momentum
investments

Sci-Fi Report 2021

THE BEHAVIOURAL **SCI**ENCE OF SOUTH AFRICAN
FINANCIAL DECISIONS

> *The investor's chief problem – and even his worst enemy – is likely to be himself.*
>
> **Benjamin Graham**

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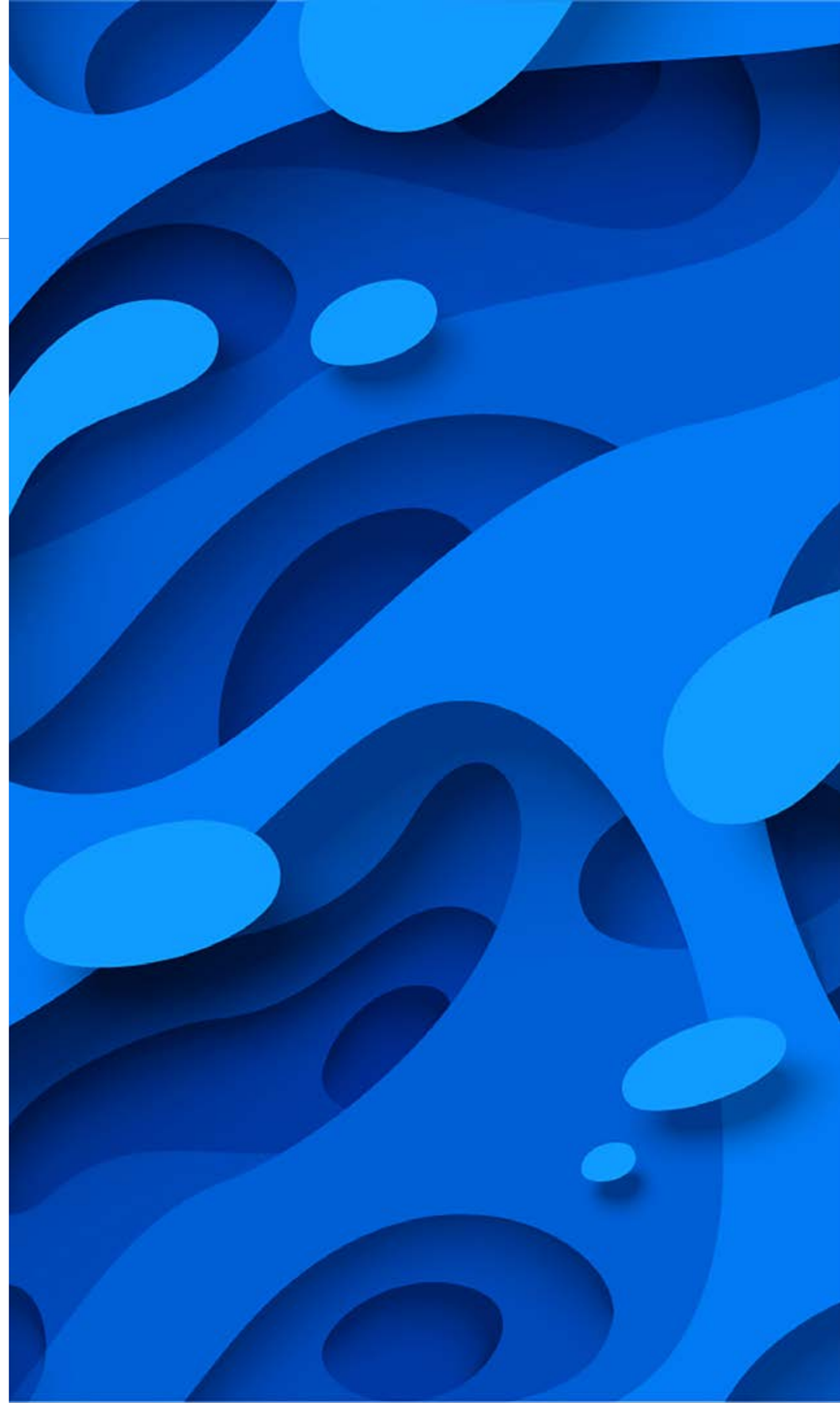
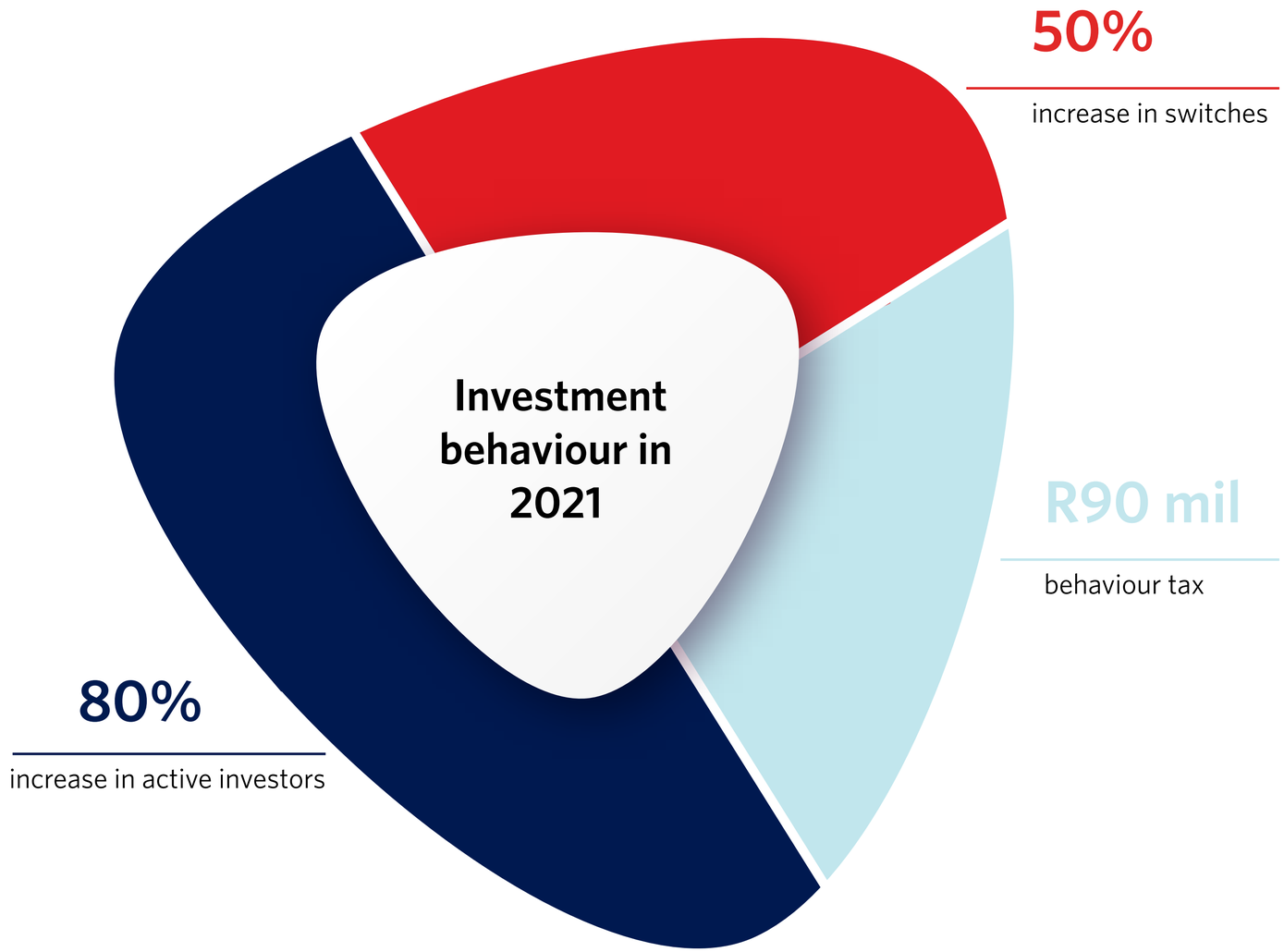
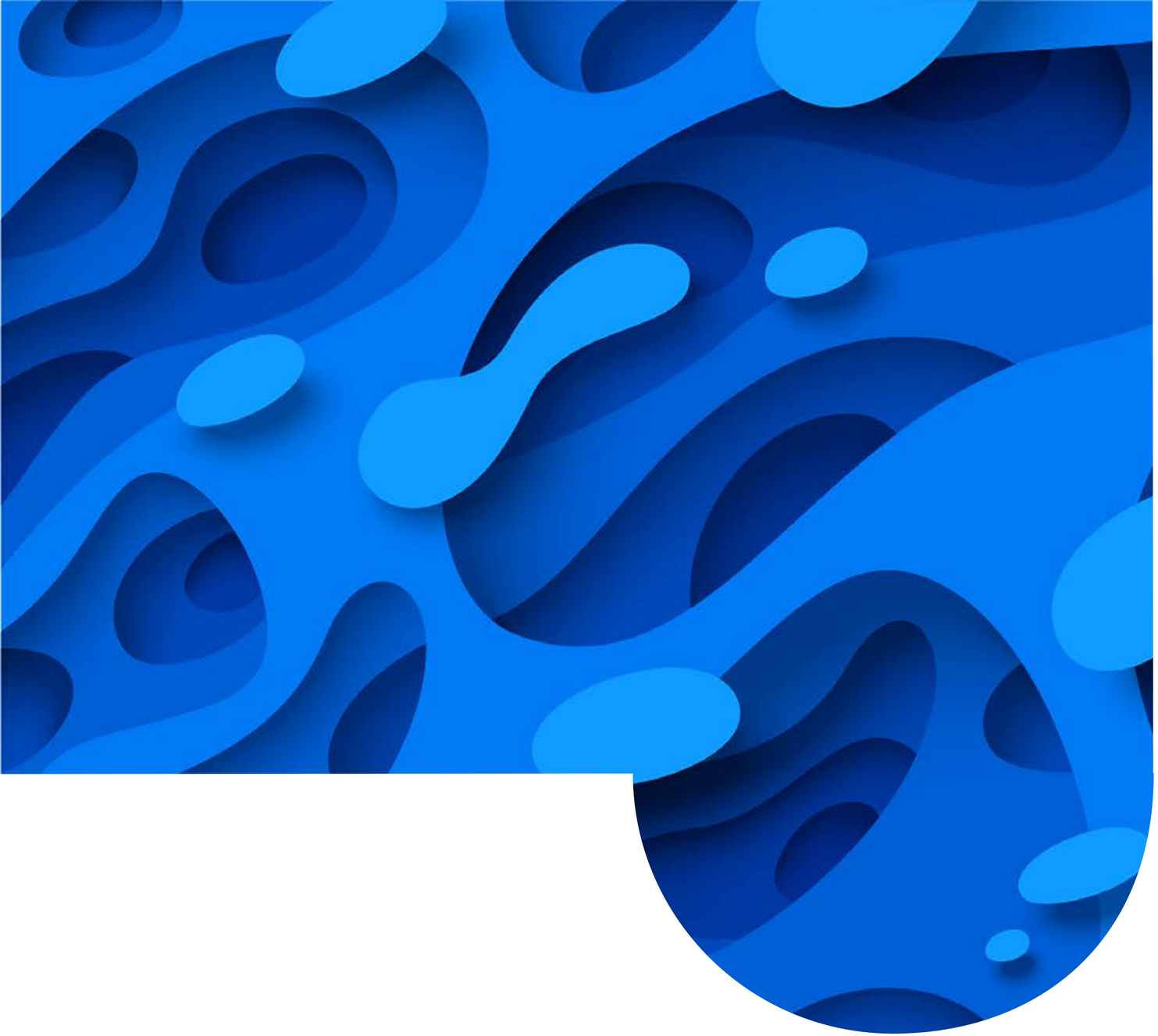


Executive summary

The Momentum Investments Sci-Fi report provides a bird's-eye view of investor behavioural patterns on the Momentum Wealth platform from 1 October 2020 to 1 October 2021 (hereafter referred to as the 2021 period). During this period, active investors (defined as investors performing switch transactions) increased by 80% and the number of switches by 50% to a record-high level of 27 994. On average, investors were chasing past performance and up-risking their investment portfolios from October 2020 to April 2021. This reversed dramatically as the South African volatility index spiked and investors switched to worse performing funds down-risking their investments. This resulted in an annualised behaviour tax of 3.5% for investors in 2021 with the Market Timer investment archetype group as the most active and whom destroyed the most value on average (the Market Timer paid 5% in behaviour tax). Overall, investors paid just over R90 million in behaviour tax for 2021.





Foreword

Jeanette Marais

CEO: Momentum Investments

Foreword

Jeanette Marais

As time goes by, it becomes clearer that the answer to encouraging good financial behaviour is not simply giving people more information. Even though we are exposed to about 18 million bits of information every second — and this has nearly doubled in the last decade — our brain usually has the right answer. Knowledge is not the problem.

The latest DataPoints Finpsyche report for 2021 revealed that 77% of the nearly 1 600 financial planning clients surveyed agreed that daily market fluctuations should be ignored. Despite this knowledge, in 2020 investors on the Momentum Wealth platform desperately shifted their investments around as markets dipped sharply in March last year. This behaviour had severe consequences, costing them a staggering 6.5% in investment returns on average. In 2021 we saw even more engagement as investor switching increased substantially from 2020.

Clearly, we all struggle to bridge our intentions and our actions. Everyone wants to be healthier, smarter, more financially secure and give their families a brighter future. However, our behaviour often contradicts this. Financial education is important but to get the 'right' behaviour from people at critical moments requires a far more personal approach. Delivering timely and tailored nudges to our clients and advisers will propel us to being South Africa's first truly behavioural investments business.

> *"Everyone wants to be healthier, smarter, more financially secure and give their families a brighter future, but our behaviour sometimes indicates otherwise."*

Shifting the focus to investment behaviour

Note from the editor

Paul Nixon
Head: Behavioural Finance

Note from the editor

Paul Nixon

A warm welcome to the first Momentum Investments Sci-Fi report. This will hopefully be an annual business publication to offer insights into investor behaviour on the Momentum Wealth platform over the period of a year.

The concept of 'nudging' or "positive reinforcement and indirect suggestions as ways to influence the behaviour and decision-making of groups or individuals", is now comfortably more than a decade old and has certainly become something of a poster child for the behavioural sciences. We know that people do not always act in their own best interest, books have been written on the subject, Nobel Prizes awarded, and gorillas missed (not mist), as the 'Selective Attention Test' has shown.

The efficacy of nudging is, however, dependent on the ability for greater personalisation that can help choice architects respect individual differences (Mills 2021). This is tied to the ability to focus on and target behaviours that require a nudge for better investment outcomes.

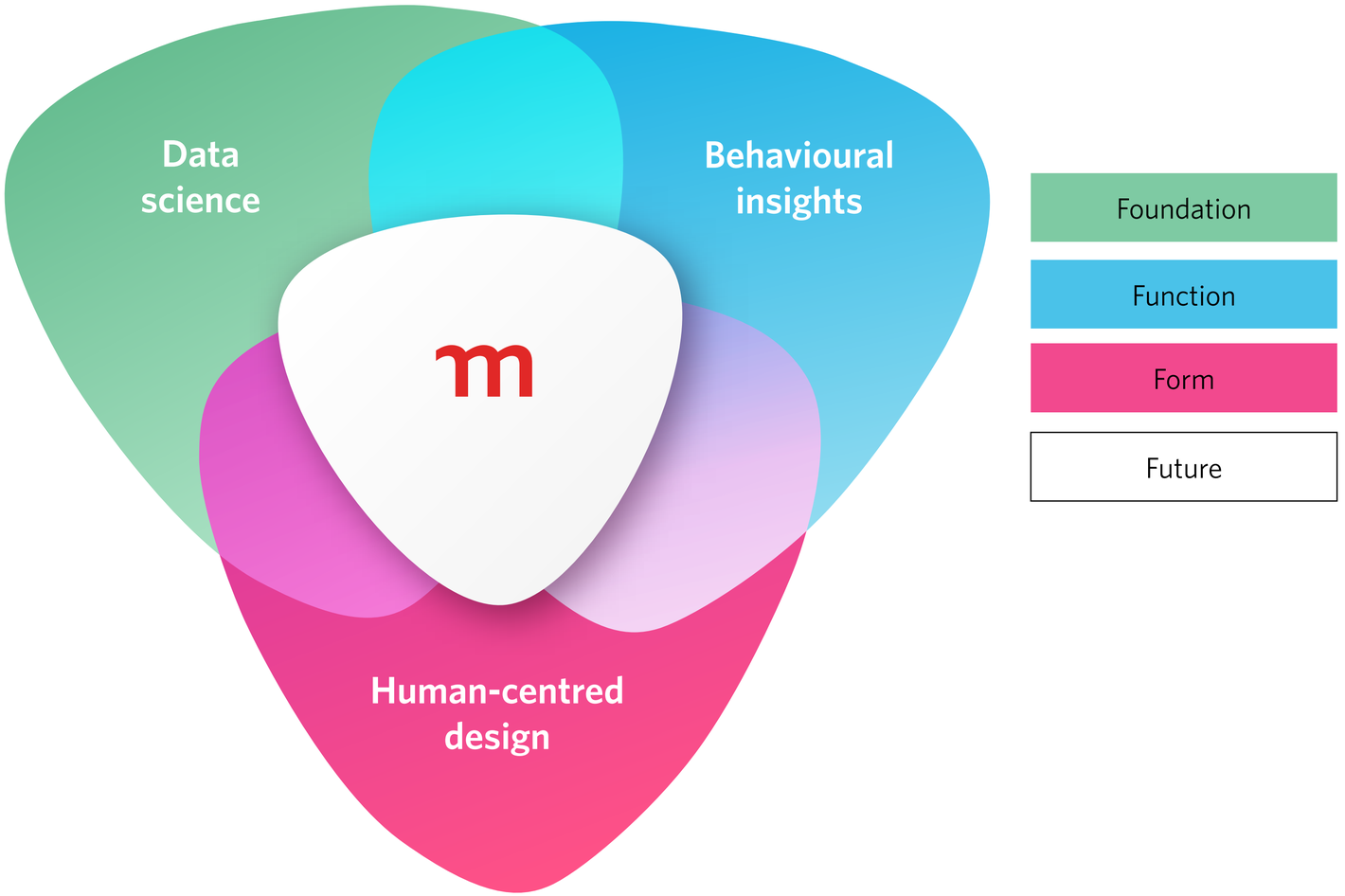
This edition sets the scene for using psychometric data (the development of a South African financial personality assessment) in hyper-personalised nudging strategies as Momentum Investments enhances our capability to focus on target behaviours.

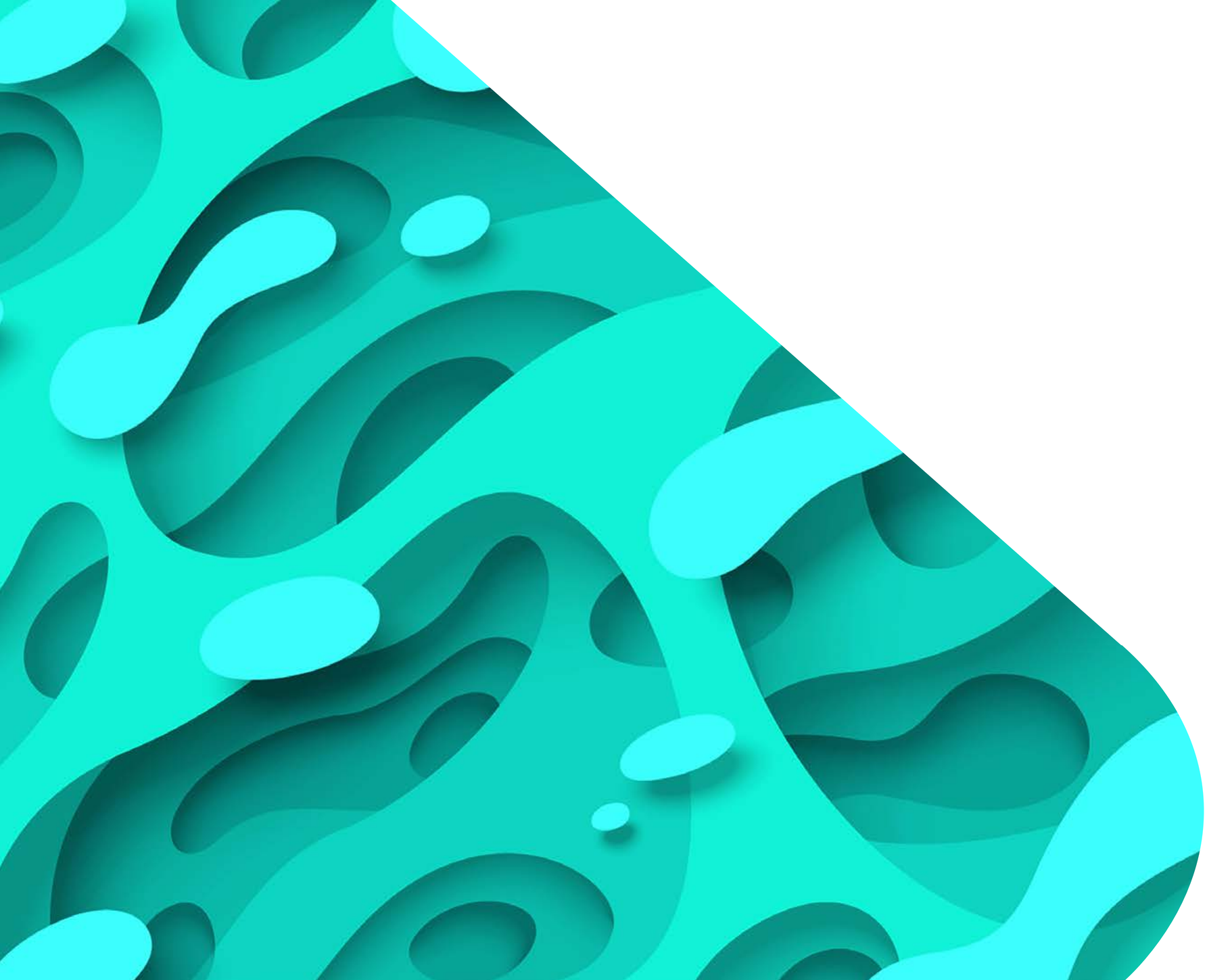
> *"'Nudging' is now comfortably more than a decade old and has certainly become something of a poster child for the behavioural sciences."*

Note from the editor

How do we get people to stay invested, for example? In the investor report card section, it will be clear that investors have become more engaged with their investments and in doing so incurred an annualised behaviour tax of 3.5% for 2021. Shifting investments around during market volatility usually results in a behaviour tax.

Becoming a behaviourally-powered investments business develops these capabilities with a behavioural 'engine' that transforms investor transactions into behavioural insights that may be delivered to the right person at the right time with the right message that ultimately encourages engagement and change.





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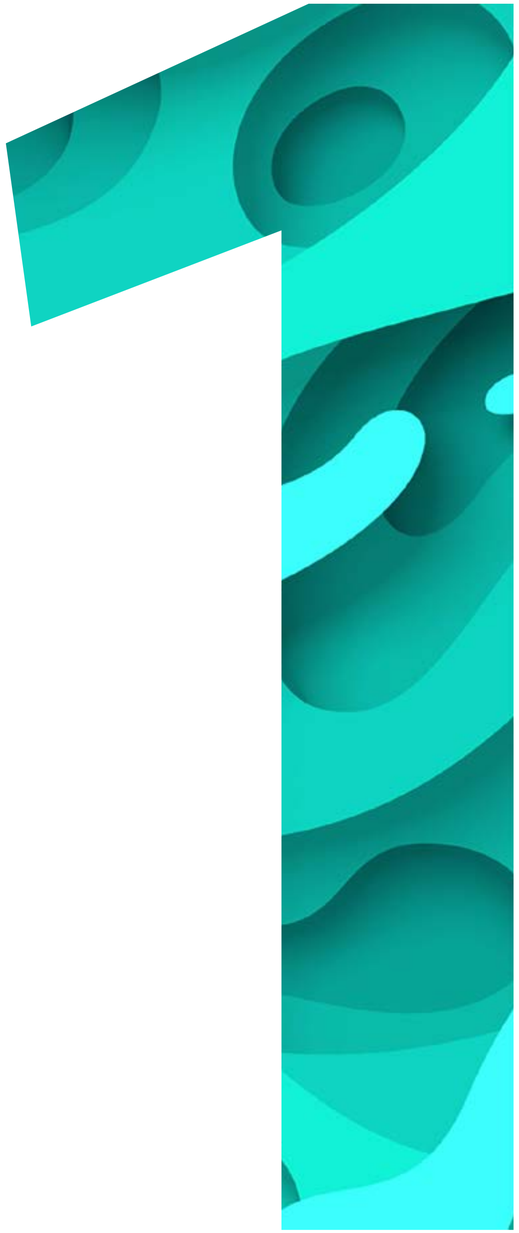


The value of behaviourally-powered investment advice

Paul Nixon

The value of behaviourally-powered investment advice

The COVID-19 pandemic shocked the world last year leaving many of us scrounging for hand sanitiser and toilet paper as shopping aisles stood empty. Similar havoc was wreaked on financial markets as investors abandoned their long-term goals for the immediate emotional comfort on offer by moving either out of financial markets completely or into comparatively 'safer' assets. Society and the economy were forcibly jolted into a new way of functioning and the ripple effects are becoming clearer as time passes.

One of the obvious and positive effects of the pandemic, in hindsight at any rate, has been the remarkable increase in savings rates around the globe. We are not stopping at a Starbucks for coffee en route to work anymore or grabbing lunch at the canteen. And, of course, our cars have spent more time in the garage than on the road. In Canada pre-COVID savings levels as a proportion of gross domestic product (GDP) were comfortably under 15% in 2019 and have escalated sharply to over 27% in 2021 (an 85% increase). South Africa's increase in savings has seen a similar trend though less dramatic. Our savings rate escalated by nearly 22% from levels of less than 15% of GDP in 2019 to more than 18% in June 2021.

"One of the obvious and positive effects, in hindsight at any rate, of the pandemic has been the remarkable increase in savings rates around the globe."

Somewhat concerningly, however, is that this increase in savings appears to be accompanied by an increased level of engagement with people's investments that appears to come at the expense of engagement with financial advisers. New research from Finder.com revealed that about 1 in 10, or 3 million Canadians, plan to manage their own investments and ditch their financial adviser in 2021. A further 4.7 million Canadians are seriously considering taking an active role in managing their future investments without the aid of a financial adviser. The survey results from a poll involving 1 143 Canadians, with the two primary concerns being related to fees and having more 'control' over their money, are shown on the next page. From a behaviour tax perspective more control is certainly less than ideal.

The value of behaviourally-powered investment advice

25%

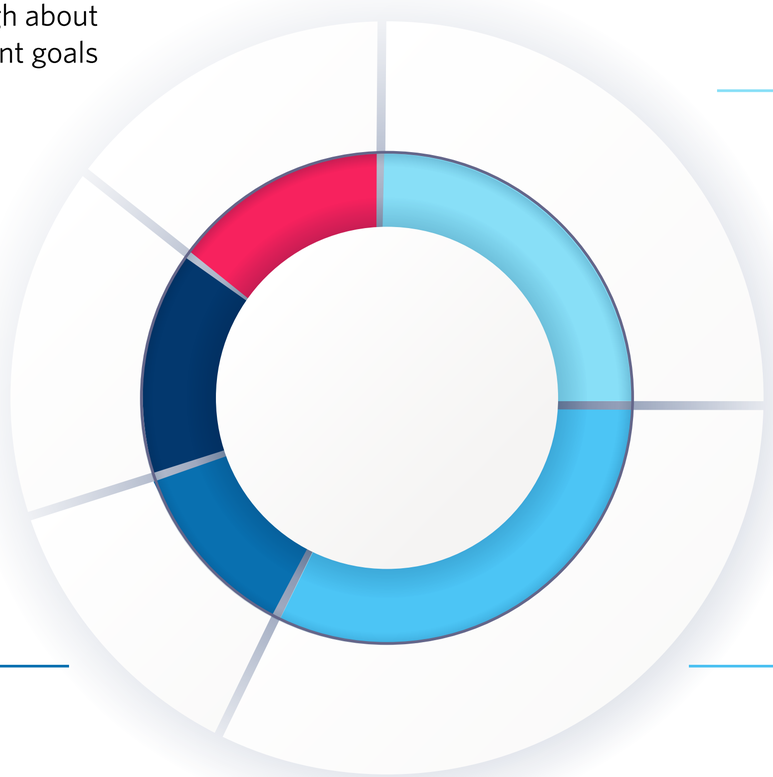
I feel knowledgeable enough about how to meet my own investment goals

42%

To have more control over my money

25%

Don't want to ask someone to make investment decisions/transactions



21%

Convenience of newer online or mobile investment services

54%

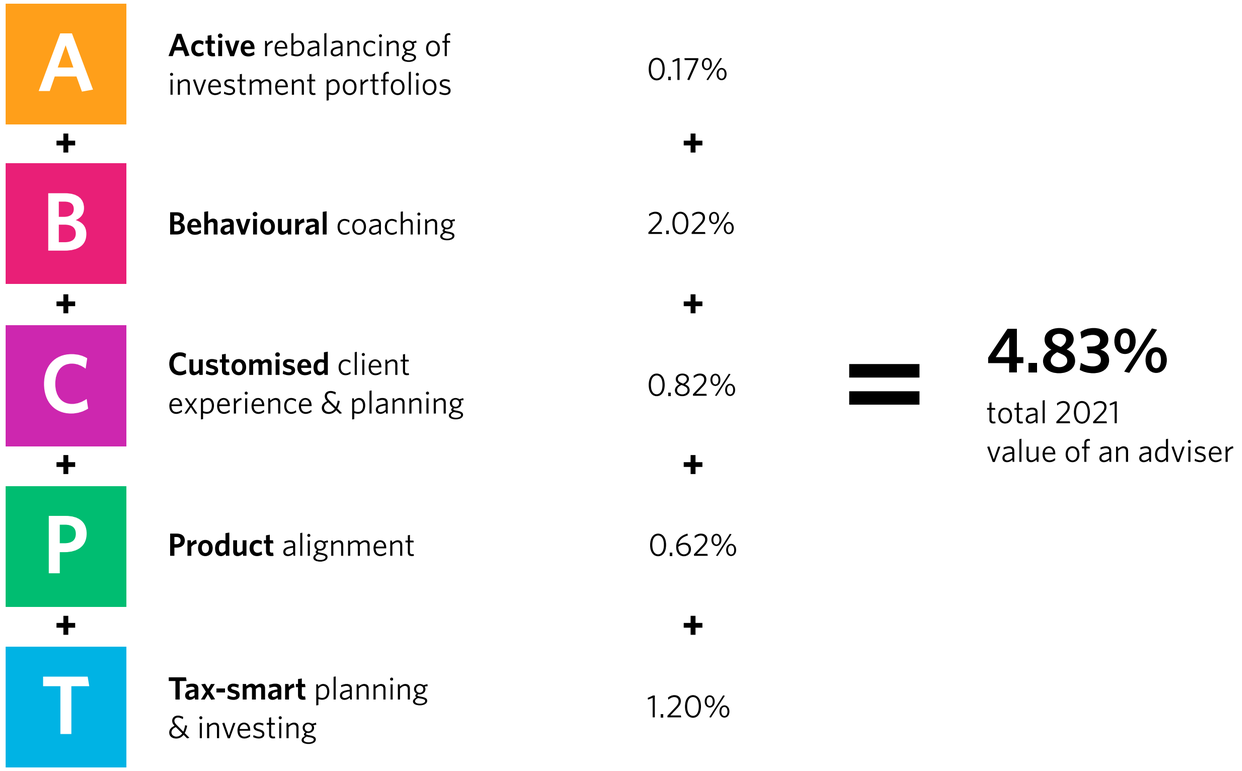
To save money on fees

Source: McKnight (2021)
https://www.finder.com/ca/financial-advisor-report

The value of behaviourally-powered investment advice

In the United States a similar trend towards self-advice saw robo-giant Betterment increase their assets under management (AUM) from $18 billion to $29 billion in the first half of 2021. Encouraging is their strategy to use a 'co-pilot' system of involving a financial adviser, which appears to be a successful approach, but the step is certainly in the direction of greater client engagement and ownership. Instant access to portfolio values and the latest news of the latest crypto or meme stocks are what millennials and Gen Z are after and they appear to be taking the advice from peers more seriously than that of financial advisers (according to the survey mentioned earlier).

The value of financial advice is well documented. Montmarquette and Viennot-Briot (2019) showed that advised households accumulate 290% or nearly three times the amount of assets over a 15-year period compared to non-advised households (another study from Canada). Russell Investments in the United States recently released a study concluding that the behavioural coaching part of advice alone is worth 2.02% per year to investors. When including other dimensions such as rebalancing, product alignment and tax planning this value can be as much as 4.83% per year.



Source: Russell Investments (2021)

The value of behaviourally-powered investment advice

A good financial adviser seems to earn far more for their clients than their annual advice fees, so why isn't everyone queueing for great financial advice? There are likely two primary behavioural biases at play that may impact on investors' decisions to use a financial adviser. The first is undoubtedly overconfidence. With the amount of and access to information these days it creates the illusion of a more stable and predictable world. 'Expert' opinions are seemingly easy to come by and any view is easily supported by a number of sources online. When coupled with selectively attributing positive outcomes to skilful decision-making and poor outcomes simply to bad luck, it creates the illusion that investing decisions are much easier than they are in reality. At the opposite end of the spectrum is loss aversion. Statman (2019) refers to a global survey of the number one thing that people want from their investments. Unsurprisingly it is financial security. People are terrified of losses and being more engaged with our investments gives us a greater sense of control. This was also reflected in the initial Canadian survey. The question is: how can behavioural insights be leveraged in this case to get investors back to using financial advisers who utilised behavioural coaching for better client investment outcomes?

> *"A good financial adviser seems to earn far in excess of their annual advice fees, so why isn't everyone queueing for great financial advice?"*

The BEworks Research Institute (BRI) recently published a noteworthy study on using behavioural science principles in a financial advice context and released some interesting results. The first is related to the 'Goldilocks effect' that shows people preferring to avoid extremes and choosing middle-of-the-road options instead.

BRI also found that when offered the choice between a small (250ml) and large (350ml) coffee, people generally opted for the small coffee (see Scenario 1 on the next page). When another size (500ml) was added to the choice, there was, however, a preference reversal to most respondents opting for large instead (the middle option). Fascinatingly they found the exact same results when offering investors hypothetical fund choices. When asking potential investors to examine four funds (A, B, C and D) on a risk/return spectrum (see Scenario 2 to follow), the majority opted for fund C (33%) with fund D being the least popular attracting 17% of respondents. When removing fund A and adding even riskier fund D+ the same effect comes into play where fund D now becomes the most popular choice (32% opting for fund D).

The value of behaviourally-powered investment advice

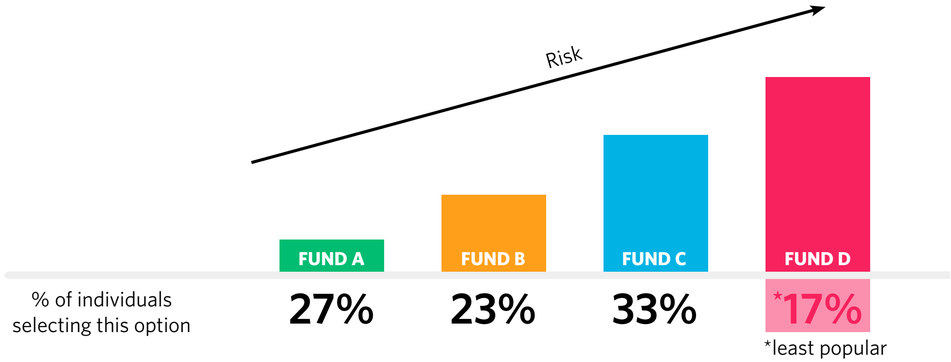
Scenario 1: Picking a coffee
Which one do you prefer?

$2.50 $3.50

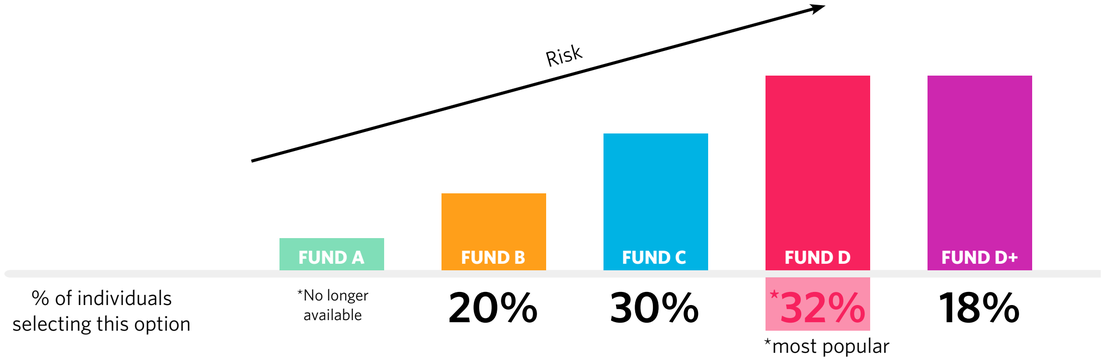
How about now?

$2.50 $3.50 $5.00

Scenario 2: Financial decision-making:
In which fund would you invest?



How about now?



Source: Lewis et. al., (2021)

The value of behaviourally-powered investment advice

In a first-of-a-kind study, 2 991 North American consumers aged between 25 and 75 with at least $50 000 in investable assets were asked to take part in an online simulated investment decision-making exercise. Respondents were asked to imagine inheriting $250 000 and to choose their investments from a list of mutual funds. They were asked to allocate all of their inheritance to these funds that would determine their investment return and were given risk and historical return information for all of the funds.

All participants were given exactly the same advice (60% allocation to equities, 30% to fixed income and 10% to money market). They were then randomly allocated to a range of experimental conditions with members of each condition receiving a different variant of advice to enable a scientific exploration of the behavioural effects of varying advice delivery. The investors were allocated to six groups and each group was targeted with a specific approach that was then compared to the control group:

Group 1

The **conventional advice** (control group) was given what may be deemed 'traditional' advice and vetted by a group of CFA® Charterholders. The focus here was on providing information and educating the groups.

Group 2

The **simply reactive** group received more limited information to combat information overload. Certain pieces of important information were also made more salient.

Group 3

The **leveraging expertise** group highlighted the advisers' experience and expertise to leverage off deference to authority.

Group 4

The **descriptive social norms** group framed recommendations as 'people like you'. This provides social proof from peers to potentially guide decision-making and off the belief system that complex decisions are made easier by deferring to peers.

Group 5

The **extremeness aversion** group was provided with investment choices that were framed as 'comfortable' or 'middle-of-the-road' between options that were safe and risky.

Group 6

The **integrated behavioural insights** were targeted with strategies to explicitly deal with overcoming the overconfidence and loss aversion biases, among others.

The value of behaviourally-powered investment advice

The results were extremely interesting and highlights how using behavioural insights in financial advice can be used to get better outcomes for investors. Some of the key findings of the study are:

1 Using behavioural economics (BE) in the advice provided increased the propensity of clients to seek out and follow advice. Financial advice is impacted by credence (Delleck *et al.*, 2009). This means that because the value is only realised after the outcome (just like buying a new bottle of wine where you only know if you like it after drinking it) the advice must have a high perceived value. The downward pressure on fees is more likely a symptom of low perceived value than clients not being willing to pay for advice. Compared to the conventional advice group, participants who heard BE advice reported that they were 4.9% to 5.6% more likely to seek advice from an adviser for future financial decisions.

2 Behaviourally-informed or -powered advice groups (groups 2 to 6) were significantly more likely to actually follow the advice received compared to respondents who received conventional advice (group 1). Specifically, participants in the BE conditions were around two times more likely to follow the recommendations of the adviser exactly. Investors who received the conventional advice significantly deviated from the asset allocation advice — on average, 13% to 36% more than investors who received BE advice.

3 Behaviourally-informed styles of delivering advice led the participants to select significantly more diverse portfolios compared to the conventional advice group. This diversification effect is reflected both in participants' tendency to choose a greater number of funds to invest in, as well as the selection of more diverse fund types.

The value of behaviourally-powered investment advice

4

Unsurprisingly it was found that behavioural biases influence financial decisions. On average, investors reported to saving around 2% less of their income than they set out to (intention-action gap). Individuals with higher levels of subjective knowledge (how they rated their knowledge versus actual qualifications) also all allocated far more to risky asset classes, confirming the overconfidence of this group.

In conclusion, the BEworks Research Institute study results are immensely encouraging from the perspective of driving clients towards investment advice that has been shown to add significant value over long periods of time. Their study revealed that incorporating behavioural economic tactics in a manner in which advisers interacted with their clients can indeed create tangibly superior outcomes. More clients are encouraged to seek and indeed follow advice, resulting in more normatively optimal investment decisions, such as selection of portfolios with increased diversification that ultimately results in higher Sharpe Ratios. Qualitative benefits were also apparent in clients' perception of increased value of advice and increased trust levels in the adviser.

> *"Their study revealed that incorporating behavioural economic tactics in a manner in which advisers interacted with their clients can indeed create tangibly superior outcomes."*

It's complicated! An exploration of the 2020/2021 natural experiment for investment-switching behaviour

Prof. Evan Gilbert

Research analyst: Momentum Investments

It's complicated! An exploration of the 2020/2021 natural experiment for investment-switching behaviour

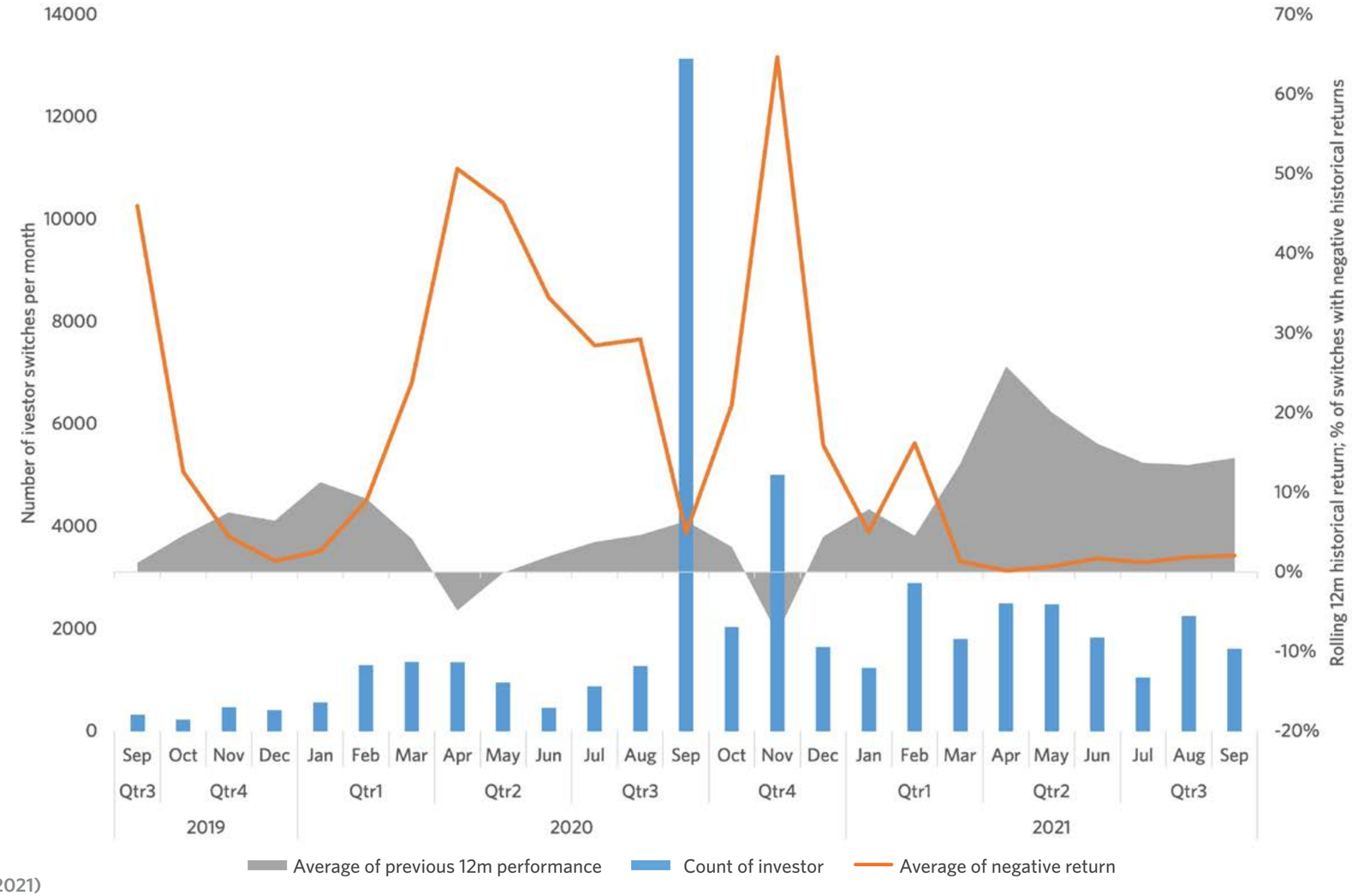
Understanding investors' investment-switching decisions has many positive potential spin-offs. A vital one is the design of better investment portfolios. A key insight from Prospect Theory, the ground-breaking work of the Nobel Prize-winning psychologist Daniel Kahneman and the economist Amon Tversky, is that (in the investment decision-making environment) decision-makers feel far worse about their losses than their gains. This suggests that investors are more likely to change their portfolios when they have suffered losses. The investment fund switching decisions of clients on the Momentum Wealth platform over the two-year period from September 2019 to September 2021 provide an excellent natural experiment for the predictions of this theory as it contains extreme positive and negative movements in portfolio returns and the resulting portfolio switches. If correct, this would support the need for more effective short-term risk management. Understanding the relationship between returns and switching is key to this process.

The effects of the extremely negative investment returns following the COVID-19 pandemic in 2020 are reflected in two ways in the graph on the next page. Firstly, the blue bars reflect the average nominal return over the previous 12 months of the fund being switched from. This is our proxy for the investment returns that the client has experienced. These go negative in April and November 2020 and then recover strongly in the second quarter of 2021. They are also relatively low in September 2019. The orange line reflects the percentage of the switches that happened in that month that had negative returns over the preceding 12 months. There are three clear peaks reflecting the September 2019 experience, the early 2020 COVID-19 shock and then another shock in November 2020.

> *"Understanding investors' investment-switching decisions has many positive potential spin-offs."*

Evan Gilbert

It's complicated! An exploration of the 2020/2021 natural experiment for investment-switching behaviour



Source: Momentum Investments (2021)

Can any of these proxies for the return experience be related to the number of switches that were observed over this period? It seems so, but the response is neither instantaneous nor linear.

The total number of monthly switches in this two-year period is illustrated in the blue columns in the graph. It shows that, while the number of switches picked up in early 2020, the real change was only seen in September and November that year. The monthly total of switches then settled down, but at a much higher level than in the pre-COVID period.

This analysis suggests that while there was a significant response to the negative return experience, the timing of the response is neither immediate nor linear. There is actually a decline in switches in the immediate aftermath of the COVID-19 shock. I It is almost as if people are paralysed by shock. Then, in September there is a wave of change. The negative returns of late October seem to have prompted a more immediate response in November. The more positive experience of 2020 is associated with higher but more consistent levels of switching behaviour.

This suggests that the story of investment switching is more complicated than the relatively simplistic approach that Prospect Theory suggests. More recent theoretical developments in this area show that there are likely to be other mediating factors than just loss aversion. The concept of risk propensity has been proposed as one of them. This is the willingness to take on new risk in the face of recent positive or negative returns. This model suggests that the recent experience of decision-makers can dominate their desire to act. This could explain the paralysing effects of the extreme events: They make investors doubt their ability to make more effective choices. Another potential mediating factor is the role of peer-relative performance. If the investment crisis leads to all funds doing poorly then there is not a real alternative to which to switch. With time, it is possible that more effective investment solutions to the crisis become clearer to decision-makers, facilitating the decision to switch.

This initial study shows that the switching decision of South African investors is not a simple, linear response to poor investment returns. There are several potentially rich alternatives to explore. To do so properly will require a model which includes all of these in an integrated fashion.

Watch this space...

Because with us, investing is personal(ity)

Paul Nixon

Because with us, investing is personal(ity)

A significant challenge facing investment advice for a number of years has been the relatively poor measurement of client risk preferences or tolerance as a component of investment suitability. The suitability of an investment for a client involves four components. The required return and associated risk to reach an investment goal is fairly straightforward and may be conducted with a cash flow analysis. But what about things like risk tolerance, risk capacity and emotional risk capacity? Do we all agree on exactly what these constituents are and how to measure them? Unlikely.

In a study conducted by Momentum Investments and global decision science experts (Oxford Risk in the United Kingdom), we found that there was a lot of noise or variability in the adviser assessment of risk capacity or clients' financial ability to take investment risks. Coupled with this was high variability in translating the risk tolerance score provided in a case-study format to a corresponding equity allocation in the investment advice provided. Irrespective of the risk tolerance score provided, equity allocations ranged all the way from 0% to 100% for six of the seven risk tolerances scores. The topic of risk tolerance and exactly how this should be measured is where the focus of this discussion will remain.

> *"Risk tolerance is our willingness to take on investment risk."*

Risk tolerance is our willingness to take on investment risk. This should reveal the baseline for our risk preferences and represents our attitude towards risk. We like risk or we don't. Behaviour models show that our preferences represent stable attitudes towards behaviours, and risk behaviour is no different. It is because of this that risk preferences have been shown to be consistent attitudes towards risk. In other words, risk tolerance, if measured correctly, only needs to be measured once (in general).

Willingness to take risk or risk tolerance is linked to our personality (Weber and Milliman 1997; Douglas and Wildavsky 1982).

Personality theory has been shown to be a good predictor of financial behaviour as well (Van Raaij 2016). A quick example should illustrate this. This is the dimension of our personality that refers to our impulsivity and spontaneity and is termed 'openness'. So basically how 'open' we are to new experiences, for example. If you have the 'openness' trait, you are likely spontaneous but also present-oriented. These people want to experience life now and generally do not mind taking investment risk. Being present-oriented also means they do not look at the future much and so saving behaviour does not come naturally. This is just one of many personality traits that have been empirically tested and confirmed.

Because with us, investing is personal(ity)

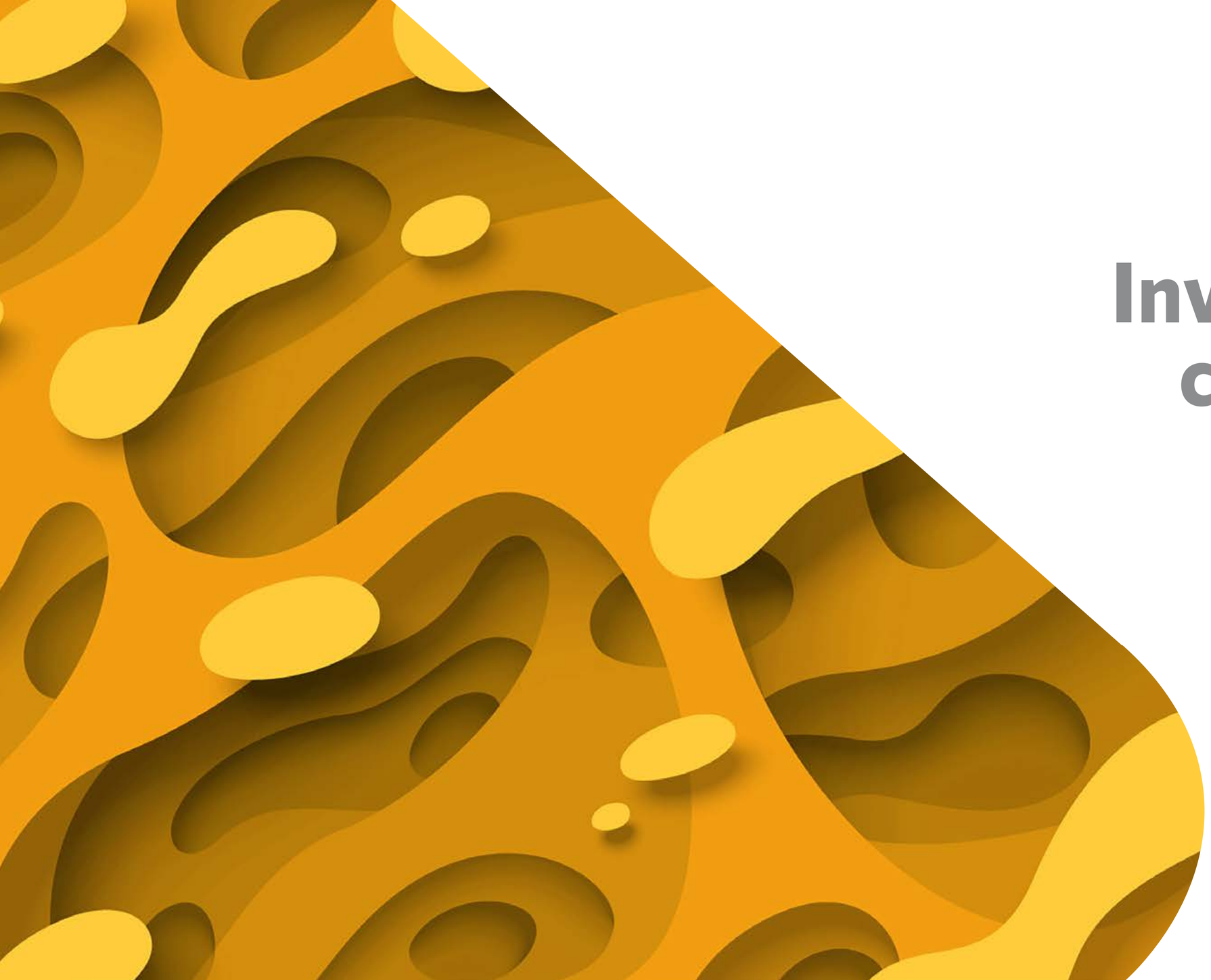
This is an important link to make because personality by nature has one extremely important characteristic: It is stable. Personality only changes in the event of trauma but generally everyone knows you as 'you' because of your personality or set of behaviour characteristics. This is important because it is exactly what the industry has got so wrong when measuring risk tolerance. Providing things like hypothetical win-loss situations in risk tolerance assessments do not measure risk tolerance; it measures risk perception. How you perceive risk can change and may also depend on your emotional state. This is crucial because if you measure something that can change and match it to a long-term or static investment goal, at some point, you are going to have a very unhappy client.

Stability in risk tolerance has been shown in a number of research papers but one in particular conducted by the CFA institute deserves attention. In a nutshell: During the global financial crisis (GFC) a group of respondents was surveyed to track if/how they were engaging with their savings. It was clear that the percentage invested in the market/risky assets was dipping sharply and then recovered sharply as markets recovered. Participants were also asked how risky they perceived markets to be during the GFC and predictably, subjective risk expectations clearly showed that people were perceiving increasingly more risk in markets during 2008 and then increasingly less as markets recovered in 2009. Lastly, as time progressed the survey respondents' return expectations were growing increasingly as optimism returned to financial markets. When mapped on a graph it is clear that these risk perceptions were not stable at all. This was reflected in the percentage allocated to equities.

The survey also conducted risk tolerance and psychometric assessments at various points. There was virtually no change. People maintained their risk-seeking or risk-averse attitudes (risk tolerance) throughout the worst financial crisis experienced.

Making investing truly personal is more than just a strapline at Momentum Investments. It is what gets us up every morning. Developing a deeper understanding of human behaviour for better advice outcomes is what keeps us doing what we are doing. Watch this space as we get closer to delivering a world-class psychometric risk profiler to the adviser community that gives insights into both stable client-risk preferences and their likely reactions to market events.

> *"How you perceive risk can change and may also depend on your emotional state."*



Investor report card for 2021

The investor switch-itch in 2021

Investor report card for 2021

The investor switch-itch in 2021

In a nutshell: South Africans increased their level of engagement with their investments in 2021. This is reflected in the analysis of switch behaviour on the Momentum Wealth platform revealing the following key insights:

- The number of 'active' investors on the Momentum Wealth platform, defined as those who performed at least one switch transaction, increased by 80% to 16 559 active investors performing on average 1.6 switches for the period.
- There was a 50% increase in the number of switches for 2021. However, the increased number of switches came primarily from new investors becoming active as opposed to the existing group performing more switches.
- A total of 60% of investors who switched during the COVID-19 market crash between January 2020 and September 2020 switched again after September 2020.
- The high number of switches in September 2020 and November 2020 correlate strongly with high market volatility as per the South African Volatility Index (Savi). As the Savi stabilises at lower levels, switch activity seems to reduce as well. Sudden spikes in the Savi, as seen occurring in March and June 2021, does not seem to influence switching activity as much as prolonged periods of high volatility.
- Looking at the JSE All Share Index (Alsi), high switch volumes seem to follow negative market movements. The effect of underperformance on switching behaviour is evident when looking at the significant drop in the Alsi towards the end of October 2020. This drop led to an increase in switching volumes during November 2020. Moreover, the average 12-month past performance of funds switched from was at a very low -8.79% and switching to funds less affected by the sudden underperformance.
- An overall reduction in the average amount switched is evident as markets return and volatility have levelled off in the five months leading up to 1 October. The average amount switched for this period ranged from R138 000 to R143 000 when compared to the average range of R127 000 to R180 000 in the preceding eight months.
- There was an average up-risking of investment portfolios in 2021. This is defined by taking the difference in asset allocation of the portfolio switched from and comparing it to the average asset allocation of the portfolio switched to. This corresponds with investors on average switching to funds with nearly 2% better past performance.

Investor report card for 2021

Exhibit 1: Detailed monthly switching activity

Values	9/1/2020	10/1/2020	11/1/2020	12/1/2020	1/1/2021	2/1/2021	3/1/2021	4/1/2021	5/1/2021	6/1/2021	7/1/2021	8/1/2021	9/1/2021	total
Number of switches	6 514	1 485	4 240	1 186	905	2 367	1 386	1 656	2 064	1 575	892	2 017	1 707	27 994
Average switch amount	180 017	168 657	166 123	168 771	147 666	127 580	179 344	174 331	143 419	143 798	149 032	124 586	138 626	169 316

1 Year past performance	9/1/2020	10/1/2020	11/1/2020	12/1/2020	1/1/2021	2/1/2021	3/1/2021	4/1/2021	5/1/2021	6/1/2021	7/1/2021	8/1/2021	9/1/2021	total
Funds switched FROM	5.73%	2.98%	-8.79%	3.79%	8.35%	4.38%	14.61%	27.29%	21.40%	16.53%	14.21%	13.62%	14.15%	7.71%
Funds switched TO	7.05%	7.58%	-1.05%	8.14%	11.34%	10.92%	14.90%	22.67%	13.56%	18.42%	15.17%	13.40%	10.84%	9.67%
Difference (performance chased)	1.31%	4.60%	7.74%	4.35%	2.98%	6.54%	0.29%	-4.62%	-7.84%	1.89%	0.96%	-0.22%	-3.31%	1.96%

Overall risk movement*	9/1/2020	10/1/2020	11/1/2020	12/1/2020	1/1/2021	2/1/2021	3/1/2021	4/1/2021	5/1/2021	6/1/2021	7/1/2021	8/1/2021	9/1/2021	total
Average asset allocation switched FROM	3.99	3.96	3.87	3.94	4.39	3.80	4.09	4.30	4.27	3.87	3.89	3.82	3.68	3.99
Average asset allocation switched TO	3.98	3.92	4.41	3.48	3.87	4.58	3.71	3.97	4.38	4.81	4.33	5.02	3.66	4.17
Difference (- downrisk / + uprisk)	-0.01	-0.04	0.54	-0.46	-0.51	0.79	-0.38	-0.33	0.11	0.94	0.43	1.20	-0.01	0.18

Source: Financial Times (2021)

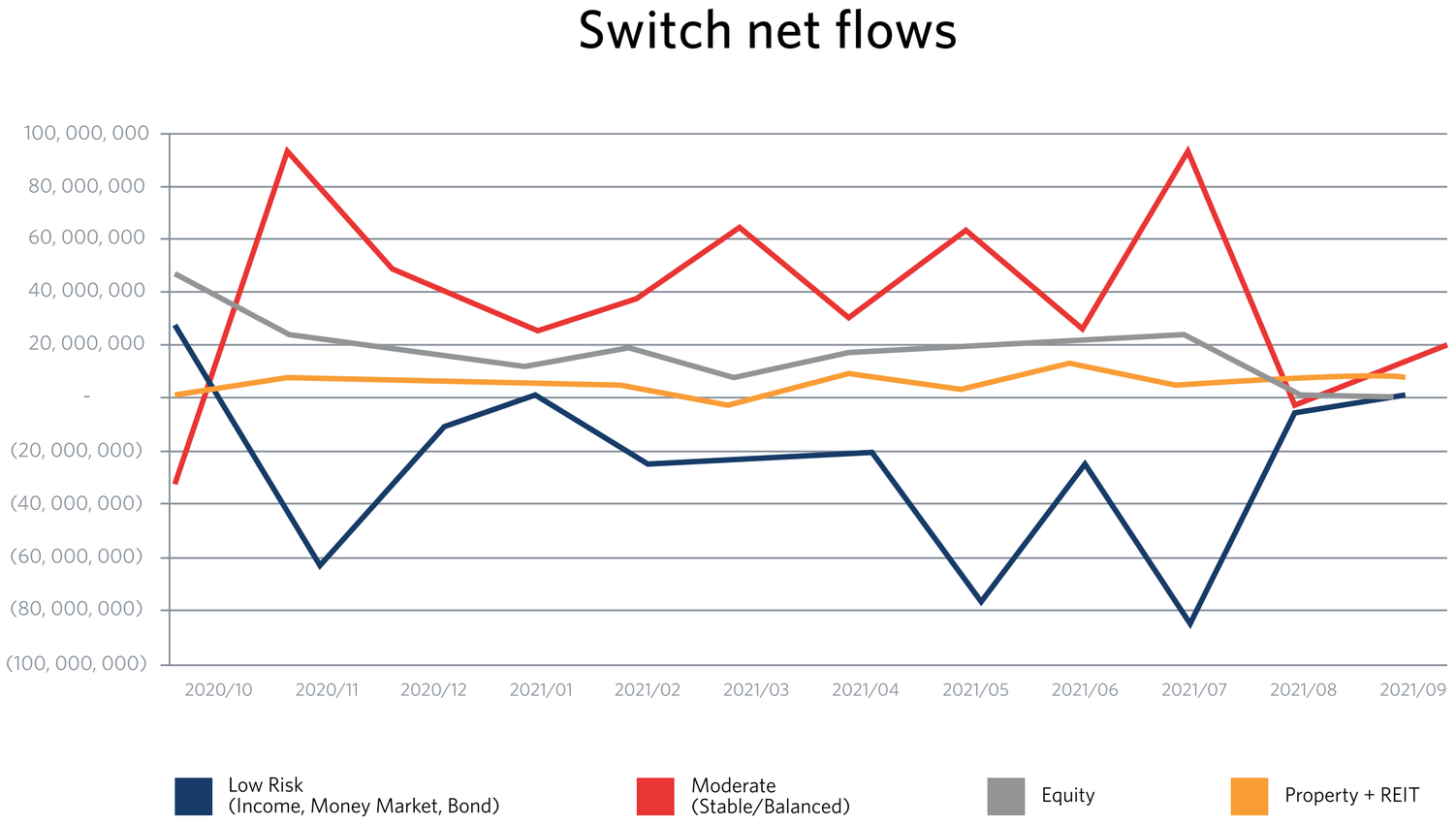
***Note: The numbers here reflect the closest average asset allocation to the OBI flagship unit trust funds. The number 3.99 for the 1 September 2020, for example means that the average asset allocation switched from was closest to the asset allocation of the CPI + 4% OBI flagship solution. This equates to the Focus 5 Fund of Funds.**

Following the money

Investor report card for 2021

Following the money

Over the period of analysis there was a constant outflow from low-risk investments (income and money market funds) into more moderate risk funds resembling a stable to balanced mandate. The property sector also observed a constant outflow of assets off the back of a negative 34.89% return in 2020 from the Momentum Real Growth Property Fund, for example. In the same fund this more than reversed with a 36.95% positive return to investors in 2021. Equity funds saw a constant net inflow; however, an outflow was observed during August 2021 and September 2021 where the outflows seemed to have moved from a mixture of equity and income funds into moderate risk funds as mentioned earlier.



Source: Momentum Investments (2021)

Investor report card for 2021

The most investor activity centred around Coronation Fund Managers, as well as Momentum Investments' funds. With respect to Coronation Fund Managers there appears to have been a shift from income funds towards Jibar plus funds with the Coronation Jibar Plus fund (P) experiencing significant inflows. Further flows followed into bond funds and the remainder into offshore and equity funds. Note how the funds with the best performance in 2020 (Global Emerging Markets and Coronation Optimum Growth Funds) turned out to realise the worst performance in 2021, likely contributing to a significant behaviour tax for those who have switched into these funds. This is a notable general trend (future performance not following past performance).

Fund name	Switch-IN	Switch-OUT	Total net flow	2020 Performance	2021 Performance
Coronation Jibar Plus Fund (P)	171 422 134	(17 732 480)	153 689 654	4.60%	4.57%
Coronation Global Emerging Markets Flexible (ZAR) Fund (P)	33 592 910	(2 079 967)	31 512 943	27.73%	-9.32%
Coronation Bond Fund (P)	10 738 920	(312 462)	10 426 458	6.21%	9.03%
Coronation Optimum Growth Fund (P)	12 531 535	(4 302 225)	8 229 310	22.15%	-3.31%
Coronation SA Equity Fund (P)	10 196 568	(363 299)	9 833 269	9.28%	27.81%
Coronation Strategic Income Fund (A, B & P)	82 125 936	(315 400 654)	(233 274 718)	4.26%	6.48%

Source: Momentum Investments (2021)

Investor report card for 2021

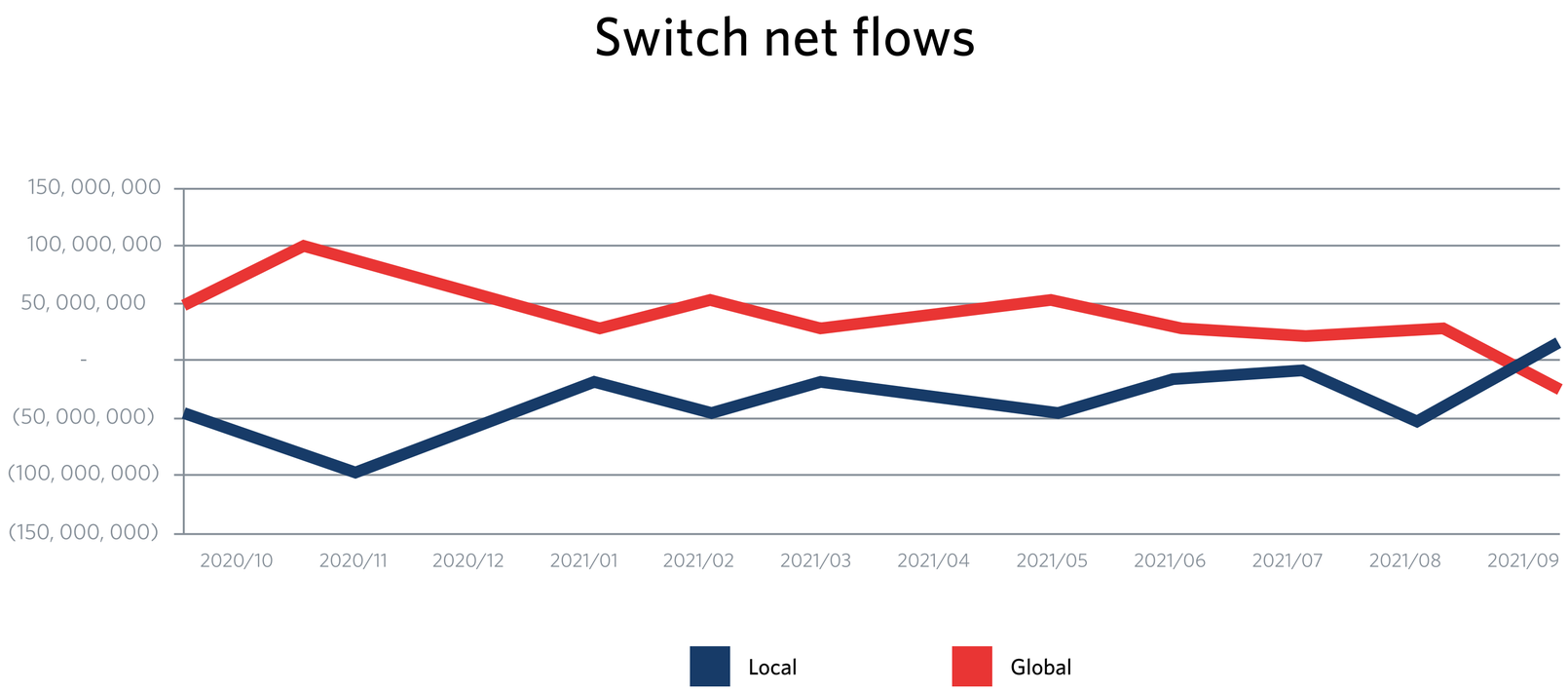
Turning our attention to activity in Momentum Investments funds, here the largest inflows were into lower risk income and bond funds that performed well in 2020. There was also a net inflow into funds with international exposure. We will focus on the local versus offshore trend next. The largest net outflows were seen in the Income Plus and Enhanced Yield Funds. Furthermore, net outflows were seen from the real growth property funds, as well as the Focus 5 and 7 funds. Notably switches from the Focus 5 and 7 funds based on low 2020 performance would have incurred significant behaviour tax given their strong recovery during 2021. This is also the case when reviewing the Real Growth Property Fund.

Fund name	Switch-IN	Switch-OUT	Total net flow	2020 Performance	2021 Performance
Momentum Flexible Income Funds	75 993 484	(1 262 794)	74 730 690	12.17%	6.45%
Momentum International Income Funds	30 845 814	(2 364 669)	28 481 145	8.85%	-0.21%
Momentum Diversified Income Funds	28 398 471	(7 839 030)	20 559 441	5.73%	5.35%
Momentum Bond Fund (C1)	18 872 844	(3 058 261)	15 814 583	7.42%	7.97%
Momentum International Balanced Feeder Funds	15 452 411	(835 890)	14 616 521	13.79%	10.10%
Momentum International Equity Feeder Funds	11 788 467	(1 134 616)	10 653 851	13.25%	16.46%
Momentum SA Flexible Fixed Interest Fund (D)	30 703 730	(20 081 390)	10 622 340	2.20%	10.60%
Momentum Target 3 Fund of Funds (C)	10 622 646	(40 688)	10 581 958	4.65%	12.83%
Momentum Core Equity Fund (C)	21 650 866	(11 497 190)	10 153 676	2.30%	21.92%
Momentum Real Growth Property Funds	363 149	(7 272 948)	(6 909 799)	-34.89%	36.95%
Momentum Focus 5 Fund of Funds (A, B2, B3, B8)	2 553 895	(14 995 719)	(12 441 824)	0.80%	15.84%
Momentum Focus 7 Fund of Funds (A, B2, B7)	1 972 437	(16 059 455)	(14 087 018)	0.83%	18.36%
Momentum Enhanced Yield Fund (A, B1, B3, B5, D)	97 676 816	(155 649 083)	(57 972 267)	6.61%	4.21%
Momentum Income Plus Fund (A, C1, D)	82 475 712	(186 904 563)	(104 428 851)	6.84%	6.18%

Source: Momentum Investments (2021)

Investor report card for 2021

Finally, we examine the flow of funds between local and offshore solutions. When comparing switch net flows between local funds and funds with international exposure, there was a clear trend of money flowing towards international exposure. This outflow peaked in November 2020 when local equities saw a significant drop in performance combined with USD/ZAR dropping below R16 to the dollar for the first time since March 2020. Leading up to this, outflows to international markets had slowed and in September 2021 a net positive switch flow to local markets was evident.

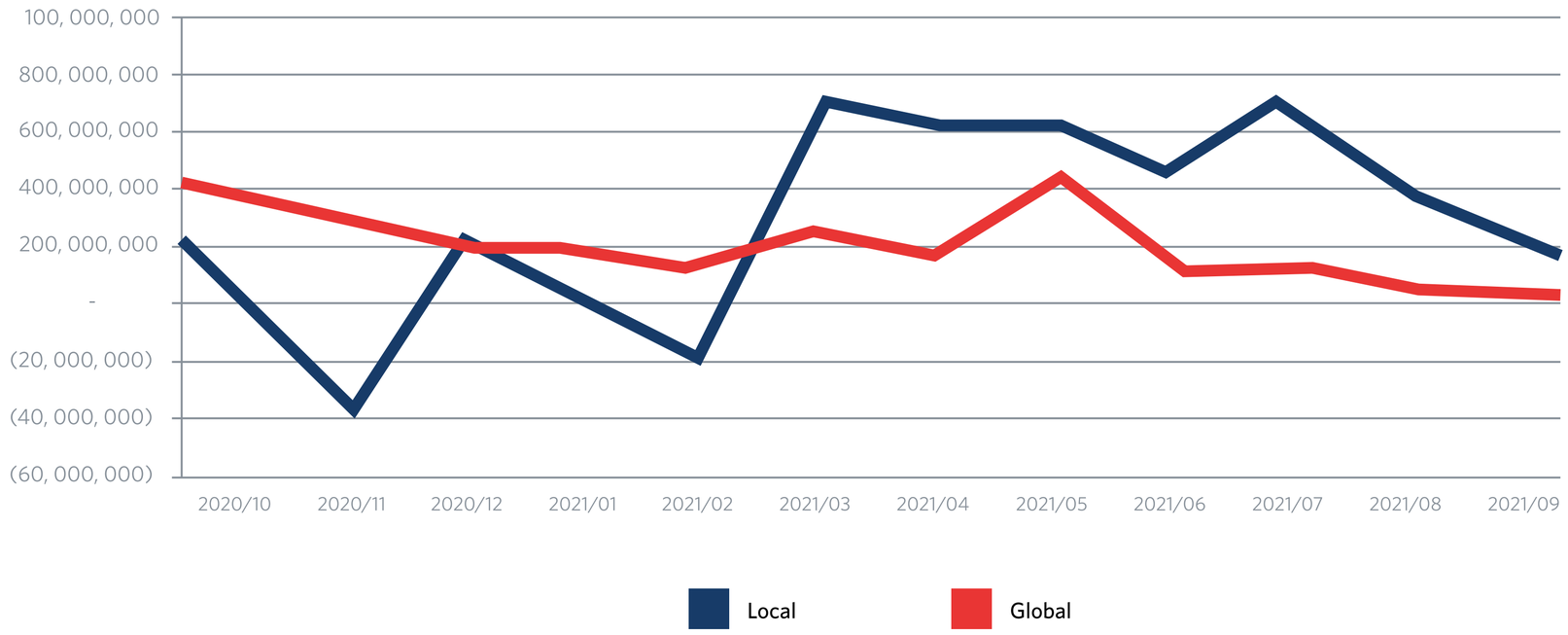


Source: Momentum Investments (2021)

Investor report card for 2021

When considering overall net flows (which include deposits and withdrawals), the peak outflow from local into international exposure during November 2020 remains prominent. It seems as though overall inflows into local markets only started to improve from March 2021 onwards and correlated with stronger local market performance. Peak net inflows into international markets during May 2021 could likely relate to the stronger rand at that time even though the rand was actually at its strongest during June 2021, which did not seem to increase inflow to international exposure.

Total net flows (incl. deposits & withdrawals)



Source: Momentum Investments (2021)

The behaviour tax

Investor report card for 2021

The behaviour tax in 2021

Behaviour tax is calculated as the difference in future performance between the funds switched from (the theoretical buy-and-hold portfolio) and the funds switch to. 'Future performance' is calculated from the end of the month a switch was made up to end of September 2021 (the last month of analysis). The future performance was annualised to make calculations comparable for switches made in different months.

Overall, the rand value lost over the period of analysis was R90 323 071, which equated to an annualised behavioural tax of 3.5%.

	Rand value of behaviour tax	Performance of buy-and-hold portfolio	Performance of portfolio switched to (new portfolio)	Difference (red = behaviour tax)
September 2020	R21,964,818	14.5%	13.0%	1.5%
October 2020	R20,544,811	18.1%	10.2%	7.9%
November 2020	R21,110,549	33.8%	30.0%	3.8%
December 2020	R7,685,124	16.8%	10.7%	6.0%
January 2021	R3,560,897	15.8%	11.9%	3.9%
February 2021	R11,064,603	15.9%	7.7%	8.2%
March 2021	R4,071,239	11.7%	7.7%	4.0%
April 2021	(R1,765,739)	10.4%	12.2%	-1.8%
May 2021	R2,997,345	14.4%	8.6%	5.8%
June 2021	R1,195,868	20.9%	14.5%	6.4%
July 2021	(R1,031,621)	16.8%	18.1%	-1.3%
August 2021	(R1,074,823)	17.7%	17.8%	-0.1%
September 2021	N/A	N/A	N/A	N/A
Grand total	R90,323,071			3.5%

Source: Momentum Investments (2021)

Investor archetype report card

Investor report card for 2021

Investor archetype report card

The final section of the report deals with the investor behavioural archetypes that Momentum Investments observed in a previous white paper titled Understanding the great forces that rule the world: A study on South African investor behaviour. Download the paper by clicking the icon on the image.

Investor report card for 2021

We begin with a brief recap of the observed behavioural archetypes after extending the machine learning analysis from 2006 until October 2021. The following behavioural characteristics are present in the four primary investor archetypes.

Avoider
Low behaviour tax

Average asset allocation most conservative resembling CPI + 3% portfolio.

Least active of the archetypes at 0.90 switches per annum on average.

Invests conservatively and remains risk neutral after investing.

Anxious
Moderate behaviour tax

Average asset allocation second most conservative resembling CPI +4% portfolio.

Highest proportion of risk reduction switches at 36%.

On 95% of occasions switches to investments with worse past performance (lower down the risk/return spectrum).

Assertive
Moderate to high behaviour tax

Average asset allocation second most aggressive resembling the CPI +5% portfolio.

Highest proportion of risk increase switches at 29%.

On 95% of occasions switches to investments with better past performance (higher up the risk/return spectrum).

Market timer
High behaviour tax

Most active in switching activity at 1.67 switches per year on average.

Active in both chasing past investment performance as well as switching to investments with worse past performance (47% and 45% respectively).

Most aggressive asset allocation on average (slightly above the CPI +5% portfolio).

Investor report card for 2021

As expected, the Market Timers were the most active archetype during the period of analysis. Even though they made up the smallest portion of active investors, they made the most switch transactions. Market Timers realised the largest behaviour tax with an average of 5% per year of the switch amount lost.

Assertive investors realised the second largest average behaviour tax at 4.09% of the switched amount lost. Assertive investors regularly chase past investment performance. As the market recovery started to stabilise during February 2021 a continued 'greed' factor of chasing past performance would have incurred a significant behaviour tax (10.9% of switched amount lost) for the average Assertive investor.

For Anxious investors the fear factor resulted in an average behaviour tax of 3% of the amount switched. By de-risking and switching to lower performing funds these investors realised a lower return than they would have had if they kept to a buy-and-hold strategy.

Lastly, the Avoiders incurred the lowest behaviour tax by avoiding the market volatility as far as possible. However, it is important to consider that while Avoiders are the least active of the archetypes, they are more prone to a different kind of behaviour tax that originates in not being exposed to risky markets enough over the long term.

“However, it is important to consider that while Avoiders are the least active of the archetypes, they are more prone to a different kind of behaviour tax that originates in not being exposed to risky markets enough over the long term.”

Investor report card for 2021

Cluster (2021)	# Investors	# Switches up to Aug 2021	# Switches per investor	Average switch amount	Behaviour tax (average rands lost per switch)	Behaviour tax (average rands lost per investor)	Behaviour tax (annualised)
Market Timer	2 802	8 787	3.14	135 387	2 563	8 038	5.00%
Assertive	4 964	6 781	1.37	202 693	5 946	8 122	4.09%
Anxious	3 274	3 960	1.21	169 664	2 208	2 670	3.02%
Avoider	5 519	6 759	1.22	179 734	1 305	1 598	1.11%

Source: Momentum Investments (2021)

Investor report card for 2021

Finally, the stability of these archetypes is examined for the 2021 period. This is an important exercise to perform to check that these behavioural patterns are relatively constant and not random in nature. This was the reason for dropping the Contrarian archetype that was revealed in the original Momentum Investments white paper. A behavioural pattern was revealed where investors appeared to be adding a small amount of value by doing the opposite to everyone else (hence the name). On closer investigation, however, this behaviour was virtually random.

When we look at the archetype stability by considering switch-level clustering (examining each switch transaction to ascertain which behavioural archetype it belongs to), we see that Market Timers' switching behaviour essentially varies between Assertive-type (43.96%) and Anxious-type (40.63%) switches. This is to be expected as Market Timers resemble Assertive investors in climbing markets and Anxious investors in falling markets. The remaining three archetypes, however, were stable during 2021.

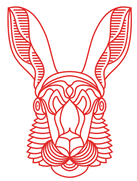
> *"A behavioural pattern was revealed where investors appeared to be adding a small amount of value by doing the opposite to everyone else (hence the name)."*

Assertive investors mostly made Assertive-type switches (94.50%), Anxious investors were also consistent (95.83%) in making Anxious-type switches and lastly Avoiders who were deviating slightly more (79.47% of their switches were Avoider-type switches).

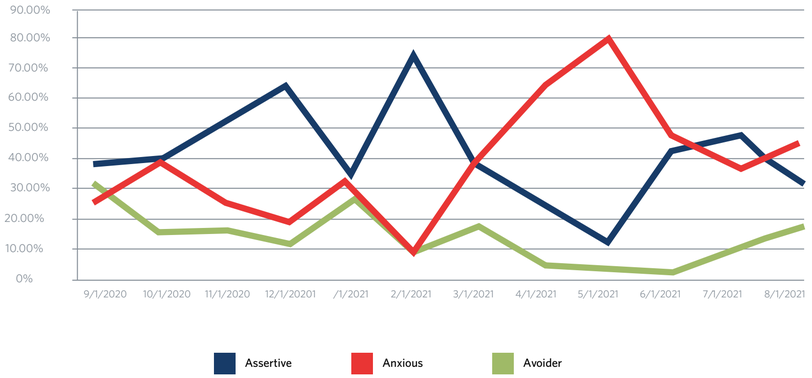
Investor archetype	Switch type	Proportion over 2021
 Market Timers	Assertive	43.96%
	Anxious	40.63%
	Avoider	15.41%
 Assertive	Assertive	94.50%
	Anxious	1.57%
	Avoider	3.93%
 Anxious	Assertive	0.39%
	Anxious	95.83%
	Avoider	3.78%
 Avoider	Assertive	9.08%
	Anxious	11.45%
	Avoider	79.47%

Source: Momentum Investments (2021)

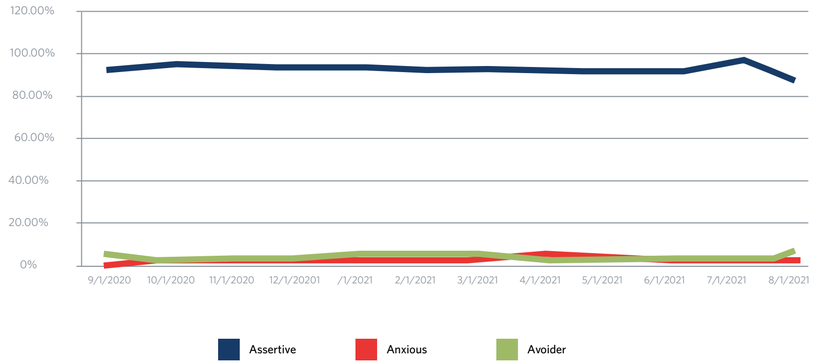
Investor report card for 2021



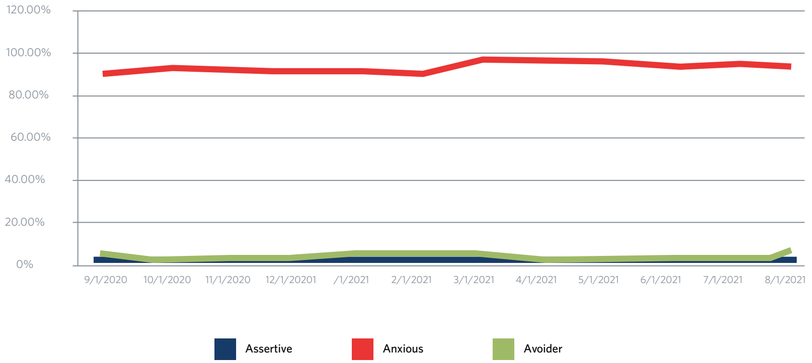
Market Timers



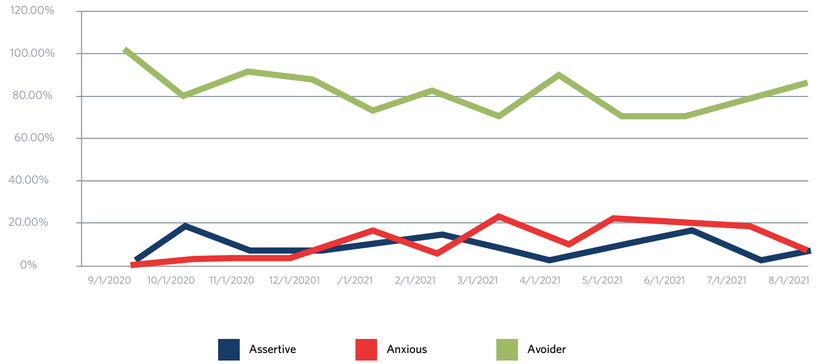
Assertive



Anxious



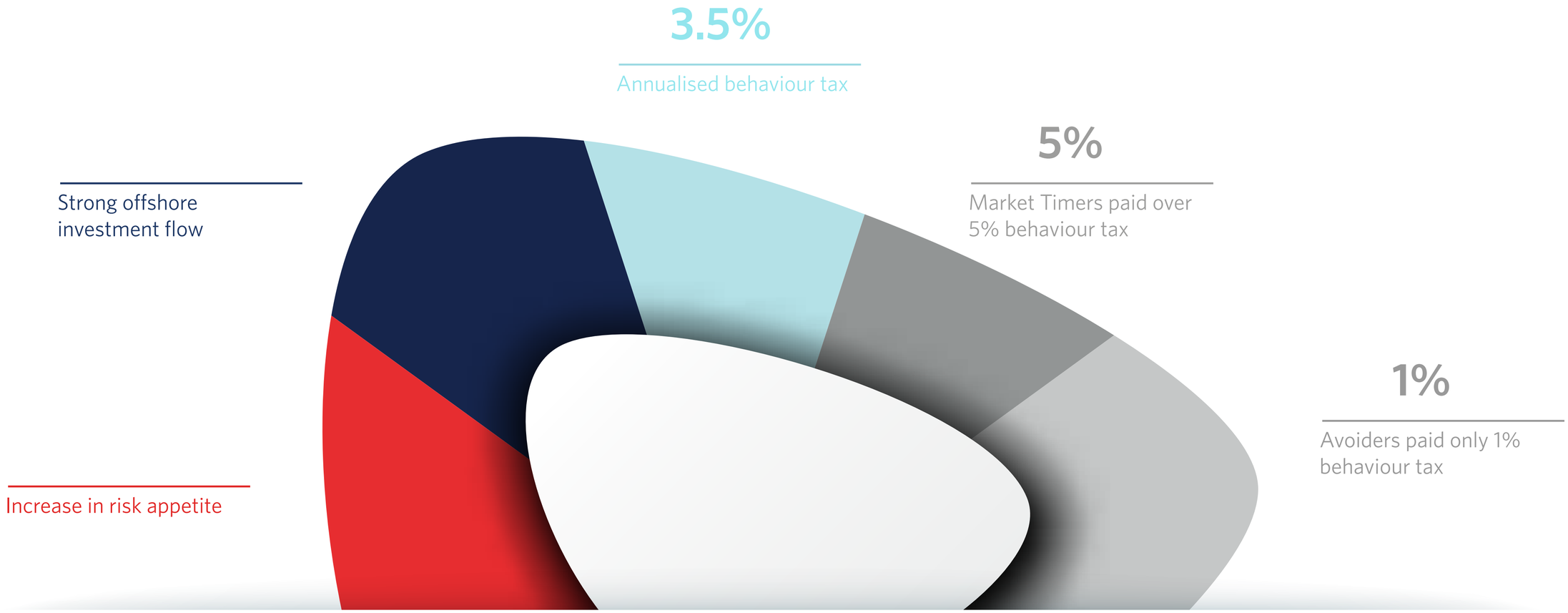
Avoider



Source: Momentum Investments (2021)

Conclusion

Conclusion



Source: Momentum Investments (2021)

Conclusion

The year 2021 was a period that saw increased engagement between investors and their portfolios. This was reflected by the 80% increase in the number of active investors and a 50% increase in the number of switch transactions. On closer investigation, there was overall an increase in risk appetite of investors as investment flows climbed the risk spectrum from cash to more stable to balanced strategies. Another trend was to the flow of funds offshore, which correlated particularly well with the extremely strong rand performance earlier in 2021.

When reviewing the past performance of the funds switched from in 2020 to the funds switched to in 2021, it is clear that more often than not past performance does not translate to future returns. The excessive behaviour tax stems from examples such as switching from the Momentum Real Growth Property Fund that delivered a -35% return amid a tumultuous property market and then missing the 37% positive return in 2021. Always a step behind.

Ultimately, this contributed to over R90 million in value destroyed by investors that equated to a 3.5% annualised behaviour tax. The 2021 period penalised investors that switched the most and the behavioural archetype that represents this behaviour is the Market Timer. Where the Anxious investor paid the most in behaviour tax during the COVID-19 crash, the market recovery and subsequent market volatility penalised those that switched the most. Market Timers paid just over 5% in behaviour tax for 2021. Once again, the low levels of engagement from the Avoider archetype paid off as they paid by far the lowest behaviour tax at just over 1%.

Whether or not the elevated levels of both savings and general engagement in portfolios are part of a new trend is yet to be seen. Momentum Investments, however, is most certainly aiming to use nudging techniques to communicate with the different segments with the right message at the right time to deliver better client outcomes and to help advisers generate the behavioural alpha of over 2% that the Russell Investments study demonstrates. This is the next level in making investments truly personal.

About the authors

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Paul heads up behavioural finance for Momentum Investments. He established an applied behavioural finance capability after experiencing both client and adviser investment behaviour for 20 years with various South African insurers and Barclays Bank. He recently completed a masterclass in behavioural science at the renowned iNudgeYou Institute in Denmark. Paul holds an MBA (with distinction) from Edinburgh Business School and is currently completing a master's degree where he is researching risk behaviour at Stellenbosch University. Paul is a contributing author on neuroeconomics to "Theories and Practices in Financial Therapy" and is a registered member of the Swiss-based Global Association of Applied Behavioural Scientists (GAABS) where he co-leads the Middle East and Africa regions.

Prof. Evan Gilbert

Following the completion of his PhD at the University of Cambridge in 2000, Evan worked for a major international strategy consultancy (the Monitor Group) for two years, followed by an eight-year period in the world of academia. He taught corporate finance on the MBA programme at UCT's Graduate School of Business and Financial Economics at the Department of Economics at Stellenbosch University. His teaching and research specialties include capital budgeting theory and practice, real options analysis, investments, behavioural finance, equity and bond market investment strategies, smart beta/factor-based investing, portfolio solution design, portfolio construction, and financial risk management.

Dirk Louw

Dirk completed his Actuarial Science degrees (BCom and Honours), after which he did a master's degree in Business Mathematics and Informatics (BMI) at the North-West University. As part of his master's degree he completed an industry-directed research project at Momentum Investments titled: "Investigating and quantifying the retail investor behaviour gap in South Africa (2018)". Continued interest in investment behaviour inspired him to remain part of the behavioural finance research group. Dirk is currently working as an actuarial analyst at Transaction Capital Recoveries.

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