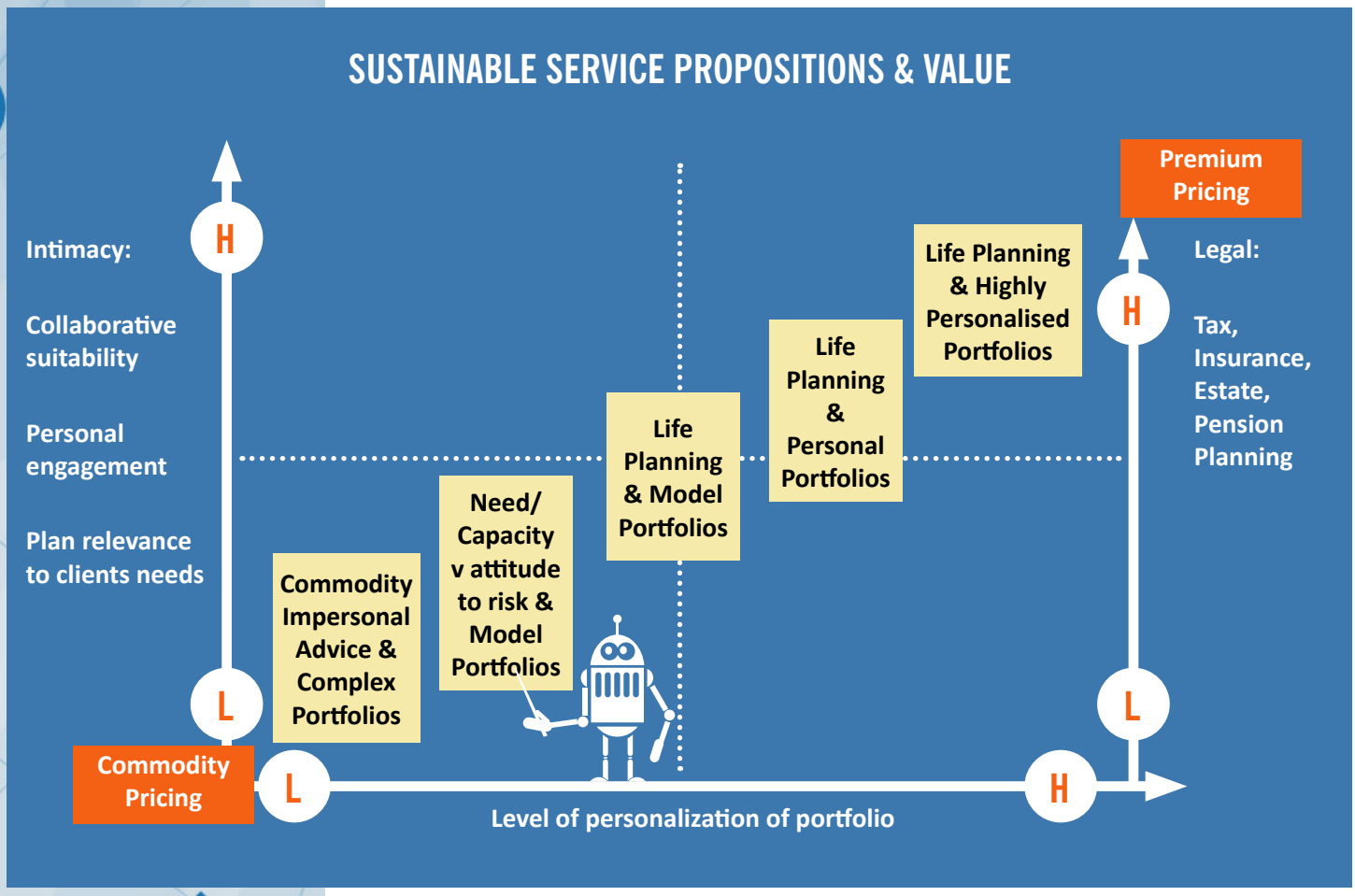
We have utilized the classification of robo-advisors developed in the 'Automated Investment Advisors' paper written by Kym Sheehan & Associates. It analyzes the functions provided and categorizes their offering into a spectrum ranging from simple 'budgeting' services through to a more valuable 'advice offering' and 'investment allocation' proposition:

Category	Services Provided
Budgeting tool	Simple online cash-flow modeling or budgeting assistance
Financial Planning Education	Educational information and guidance on general financial planning matters
Retirement planning & investment wrapper	Pension and other investment wrappers which may include ISA, SIPP & bonds
Social media / investment community	This may range from sharing of ideas to creation of model portfolios that can be shared
Robo-advisor	Usually online series of questions including attitude to risk leading to an advised investment portfolio
White-label capacity	Ability for the proposition to be branded and utilized by a third party.

The development path in the two case studies contained within this paper of the largest US robo-advisors shows that more challenging advice areas are beginning to be addressed, albeit slowly and with caution.

FinaMetrica suggests that even the more sophisticated robo-advisor models will in the near future, be mostly 'low personalization, low intimacy' customer propositions.

The analysis of the significant players in the robo-advisor world is contained in Section 7 – Analysis of Industry Participants.



2.2 CHALLENGES FOR ROBO-ADVISORS

We believe that robo-advisors are paradigm changing, but that doesn't mean they have a free pass to success.

We argue that robo-advisors must overcome six significant challenges if they are to evolve into profitable financial services businesses:

1. Changing perceptions of financial advice;
2. Establishing trust;
3. Meet advice and guidance gaps;
4. Economic influences;
5. Cost of acquiring clients; and
6. Manage behavioral biases.

1. Changing perceptions of financial advice

For a very large group of consumers, investment advisors are self-interested and greedy, financial markets are rigged and corrupt and their money is better off being self-invested into real estate, gold and other real assets.

This widely held perception of the finance industry is justly deserved.

There have been far too many financial services scandals that prove these theories, from an outright fraud like Bernie Madoff through to a local advisor churning an unsophisticated client through a procession of high brokerage-fee products. Meanwhile, the global markets collapse of 2008 has left many investors wary and untrusting of the entire financial market framework – they would rather buy real estate that they can see and touch.

The financial advice industry has failed to make a convincing argument to justify its value to consumers. The industry has struggled with the intangibility of advice, the potential uncertainties of outcomes should markets crash and perceptions of greed and corruption among the people running the 'system'. The impact of this is that most people don't want to pay for financial advice.

The results of the A.T. Kearney 2015 Robo Advisory Services study in the UK should concern everyone in the financial advice industry:

- Just 14% of adults considered themselves 'likely' to pay for financial advice, while 53% of people said they were 'unlikely' to pay for advice;
- Many would be unwilling to pay for any services that they had previously enjoyed for 'free';
- Most would not pay the hourly rates for advice that advisors would demand; 58% of people said advice was worth less than £50 (US$78) per hour, while the average advisor in the UK is expecting to be paid £165 (US$257) per hour;
- The low perceived value of advice comes as only 79% of people say they do not have a good understanding of savings and investment products; and
- Despite the self-acknowledged ignorance of investment products, the ability to 'self-service' investment advice is rated highly, with 37% of respondents saying they would use a 'jargon-free' website for financial guidance.

The 'self-service' finding deserves to be treated with great caution. Survey respondents might be trying to be seen to want to do the right thing in the same way they would say, if asked by a stranger, that they intend to eat fruit and undertake regular exercise. They may, indeed, hold those intents – but converting them to actions is another matter entirely.

We have a case in point. In response to findings like these, the UK government launched the Money Advice Service (MAS) that provides free online financial education and guidance online and over the phone. While it is jargon-free, online and offered free, the service has not drawn the level of response first thought. Many people are not actively engaged with their financial planning or making self-directed investment decisions. The experience of the financial services industry supports this – the industry has always had to pursue customers and cajole them (often through fear) to act.

Trust is defined as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviours of another" (Rousseau, Sitkin, Burt, & Camerer, 1998).

So why, then, would anyone change just because someone built a robo-advisor? What would be so engaging that people would seek one out? Why would they suddenly be happy to pay a robo for financial advice when they will not pay a human?

We can find no logical reason to believe that customers are more likely to actively engage with investments and pay a fee for financial advice just because a website or smartphone app is delivering the advice.

In this respect, we believe a robo-advisor faces all of the same challenge as everyone else in the advice business, with one additional burden – it must overcome its 'inhumanity' and establish trust.

2. Establishing trust

In financial planning, human interaction has traditionally been vitally important. As many a salesperson knows, selling something that is intangible requires the establishment of trust. This is problematic, because trust in the planning industry is low.

Trust is defined as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviors of another" (Rousseau, Sitkin, Burt, & Camerer, 1998).

Repeated surveys around the world show financial advisors sit towards the bottom of the trust ladder. According to Gallup, only 11% of Americans think stockbrokers have high ethical standards, compared to 15% for insurance salespeople and 8% for car salespeople. (Want to be trusted? Be a nurse – they are consistently number 1 on the list, where four of the top five most trusted jobs wear white uniforms to work!).

The question is how do robo-advisors show they are trustworthy?

To show you are trustworthy, you must display the behaviours that will lead to people to trust you. Three important requirements are:

1. Be competent in the matters in which you claim competence;
2. Be reliable, by doing the things that are expected of you and the things that you have promised to do; and
3. Be honest and transparent in your dealings with customers.

Amazon is trusted because it does all these things – and more. Amazon's 'no questions asked' refund policy encourages people to trust it, by making itself vulnerable to the customer. Vulnerability is a signal of trustworthiness and confidence in your offer. Perhaps an example of attempting to develop trust in the robo world is Wealthfront, which offers its service and platform free of charge for the first $20,000. By doing this it is signaling a form of commercial vulnerability that has contributed in higher average account sizes and fees.

To convince the broad public that it can be trusted, a robo-advisor will be required to make the same investment in processes and marketing to tell the story of how and why they are trustworthy as any other advisory business.

This requirement favors established brands and the large end of town in the current financial services sector, as they already have customer bases into which to market to quickly achieve scale while also having the marketing budgets and communication channels needed to attract new business to a robo-advisor.

3. Advice and guidance gaps

'Advice gaps' arise when people who could benefit from financial advice do not receive it because:

- Their level of assets is too low to viably warrant the attention of a financial advisor; or
- They are not prepared to pay a fee to receive advice.

The question of what constitutes a requisite level of assets is an interesting one. The answer varies across jurisdictions.

In the US, the desire to maximize planner profits appears to be why the financial barriers to accessing a financial planner are very high compared with the rest of the world. US advisors focus almost exclusively on what would be regarded as high wealth clients in the rest of the world.

In the UK, financial advice is generally more readily available to the middle classes – what might be termed the 'mass affluent'.

In the UK, the dollar figure required to access a basic service is driven significantly by the regulatory framework. Ironically, rules that were introduced to protect consumers now deny many of those people any service at all as the costs of regulatory compliance are too high to make them financially viable as financial planning clients.

It is, perhaps, a logical conclusion to see robo-advisors as the solution to the advice gap as they have scalability and can service customers at low cost. Some people see robo-advisors 'democratizing' financial advice, making it available to all.

The cost of acquiring a client for a robo-advisor can be as high as that for acquiring a client for a human advisor. As we will discuss in the next chapter, the acquisition costs are likely to be the dominant component of operating a robo-advisor – often far more significant than the cost savings delivered by the robo.

By definition, those in advice gaps have lower investable asset balances, which means, per customer, lower income for the robo operator. Robo-advisors need profitable clients – but to acquire them as clients they need to invest serious marketing money, which is why existing big players have advantages over new entrant start-ups no matter how well funded. The exception is perhaps those providing a B2B robo white-label platform for existing distributors.

4. Economic influences

Around the world, wealth is being squeezed into upper economic groups, with corresponding falls in income and wealth for the middle and lower economic groups.

The loss of the middle range investor means that an increasing number of service providers are marketing to a shrinking pool of affluent investors, albeit that each of those customers comes bearing a larger pool of assets. Robo-advisors add to the list of contenders for a higher-worth client.

At the same time, there might be increased demand for robo-advisors that focus on providing budgeting tools and cash-flow forecasting, as these issues are of more significance to lower economic groups than questions of investment.

5. Cost of acquiring clients (CAC)

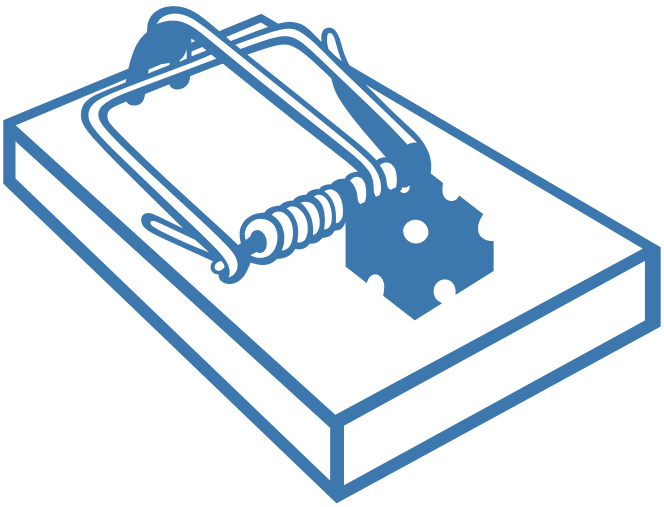
Robo-advisors need clients to operate and the cost of acquiring clients in financial services is high.

To us, this is the elephant in the robo-advisor room that is seldom discussed – which we believe is a strategic failure of the highest order. We devote the following chapter of this paper to this issue as it is an overriding concern that hangs over all other discussions about robo-advisors.

Acquisition costs include the costs of initially finding a prospect and then converting those prospects into clients, with the inevitable attrition rate that those conversions incur. When total costs are compared to clients gained the results can be surprisingly high. Lucian Camp calculates the cost of acquiring a client in the UK to be around £200 (US$312).

This cost is beyond the means of many advisory firms, which is why they grow rather slowly – largely through word-of-mouth referral. In the past, they might have relied on product manufacturers and distributors to provide them with marketing support. Under new regulations in the UK such supports are now largely no longer possible. But they continue to thrive in the US marketplace.

In a world where former specialties have become commoditized, being able to make a financial product or service no longer makes you special as it once did. Where, in the past, you may have been able to extract an economic rent because you occupied a position of advantage, market forces have now equalized you.



Today, the ability (knowledge) and capacity (cash-flow) to quickly market financial products to scale is what separates successful financial services businesses from the 'also-rans'.

It does not matter if you arrive at the marketplace with a better mousetrap if that trap is hidden where the mice cannot find it. Cheese – in the form of marketing, advertising and promotion – will help to attract them. But cheese isn't cheap.

We return, once again, to our initial caution – robo-advisors are very good at servicing customers, but do nothing to attract customers. Putting a robo-advisor to work effectively requires considerable investment in marketing and promotions, with no guarantee of success.

Vitamins and supplements are equally generic. Yet, a family business in Australia figured out how to create a brand that made generic inputs 'special'. In late 2015, a Chinese firm acquired the vitamin and supplement company, Swisse, for A$1.5 billion (US$1.05 billion).

Swisse is a marketing machine – it is constantly in the news, through its sponsorship of high-profile ambassadors and it spends a lot of money on advertising. It is rumored that its annual marketing budget is A$50 million (US$35 million) when the cost of the raw materials for all of the products it makes is less than A$5 million (US$3.5 million). Vitamin C is not special – being part of the brand image and lifestyle Swisse promotes is special. More than US$1 billion worth of special!

6. Behavioural biases

It is human nature to want it now. But it is also human nature to make plans for the future, including saving money. Of course, the two natures quickly come into conflict. You want a holiday now – but spending the money will reduce your pension in 30 years' time.

More often than not your 'present' self will defeat your 'future' self. The future loss is so far away that it is diminished, but the present benefit is NOW! "Pack your swimsuit honey, we are going to the beach".

There is good reason to believe that robo-advice systems might do a much better job than human systems at helping people confront and manage this 'present-day' bias, by allowing them to visualize the impact of financial decisions made now projected into the future.

The costs of manipulating and reporting data that already exists within the robo-advisor's databases is negligible, to nil. The robo can do it in many different ways that are far more engaging than simply sending a paper statement about the value of your investments every six months. Robo-advisors can create emails, texts, tailor-made videos, customized web pages and more. The data is there to be iterated as you please.

For several years it has been possible for managers of retirement savings and investments to report to their clients using tailor-made videos, with a voiceover script along the lines:

Hi Georgina. You are now 60% of the way to the <<insert financial goal>> goal you set for yourself. Great work! You are 15 months ahead of schedule!

During the video we see Georgina's financial goal and history portrayed in charts and forecasts on the screen as the narration discusses:

This is how you did it. Your contributions were <<insert amount>> and your earnings were <<insert earnings rate>> percent. If every year was like this you'd reach your financial goal in 8 years and 7 months. But a more realistic target, to allow for fluctuations, is around 10 years. Either way – great job! You are on track for success.

These fully automated videos are created using a 'data-dump' from the financial services firm. The provider can create millions of videos at a time.

Just as bathroom scales can be a motivator to diet, these types of communications, at which robo-advisors should excel, may be a true motivator for many people to overcome present-day bias and save for the future. The proliferation of interactive mobile devices offers a great platform for robo-advisors to interact graphically with clients, nudging them to make better-informed financial decisions.

2.3 THE CHALLENGE OF ACQUIRING CUSTOMERS

The cost of acquiring customers is the perpetual thorn in the side of the financial services industry. In most cases the costs of actually servicing the client are small, compared to the marketing costs of bringing the client on board.

Every discussion and news report appears to start with the assumption that robo-advisors somehow find their own customers. The conversation then quickly moves on to how efficiently the robo-advisor will deal with these customers.

This is a dangerously incorrect assumption which will, inevitably, destroy many millions of dollars of shareholder capital and spoil many careers in financial services.

'If you build it they will come' simply doesn't apply in financial planning services. We can readily stroll through a graveyard overflowing with well-made, fit-for-purpose, innovative financial planning IT platforms that died for the same reason – they could not engage enough customers to feed themselves.

Silicon Valley's involvement in robo-advisors has had a big influence. Its 'Build it first, worry about the customers and profits later' mantra works in many universes, like social media and computer games. But in the financial services universe that attitude may be ill advised. Customers have always had to be found – only a minority comes knocking on your door begging for service.

The client acquisition issue is slightly different for those established organizations who have existing clients. There is a risk of cannibalizing the existing business combined with unsettling existing consumer expectations.

Large players in financial services have two features in common – the enormous piles of cash required to generate leads and armies of humans to process those leads and convert some into customers.

Those existing sales processes, thick with their human interactions and relationship building, have traditionally acted as a moat against new entrants who could not afford to find such a sales force to distribute their products. Robo-advisors are not going to change the way corporations set about finding their customers – they will still be acquired through marketing and referral.

But robo-advisors will change the way that the controllers of large communities of people set about providing financial services to those communities. This is where the maximum risks lies for existing players in financial services. Robo-advice, purchased as white-label and branded for a community, will dislodge current providers.

The cost of acquiring a customer within a community is a fraction of going to the

wider market. We all know this to be true – it is why financial advisors join the golf club.

So who are the controllers of today's communities? They are all around us! They are:

- **Corporations**

  People can be crazily loyal to brands they love. Those brand-loyalists are a community. Apple, for example, has the most loyal and committed customer base of any IT company. Imagine, for a moment, the impact of Apple offering financial services through a robo embedded into the operating system of its iPhones and iPads.

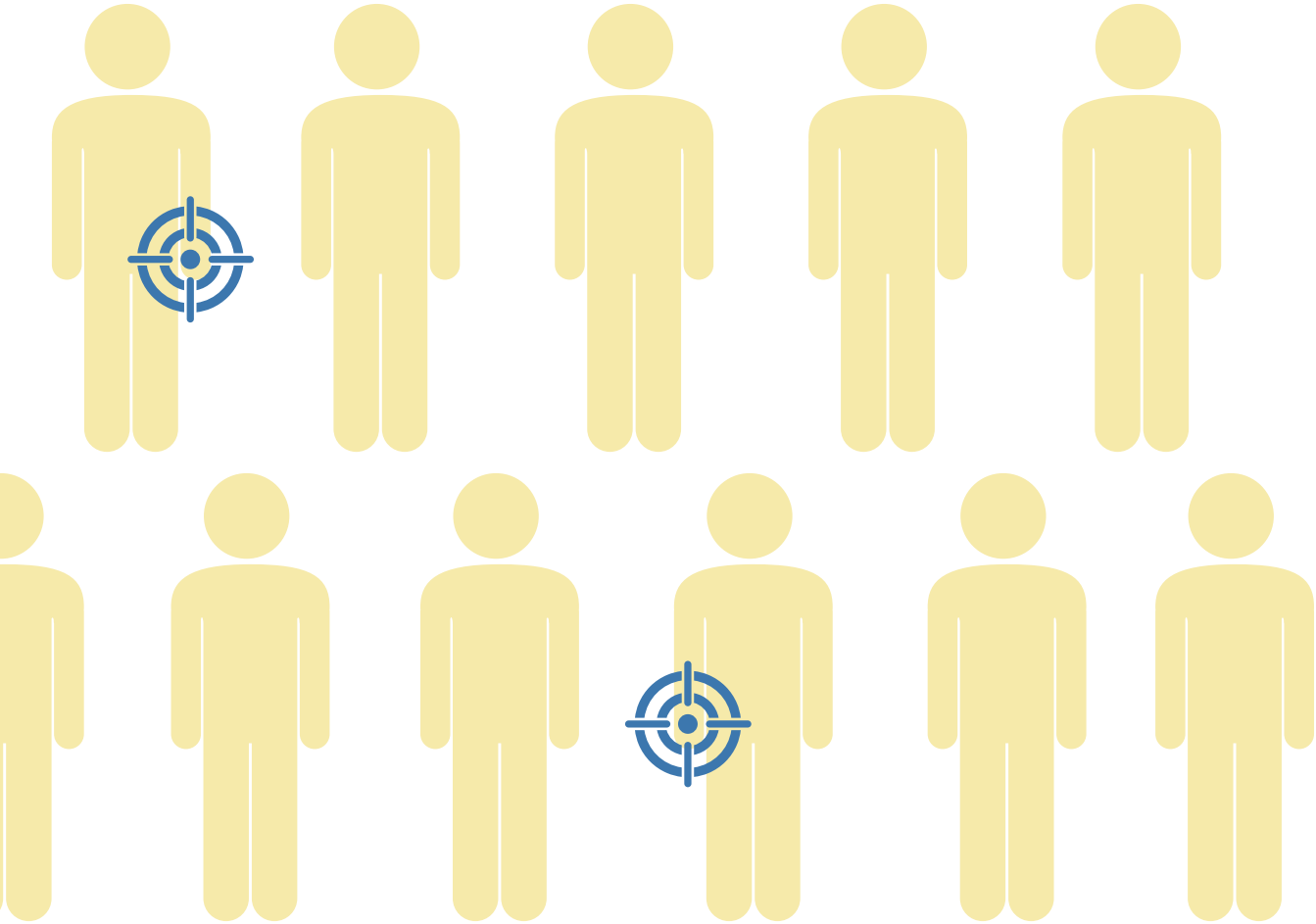
- **Community groupings and associations**

  Churches, sporting clubs, and community groups are just a few examples of self-selecting clusters of people forming in activities in which they happily choose to participate. These clusters are engaged and easy to communicate with – they can be sold to at very low cost. And they will be, inevitably, biased towards an offer that emerges from within their 'circle of trust'.

- **People who have followers**

  Today, a local blogger may have hundreds of thousands of people reading their blog daily or weekly. Someone with a popular YouTube channel may have millions of followers getting regular updates in their inbox. Meanwhile, the world in which we live, billions of people follow every breath that Kim Kardashian takes. If they will buy her perfume – and they do! – why would they not buy her investment website? All she has to do to drive traffic there is to make one tweet – marginal cost, $0.

A robo-advisor can be all places, at all times, for all technology-engaged customers. Robo-advisors bridge the moat and allow a new entrant to crash the market. Branded robo-advisors are quick and relatively low cost to deploy if you can supply the customers. A robo will let you lead your followers off the traditional financial services grid, away from the established industry players. The key to profitable financial services businesses, whether human or robo, is still the acquisition of customers at a reasonable cost.



2.4 WHY ROBO-ADVISORS ARE CHANGING THE FINANCIAL DISTRIBUTION LANDSCAPE

In their quest to find clients, we see robo-advisors as being as disruptive to the financial services sector as Uber is being to public transport.

Uber is a great example of something that was made possible by the internet. Without the net, Uber simply could not be. And yet, the internet alone did not change the world of taxis – Uber did that. The internet was certainly a vital piece of communications infrastructure which allowed a world-changing thing to happen. But it's not the technology itself that is revolutionary today – it is how it connects people.

Currently, the debate is limited to how robo-advisors affect established players and, given their experience, capital, advertising and existing client bases, you can be assured that the established players will be at the table. Surprising new entrants may emerge in the robo-advice sector that may change the fundamental rules of the financial services sector. What if AARP (American Association of Retired Persons) entered the market with a branded white-label robo-advisor? What if Aldi or Lidl did too?

At the same time, we see and acknowledge a degree of resistance and backlash to robo-advisors. This is unsurprising as, historically, all new technologies are viewed with some suspicion.

You will very soon be spared the sharp shock of your doctor's icy-cold metallic stethoscope on your chest or back. Everyone thought its inventor, Rene Laennec, was a lunatic and rejected his device out of hand. Two hundred years on, only a lunatic could imagine a doctor's surgery without a stethoscope.

But Laennec himself, from his resting place, might be a little resistant about the latest disrupter to his patch.

Hand-held ultrasound scanners are threatening to replace his stethoscope because they are a superior tool. They are more accurate, more reliable and even intelligent; they use algorithms and heuristics to make a diagnosis. What hope then for Laennec's stethoscope, once considered a cutting-edge tool?

Which leads us to two critical questions that most people ask:

1. Are robo-advisors better tools than human advisors?
2. If so, will robo-advisors replace humans?

The answer to question one is that robo-advisors are very good at the limited functions they perform. Their lack of human fallibility almost guarantees them to be faster, more accurate and more consistent than you or me.

And so, to question two. Is today's advisor already on a countdown to oblivion? This is a compelling question and it is easy to fixate on it, particularly if your job is one that might be replaced. But it is not the only question posed by robo-advisors nor, necessarily, is it the most important question to be asked.

Nonetheless, let's deal with it.

Robo-advisors bring viable self-service to financial advice for the first time.

Their advice will be low cost to deliver (although perhaps not low cost to market and promote), consistent and make it easier to maintain meaningful conversations with customers about their money through highly effective automated communications.

As travel agents and bank tellers know, many people will self-serve when technology allows them to – and if enough people self-serve you can start replacing employees with machines. But making investments is different to buying air-tickets. A lot of people want the comfort that dealing with another person in a trusting relationship can deliver.

The second factor to recognize is the significance that robo-advisors are limited in function and scope. We still need people when things get outside the box.

There is not a robo in the world today that produces a meaningful answer to very complex financial situations. For example, there are no algorithms that we know of that address estate planning considerations across multiple family units using assets held in different trusts. It is going to take a person (and quite a skilled one at that) to address those issues using all the traditional tools in their financial advisor kit.

That is not to say that no jobs will be lost because of robo-advisors – there will be losses. Just as armies of clerks lost their jobs because Microsoft Excel was better at doing the mundane slog work than them, robo-advisors will replace people in tasks that are process driven and lend themselves to automation.

We see the days of someone with a clip-board taking a financial history in a fact-find as being very limited indeed. This raises an interesting question of how many advisors will engage clients in a discussion about their financial affairs as many currently use the fact-find as an interpersonal get-to-know-you session. When clients key their own data from home, the advisor needs a new tool to generate that discussion and engagement (we argue that tool is a discussion of the person's risk tolerance and what that means for them as investors).

But, overall, we see advisor jobs as being at risk more at the margins – we don't see mass lay-offs of financial advisors to be replaced by robo-advisors. Jobs are evolving all the time – displacement, in our view, is not why robo-advisors really matter.

Meanwhile, people are simply too good at selling financial services to be dumped as a distribution channel. Face-to-face marketing will always have a place – but from what we see today we cannot anticipate how big that place will be in the future.

For large, existing, players in financial services, robo-advisors may be an opportunity to lower back-office and servicing costs or open up new distribution channels. They will have the enormous marketing spend required to generate leads and convert some into customers.

At the same time, that very same technology in the hands of a disruptive new-entrant could strike a deathblow to many established financial services firms. With robo-advisors, the competitive question might become 'Do you remember BlackRock and Schwab? They used to be in financial services back before Apple incorporated its robo-advisor into the operating system of the iPhone 8.

Robo-advisors are quick and low cost to deploy, allowing anyone with a community to create and brand their own investment platform for that community. From a church, to a fishing club, to a popular blogger to Amazon. If you already have the followers, a robo-advisor will let you lead them off the traditional financial services grid.

That is where we see the threat to the existing industry players and the opportunity for the disrupters and new entrants. And that is why robo-advisors matter so much.

2.5 ROBO ADVICE FOR ADVISORS

In 1994, OJ Simpson was on the run from police, the US Federal Reserve was paying yields of 8.5% and a gallon of gas cost US$1.09. It was also when we started thinking about investment suitability – matching investments to clients and their needs – and we've been doing it ever since.

Over that twenty-one years, we have worked extensively with advisors around the world to help them deliver suitable investment advice by accurately and scientifically assessing their client's risk tolerance with a proven psychometric test. We've come to know, and understand, advisors very well. We've done nearly one million risk profiles for more than 6,000 top-end advisors in more than twenty countries. We've found that people who are invested in accordance with their risk tolerance tend to be more likely to stay invested for the longer term. That means a more profitable advice business for the advisor, because long-term happy clients create fewer frictions and refer more often.

Back in 1994 we saw the area where an advisor, the client and investments meet was like the Bermuda Triangle – while most travelled easily through it, many disappeared. We couldn't understand (and still can't) why so many financial advice processes emphasize the speed of the sale, rather than the quality of the sale. A good sale can create a long-term client, whereas a rushed sale can create a client who becomes unhappy and vanishes (or even worse, resorts to litigation against you).

We believe that a rigorous, scientific assessment of risk tolerance is an essential step in a good sale. It took us more than four years to industrialize that belief into a 25-question psychometric risk tolerance test, which was launched in 1998. Since then, we have confirmed that risk tolerance is at the heart of suitable advice and happy clients.

We've proved that risk tolerance is a stable personality trait – even when confronted with major market upheavals such as 2007-08. We know that if you match the investment to the client, then the client is much more likely to stay with the investment through good times and, more importantly, when there are storms. While the core of our business has been advisors, we also work extensively with some of the world's largest and most successful investment managers to map their multi-asset portfolios to FinaMetrica risk tolerance scores.

Today, we are working with the next evolution, robo-advisors. Automated-advice systems need smart investment suitability tools, like our risk tolerance test and mappings, to 'plug-in' to their algorithms – just as every miner in the Californian gold rush needed a shovel. Our risk tolerance test is the best of breed. It has been tried and tested and we believe it should become the standard suitability test for robos. They may even boast about using FinaMetrica adding validity to the advice process, indeed FinaMetrica PR activity is aimed at developing the brand to support the advisor community.

So, based on all we know, here is our take on what robo-advisors mean for you, the human-advisor:

1. Robos are big.

You're going to hear a lot about them and they will impact on your life. We believe that the impact will be overwhelmingly positive! Don't believe the gloom that says robos will replace human advisors. They won't.

2. Robos will be everywhere.

Everyone in the financial services supply chain will have a robo, either as a direct-to-consumer offering or as a tool for financial advisors to use.

3. Your client base may be under threat.

Robos will be everywhere and your clients will be courted by them. Your new competitor might be a club or a community based organization or affiliate – any organization with a large membership could soon be in the market for a while-label robo.

4. There will be many different robos for different purposes.

You will have a choice of robos, which will not all be the same. If you plan on working with any one you will need to assess it carefully to ensure it will be fit for your purpose.

5. Early-movers don't necessarily win.

Better to make a considered decision and use proven technology and processes like FinaMetrica's risk profiling system.

6. Robos will have to adopt suitability standards.

To flourish, robos will have to meet the same suitability standards as human advisors. It is unimaginable that an advice business would want the same client getting a different recommendation depending on whether they used robo or human advice. A business built on a multi-factor assessment of risk tolerance, risk capacity and risk needed will, of course, expect those same standards in a robo.

7. Dealing with non-assigned clients and other relationships.

Robos are quick and accurate at process work, like collecting data. And they make things fast – an investment recommendation can be on the table moments after the data is collected. It will, of course, be expected that robos must integrate with your business practices.

8. Low-cost, multi-asset portfolios are here.

Robos deal in very low-cost investment structures and that is going to challenge current thinking, current practice and profitability. Like ripples in a pond, over time the effect becomes unpredictable even when it started out very structured.

9. You will have to prove your value proposition.

Advisors are professionals who add value to their clients' financial lives. Be ready to prove that, because you will have to be able to do supply that proof to charge higher fees than a robo.

10. Fees may come under pressure.

Just as low-cost airlines lowered airfare costs, robos are likely to bring down the base-cost of advice. But, just as with the airlines, some people will not want to fly with the cheapest; some will be happy to pay full economy and some will want the silver-service that comes with first-class. The more holistic and detailed you are the more you will win. Robos are not currently good at complex matters such tax or estate planning or insurance. Possibly we will see traditional advice operating to create the financial plan, with robos dealing with ongoing transactional needs.

The robo space is changing very quickly. This report on robos has been rewritten several times, as every time we believe we are finished a new story emerges to change the landscape.

FinaMetrica is working on technology to analyze the ongoing suitability of investments for clients on behalf of robo product providers. This will help guide communication strategy and engagement with clients.

SECTION 3

ROBO-ADVISOR MARKET ANALYSIS

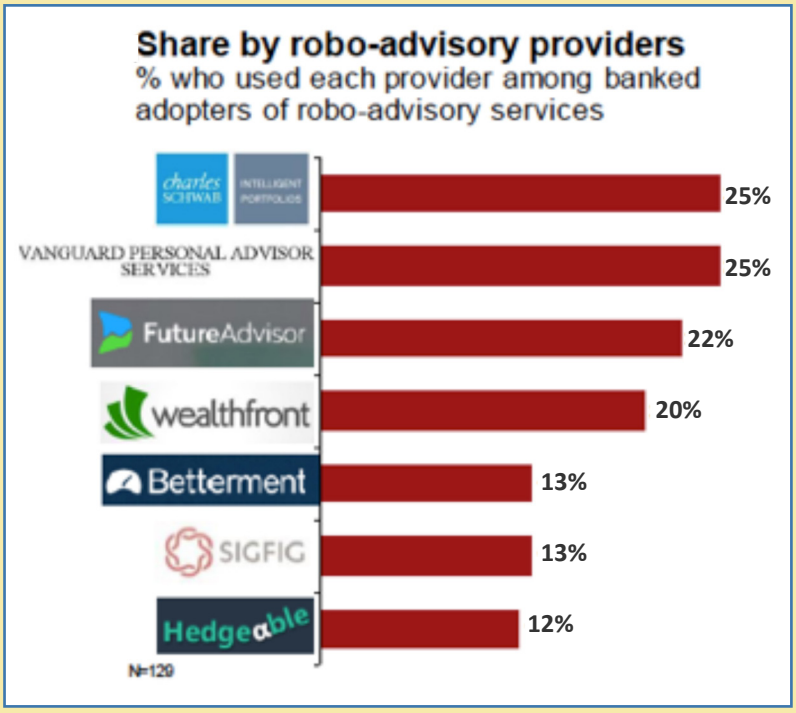
3.1 THE ROBO-ADVISOR BOOM IN THE US

America is the epicenter of the robo-advisor boom. Any serious discussions about robo-advisors and their impacts are rooted in the US experience.

The US has the technological savvy to develop robo-advisors and the right regulatory settings to allow them to flourish.

Robo-advisors are beginning to gather pace in the UK, but they are not as well established there in part due to the strict regulations in place which make them suitable only for very limited, simplified advice. Europe is more encouraging, but is a slow-growth region compared with the US.

A study by Corporate Insight shows that, collectively, robo-advisors in the US directly manage about US$19 billion AUM (assets under management) as of December 2014. This is a 21% increase in AUM since July 2014, and a 65% since April 2014. These are very impressive growth numbers in an industry under pressure from many different forces. Of course, it is coming from an admittedly low base – robo-advisors hold less than 1% of the total market.

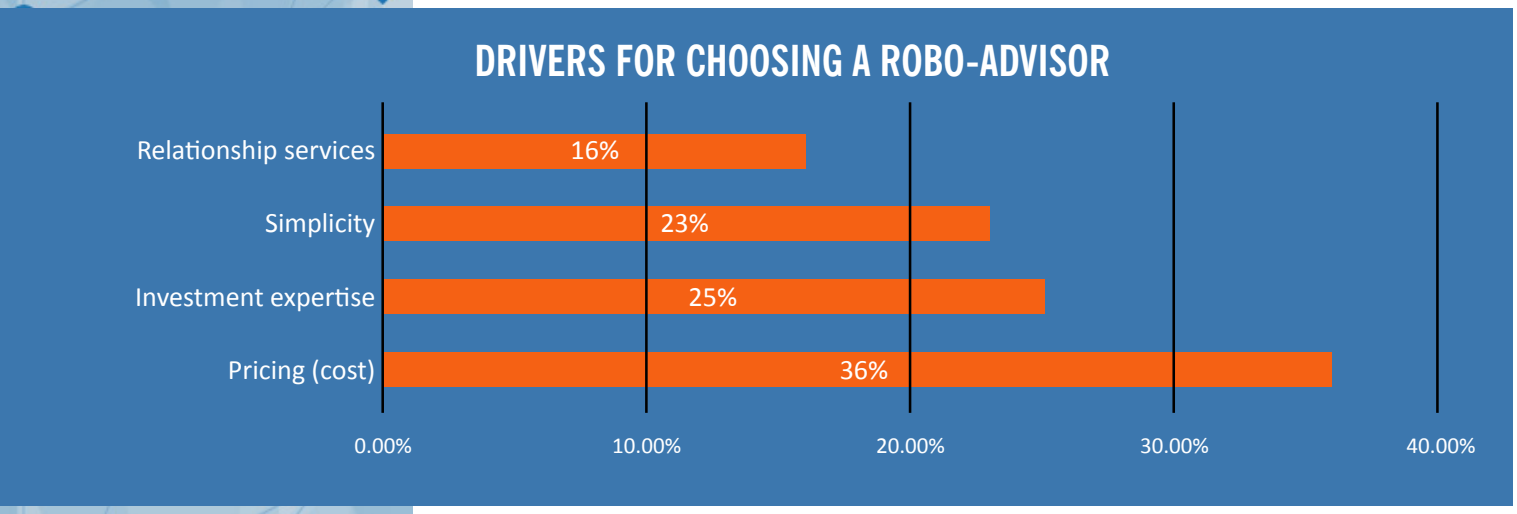


Although AUM is a somewhat crude metric, it is undeniable that awareness of robo-advisors in the US is increasing.

A.T. Kearney's study found that approximately 20% of consumers in the US are aware of robo-advisory services. Unsurprisingly, the majority of early adopters of robo-advisors are aged under 35 years.

America is also a somewhat unique marketplace, where the advice gap is very real for many lower-wealth investors, who do not have any access to any kind of financial advice. Robo-advisors are seen a way to democratize financial advice for this sector (at a profit, of course – should that be possible, given the marketing costs).

It is interesting to analyze the A.T. Kearney research regarding the factors that were important to customers when choosing a robo-advisory offering.



Pricing is clearly the dominant driver. It is, perhaps, a little discomforting to see that only one out of every four customers expects their investment manager to be competent! It is interesting to note, meanwhile, that very few people are expecting their robo-advisor to offer them any form of relationship.

To date, the boom for robo-advisors has really been in public relations – it is impossible to read industry press without seeing many robo-advisor stories. Even in the mainstream, the media is presenting stories about robos from a user/customer perspective.

We see these stories as tiny pockets popping up from a huge groundswell of activity in the financial services sector.

We know that strategy sessions, board meetings and budgets are all being set aside for implementing robo technologies. Much of this work is being undertaken privately – there is no way of knowing what everyone is working on or what will come out of this boom in investment in developing robo platforms.

The barriers to entry for providing robo-advice can be low.

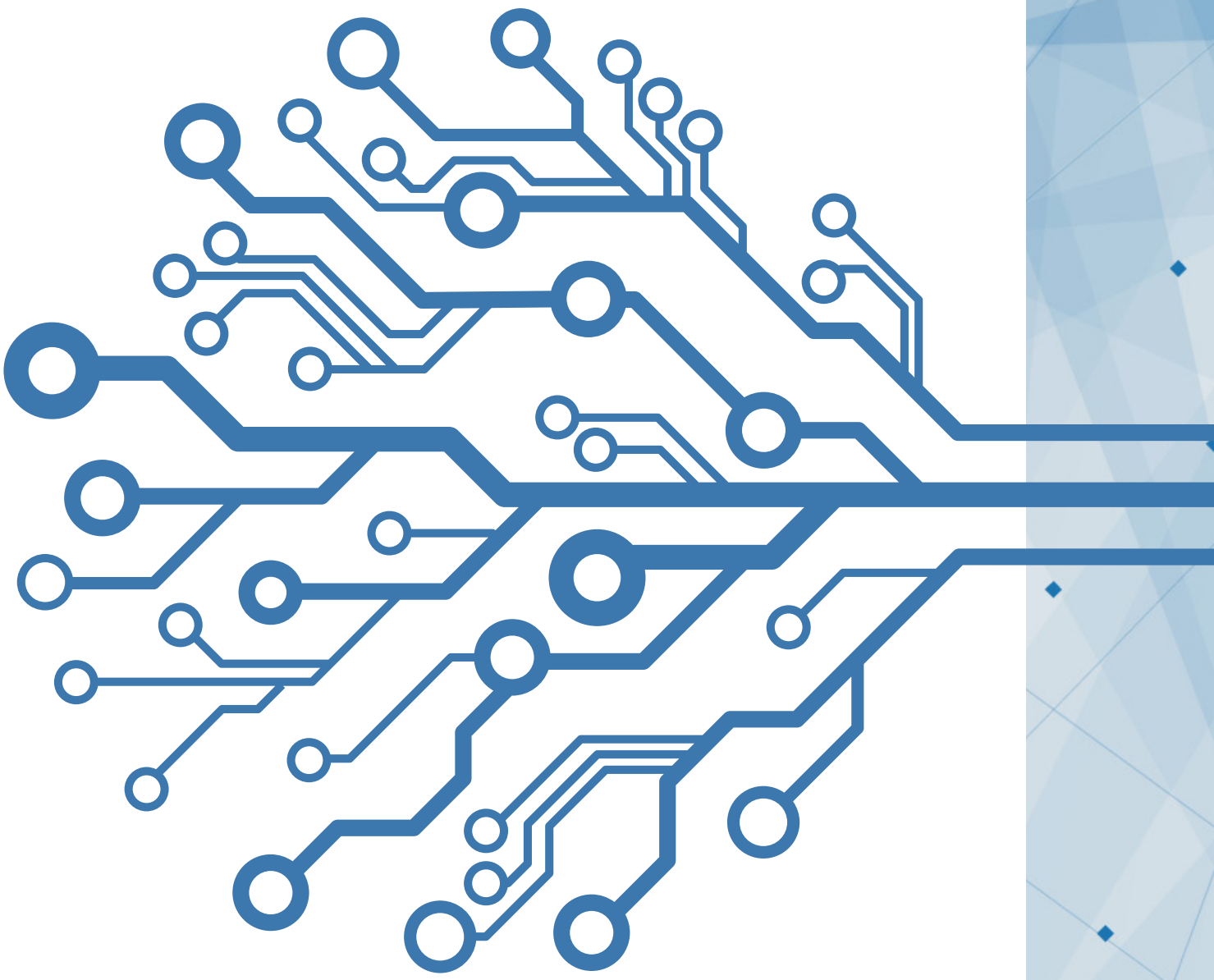
A company could purchase a white-label robo-advisor, perhaps from BlackRock after its recent purchase of FutureAdvisor, and have an offering in the marketplace in the blink of an eye. This may also be the most effective way to de-risk a robo from a business perspective.

Financial commentator Michael Kitces has written on the recent BlackRock acquisition of FutureAdvisor. FutureAdvisor is one of the three original and pure robo-advisors which has been gathering assets and managing ETF portfolios directly for consumers. Even though FutureAdvisor has just US$600 million of AUM, and an estimated US$3 million of revenue, BlackRock's purchase is reputed to be in excess of US$150 million.

Kitces suggests that BlackRock's strategy was not simply to buy FutureAdvisor to expand its direct-to-consumer solution, but instead to pivot FutureAdvisor to become a robo-advisor-for-advisors solution, and license or offer the technology platform to a wide range of broker-dealers, insurance companies, banks, and custodians to turn their human advisors into tech-augmented cyborg advisors.

In this context, as the world's largest asset manager and a leading player in the ETF space already, the BlackRock deal appears to be visioned primarily as a means to further grow the size of the ETF pie and the BlackRock (iShares) market share by driving distribution to its ETFs through this new technology platform. The robo-advisor, therefore, is now a distribution channel. A similar strategy has been undertaken by LV= in the UK, with LV= having taken a large stake in UK robo-advisor Wealth Wizards.

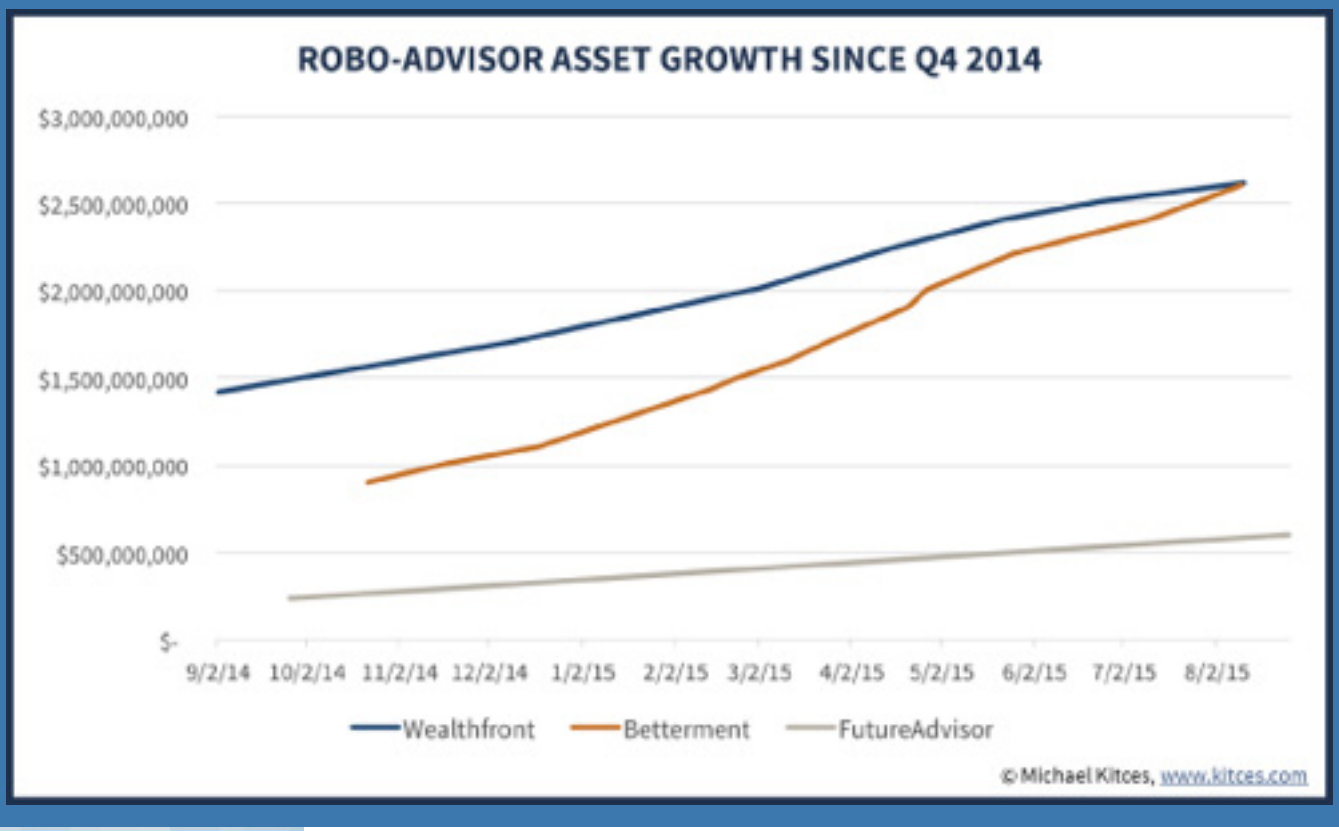
Others like Nutmeg are recruiting financial advisors to add to support their current automated process, perhaps realising that financial advisors are an important part of client recruitment.



3.2 ROBO-ADVISOR CASE STUDIES

We have three case studies of US 'pure-play' robo-advisor processes and systems in action to examine:

1. FutureAdvisor
2. Betterment
3. Wealthfront



FUTUREADVISOR

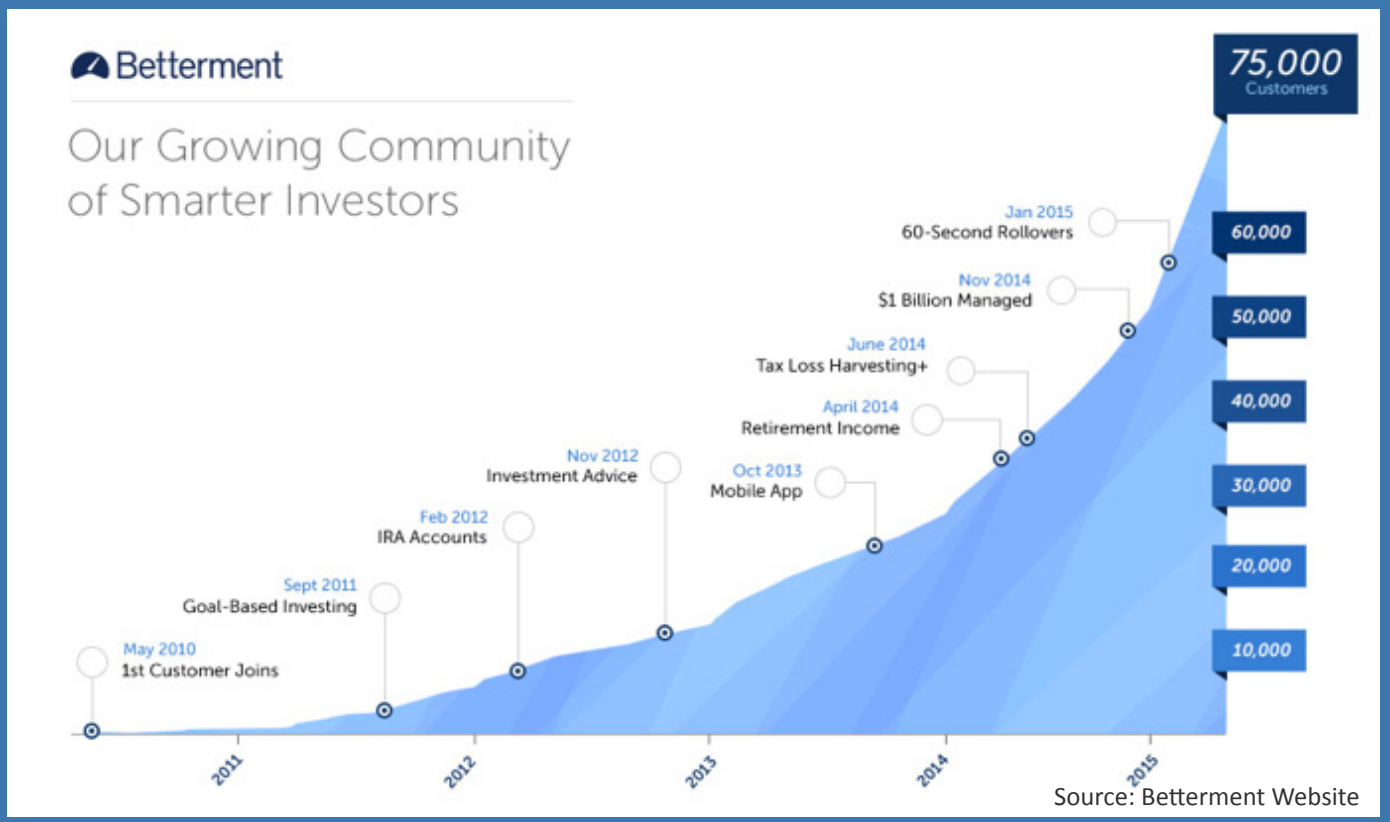
FutureAdvisor, the smallest of the three robo-advisors analyzed in detail here. It was recently purchased by BlackRock. BlackRock is rumored to have paid more than US$150 million to buy just US$3 million of revenue from US$600 million of AUM, in ETF portfolios.

Clearly, BlackRock was purchasing a technological head start on the robo market and not a revenue stream. BlackRock says that it will maintain the FutureAdvisor direct-to-customer website, but that is obviously not a core driver for the acquisition.

Platforms like FutureAdvisor need passive investment channels to function and BlackRock's are some of the biggest around. BlackRock is one of the largest issuers of ETFs and is the largest asset manager in the world. It could well view FutureAdvisor as just another distribution channel down which to pump index funds and ETFs.

BETTERMENT

Betterment has been in business as a robo-advisor for just over six years years. Over that time, it has reached over 100,000 customers and has more than US$2.5 billion in AUM.



Source: Betterment Website

The chart shows the release of new client products over the time, from the original offering of goal-based investing in September 2011 to retirement-income product and tax loss harvesting.

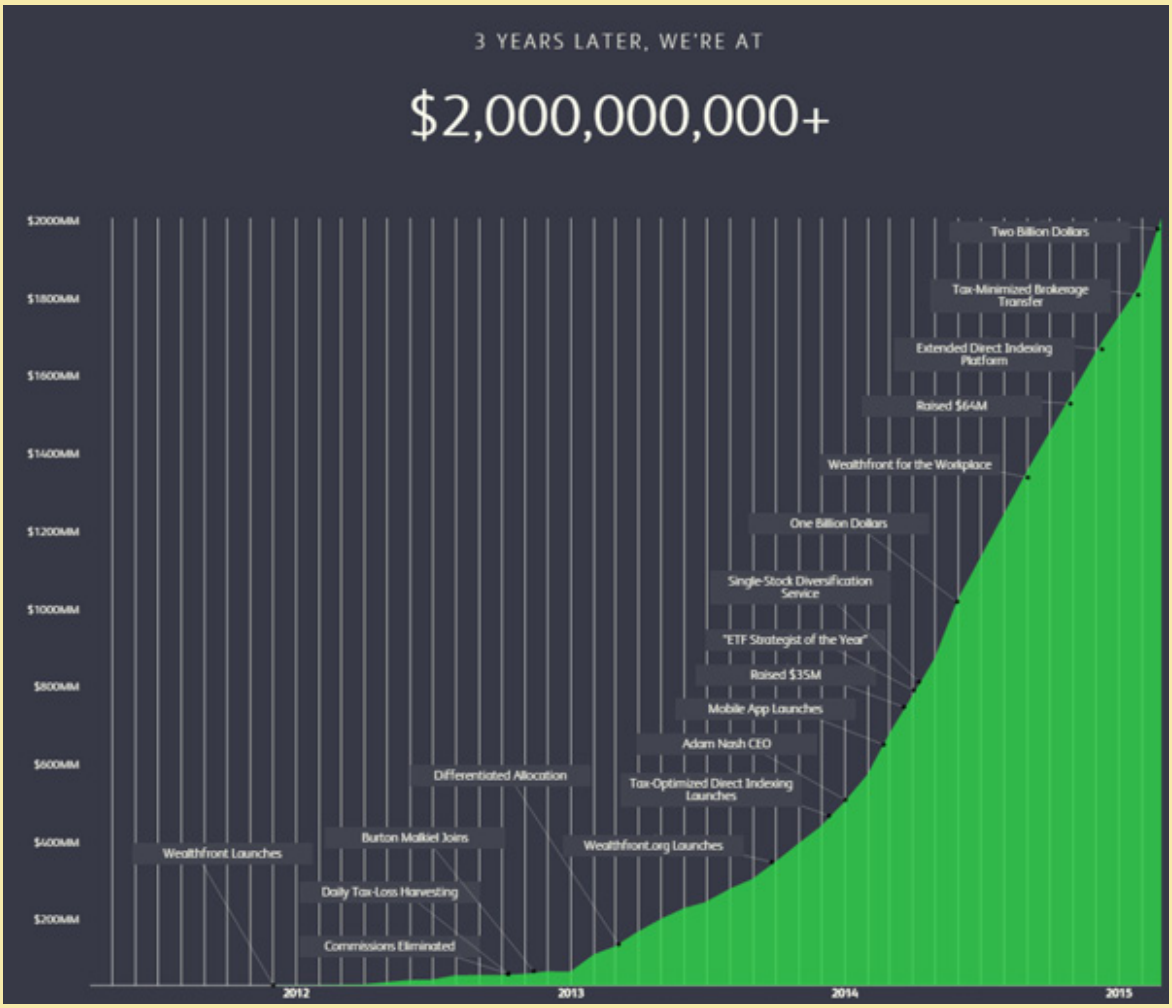
Betterment has had four separate capital raisings over time to secure a total investment of US$105 million. A staff of over 100 serves this client base, with five employees performing an investment advisor/advisory function including research. The ratio of employees performing an investment advisor function to clients is, therefore, in excess of 1:12,000. This illustrates the efficiency and leverage offered by the robo-advisor model regarding advice. Face-to-face advisors generally have 100 to 200 clients – that keeps their diaries filled for the year (some may, in extreme cases, have up to 1,000 clients).

While Betterment has been successful in attracting a significant number of clients, the average size of those accounts (calculated as AUM divided by number of client accounts) is just over US$22,500.

Based on its disclosed fee rates for a minimum account of US$10,000 (the 'better' rate of 0.25% of AUM per annum, billed monthly in arrears), this means revenue of just under US$50 per account per annum.

WEALTHFRONT

Wealthfront has been in business as a robo-advisor for just over four years. Wealthfront claims to be the world's largest robo-advisor with US$2.6 billion in FUM.



Wealthfront is targeting the so-called tech-savvy millennials (millennials are those born between 1980-2000). To date, 60% of its clients are aged under 35 years and 90% are under 50 years old.

Wealthfront has had five separate capital raisings over time to secure a total of US$129 million. It, too, was red hot with investors – with FutureAdvisor being snapped up it's become even hotter.

According to Wealthfront's CEO, the average account size of its 22,000 client accounts is just over US$90,000: This is over three times higher than the average client account at rival Betterment.

Wealthfront doesn't charge anything for the first US$10,000 invested (a trust-building 'free' trial), with a management fee of 0.25% above that. This means the average fee per account is around US$175.

HOW ROBO-ADVISORS MARKET THEMSELVES

Interestingly, both Wealthfront and Betterment are using similar marketing messages focusing on:

- Ease of use;
- Accessible – open 24/7;
- Works on multiple devices;
- Free up time to get on with life;
- Low cost – previously only available to the wealthy;
- Only small investment account size required;
- Co-creation: you design the portfolio alongside the service;
- Transparency — no premium for the pretense of a personal relationship; and
- Client centric and personalized – rebalancing/risk reduction/diversification.

The marketing messages are disseminated through:

- Blogs;
- TV and print/online media;
- Online advertising; and
- Word-of-mouth, offering existing customers bonuses for recruiting their friends.

THE ROBO-ADVISOR MARKET

Bo Lu, the CEO of FutureAdvisor (now part of BlackRock), used to describe the size of the opportunity for his product in these terms:

"There are 32 million mass-affluent Americans – with assets between $100,000 and $1 million – and only 20% have an advisor. 60% of families with more than $1 million in investable assets already work with a financial advisor. 80% of our clients never have had an advisor. No ecosystem has ever served these people. That's a big gap that's artificial and made by economics. We want to bring the penetration up to where it is for the affluent, and that is a 14-million-household opportunity."

The target client base for robo-advisor startups is the tech savvy, the mature, the app friendly or millennials reaching adulthood in year 2000.

It's those who prefer Twitter to reading the newspaper or someone who books their dinner reservation via OpenTable instead of calling the restaurant. Those who research and act in most situations in a vastly differently manner from the way people did 15 years ago. For this cohort, this method of online engagement will be also true when it comes to making financial decisions. If it can be done online, they will do it online.

For many people, the question boils down to how investors want to organize their finances and interact with their advisors. Will they prefer control and accessibility of 24/7 online access to statements, positions, fees, and other account information on their smart phone? Or will they prefer a face-to-face conversation with a financial advisor who can prepare and talk them through a financial plan?

We believe these questions are strategically flawed. We consider that robo-advisors are not an either/or question.

Both the human and robo options are required to serve the different profiles of clients. The complex decision may always require face-to-face interaction with another human being, while the basic transactional experience may only require a self-service online process.

Both eco-systems can, and will, exist together – one need not consume the other to thrive.

3.3 THE LAG IN THE UK AND EUROPE

Robo-advice platforms are active in the UK and Europe, but these markets lag the US in the rise of robo-advisors. The lag in the UK is pronounced and significant although the signs in Europe are generally more encouraging, with Germany leading the expansion of the robo market.

If the regulatory environment were more accommodating, robo-advisors could play an important role in servicing the UK market's advice-gap sector, where people fall below the asset limits required to be viable clients in a holistic advice process.

It is estimated that there is £440 billion (US$682 billion) of investable assets among the 43 million adults in the UK who find themselves in the advice-gap. They save another £54 billion (US$84 billion) each year.

THE UK

In the UK, robo-advice systems face regulatory challenges which have undoubtedly slowed entry into the market.

Those that do exist operate only at the lowest levels of restricted, focused or simplified advice. They are, basically, transactional machines. Robo-advisors aspiring to rise any further up the ladder towards more sophisticated advice – which includes a portfolio recommendation – become caught in a strange clash of regulatory and compliance regimes.

The regulator, the Financial Conduct Authority (FCA), appears to allow online advice and to want to encourage the development of robo-advisors. But appearances can be deceptive. The UK legislation on financial advice restricts how liberal the FCA can be.

The onerous compliance obligations coupled with the Ombudsman's decisions have raised the perceived risks of operating robo-advice platforms in this jurisdiction and stifled innovation and growth. The movement from online execution only websites to robo-advice models means significant regulatory implications, not to mention significant professional indemnity insurance costs and financial service compensation levies.

FINANCIAL CONDUCT AUTHORITY

Anyone conducting due diligence on buying, building or establishing an automated-advice process in the UK would, naturally, begin with the FCA. The problem isn't the FCA itself – you get the sense that the folks at the FCA would happily tick robo-advisors quite readily, if only they could. The establishment of the FCA Project Innovate is a manifestation of their desire to support robos. The issue is whether the legislation itself is supportive and fit for purpose for the robo environment. The clash between what the FCA might want to encourage and what can be achieved is easy to demonstrate.

Let's begin with what appears to be a series of green-lights for robo-advisors from the FCA.

The FCA's Director of Policy, David Geale is on record as saying:

'A healthy advice market is one in which a range of different models exist and develop to suit the needs of a broad spectrum of investors. We believe that FG 15/1 will give firms the confidence to innovate to provide new streamlined advisory propositions with a clearer understanding of their responsibilities and of where the boundaries lie'.

'FG' is 'Final Guidance' and FG 15/1, to which Mr Geale refers, is essential reading for anyone with an interest in robo-advisors in the UK or wider European markets. Its full name is FG 15/1: Retail Investment Advice: Clarifying the boundaries and exploring the barriers to market development.

Meanwhile, the FCA has made it known that:

'A well-functioning retail advice market needs different delivery mechanisms to be fully effective for the broad range of potential investors. There could be benefits from a well-designed, low-cost method of meeting consumers' straightforward investment advice needs. The challenge is to ensure such methods will deliver good outcomes for those consumers.'

At the same, the FCA has established Project Innovate to help new and established businesses to introduce innovative financial products and services. Through its Innovation Hub, the FCA offers:

- Dedicated teams and contacts for innovator businesses;
- Help for these businesses to understand the regulatory framework and how it applies to them;
- Assistance in preparing and making an application for authorization, to ensure the business understands the UK regulatory regime and what it means for them; and
- A dedicated contact for up to a year after an innovator business is authorized.

The FCA says the Innovation Hub 'will identify areas where its regulatory framework needs to adapt to enable further innovation in the interests of consumers'. We have had quite a few discussions with the Project Innovate team. They tell us, enthusiastically, that they are talking with a lot of different businesses that are keen to innovate.

That's the rhetoric – here are the facts. Despite all of the apparent positiveness towards innovation, as 2015 drew to a close, not a single new robo-advisor had been launched in the UK.

To find out why, we must turn to the legislation.

The UK legislation accords with directives from the European Union, although some do argue that the UK has taken an even tougher stance that the rest of Europe is likely to do.

Either way, EU directives such as MiFID I and II, which come into effect on 3 January 2017, have created more onerous standards and obligations when giving financial advice.

Essentially, the person selling a product must ensure that the advice is 'appropriate' for the customer – even, in some cases, where no advice was given during the sales process.

This means that in some cases and even for execution-only sales the advisor has to ask the consumer for more information to help it decide whether the consumer has the necessary knowledge and experience to understand the risks involved in the transaction.

The categories of 'non-complex' products will be narrowed under MiFID II so that the 'appropriateness' test will apply even more often.

Suitability requirements apply to advised services and portfolio management. There will be more onerous obligations on investment firms to determine suitability (including of bundled packages of products). Firms giving investment advice will be required to disclose whether they will provide the client with an ongoing assessment of suitability of the product.

Periodic reports must be provided to clients including an assessment of the suitability of the portfolio unless, in the case of investment advisors, the firm is not carrying out a periodic assessment of suitability. Firms providing investment advice must provide clients with a statement specifying the basis on which the investment recommended is suitable for the client.

The ramifications of this for the robo sector have been profound, with no one yet prepared to bring a robo product to market under this regime.

In the UK today operators must navigate a minefield of 'simplified advice' versus 'limited advice' versus 'focused advice' versus 'regulated advice' versus 'personal recommendation' versus 'generic advice'. You can very quickly drown in all the 'blah, blah, blah …' that accompanies each of those terms.

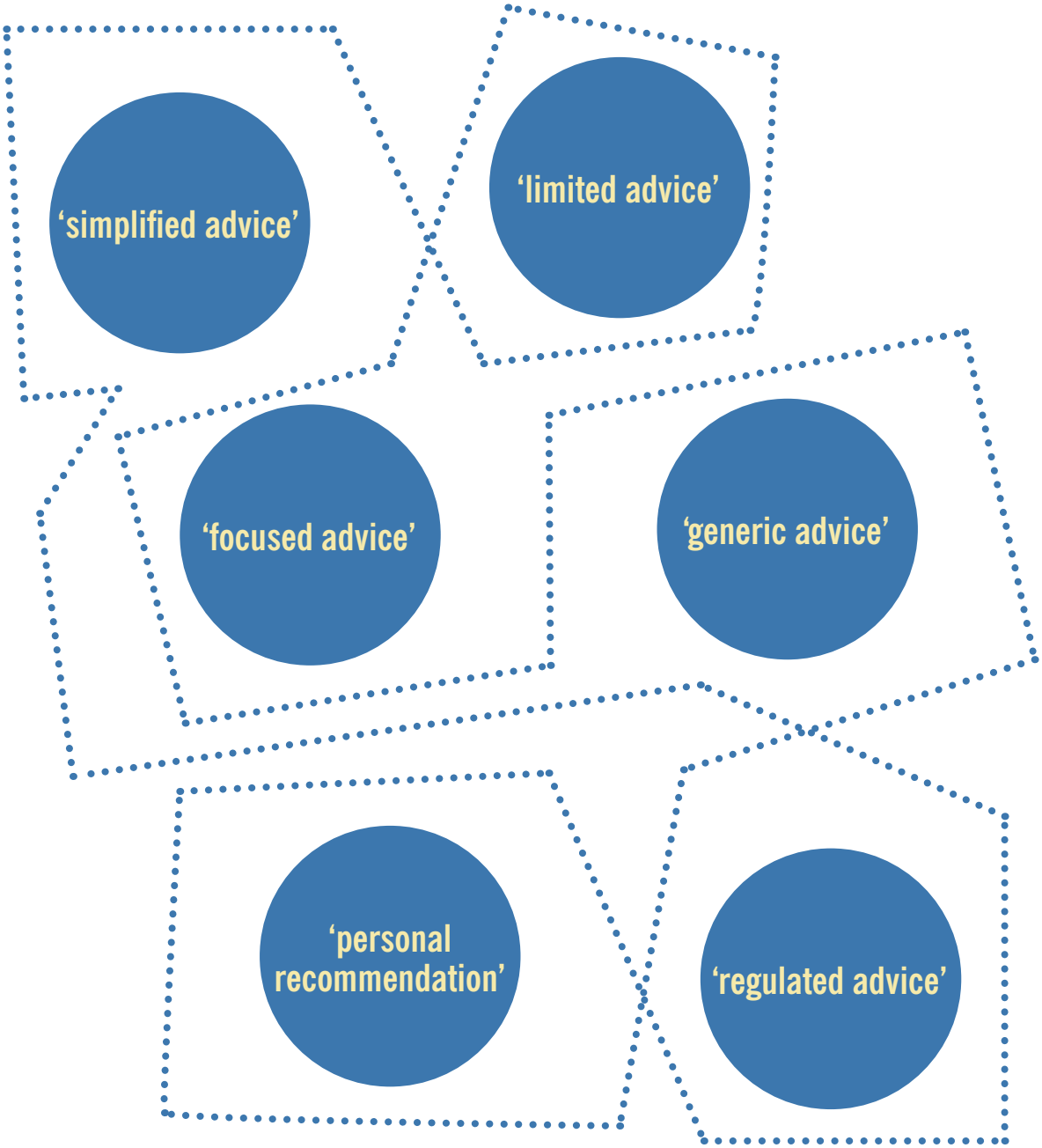
FINANCIAL OMBUDSMAN SERVICE

The UK's Financial Ombudsman Service (FOS) is an independent arbiter in disputes between consumers and businesses providing financial advice. Each complaint is decided on the merits of the matter, based on what the Ombudsman – as an expert, impartial observer – believes to be fair and reasonable.

The Ombudsman's decisions reflect the twin themes of 'informed consent' and 'suitability'. To defend a claim before the Ombudsman, the giver of advice must be able to demonstrate that:

1. They 'know their client' by conducting a data collection including risk tolerance testing;
2. They have a documented process for selecting suitable investment products based on information obtained in step 1;
3. They explained all the details and risks to the client and have documentation to support this; and
4. They received formal acknowledgement from the client that they had accepted this information and the recommendation.

For more information on the Ombudsman's rulings refer to section 5.1 Assessing a Robo-Advisor.



SECTION 4

ASSESSING A ROBO-ADVISOR

4.1 ASSESSING A ROBO-ADVISOR

How are we to assess a robo-advisor?

This is a top-of-mind question for anyone considering building, buying or implementing a robo-advisor process, along with other questions such as:

- How do we ensure this thing doesn't get us sued?
- How do we comply with various rules to ensure regulators don't sanction us?
- What framework or guidelines can we point to in order to demonstrate that our robo gives suitable advice?

Charles Schwab's paper "Gaining perspective on automated investing" puts forward a list of high-level questions to help the decision-making process in considering the opportunity and a firm's readiness to capitalize on the robo-advisor movement. While not comprehensive, the following list of questions are examples of what might be asked:

- Have we turned away clients who could have been a good fit with our service model if we had been able to reduce the cost of serving them?
- Can we increase the number of profitable relationships we have by identifying ways to serve smaller clients more efficiently?
- Are we currently serving clients who are below our account minimum (perhaps family and friends of current clients)?
- Would we be interested in expanding our team by adding a new advisor whose typical account size is below our firm's account minimums?
- Am I open to taking on younger investors with smaller portfolios but high potential as a way to fuel future growth?

Unfortunately, there are generally no clear rules, regulations or guidelines when it comes to robo-advisors. People asking these questions are not getting a lot of answers. They must sift through various data to infer their own answers. Many are simply being left in the dark.

We would like to shine a flashlight on these questions, because we believe that we have constructed an intelligent framework that will allow robo-advisory processes to be assessed for:

- Business risk;
- Regulatory risk; and
- Investment suitability risk.

In constructing our framework we found these tools to be useful:

- Data from the UK Financial Ombudsman Service (FOS), which gives insights into the flaws in process that often result in a finding against a financial services provider; and
- The recent International Organization of Securities Commissions (IOSCO) publication 'Report on the IOSCO Social Media & Automation of Advice Tools Surveys'.

In the FOS data, our interest lies in the cases where the Ombudsman found no fault by the service provider – what are the common characteristics of process in those companies that meant they escaped criticism?

The IOSCO is a window into the minds of regulators around the world. It maps their concerns about robo-advisors and presents a series of red-flags to note when building, buying or implementing a robo solution.

By putting the two together we emerge with very clear guidelines about:

1. What constitutes 'best-practice' for robo-advisors; and
2. What faults and flaws could easily lead to legal action or regulatory sanction.

WHAT TO ASSESS

Think, for a moment, of a robo-advisor at its most fundamental level:
1. A user completes an online process about themselves;
2. The robo 'thinks', using an algorithm that is unknown to the user; and
3. The robo suggests a course of action.

Think, for a moment, of a robo-advisor at its most fundamental level:

1. A user completes an online process about themselves;
2. The robo 'thinks', using an algorithm that is unknown to the user; and
3. The robo suggests a course of action.

The step 1 data is clearly critical to the entire process. So it follows that there must be a very robust data collection framework to avoid the system suffering a 'garbage in – garbage out' fault. Assuming the input data is robust, we must then turn to the robo's 'thought-process'. What rules and principles does the algorithm apply, and why?

We find 'suitability' to be a very useful overriding term for establishing an assessment framework, as it captures the two critical issues:

1. Have you made suitable inquiries of your client to know enough about them to be able make a recommendation relevant to their circumstance?
2. Is the recommendation you make suitable to them? The standard proxy for suitability is the client's risk profile which includes the person's risk tolerance – does the recommendation accord with the risk profile? There are huge variances in how different people assess risk tolerance. Some assessments are flawed and are of little use in determining suitability.

With the principle of suitability in mind, in the next chapter we mine the FOS and IOSCO data for indicators of how an independent observer and the global regulators determine if suitability standards have been met.

SECTION 5

THE ROBO RELEVANT REGULATORY LANDSCAPE

5.1 ANALYSIS OF THE FINANCIAL OMBUDSMAN SERVICE COMPLAINTS DATA

Financial businesses entering the robo-advisor space will be interested to know and understand the financial risks involved. An important piece of the jigsaw puzzle is the Financial Ombudsman Service (FOS).

The FOS was established in 2001 under the provisions of the Financial Services and Markets Act 2000 to help settle disputes between consumers and UK-based businesses providing financial services. It is important to review the attitude and approach taken by the FOS in its work. The FOS states that the law requires it to decide each complaint on a case-by-case basis and using its discretion on what it believes to be fair and reasonable. In doing so, the FOS rules require it to take account of the law, rules and good practice in the industry. The FOS approach is to ask questions, listen to both sides of the story and then decide each case on its individual facts and merits, not on how cleverly or persuasively either side argues their case.

Our review of a sample of the FOS data highlights that there are common patterns that have important implications for robo-advisors. Complaints that are not upheld tend to have the following in common:

- Evidence of well-documented advice including explanation of charges essentially leading to the ability to defend the advisor's recommendations;
- Evidence of documented client acceptance – many examples of complaints are refuted by the client's documented acceptance of recommendations;
- Demonstrated use of recognized risk profiling tools and a clear and well-documented investment suitability process; and
- Evidence of following an online process – there are many examples of the Ombudsman referring to the absence of supporting evidence from the complainant with regards to online systems. The FOS states that its decision in a case is made on the civil test of the "balance of probability" and this can be achieved through the presence of an established and well-run online journey or process for all consumers alike.

The absence of any one of these four points often means that an FOS complaint may be upheld. It is worth noting that a common mistake leading to a complaint being upheld is the role of an advisor in documenting a process (such as defining the complainant's risk profile) but then recommending a specific investment that does not meet the profile.

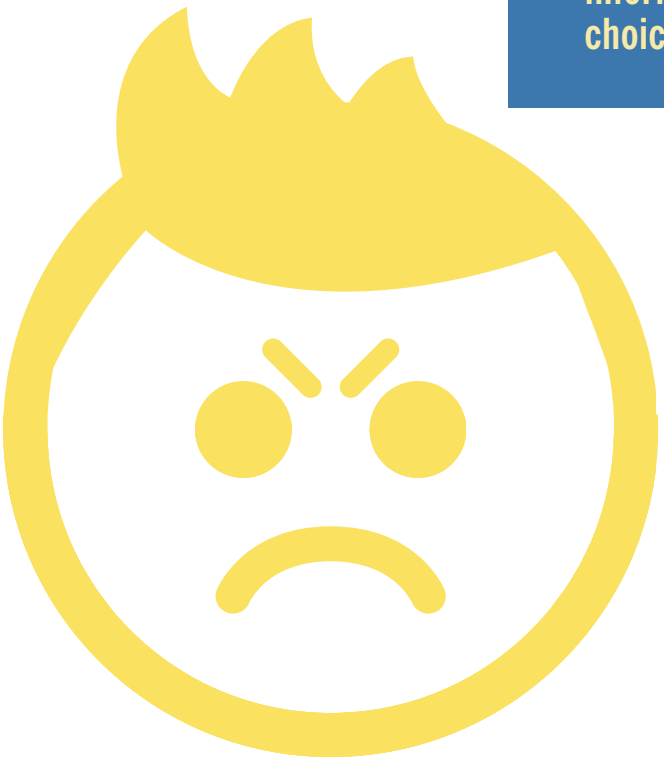
That the FOS may arrive at different outcomes on separate cases should not be seen as surprising. It is not a question of inconsistency but a matter of the FOS looking at each complaint individually and making a decision on what it believes is fair and reasonable in the circumstances of that particular case. There may be surface similarities between some complaints but when looked at in detail the FOS often provide very different outcomes based on similar inputs.

Regular and independent testing of process, algorithms and risk profiling is important particularly to remove any systemic (or indeed systematic) risk.

Relevant to robo-advisors, the FOS explains its approach to dealing with complaints:

- "We are already used to dealing with complaints about many financial products where there is no specific requirement in relation to 'suitability' or 'know your customers'. In such cases – as long as they have not been misled – we expect customers to be responsible for their own choice".
- "We assess any complaint we deal with involving the sale of a 'stakeholder product' on the understanding that the customer received 'basic advice'. We will not, for example, expect a 'fact find' to have been completed – or the advisor to have made detailed enquiries to 'know the customer'. As with other products, we take the regulator's rules and guidance into account. We also look at good industry practice".
- "Simplified advice' processes must comply with the same regulatory requirements as those involving full advice – including the requirement that the advice has to be 'suitable'. But in any complaints we might receive, we would judge the advice in the specific context in which it was given. So we would not expect a 'full fact-finding' exercise. But we would look at the questions asked and the options open to the particular customer concerned".
- "Where the 'simplified advice' involves an automated process, we would look, as part of our consideration of any complaint, at whether there was a good record of the information the customer gave and the choices they made". Which infers if this is present then the complaint is less likely to be upheld.

"Where the 'simplified advice' involves an automated process, we would look, as part of our consideration of any complaint, at whether there was a good record of the information the customer gave and the choices they made".



5.2 ANALYSIS OF THE ROBO RELEVANT REGULATION

The International Organization of Securities Commissions (IOSCO) is a trade body made up of senior representatives from the various regulators around the world. The Financial Conduct Authority (FCA) acting head Tracey McDermott is involved. The IOSCO coordinates and shares experiences regarding robo-advisors.

Their recent publication is the "Report on the IOSCO Social Media and Automation of Advice Tools Surveys".

The various regulators who participated identified a number of concerns related to the use of automated tools and the report succinctly demonstrates their coordinated thinking. The regulators are concerned that:

- Firms may be classifying the output of automated advice tools as something other than a recommendation (e.g., non-personal promotional material) to avoid regulations or to engage in regulatory arbitrage;
- Firms may not be regularly updating customer information used for a suitability analysis to the extent required by good practice;
- Customers may not be providing sufficient information for the automated tool to provide appropriate responses (consumers may be 'gaming' the system or just acting in ignorance of the relevance of providing the correct answer for a good outcome);
- Customers, potentially believing that they have received advice, go on to buy riskier, unsuitable products;
- There may be conflicts of interest between a firm and its customers resulting in an automated tool potentially making recommendations that favor the firm at its customers' expense (e.g., recommending proprietary products, churning, favouring preferred clients);
- Firms may lack sufficient internal controls to adequately supervise the use of automated advice tools 'in the wild';
- Whether firms are or are not providing their customers with sufficient information/disclosure about their using automated tools (e.g., instructions and risk disclosures); and
- Whether firms are properly applying suitability requirements when they recommend complex or illiquid products to retail customers.

The IOSCO member regulators also identified three areas where they believe additional guidance from the IOSCO would be helpful in the future:

1. Best practices for intermediaries providing advice via automated tools (e.g., how best to comply with suitability obligations). This would include such things as:

- The circumstances under which the output from an automated tool on a customer directed/execution-only platform should be subject to the applicable suitability obligations (if permissible under the applicable legal framework);

- In complying with suitability obligations, how to best reflect an investor's risk preference in an automated tool;
- Whether, and if so, a firm can satisfy its suitability obligations by mechanically matching a customer's risk tolerance with a product rating; and
- Can/should a firm execute a trade recommended by an automated tool?

2. What principles should an intermediary consider when designing an automated tool? This would include such things as IT integrity, including recordkeeping and data storage; identity theft and other privacy concerns; and the types of and potential risks associated with automated tools, including the methodologies/algorithms the tools use.

3. What principles should regulators consider when regulating intermediaries that use automated tools? This would include such things as how to improve communication among regulators to enhance sharing their experiences in regulating automated tools (e.g., online access to regulators' relevant rules, regulations and guidelines); identifying risks unique to providing advice through automated tools that may require targeted regulation (e.g., testing and ex-post review of recommendations); and providing guidance on the types of and potential risks associated with automated tools, including the methodologies/algorithms they use.

The IOSCO report clearly highlights that the use of automated advice tools is growing around the world. Financial intermediaries are using these tools to assist with their suitability and the various Know Your Customer (KYC) obligations put upon them. The IOSCO found that when financial intermediaries make recommendations, the vast majority of firms do so with respect to asset classes and that in respect of specific products, then collective investment schemes, mutual funds, ETFs and equity classes are the most common asset classes recommended.

The IOSCO report demonstrates that currently no regulator that responded to the survey indicated that it prohibits the use of automated advice tools but it also highlights that very few regulators have specific rules or guidance related to their use. Rather, most regulators rely on their standard directives on general suitability, disclosure, supervision and record keeping rules.

In the UK, the FCA is no exception to this. The FCA, however, has aggregated the various strands of the regulation relevant to robo-advisors in their recent publication FG15/1: "Clarifying the boundaries and exploring the barriers to market development" (January 2015). This paper is essential reading for those considering launching a robo-advisor proposition in the UK or indeed Europe as relevant MiFID is included.

The FCA's attitude is that it recognizes that "a well-functioning retail advice market needs different delivery mechanisms to be fully effective for the broad range of potential investors. There could be benefits from a well-designed, low-cost method of meeting consumers' straightforward investment advice needs. The challenge is to ensure that such methods will deliver good outcomes for those consumers".

To that extent and as previously discussed, the FCA has established Project Innovate. The author has been in discussions with the Project Innovate team and while the FCA acknowledges a number of organizations have engaged with the Project Innovate team, there has not been, at the time of writing, a robo-advisor launch in the UK. We await with bated breath the first of these.

The FCA Director of Policy David Geale has further stated: "A healthy advice market is one in which a range of different models exist and develop to suit the needs of a broad spectrum of investors. We believe that (Final Guidance Jan 2015) will give firms the confidence to innovate to provide new, streamlined advisory propositions with a clearer understanding of their responsibilities and of where the boundaries lie."

The FCA highlights the types of advice that may be relevant for those operating robo-advisor models.

'Simplified advice' is not a defined term in the FCA Handbook but has been adopted by the FCA to describe streamlined advice processes that aim to address straightforward needs of consumers. It is used to mean a limited form of advice in that it is focused on one or more specific needs and does not involve analysis of the consumer's circumstances that are not directly relevant to those needs. The outcome, therefore, of a simplified advice process may be a specific recommendation. This guidance is targeted at simplified advice processes that recommend retail investment products.

From a regulatory perspective, simplified advice is a form of 'restricted advice' because it does not consider all retail investment products that may be suitable for consumers. So it needs to comply

with the requirements for restricted advice. The FCA states that a simplified advice process may be appropriate for consumers who meet the following criteria:

- They have their priority needs met, that is, they do not need to reduce existing debt, they have adequate access to liquid cash (i.e. savings), and have any core protection needs met;
- They have some disposable income or capital that they wish to invest; and
- They do not want a holistic assessment of their financial situation, but rather advice on a specific investment need.

'Focused advice' is a term that the FCA has taken on board replacing a previously used term 'limited advice'. Focused advice is also not defined in the FCA Handbook but it is used to describe a situation where the client requests that a firm only gives personal recommendations relating to a specific need, designated investment or certain assets. Therefore simplified advice has some similar characteristics to focused advice in that the advice process is focused on one or more specific needs.

The key difference between 'focused advice' and 'simplified advice' is that the focused advice involves the client stipulating the boundaries of the service they wish to receive. So, with automated, simplified advice processes, the firm is setting out the boundaries of the service it provides.

A concern for firms may be that a customer goes through the automated process but then transacts with another organization following (or based on) the advice recommended by the original process. The FCA deals with this by stating that in relation to the firms general non-statutory liabilities (but not its liability under COBS rules schedule 5 section 138D for breach of the COBS rules), a firm could include a provision in the terms and conditions of the simplified advice process that limits its liability or excludes liability (both contractual and in tort) if the customer does not buy the product recommended in the process from the original firm. Obviously, the exclusion clause must comply with common law and statutory requirements such as the reasonableness test under the Unfair Contract Terms Act 1977 and the Unfair Terms in Customer Contracts Regulations 1999. In the view of the FCA, a prominent and clear exclusion clause is likely to be effective in these circumstances (although this is ultimately a decision for the court).

The FCA has restated its definitions of 'regulated advice', 'personal recommendation' and 'generic advice'. Under the MiFID definition, regulated advice is a personal recommendation relating to one or more specific investments; otherwise it is classified generic advice. Information which might be construed as advice but not relating to specific investments and delivered to the general public or to existing customers in the form of a newsletter is not likely to be considered regulated advice. An example of this is a blog on the potential upside in a particular investment sector. It is important to remember that the FCA's investment suitability rules only apply where a personal recommendation is made.

Note: execution only is technically not advice and therefore is outside of this White Paper and the robo-advisor remit as it is a service consisting of the execution and/or reception and transmission of client orders relating to particular financial instruments at the client's initiative. The firm does not give any advice on investments or assess appropriateness.

5.3 ANALYSIS OF ROBO RELEVANT MIFID I AND II

The EU Directive MiFID II is worth visiting in relation to robo-advice. It is coming into effect 3 January 2017, and creates more onerous obligations in the form of an 'appropriateness' test for 'non-advised sales'. This means that in some cases and even for execution only sales, the advisor has to ask the consumer for more information to help it decide whether the consumer has the necessary knowledge and experience to understand the risks involved in the transaction.

The categories of 'non-complex' products will be narrowed under MiFID II so that the 'appropriateness' test will apply even more often.

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Periodic reports must be provided to clients including an assessment of the suitability of the portfolio unless, in the case of investment advisors, the firm is not carrying out a periodic assessment of suitability.

Firms providing investment advice must provide clients with a statement specifying the basis on which the investment recommended is suitable for the client.

SECTION 6

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6.1 BIBLIOGRAPHY AND RESEARCH LINKS

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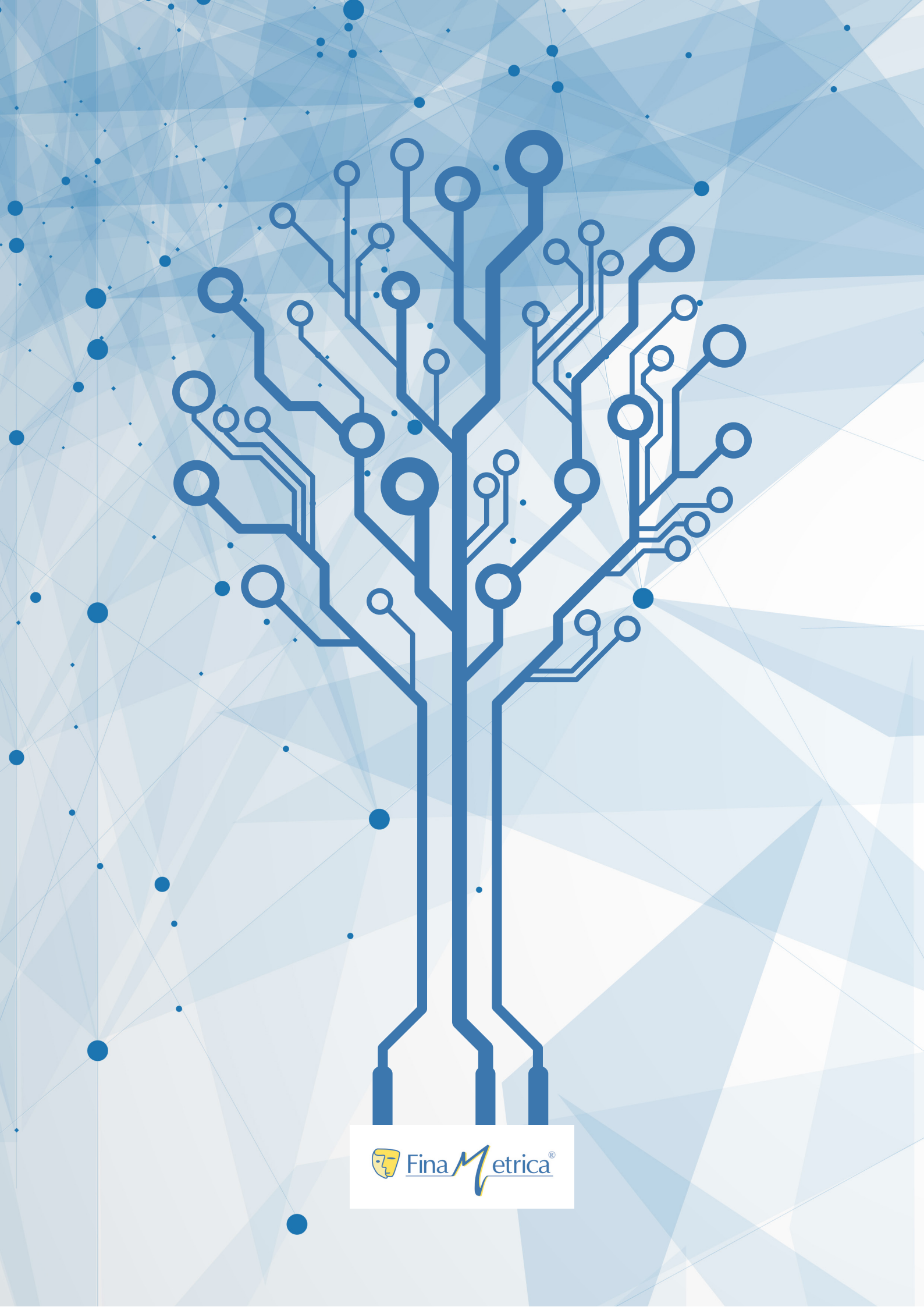
SECTION 7

ANALYSIS OF INDUSTRY PARTICIPANTS

Region	Company	Budgeting Tool	Financial Planning Education / Information	Retirement Planning and Investment Wrappers	Social Media Centre Investment Community	Robo-advisor	White Label Capability	Direct investment without advice	Funds managed and number of clients accounts	Average account size	Fee rate for this size of account	Fee per client	Revenue estimate
Australia	BigFuture		✔	✔		✔							
Australia	Brightday			✔									
Australia	FinaMetrica		✔			✔	✔	✔					
Australia	MOVO		✔			✔							
Australia	Pocketbook	✔	✔								Nil		
Australia	SelfWealth				✔							$240	
Australia	Stockspot		✔			✔					0.294% - 0.387%	0 - $77	
Canada	Nest Wealth					✔							
Canada	Share Owner		✔			✔		✔				$40 per order	
Canada	Smart Money Investments					✔					0.45%		
Canada	Wealth Bar	✔	✔	✔		✔					0.35% - 0.6%		
Canada	Wealth Simple		✔			✔					0.35% - 0.5%		
Others	8 Securities				✔	✔							
UK	fiveraday		✔			✔		✔	around 45 funds FUM £1.25m	£25 - 30k	average 0.79%		
UK	Hargreaves Lansdown	✔	✔	✔	✔	✔		✔			0.1% - 0.45%		
UK	Money on Toast					✔	✔	✔					
UK	Nutmeg		✔			✔					0.3% - 1.0%		
UK	Parmenion Interact					✔	✔						
UK	Wealth Horizon	Powered by Parmenion											
UK	Wealth Wizard	✔	✔			✔							
USA	Acorns		✔			✔					0.25%		
USA	Angellist				✔			✔					
USA	Asset Builder					✔			US$616,216,000 in 2,413 client accounts	$255,374	0.43% of AUM	$1,098	$2,649,735
USA	Betterment					✔	✔	✔	US$1.3 billion in 72,757 client accounts	$18,868	0.25% AUM	$47	$3,431,948
USA	Blooom			✔		✔	✔	✔	US$26,949,932 in 205 client accounts	$131, 463	$15/month or $180/ year	$180	36,900
USA	Covestor				✔				US$27,128,583 in 485 accounts	$55, 935	(assuming self-directed subscription fees) at 0.25% of AUM	$140	$67,821
USA	Financial Engines			✔		✔	✔	✔	US $88.2 billion across 835,107 accounts	$105,615	for professional management is 0.75% AUM	$792	**
USA	Financial Guard			✔		✔	✔	✔					
USA	FinMason	✔	✔								Nil		
USA	Future Advisor			✔		✔	✔	✔	US$232,124,128 on discretionary basis in 3,460 accounts	$67, 088	0.50% AUM	$335	$1,160,622
USA	Hedgeable			✔		✔	✔	✔	US$2,555,639 in 27 client accounts	$94,653	0.70%AUM	$663	$17,889
USA	iQuantifi		✔	✔		✔	✔	✔					
USA	Jemstep		✔	✔		✔	✔	✔					
USA	LearnVest	✔	✔	✔		✔	✔	✔					
USA	Lift Off	✔	✔	✔		✔	✔	✔					

Region	Company	Budgeting Tool	Financial Planning Education / Information	Retirement Planning and Investment Wrappers	Social Media Centre Investment Community	Robo-advisor	White Label Capability	Direct investment without advice	Funds managed and number of clients accounts	Average account size	Fee rate for this size of account	Fee per client	Revenue estimate
USA	MarketRiders	✔	✔	✔		✔	✔	✔					
USA	Marstone		✔	✔		✔	✔	✔					
USA	Mint	✔	✔	✔		✔	✔	✔					
USA	Motif Investing					✔	✔	✔					
USA	Mpower	✔	✔			✔							
USA	NestEgg Wealth	✔	✔			✔	✔						
USA	Open Folio				✔								
USA	Personal Capital		✔		✔	✔			US$861,759,448 in 6,571 accounts	$131,146	0.89%AUM	$1,167	$7,669,667
USA	Rebalance IRA			✔		✔			$225 million across 425 accounts	$529,412	0.5% AUM	$2,647	$1,125,001
USA	Robinhood		✔				✔	✔					
USA	Schwab Intelligent Portfolios		✔			✔							
USA	SheCapital												
USA	SigFig					✔			US$59.5 million across 672 accounts	$88,542	0.5% AUM	$443	$297,501
USA	StockTwits				✔								
USA	Trade King Advisors		✔			✔	✔				0.25% - 0.50%		
USA	Upside					✔	✔						
USA	Vanguard Personal Advisor Service		✔			✔ *					0.30%		
USA	Wealth Front		✔	✔		✔			US$1,702,872,811 via 21,450 accounts	$79,388	0.25% but fee waiver on first $10k of assets	$173	$3,720,932
USA	Wise Banyan					✔			US$20,281,965 via 2,762 accounts	$7,343	(assume customised portfolio management) at 0.5%AUM	$37	$101,407
Wider Europe	Cashboard					✔					10 % on the previous high-water mark		
Wider Europe	EasyFolio				✔	✔							
Wider Europe	Finance Scout 24		✔			✔	✔				0.5% - 1.25%		
Wider Europe	Money Farm	✔	✔	✔		✔	✔	✔					
Wider Europe	Money Meets	✔			✔						Nil		
Wider Europe	Quirion					✔					0.48%		
Wider Europe	Sutor Bank					✔							
Wider Europe	Swissquote Eprivate Banking		✔			✔	✔				0.95% - 1.25%		
Wider Europe	True Wealth					✔					0.50%		
Wider Europe	Vaamo					✔					0.49% - 0.99%		
Wider Europe	wikifolio				✔			✔					

* Hybrid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