Oxford Risk | Behavioural Finance. Applied.

BEHAVIOURAL ENGAGEMENT TECHNOLOGY

Using technology to understand, map, and improve engagement in personal finance

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PART ONE

SUITABLE INVESTOR ENGAGEMENT

The Investor Engagement Conundrum

The importance of investor engagement is well-understood. However, what it means, and consequently how to improve it, is not. Behavioural Engagement Technology marries a deep psychological understanding of investors as individuals with the tools for institutions to capitalise upon this, robustly, reliably, and repeatedly at scale.

Techniques for engaging investors – to better attract both attention and assets – are at the top of many advisers' wish lists.

However, while 'increasing investor engagement' sounds enticing (and profitable), it's not always clear what it means. This leads to typical attempts to do something about it not being nearly as effective as they could be.

When we talk about investor engagement, we are talking about one of two things:

1. **Engagement between the investor and the institution providing or managing their investments (which could be an adviser or a direct-to-consumer platform)**
   Advice or guidance, as well as portfolio reporting, education, and general communication given by an institution to an investor. Institutions like to know how to engage more effectively, to grab investor attention and direct it towards better outcomes for both parties.

2. **The investor's engagement with their investments, or investing in general**
   How an investor participates in the investing process. It's what an institution is trying to influence when it communicates with the investor. More engaged investors tend to both invest more money and feel more comfortable doing so, each of which leads to better outcomes for both the investor and the institution.

The second type – *how* an investor interacts with their investments – is the reason institutions are so rightly keen to improve the first. Communicate with your clients at the right time, in the right tone, with the right frequency and the right level of detail, and you help improve their investing experience, which improves your business.

Left to their own devices, individual investors frequently prove to be their own worst enemies. Some buy too high out of excitement. Some sell too low out of desperation. Many do both. Some do too little. Some do too much. Some do things badly. Whatever their precise cause, we have estimated the cost over time of poor, emotionally driven investor decisions to be about 3% per year

for the average investor. See the following section, ‘The Cost of Being Human’ for details.

This cost should interest everyone because of its sheer size. That’s a huge amount of money! However, what should interest wealth-management firms in particular is that this is money investors are leaving on the table. It is ‘greenfield’ money; it is not money one firm has to compete with another to ‘win’, to ‘redevelop’ under their own banner.

The decisions that lead to this 3% per year are financially poor, but they’re emotionally comfortable. Which means effective investor engagement – *helping investors feel just as emotionally comfortable with the financially optimal decision* – can dramatically help reduce this cost.

Whether you’re an advisory firm or a self-directed platform, this matters. Because helping investors recapture some of this lost 3% can help you:

- justify your fees;
- increase AUM immediately (through investors being more comfortable putting more wealth to work);
- increase AUM over time (as investors forge closer, and more stable, emotional connections with their portfolios); and
- increase investor loyalty and referrals, and reduce investor attrition (through deeper connections between institution and investor).

And, for face-to-face human advisers specifically, Behavioural Engagement Technology can also help make your expensive human resources more consistent and efficient, not by replacing adviser-client interactions, but by directing advisers to the most effective form of improving engagement with a particular investor at a particular time.

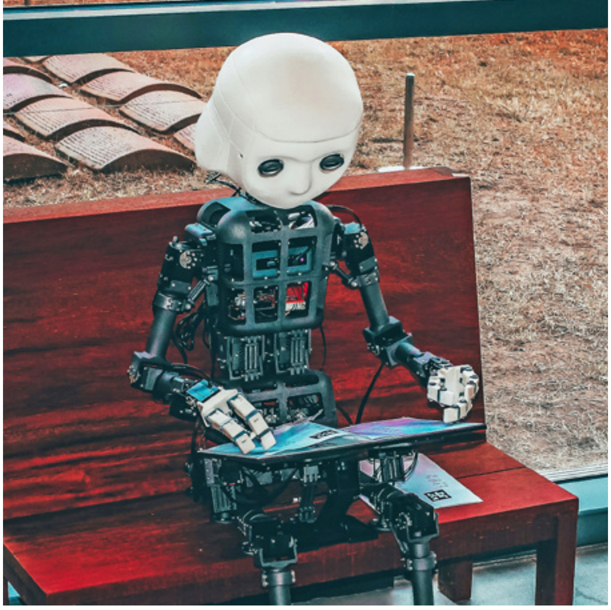
However, it’s possible to merely *increase* investor engagement – in either sense – without actually *improving* it.

For example, an obvious technique for an institution to implement is to track its ‘touchpoints’ – how often it communicates with its clients. Yet send a client unclear or irrelevant information, and this can backfire. You can put more effort into making communications clearer and more relevant, of course, but any universally targeted message, however well-crafted, quickly reaches a point where making it clearer or more relevant to one person makes it more patronising or repellent to another.

It’s also increasingly common to see ‘gamification’ techniques deployed to increase immediate, surface-level, engagement at the expense of cultivating the sort of longer-term, deeper, engagement that drives better investor and institutional outcomes.

With a more sophisticated understanding of what it is institutions should be aiming for when looking to improve investor engagement, and more sophisticated tools to help you achieve it, you can break beyond the limits of the typical techniques and improve not only *how much* clients engage with investing, but *how well* they do it too.

In this paper, we first unpack what good investor engagement looks like (in both senses), and then show how our unique Behavioural Engagement Technology promotes better engagement between institutions and their clients, which in turn creates clients better equipped to engage with their investments, in a virtuous feedback loop.



The Cost of Being Human

Failing to invest at all, and jumping ship when a big wave hits, can both be extremely expensive in the long-term context of an investor's financial life.

Investors are prone to make expensive mistakes, purely by being human.

We have estimated that a typical investor could cost themselves 3% per year. Other studies have come to very similar conclusions.* This estimation is necessarily a generalisation, and will differ from investor to investor, and from time to time. It is, however, a generalisation grounded in decades of extensive academic and industry research into the behavioural costs of making bad investing decisions in multiple ways.

Our estimate is based on a combination of failing to invest enough, and behaving badly with what is invested.

The cost of failing to invest

The first major investing mistake is leaving too much cash on the sidelines. People sit on mountains of cash not because it *is* secure, but because it *feels* secure.

Failing to invest provides short-term emotional comfort in a very simple way – you cannot lose if you don't get involved – but at a very high price. An investor with moderate Risk Tolerance in a globally diverse multi-asset-class 'optimal' portfolio, can expect excess returns over cash of around 4-5% per year averaged over the long term.

Seen this way, 'sleeping well at night' because of all the cash under the bed could become somebody's single biggest expense each and every year.

The cost of behaving badly when invested

Investors are also prone to forgo returns on the money they *do* invest.

Investors exhibit a common tendency to take more risk when times are good, and reduce risk when markets drop. This 'behaviour gap' – between the theoretical return investors would have achieved in a behavioural vacuum, and the one they do achieve in real life – results in investors buying high and selling low, and thus systematically underperforming buy and hold returns. Of particular concern here is the danger of panic selling in times of market turmoil. For example, the large market dip at the onset of Covid in March 2020 was immensely costly to many investors†.

There are many industry and academic studies of the behaviour gap, covering many geographies, time periods, market conditions, and asset classes. Collectively, they suggest the cost to the average investor is 1.5–2% per year. This makes up the bulk of the behaving badly cost.

* Notably Vanguard's February 2019 study (addressed to advisers) 'Putting a value on your value', and Russell Investments' April 2021 'Value of an Advisor'. These estimate the total value of an adviser to be 3-4.8% per year, comprising both saving clients from behavioural mistakes, and other more technical costs. The higher estimates account for inefficient tax planning, which is less due to poor behaviour, and more to a lack of good advice.

† For example, both the UK (Investment Association) and the US (Morningstar) reported record outflows in March 2020.

A further 0.5% or so is attributable to deviating from those aspects of an 'ideal' portfolio or strategy that can be emotionally uncomfortable for investors to implement, such as:

- biases towards familiar assets (e.g. those from one's home country, or into companies they've heard of)*;
- comfortable narratives (herding into currently popular themes, assets, or star fund managers; or chasing past performance);
- trading too often†;
- rebalancing too seldom;
- under-diversifying; and
- prioritising income/yield over total returns.

Each decision, whether it's to invest money, withdraw money, or rebalance is an opportunity for emotion, bias, and paralysis to occur, meaning that portfolio management along the journey is often far from optimal. And tilting towards concentrated portfolios of good stories, rather than diversified portfolios of good investments, usually means paying more in fees for thematic, tilted, or actively managed investments compared to the same effective risk-return trade-off without these emotionally enticing narratives. All these impose efficiency taxes on portfolios.

A good adviser can help mitigate many of these behavioural mistakes. However, much of these foregone returns could be re-captured just as well, if not better, by well-designed hyper-personalised digital client engagement systems to target better behaviour. And such systems could also be used to glean additional value for customers, and financial institutions, by a) encouraging cash deployment, b) guiding and prompting better rebalancing and cash withdrawal strategies, c) effective tax location, and d) using better, more diversified, portfolio monitoring.

The 3% per year cost of being human

Consider an investor who invests only 50% of the cash they could afford to. Some will of course invest more, but many much less. It is far from unusual for investors to put less than 50% of their investible wealth to work.

Their cost of not investing would be the expected foregone return from not being in the markets of 4%, multiplied by the 50% that isn't invested, i.e. 2%.

Their cost of bad investing would be the expected foregone return from behavioural mistakes of 2%, multiplied by the 50% that is invested, i.e. 1%.

Combined, they would be costing themselves 3% per year.

Of course, each investor will incur their own unique combination of these costs at different times, but 3% per year is a sound estimate of average annual costs over time given all the evidence.

* See the likes of Familiarity Breeds Investment.

† See Trading is hazardous to your wealth.

Not All Engagement is Good Engagement

Engagement is central to both the quality of an investor's experience and the profitability of the firms enabling it. Yet mere 'engagement' can also be disastrous. In designing and deploying engagement strategies, it pays to understand what works, what doesn't, and what could even be actively harmful.

In the world of personal financial advice, engagement is a precious commodity. More engaged investors are more invested, both mentally, and monetarily.

Amid the many common costly investor behaviours, failing to engage with the very idea of investing (and therefore not investing enough, or at all) is the most reliably costly of the lot.

But like any precious commodity, engagement is rare. It's hard to find, and even harder to reliably produce at scale.

The difficulties compound because not all engagement is good engagement. As noted above, the average cost of poor, emotionally driven, investor decisions is estimated to be an enormous 3% per year! But these investors aren't *un*engaged. They're *badly* engaged.

> “there’s a big difference for the firm between the client that calmly and confidently gets and stays invested... and the one that stays invested only as the result of time-intensive attempts to talk them in from the ledge”

Often in investing the best advice (and the best outcome for both investors and the firms serving them) is to do nothing. Yet there’s a big difference in the emotional comfort of the person that does nothing because they’re too afraid to look, and the person that does nothing because, *having looked*, they’ve concluded nothing is the right thing to do.

And there’s a big difference for the firm between the client that calmly and confidently gets and stays invested (and maybe refers others to do the same) and the one that stays invested only as the result of time-intensive attempts to talk them off the ledge.

The investor that tunes in too frequently is prone to believing investing is far riskier than it actually is. But the investor that turns off completely is obviously not in a wise position either. Paying *no* attention to investing can lead to all sorts of problems. For example:

- not investing at all (and therefore forgoing potentially life-changing rewards);
- portfolios becoming increasingly unbalanced (and therefore increasingly unsuitably risky);
- always feeling a little uneasy about investing in general (and therefore more prone to costly panic-driven mistakes in times of turmoil); and
- being prone to falling victim to a scam, or unscrupulous and unnecessarily high fees (and never even knowing that’s what’s happening).

Paying *scant* attention can be just as bad, for example jumping into the first fund one comes across, be that via an advert, or a friend’s enthusiastic recommendation, or picking the one with the highest return last quarter.

While at scale it’s possible to say certain things about investor behaviours *on average*, when it comes to prescribing interventions to an individual, as all the most-effective prescriptions must be, on average isn’t all that helpful. What do you say when what draws in one investor can repel another?

The best engagement strategies encourage *good* engagement (such as getting invested *and* feeling good about doing so, or intentionally checking in on investments when appropriate to do so) and target reducing *bad* engagement (such as not investing at all, or plunging in only to panic-sell out shortly after, or checking in too often or not at all).

The potential benefits to cracking personalised behavioural engagement at scale dwarf the up-front costs of implementing a system to do so (as set out in Part Two).

The Sweet-Spot of Appropriate Engagement

The best investor experiences are characterised by a comfortable and confident relationship between an investor and their investments. In designing and deploying engagement strategies, it pays to understand not only who's being engaged, but also what they're being engaged for.

Appropriate engagement isn't about more engagement or less engagement for the sake of it. It's less about *what* you do, and more about *how well* you do it for the specific person you're doing it *for*.

It's about *less* engagement with superfluous detail, with the short- (and especially immediate-) term, with the picking of particular investments, with timing, and trading, and with responding to (overconfident) predictions about what might happen (either one's own, or someone else's).

And it's about *more* engagement with getting invested to the right degree, the ongoing management of a unique investment journey, adjustments in response to what has actually happened, fitting the big picture to immediate needs, and core investment principles like diversification, rebalancing, and long-term structuring and planning.

Appropriate engagement focuses less on investments in isolation, and more on the investor-institution and investor-investment relationships and how the two help shape someone to become a better, more consistently comfortable and confident investor.

Doing this effectively at scale requires understanding:

- what we're trying to get the investor to do (the use case, e.g. deploy cash, or ease anxiety);
- what is likely to get them to do it (the intervention most relevant to their financial personality); and
- tone and delivery (e.g. the medium and frequency of communication, or the technicality or assumed knowledge of the language used).

And it leads to investors:

- who are more fully invested;
- in robust, well-diversified, portfolios;
- who stay invested over the long term; and with
- increased overall satisfaction.

And institutions that experience:

- increased assets under management;
- at a lower cost to serve; with
- reduced attrition; and
- additional business from referrals.

What appropriate engagement like this could look like in practice is the focus of the rest of Part One. Part Two sets out how Behavioural Engagement Technology can deliver it.*

* While many advisers have a keen intuitive understanding of how to combine the required elements of understanding for a given investor, this is almost impossible to do reliably over a large client base, not all investors have advisers, and even those that do may be far too early in their relationship to have built such an understanding.

Engagement Isn't Everything, But Try Doing Anything Without It

What immediately engages an investor can be at odds with what keeps them engaged over an investment journey. In designing and deploying engagement strategies, it pays to understand what both sparks interest, and serves interests.

Prescribing individual investment interventions gives rise to a potential conflict between what engages someone because it best *resonates with them*, and which interventions will most effectively *serve them*.

Merely engaging an individual is relatively easy. The basic tricks of the advertising trade haven't changed much in years. But in investing, tricking people into actions can backfire, because while their behaviours in a particular situation may have changed, *they* as an investor, have not changed: they are just as vulnerable as ever.

In politics, charisma is a more engaging quality than competence. The personal trainer who promises cake is likely to be more engaging than the one who prescribes kettlebells. But it would be a stretch to say either the charisma or the cake best served their recipient.

Similarly, we've seen a spate of tools that claim to 'measure' Risk Tolerance using all the 'gamification' techniques going, and prioritising flashy interfaces over sufficiently well-tested psychometric questionnaires. But gamified gimmicks don't *measure* Risk Tolerance, they *trivialise* it, and leave the unwitting investor unwelcomely exposed to unsuitable investments.

Behaviourally conscious interventions aim to increase an investor's emotional comfort. But the very behaviours those interventions seek to correct are also aiming at emotional comfort! They're just doing it in a much more costly way.

For example, consider the person who is keeping the majority of their investible assets in cash.

Sitting on surplus cash can provide a comforting sense of security (especially for those with certain financial-personality traits like low Composure and low Confidence). However, it is likely over time to be costing them 4-5% a year in foregone returns. It's not unheard of for someone to sit on a large enough cash reserve that the foregone returns would cover their entire annual expenditure – which would undoubtedly also be quite comforting.

People do not tend to avoid investing because it *is* safer, but because it makes them *feel* safer. In these instances, simply pointing out the value of the likely foregone returns is unlikely to be enough. Even if it led to investing, it would probably not lead to feeling comfortable with the overall investing experience.

The aim of behavioural interventions is to help individuals take economically optimal actions while also finding ways to replace, rather than simply ignore, the emotional comfort being served by the uneconomic alternatives.*

There's also the role of the adviser to consider. Hiring a professional adviser to help with (or perhaps make) one's investment decisions can be incredibly valuable (especially to those who score highly on the Desire for Guidance personality scale). However, there's a difference between delegating some or all of the decision-making process and delegating the engagement altogether, especially when the journey gets shaky, and trust starts to waver.

Active, conscious, engagement comes from a place of comfort and confidence – a turning away not out of fear of what one may find, but out of an understanding of what one likely will… and knowing it's nothing to be too bothered by.

* See also The Case for Anxiety-Adjusted Returns.

Effective Engagement is Conscious of Context

There is no universally 'best' engagement protocol, because what works for one investor is heavily and inescapably dependent upon a complex web of contextual moving parts. In designing and deploying engagement strategies, it pays to understand the limits of humans to reliably account for these moving parts, and to use tech to overcome them.

Beyond a few obvious basics, like making messaging clear, and not prioritising short-term concerns in the design of a long-term portfolio, there are few, if any, 'objective' interventions that can be prescribed in isolation of an understanding of their recipient, and their relationship with their investments.

Crucial to effective engagement strategies is understanding it is not merely *what* you do (what techniques you employ) or even what outcomes you achieve (an investor not panic-selling, for example) that determine your results.

It is instead the *way in which* you do it (how those techniques are employed, accounting for a given investor's circumstances and personality) and the *way in which* the investor experiences the effects (e.g. staying invested calmly and freely rather than out of acquiescence to authority).

This can be as much a matter of the positioning of a portfolio as its make-up, and of the tone and timing of a message as its factual content.

Key to doing this well – and especially to doing it at scale – is an understanding of each investor's:

- **Starting position**
  Not only their financial situation, and their level of financial knowledge and experience, but also: what's their most pressing problem? Is it: getting invested, investing enough, staying invested, making suitable investment choices, or overreliance on advice (good or bad) because they believe investing is scary, impossible to understand, or simply not for them?

- **Financial Personality**
  How does their financial personality signature determine how they're likely to react to both market changes, and adviser communications about those changes?

- **Current emotional state**
  What mood are they in, and what difference does the tone and timing of a message make given that mood?

A key part of investor engagement – making communications not only technically accurate, but also effective for the individual receiving it – has even become a regulatory requirement. See, for a UK example: 'Consumer Duty and how to evidence you're really focusing on client outcomes', and, 'MiFID II: Putting the investor first' for a European example).

As investment information becomes ever-more accessible, curating it to the needs of each individual becomes ever-more challenging, because it's so easy for a given investor to stumble into advice that may be suitable for someone, but isn't suitable, right there and then, for them.

With appropriate tools that harness the number-crunching power of technology and afford a deeper behavioural understanding of each investor's personality and preferences, we can meet this challenge.

Towards a Better Understanding of Investor Engagement

The understanding of investor engagement is ripe for additional research and refinement, and the use of AI and machine learning to continually fine tune which different types of engagement are most effective for each individual personality signature. Behavioural Engagement Technology can help lead the way.

When we look at investors through an engagement lens, we intuitively see three familiar patterns:

1. **The un- and under-invested**
   Consider someone who is not positively engaged with investing in general (though may well be highly negatively engaged – their aversion could be driven by high anxiety). In response to the stress of investing, they're frozen. They need help to get invested at all, or to invest enough.

2. **The precariously invested**
   Consider someone who is invested, but is prone to bad decisions. They understand the benefits of investing in general, but don't engage beyond jumping on the first recommendation they come across. They are also prone to jump out of the markets entirely at the first sign of trouble. In response to the stress of investing, they're fighting, flailing around without much control. They need help to stay invested, and to invest better (in more suitable investments and/or via a more suitable selection process).

3. **The insecurely invested**
   Consider someone who is invested, and sensibly so, probably because they follow good advice. However, they follow this advice without engaging with it. In response to the stress of investing, they're fleeing (often blindly into the arms of an apparent authority). They need help to feel more comfortable and confident through developing a better relationship with investing.

These should not be seen as 'categories' or 'groups' so much as tilts in emphasis. An underinvested person can of course also be precariously invested with what they have put to work, say.

Viewing investors (including potential investors) in this way helps highlight the different engagement challenges different investors face, and therefore which techniques for improving engagement are likely to be most effective in each set of circumstances.

There are certainly limits to how precisely we can – or would want to! – turn valuably fuzzy tilts in emphasis into hard-edged categories. However, there is still substantial scope for developing a more refined understanding of the types and drivers of investor engagement (both good and bad) at each stage of their journey navigating through shifting circumstances and ephemeral emotional reactions.

Behavioural Engagement Technology (as outlined in Part Two), in addition to its immediate uses, is an attempt to develop this understanding, by using data on investor holdings and behaviour (and iterative feedback loops) to refine what we put in front of each investor at any point in time.

PART TWO

BEHAVIOURAL ENGAGEMENT TECHNOLOGY

Putting It All Together: Behavioural Engagement Technology

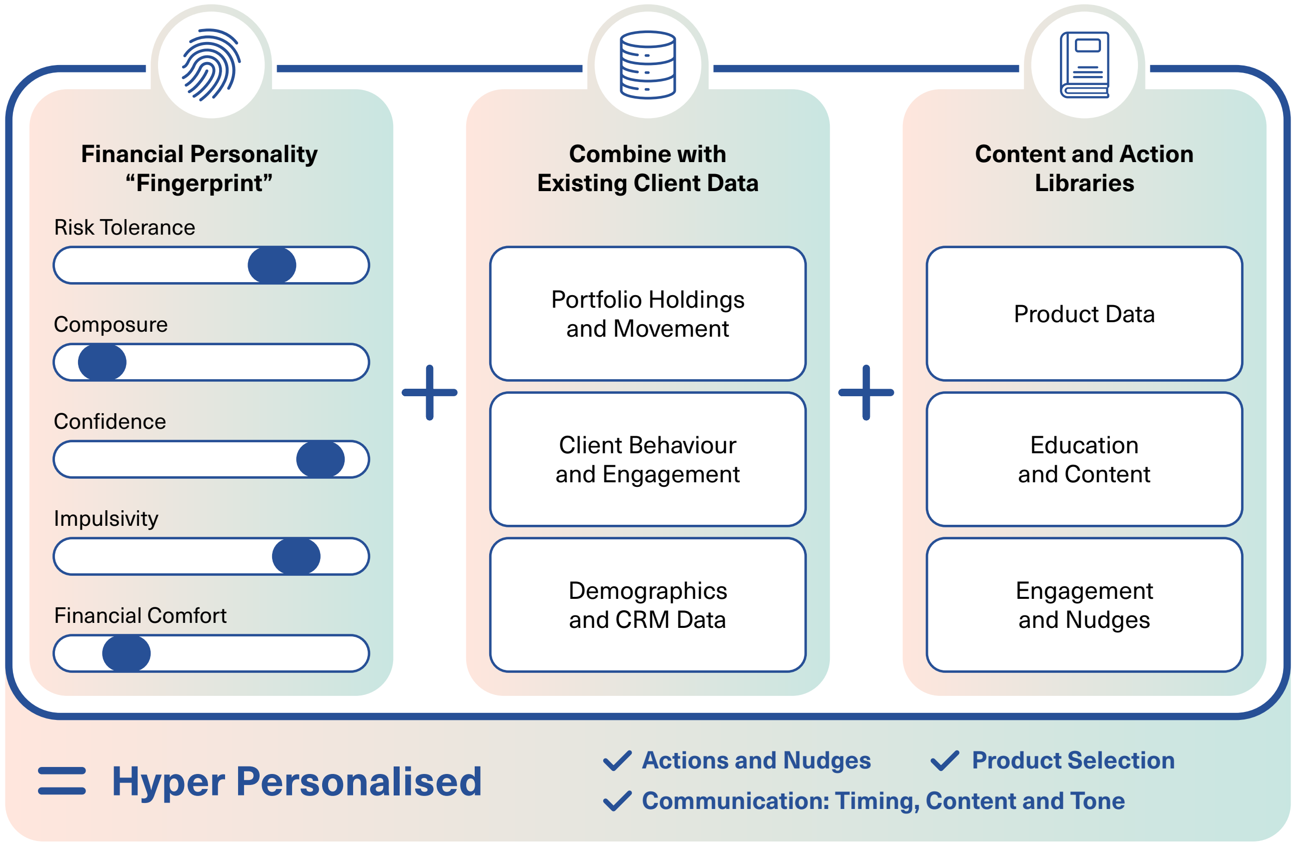
The best way for institutions to encourage *good* investor engagement will differ with each investor.

What we want to know is how to account for each investor's financial personality traits, financial circumstances, and their actions (say how frequently they log-in, or trade) in advising on the right next action to take for a specific person at a specific time.

Should we change the make-up of a portfolio, how decisions are made, the content of a message, the tone, or how that message is sent (e.g. the medium, or the timing)?

Managing this many moving (and frequently interdependent) parts requires an innovative technological solution.

Oxford Risk's Behavioural Engagement Technology takes relevant details about an investor (a range of facts about both their financial situation and financial personality) and uses these to weight possible prescriptions, delivering those that are likely to be most useful for a given investor right now.



Methodology overview

In summary, recommending individual investment interventions with Behavioural Engagement Technology is about more than merely matching a personality trait (or even a combination of personality traits) to a prescription. It is the (dynamic) interaction between an investor – their financial personality, their financial situation, where they're trying to get to, both financially and emotionally – and the market moves and available investment options that constitute their investing environment.

In this section, and in the examples that follow, we have sketched out a simplified model of how this web of interactions leads to personalised interventions.

The key features of the Oxford Risk approach to behavioural engagement are:

1. **The role of use cases**
   What an investor is trying to achieve – e.g. deploying cash, calming market-related anxiety, tackling behavioural vulnerability – is the starting point. Each use case determines the set of potential interventions that could be suitable, as well as the relevance of the data points collected.

   For example, the *cash deployment* use case contains more recommendations for making changes to investments themselves (e.g. gradually increasing risk over time) than the use case of calming *market-related anxiety*, which is much more about how the investments are presented and helping investors sit tight with what they've already got; and the use case of becoming a better investor is more about changing unhelpful beliefs. There is of course substantial overlap across cases.

   The same methodology can be applied more widely, e.g. to help advisers determine which type of clients are most likely to be a good source of referrals, by automatically searching for and extracting the clusters of individual financial situation and financial personality characteristics that correlate with those more likely to refer, and highlighting which existing clients best match these patterns.

2. **Behavioural intervention libraries**
   Each use case has a library of potential behavioural interventions, built from scouring decades of the behavioural literature and putting behavioural science to work in investing. Each intervention is backed by a plausible rationale that for the right investor it could be effective,

for example, by lowering the emotional barrier to getting invested, or making them more comfortable with short-term market turbulence.

3. **The role of financial personality**
   Each intervention in our libraries has been linked to each of the multiple dimensions of financial personality that academic research and real-world testing has identified as being both relevant enough and reliable enough to help shape investor- and investment-management recommendations. Each intervention is graded such that it is either boosted or suppressed for each personality characteristic. For example, in the cash deployment library, the recommendation to start by investing cash in stages is strongly boosted for low Composure and low Confidence investors.

4. **Goodness-of-fit score**
   For any given combination of personality signature and use case, we create a 'goodness-of-fit' score that identifies which interventions are likely to be the most effective for that investor, at that time. The fit is to the whole personality pattern that considers scores on all personality dimensions the investor has completed. The more fully fleshed out the investor's profile (i.e. the more dimensions on which they have been assessed), the more effective the matching will be.

5. **The role of tone and timing**
   Identical actions can be made more effective by how an intervention is presented. For example, different combinations of personality traits, or level of knowledge and experience, can make it wise to adjust the precise timing of a message, or the way in which it is sent, such as its length, or the level of expertise assumed. Consider a large-language-model AI that could be trained to 'rewrite message X for type of investor Y in situation Z'.

Future research, testing, and ongoing refinement

Each intervention is supported by evidence, from academic research or industry experimentation, that it should work, and to some extent for whom.

But we know from behavioural research that context is crucial. As much as we have good evidence that each behavioural intervention will have a positive effect, we also know that some will work better in specific contexts, and that our model will be vastly improved over time by gathering evidence on what works and what doesn't when used on real investors in real specific contexts.

As these interventions reach more investors, especially in contexts such as digital platforms that can track effectiveness towards a given aim and use AI to identify and amplify things that work, and drop things that don't, recommendations will become increasingly refined, and the most effective ones will be propelled to the top of the lists that each investor sees.

For example, consider what we could learn from data such as how long someone has been invested, how often someone logs in to their account, and what actions they tend to take when they do, in conjunction with specific messages they've just received, as well as the state of their personal financial situation and the wider economic context, and – where investors have access to educational resources – how much (or, if those resources include tests, how well) they've engaged with them.

Example Table of Behavioural Intervention Elements

The table on the next page shows a sample set of behavioural interventions specific to the cash deployment use-case.

Each row is a specific technique to assist individuals (potentially with the help of an adviser) in getting invested, alongside the rationale for why each may be effective.

Each intervention is matched to how effective it is likely to be for four of our key Oxford Risk personality traits. The technology matches each technique to the investor's scores across all financial personality dimensions simultaneously, ensuring each investor gets the action most likely to be effective for their individual set of attitudes.

The personality traits used are:

- **Composure**
  An investor's tendency to overreact to the present state of their investment journey (and also external stimuli such as the news). It is a measure of an investor's comfort or anxiety with the ups and downs along the journey. Low Composure investors are likely to struggle with staying invested. High Composure investors can fail to update their portfolio in response to important changes in circumstances.
- **Confidence**
  How capable and comfortable an investor feels about their ability to make good financial decisions. Both high and low Confidence can be problematic in their own way. Investors with low Confidence often can struggle to get invested. Overconfident investors tend to trade too much, and are more likely to be susceptible to confirmation bias, each of which heightens the chances of not staying invested.
- **Financial Comfort**
  An investor's confidence in and satisfaction with their long-term financial situation. Low Financial Comfort investors tend to be worried about their long-term financial security. High Financial Comfort investors conversely are optimistic about their financial futures (and therefore potentially less motivated to do something about their current situation). Financial Comfort can magnify some of the effects of low or high Confidence and Composure.
- **Impulsivity**
  An investor's propensity to act quickly and on emotional instinct when making decisions about investments and spending. High Impulsivity investors are more likely to make snap decisions (especially when coupled with low Composure), which means they may struggle to stay invested, or invest in suitable portfolios.

Financial Personality	**Composure**		**Confidence**		**Financial Comfort**		**Impulsivity**	
Technique / Rationale	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**
Agree on a set of simple 'rules of investing' to guide initial investing actions Simple 'rules of investing' can help overcome initial fears by breaking down a vague and daunting complex picture into something more cognitively manageable and controlled.	Useful	Generally a good idea	Very useful	Generally a good idea	Very useful	Generally a good idea	Generally a good idea	Generally a good idea
Agree on a set of simple step-by-step instructions to guide initial investing actions Where a struggle to get started is related to a feeling of not knowing where to start, step-by-step guidance is generally helpful. The more precise the better (e.g. not just 'invest £X' but 'To invest £X, click/sign here' and so on).	Very useful	Generally a good idea	Very useful	Generally a good idea	Generally a good idea	Generally a good idea	Useful	Useful
Immediate investment of surplus cash (setting aside cash safety buffer) Putting your cash to work as soon as possible is the most logical and efficient action to increase long-term returns.	Potentially harmful	Very useful	Potentially harmful	Very useful	Generally a good idea	Generally a good idea	Not relevant, or unclear	Very useful
Make a plan to pre-commit to getting started or increasing investment It's less daunting to start something in the future than it is right now, though also less efficient, so do this only for those for whom it is most effective.	Useful	Potentially harmful	Very useful	Potentially harmful	Useful	Potentially harmful	Useful	Useful
Invest cash in stages It's less daunting to invest a little bit than a lot, even when those little bits will automatically become a lot in time.	Very useful	Potentially harmful	Very useful	Potentially harmful	Not relevant, or unclear	Potentially harmful	Potentially harmful	Useful
Focus on sustainability and social goals that the investor particularly values (over investment goals) Social and sustainable goals tend to be more emotionally engaging than investment ones.	Useful	Generally a good idea	Very useful	Generally a good idea	Generally a good idea	Useful	Useful	Generally a good idea
Start at a lower risk level and ramp risk up gradually Reaching the desired level of risk in stages can be a more comfortable way of getting invested, whilst still getting fully invested from the outset.	Useful	Potentially harmful	Very useful	Potentially harmful	Useful	Potentially harmful	Potentially harmful	Useful
Create a schedule of dates on which to review the portfolio stick with it strictly Unless reviews and changes are scheduled it is easy to let them slip, or make excuses to stick with a comfortable status quo rather than good investing behaviour.	Useful	Very useful	Generally a good idea	Generally a good idea	Generally a good idea	Generally a good idea	Useful	Useful
In talking about or reporting on a portfolio, prioritise the long-term over the short-term (including putting any mandatory short-term numbers in a long-term context) Emotional attention naturally tends towards the short-term, which is always unhelpful in investing.	Useful	Useful	Useful	Useful	Useful	Useful	Useful	Useful
Use compelling comparisons with an easily identifiable and personally relevant group to inspire FOMO from not being invested Feelings of 'getting ahead' or 'falling behind' are usually unhelpful in personal finance, however used carefully they can help get people unstuck.	Generally a good idea	Generally a good idea	Useful	Generally a good idea	Generally a good idea	Useful	Generally a good idea	Generally a good idea

Very useful · Useful · Generally a good idea · Not relevant, or unclear · Potentially harmful

Financial Personality	Composure		Confidence		Financial Comfort		Impulsivity	
Technique / Rationale	Low	High	Low	High	Low	High	Low	High
Inform, where applicable, how many people in a similar position have already taken the desired action Social proof (knowing what others in a simliar position are doing) strongly influences behaviour.								
When talking about the uncertainties of the future, prioritise the risk of missing out over the risks inherent in the unknown Possible regrets (e.g. FOMO) can be a powerful way to break indecision.								
Highlight familiar aspects or components of otherwise unfamiliar investments. Familiarity is a universal source of emotional comfort. By focussing on the familiar and comfortable an investor can be made more comfortable with otherwise uncomfortable investments.								
Pretend, for a moment, that there is a 'good' time to enter the market Providing a reason why 'now' is a good time can be emotionally persuasive. This needs to be used with caution, but for the right investors can be effective to get them invested.								
Invest with a limited bias towards familiar investments, or "home" assets. A salient reason to be comfortable with 5% of a portfolio (say) can become a background reason to be comfortable with 100%.								

The table is an illustrative selection, not a comprehensive map of all possible actions, or all financial personality dimensions. As such, it glosses over some subtleties.

- **The rationales are simplified**
  A technique may be applicable to different types of investors (including ones that score 'high' and 'low' on the same trait) though the rationale for each may be different. For example, some very low Impulsivity investors struggle to act at all, and therefore step-by-step guidance can help force their hand. High Impulsivity investors can also benefit from step-by-step guidance – not because it works to counter their natural tendencies, but because it works with them. They're keen to act: so you can harness that keenness and direct them towards doing something sensible.

- **These are starting points only**
  The weights showing which traits a technique is likely to be most effective for are starting points. Each real-life use of the technology provides evidence that tells us what is and isn't working, enabling machine learning techniques to constantly update these weights to reflect these implementation successes (and failures).

- **Supplementary resources**
  For each technique, the table shows only a rationale and how strongly it should be boosted or suppressed for each personality dimension.

  In addition, the technology can deliver examples of what each intervention could look like in practice, say, exact wording to use in front of a client, or in a report, or a specific graph or chart that helps illustrate the point in question. For example, a sample set of 'rules of investing', or a framework for a review, or a chart showing the ratio of seeing portfolio rises versus portfolio falls depending on the frequency of checking.

An Example of Interventions Along the Investor Journey

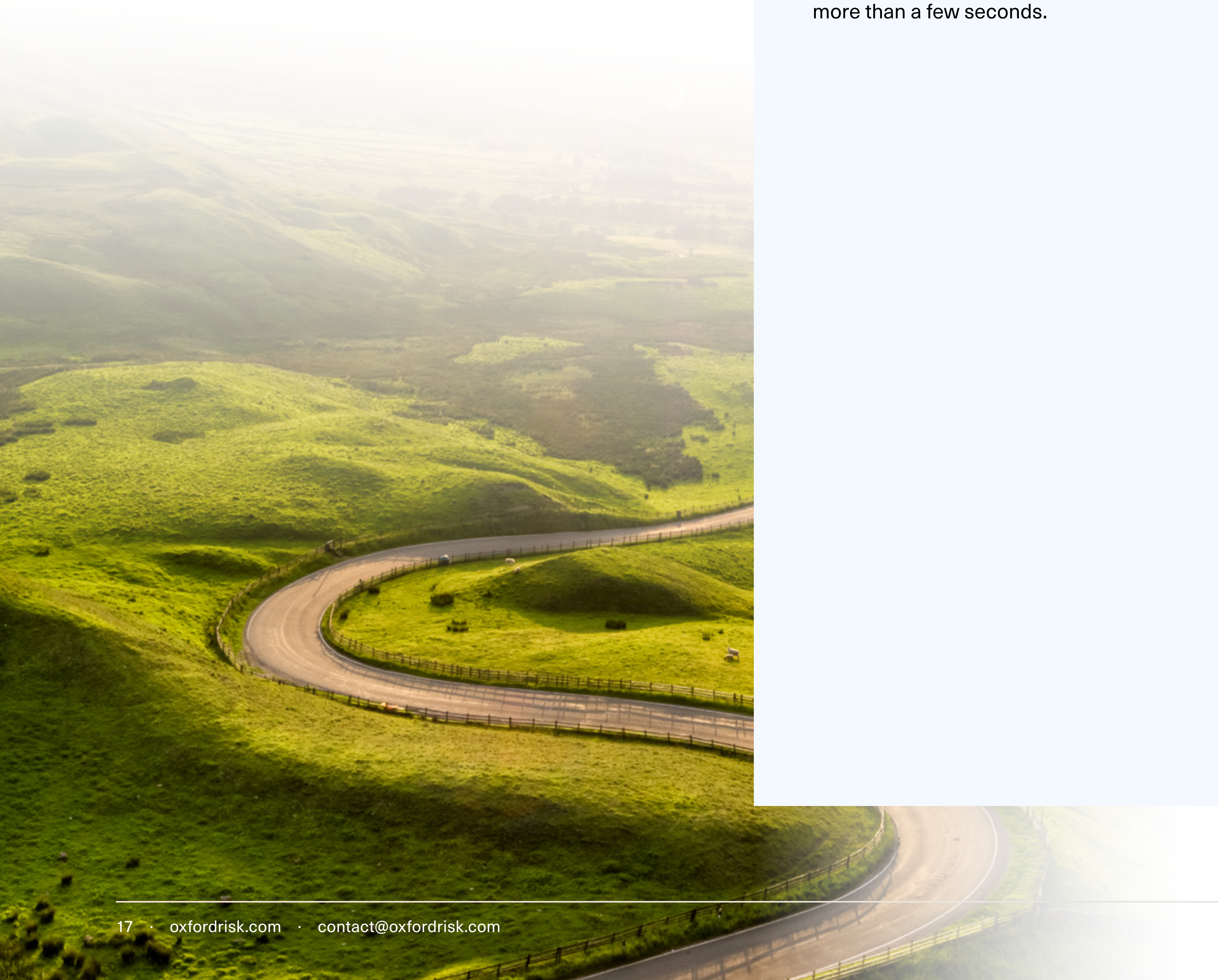
This section follows some hypothetical investors with similar basic financial situations on simplified journeys from getting started, to getting going, to staying invested when it's hard to do so, to gradually becoming more comfortable and confident investors.

It introduces the four dimensions of Oxford Risk's Financial Personality Assessment to show how each one can affect the right thing to do for each individual at a given moment.

The point of this example isn't to carve in stone 'the' way of handling each of these investor types. It is to show a sample of the many possible aspects to consider, and to highlight, as the complexity rapidly multiplies, the crucial role of technology in managing it all automatically.

1. Getting started

Consider an investor, let's call them Alex, who has investible cash (over and above that suitably set aside as an emergency fund) but who can't bring themselves to think about how to start investing it for more than a few seconds.



UNIVERSAL INTERVENTIONS

Anyone in Alex's position could be helped by some universal measures, such as those listed below. These are never going to be as effective as personalised interventions, but they are usually fairly easy to implement, and, because they are universal, unlikely to have any downsides.

- **The use of defaults**
  Defaults are usually the most powerful tool in the kit, though the recipients don't often have a lot of control over them. For example, in the absence of an active choice, a company pension scheme that imposes a default contribution amount, and a default fund into which it's invested. This selection has enormous effects on both how much someone saves via their pension and what they invest it in, and thus their long-term wealth.

- **Step-by-step instructions**
  Where a struggle to get started is related to a feeling of not knowing *where* to start, step-by-step guidance is generally helpful. The sense of certainty they bring to possible future uncertain situations is especially valuable for more anxious investors, though even those that know what they're doing usually appreciate having it spelled out, ideally as precisely as possible (e.g. not just 'invest £X' but 'To invest £X, click/sign here' and so on).

- **Making the long-term benefits more salient**
  A common cause of investment procrastination is a lack of a sense of urgency: the benefits happen over decades, and the costs of starting, even if small, loom large in the immediate moment they have to be paid. This gap can be closed in several ways, e.g. linking a long-term plan to long-term goals, or educative efforts to make the benefits of compounding more vivid and intuitive (both of which, while universally useful, are likely to be especially effective for investors with very low Composure or Confidence).

There are other universal ways to be helpful. Investors are often bombarded with all sorts of valuable information, but when and how a message is sent can drastically change the utility of the message that's received. For example, instructions are most useful when the person receiving them is in a position to act on them, so the use of 'just-in-time' education means that whatever the instruction is, delivering it (and only it) at the time it most needs to be understood is universally helpful (and especially so for those with lower Knowledge and Experience).

It's not all about simplicity, however. Billions have been pumped into strategies to make the steps as simple as possible, and there are only so many clicks that can be removed. Many are so daunted by the idea of investing that even a hypothetical zero-click solution, where they merely had to imagine getting started to actually do so, wouldn't work.

It's even arguable that investing has already become *too* frictionless: overcoming *some* degree of challenge to get invested is at least a partially good indication that an individual knows what they're getting into. It's only asking for trouble to get someone into an investment when there's good reason to believe they'll feel like getting out the second it takes a bit of a dip (for example because they have low Composure).

TAILORED INTERVENTIONS

Other techniques are more personality-specific.

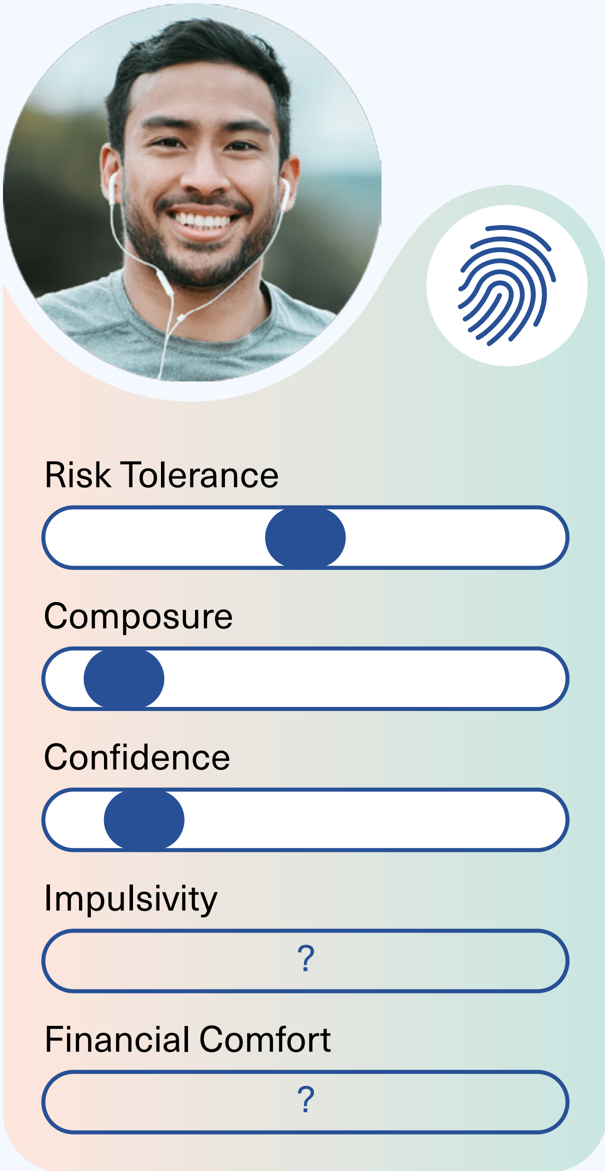
While what matters is the complexity of an individual investor's psychology – how their personality characteristics combine with both each other and external circumstances – it can be helpful to strip this back to see how even considering only one or two dimensions can demonstrate how to communicate differently.

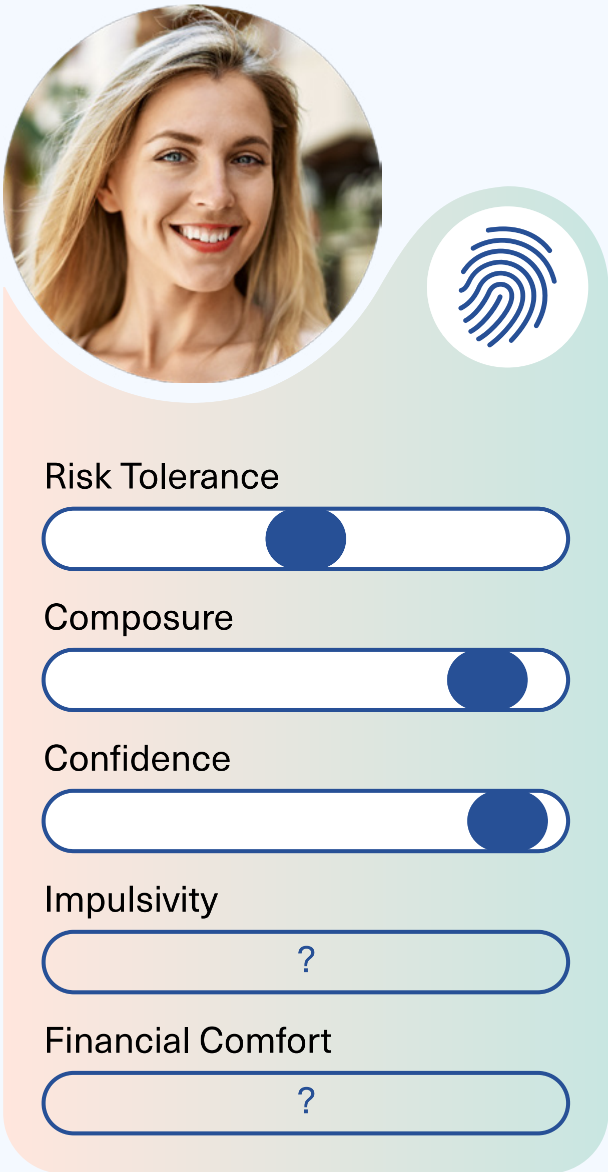
Let's assume that Alex has low Composure (similar to 42% of the population, using results from a representative sample). Let's also assume Alex has low Confidence (low Composure and low Confidence is a position shared with 18% of our population of representative investors).

Low Composure and low Confidence investors that are un- or under-invested (and therefore need to deploy some, or more, cash) could be helped by:

- **Investing cash or increasing risk in stages**
  Low Composure low Confidence investors are likely to feel more comfortable investing cash in stages, or starting at a lower level of risk and gradually trading up to whatever their long-term Suitable Risk Level is.

- **Pre-commitment and re-commitment plans**
  For investors in Alex's position, it's far more comfortable to make changes in the future than right now. What you can do right now, however, is make a strict *plan* to make changes in the future, for example to increase an investment amount on a particular date, or invest surplus cash when cash reserves exceed a threshold. On their own, defaults can lead to disengagement rather than engagement, so it's important to position them wisely, and use their preset implementation dates as a trigger for re-learning their lessons and re-committing to their actions.





Let's now introduce a second investor, Brittany. Unlike Alex, Brittany has high Composure (shared with 14% of our sample population) and high Confidence (a combination shared with 6% of our population of representative investors; only 1%, incidentally, have both high Composure and low Confidence).

At this stage of the journey, a high Composure and high Confidence investor is unlikely to require much special treatment aimed at providing emotional comfort. The interventions suggested for Alex would likely prove counterproductive for Brittany – there would be little to no emotional comfort benefit, and a probable long-term financial cost, or administrative hassle.

However, high Composure investors can suffer from inertia and procrastination, which can be amplified by overconfidence. Remaining stoically unmoved by short-term market movements is great... unless you do actually need to do something, for example, start investing at all. In this instance, Brittany could benefit from a greater sense of urgency, even if artificially created, for example:

- **Presenting a 'timing' opportunity (judiciously)**
  Trying to time the market, especially in the context of initiating a long-term investment, is famously pretty pointless, if not actually calamitous. However, where a lack of a sense of urgency is an issue, providing a reason why 'now' is a good time, while logically questionable, can be emotionally persuasive.

2. Getting going, and staying invested

There's a big gap between getting invested and gradually becoming a better investor. Sometimes this is financial, e.g. those who invest some surplus cash, but not all. Often, it's emotional.

Many of the most-effective interventions are aimed at this journey: not only helping someone become fully invested, but also helping them better manage their overall investing experience as it unfolds.

Despite many traditional approaches focusing almost exclusively on the initial know-your-client process, the start of an investor's journey isn't the end of their emotional engagement. Inves*tor* management becomes more, not less, important, once the initial investment has been made.

Each interaction between an investor and their investments (which could be via an adviser or on a self-directed platform) is an opportunity to enhance the engagement with, and experience of, an investing journey.

In these early stages of Alex's journey through this strange new world, the emphasis should be on turning away from the temptations to tinker with his portfolio, and towards embedding the lessons of how to be a good investor, because when the time comes to test those lessons, it'll be too late to start learning them.

In addition to such actions, Alex will also be helped by how interventions are delivered, for example:

- **Limiting the volume of information**
  It's tempting when there's so much for someone to learn, ideally as quickly as possible, to hit them with it all. However, this is likely to backfire. Focus instead only on one point at a time, and check understanding before proceeding.

- **Repeating key information**
  Having understood something once does not mean it's sunk in. It could quickly be forgotten and then the investor's back where they started, but your communication has moved on: a dangerous combo.

- **Avoiding alienating investment talk**
  Don't talk of markets, or risk-adjusted returns. Do discuss likely ups and downs (and place them in a longer-term context), and counsel: listen, and create collaborative processes for dealing with those ups and downs whenever they appear. Where elements of a portfolio are more familiar than others, emphasise them, to help connect the world of investing to something already better understood.

In contrast to Alex, Brittany understands the benefits of investing, but is prone to poor decisions.

She's more engaged with the investing process, but in an unhelpfully frantic way. Poor decisions are much easier to prevent than cure, so the early days are a great opportunity to address the risk of them before the opportunity to make them arises.

Brittany's high Composure and Confidence suggests:

- **Using strict review plans to guard against overconfidence**
  Those prone to making poor decisions are well-served by agreeing in advance that decisions of any sort (especially those that change a portfolio) are best made in line with a pre-set schedule of reviews. Connecting planned changes to personally salient dates can also help here, by increasing the sense of personal control.

As with Alex, in addition to the actions, it's important to consider their presentation. For example, high Composure and high Confidence investors (especially those with high Knowledge and Experience) could be put-off (or patronised) by going *too* slowly, or repeating things *too* often.

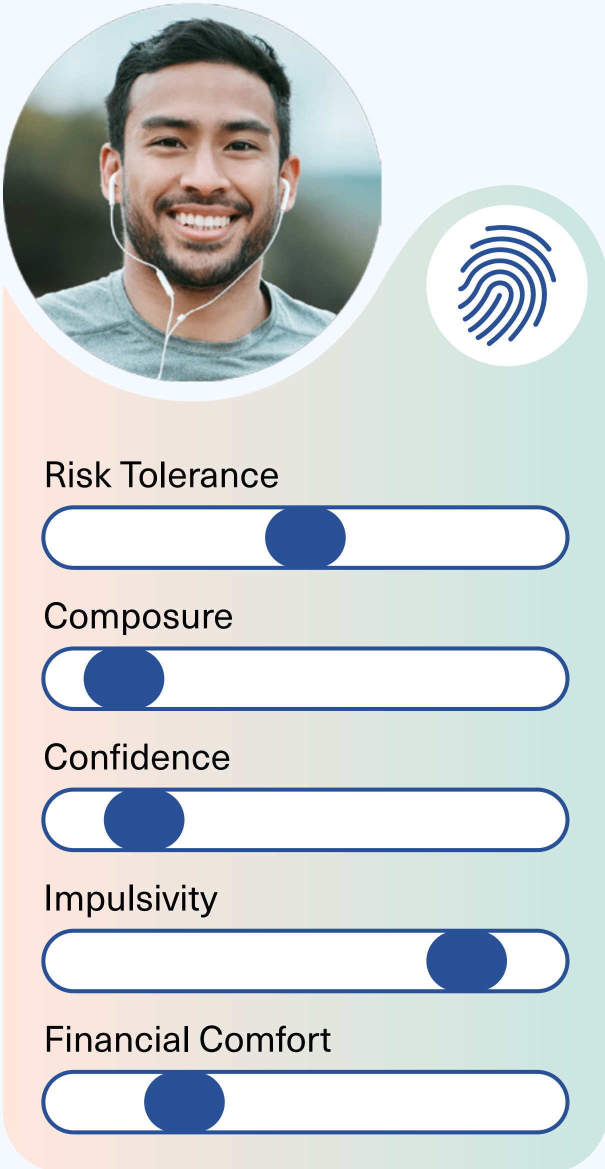
3. Making better investment decisions

Let us now introduce two further dimensions: Impulsivity and Financial Comfort.

Each of these can be thought of as having something of a multiplier effect. If you're highly impulsive, poor decisions you're prone to make are more of an issue, because you're likely to make them more quickly, and turn emotional discomfort into financial error, where some reflection may have saved you.

Impulsivity is also interesting because while low Impulsivity investors aren't prone to any particular mistakes, extremely low Impulsivity investors can fail to make decisions when decisions need to be made.

Low Financial Comfort (feeling pessimistic about your financial situation, especially your future) can ramp up stressful situations by attaching a sense of desperation to them. Conversely, high Financial Comfort, especially if it's misplaced, can cause someone to become recklessly blasé.

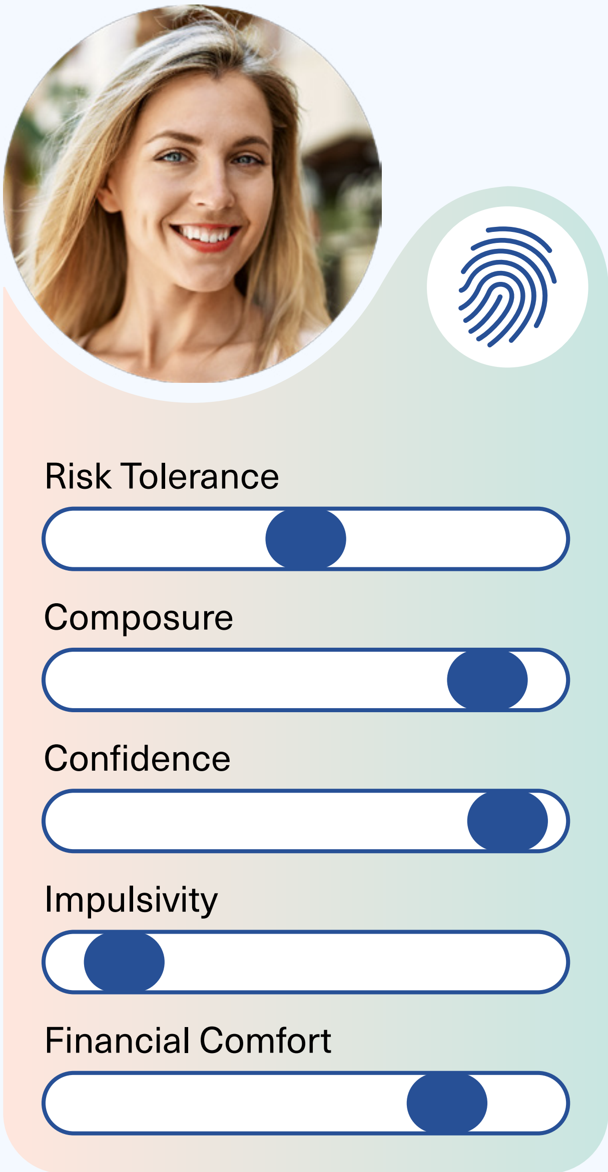


Let us assume that to go with his low Composure and low Confidence, Alex has high Impulsivity and low Financial Comfort. In considering how to steer Alex away from potential panic-selling, he should consider:

- **Strong rules around withdrawals**
  This could be either a pre-agreed set of rules (and a pre-agreed ideally exhaustive list of reasons why it's okay in emergencies to break them), or the use of specialist products with in-built withdrawal restrictions.

Again, *how* messages are delivered is important. For example:

- **Avoid talk of numbers, especially in trying to establish emotional comfort**
  Breaking the link between emotional comfort and numbers is potentially highly valuable, because you can't control them, and if you rely on numbers to provide comfort when they're up, you're doomed when they're down.



Let us assume that Brittany is the complete opposite. To go with her high Composure and high Confidence, she has low Impulsivity and high Financial Comfort. She's in a strong position – especially as she becomes a more experienced (and one hopes more knowledgeable) investor.

Her main dangers will be becoming *too* comfortable, and perhaps *over*confident. Sticking to plans, reinforcing key principles, and regularly reviewing both what she's invested in and why she's invested in anything at all, will be key to making the most of this strong position.

The Use of Investor Personas

While on the most granular level, each investor is unique, for practical purposes they can be grouped according to common clusters of behavioural traits. Certain personality signatures occur more frequently than others. For example, as we saw above, almost no investors have high Composure and low Confidence.

Using 'personas' which represent common clusters means you needn't prepare a different type of intervention for every combination; instead, you can rely upon a mere handful of tailored interventions to cover all likely scenarios.

CONCLUSION

Appropriately engaged investors are all alike. Each badly engaged investor struggles in their own individual way.

Appropriate engagement leads to better outcomes for both investors and institutions, its absence leads to worse… sometimes much worse. And the cost of implementing a system to do something about this is minimal relative to the potential upside.

While many personality traits and preferences are highly stable over time, some are less so. And the circumstances that interact with an investor's personality, both financial and emotional, and both internal and external, are changing constantly.

We've looked only very briefly at four dimensions, and only a fraction of the ways in which they can combine within an individual investor. It's a deliberately simplified look at an approach that can quickly explode into the sort of computational complexity only the right sort of technology can be trusted to implement robustly and reliably.

As well as several other personality dimensions, good advice also needs to account for other preferences, specifically those related to sustainable investing. Oxford Risk's Financial Personality Assessment analyses numerous elements of sustainability preferences.

Trying to work out what to do, for every investor, every time, is impossible without technology.

But not just any technology. Technology built on behavioural expertise, tested on thousands of existing investors, and designed to learn from every investor interaction, to continually refine which prescriptions are promoted for each investor-investment combination.

About Oxford Risk

Founded in 2002 by leading decision science academics from Oxford University, Oxford Risk are experts in behavioural finance and financial well-being. They understand how people perceive risk, make judgements about risk, and behave in risky situations. They know how best to elicit and convey information to ensure those perceptions, judgements, and behaviours reflect true intent.

Oxford Risk's software supports wealth managers to assist their clients in making the best financial decisions in the face of complexity, uncertainty, and behavioural biases. This helps firms better engage with investors, increase assets under management, and attain regulatory peace of mind.

Its behavioural tools assess financial personality and preferences as well as changes in investors' financial situations and, supplemented with other behavioural information and demographics, build a comprehensive profile. Oxford Risk's financial personality assessments can measure in excess of 20 distinct dimensions, including preferences for risk, investment characteristics, sustainable investing, and engagement.

Oxford Risk believes the best investment solution for each investor needs to be anchored on stable and accurate measures of risk tolerance. Behavioural profiling then provides an opportunity for investors to learn about their own attitudes, emotions, and biases, helping them prepare for the anxiety that is likely to arise over the journey, control their emotional impulses, and make better decisions for better outcomes.

Oxford Risk

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