# Annual Review 2018

The year started on a euphoric note following the election of Cyril Ramaphosa as the new leader of the ANC in December 2017. The rand firmed and local bonds and SA-focused shares rallied. Coming on the heels of the strong performance of SA equities in 2017, investors anticipated 2018 with renewed optimism. That was enhanced by signs of synchronised global growth and bullish sentiment in the major world markets. In the US, markets rallied in January on the huge tax cuts announced by President Donald Trump.

However, the optimism was short-lived. In February, the United States threatened a series of import tariffs on Chinese goods. The Chinese quickly reciprocated, raising the prospect of a trade war and a slow-down in global growth.

Overlaying that, strong US jobs data triggered fears that the US Federal Reserve (the Fed) would hike rates more aggressively than anticipated. The resultant correction wiped out January's gains (and more) as investors started to factor in the end of the

Fed's "easy" monetary policy, which has supported asset prices since the 2008 Global Financial Crisis. The correction saw stock markets from the US, Europe, Japan and South Africa all selling off between 8% and 10% over a matter of days.

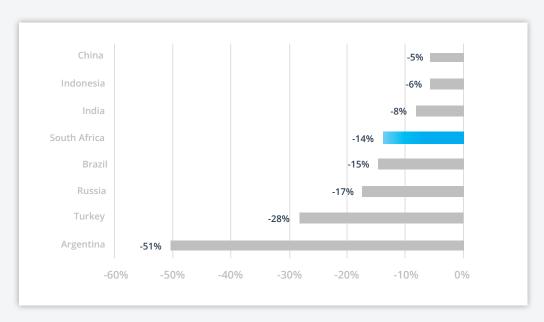
Although the correction was short-lived, these events marked the return of heightened volatility in global equity markets. What followed was a series of corrections and recoveries, culminating in the S&P 500 experiencing its worst December since 1931, during the time of the Great Depression.

The changing of the guard within the ANC executive precursored some unpopular, but necessary, announcements. This included an increase in VAT, from 14% to 15%, as well as key personnel changes within the cabinet and state-owned enterprises as a first step to improve governance, rout out state capture and restore the country to financial health. The corrective action promised by President Ramaphosa helped stave off a downgrade to subinvestment grade or "junk" by Moody's.

The Fed's interest rate hikes sparked a period of dollar strength. As commodities are priced in dollars, a strong dollar invariably weakens commodity prices, setting off a negative feedback loop for commodity-exporting economies, manifesting primarily in sharply weaker emerging market currencies.

Although this type of currency weakness is a cyclical phenomenon, it is exacerbated by structural factors, such as a large current account and budget deficits, poor governance, policy uncertainty and investor-unfriendly rhetoric. At times like these, the rand tends to get knocked around like a punching bag, much like other emerging market currencies.

Figure 1: Emerging market currencies vs \$ in 2018



Source: Datastream

Whilst some may consider the local situation to be dire, the stronger dollar contributed to economic pressure in other emerging markets with Argentina raising interest rates to 60%, and the Turkish lira hitting an all-time low against the dollar. All the while, US economic growth was steaming ahead, diverging from the rest of the world.

The local optimism at the start of 2018 waned quickly as the extent of the political and economic rot in the country over the prior 10 years became more apparent. South Africa fell into a recession, with the local economy contracting in both the 1st and 2nd quarters of the year. The SA consumer came under significant pressure from the VAT hike, petrol prices at record highs and an interest rate hike just before the festive season.

The S&P 500 hit another all-time high in September, but that proved to be the top. Investors lost their nerve after yet another Fed interest rate hike and comments that it would continue on this path.

This correction was more severe: the S&P 500

was some 20% off its peak by the time Christmas came around.

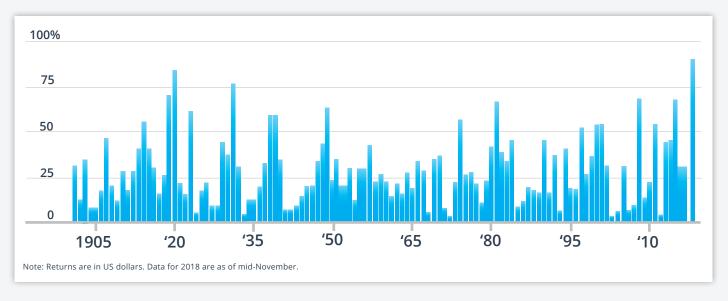
Throughout the year, the local market saw an extraordinarily high number of stock-specific sell-offs for diverse reasons, ranging from market manipulation to financial misrepresentations, and from regulatory developments in the US and China to a fatal listeriosis outbreak in SA and political manipulation in Nigeria. Stalwarts like Aspen, MTN, British American Tobacco, Tiger Brands, Resilient, Naspers and Steinhoff were among the casualties.

This negative price action was exacerbated by a slew of weak economic data. The IMF revised down its global growth forecasts, citing trade tensions and emerging markets stress. The Medium-Term Budget Policy Statement painted a bleak medium-term outlook, with government debt set to increase over the next couple of years still, to finance higher government spending. The SARB hiked interest rates on concerns that the weaker currency would push up the inflation rate.



The year-end brought some respite for the consumer as oil fell below \$50 a barrel and a petrol price cut freed up some money for the festive season, but all in all it was a gloomy year.





i Source: Deutsche Bank; Bloomberg Finance LP; GD

For global stock markets, it proved to be the worst year since the 2008 Global Financial Crisis. Whilst the magnitude of decline wasn't quite the same as 2008, the number of asset classes that declined was greater. So much so, in fact, that of all the global assets tracked by Deutsche Bank, 90% delivered negative returns in 2018, the highest percentage on record going back to 1901. Interestingly, this was the opposite of 2017, when almost all asset classes delivered a positive return, also a record year going back to 1901.

For long-term investors, these are testing times. It is easy to get caught up by all the negative news and price action and to seek shelter in less volatile investments, even if they promise a lower long-term return.

Investors may believe that they can always get back into the market at a later stage. That temptation, to 'time' the market, is ever-present. But the reality is that it will almost never feel like the right time to hold equities. Either the market has had a strong run, and all the good news seems priced in, or sentiment is highly negative after a sharp correction, or the economic outlook is so poor that it just makes no sense.

Also, markets are pretty good at discounting all available information, so taking such short-term views on where it will go next is not much different from going to the casino and betting on red or black. It does not serve long-term term investors to gamble their retirement savings in this way, because they risk losing out on the strong gains that tend to be concentrated around the times that markets turn.

Of course, no one likes the idea of investing their monthly contributions in a share market that seems to be heading south. But when you contribute regularly to a long-term savings plan your return depends almost entirely on the long-term earnings and dividends generated by the companies that make up the market, and hardly on the market price at the time your regular contributions are invested.

Given that no one can consistently time the market, and that the market level at which your contributions are invested barely impacts your long-term return, it is more important to get the long-term asset allocation right than trying to make short-term tactical changes. For long-term investors that simply means maintaining a high allocation to the share market – the asset class that has historically delivered the highest return over the long-term – for most of their savings term.



At 10X, we don't make economic forecasts or align our portfolios to speculative predictions. That would go against the very essence of the 10X investment philosophy and our one optimal retirement solution. We do, however, take a view on return prospects, based on how much markets have delivered in the recent past, relative to what they have delivered over the long-term. We do this because we believe in mean reversion, that asset class returns (after inflation) ultimately trend back to their long-run average.



Figure 3: Real (after inflation) growth asset returns vs long-term average

Source: 10X Investments; Dimson, Marsh and Staunton

Figure 3, above, shows the real (after-inflation) annualised return of the 10X growth asset classes over different periods (1, 3, 5, 7 and 10 years). The red lines represent the long-term average return for each asset class. Short-term returns (up to 5 years) can deviate markedly from the average, but over longer periods (10 years or more) we would expect returns to tend back towards the historical average.

With **SA Equity** delivering its worst year since 2008, the asset class is experiencing short-term returns far away from its long-term average.

Over five years, SA Equities are effectively flat in real terms. This has dragged the 10-year real return back to the long run average. While the soft short-term performance does not automatically mean that we will see strong returns in 2019, it does make us more optimistic about the future. Investors can take comfort that even though the asset class is volatile over the short-term, 10-year returns remain around the long-term average.

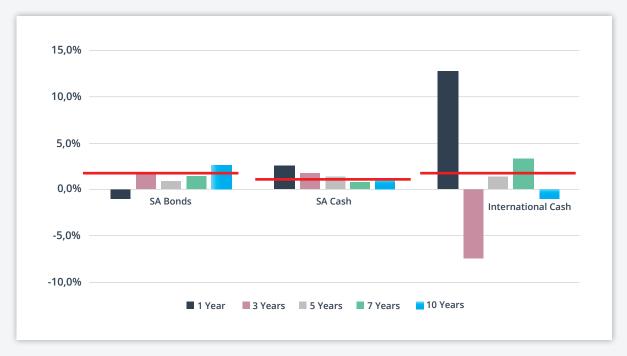
**SA Property** was the star performing asset class for most of the last 20 years, delivering long-run real

returns far above the historical average. In our 2016 annual review we cautioned that the 5 and 10-year returns were well above trend, and more moderate returns could be expected. 2018 was certainly not "moderate" for SA Property, but the sharp correction during the year has seen the longer-term real returns 'revert' back towards the mean. Against the de-rating that has occurred, the asset class is now offering the best yield since 2008.

**International Equity** returns have two main drivers: the performance of international equity markets and the performance of the rand. Whilst the 1 and 3-year returns have been low, just matching inflation, the 10-year returns are still above average indicating that they are not unsustainably high or low.



Figure 4: Real (after inflation) defensive asset returns vs long-term average



Source: 10X Investments; Dimson, Marsh and Staunton

**SA Bonds'** longer-term returns are close to the historical average. Compared with growth assets, we can see the defensive nature of bonds, with a lower variability of returns.

**SA Cash** has continued to deliver real returns above the long-run average. This is for two reasons. Firstly, persistently benign inflation (coming in at 4.5% for 2018) is below what we have become accustomed to. Secondly, an additional risk premium has been priced in due to credit rating concerns. However, over 10 years, the real return has been close to the long-term average of 1%, confirming that this asset class is not a suitable investment for the long-term.

The 1 and 3-year real returns on **International Cash** display how volatile the rand is over the short-term.

Whilst it has provided the sole source (besides SA cash) of real return this year, the 3-year returns are still significantly negative.

Three years ago, Nhlanhla Nene had just been fired as finance minister and a sense of panic had taken hold in South Africa, with many investors rushing to take their money offshore.

Again, a timely lesson that the market price represents the information available at the time and that market movements over the short term are unpredictable. This is the only asset class to deliver negative real returns over the last 10 years. This shows that despite popular opinion, the rand is not as much of a one-way bet as many pundits think.

As much as we emphasize focusing on the long-term, the reality is that stock market volatility can be very hard to ignore. Growth assets were on a roller-coaster ride in 2018 and seeing a negative a return on a factsheet or benefit statement can cause significant anxiety and distress.

Successful investing is simple, but it is not easy. The hard part of investing is managing your emotions during times of market stress, as experienced in 2018.

Given all the negativity in the news, it can often feel like a high equity portfolio is the wrong place to be, it can be tempting to switch to the calmer waters of a low equity or defensive portfolio. In doing so, we would pacify our emotions in the short term, but at what risk?

To quote the late Jack Bogle, "Investing is not nearly as difficult as it looks. Successful investing involves doing a few things right and avoiding serious mistakes."

## What do we know about investing (the facts):

- 1) Asset allocation determines long-run returns
- 2) Diversification improves risk-adjusted returns
- 3) Fees have the highest predictive value

### What are the things we don't know about investing:

- 4) Short-term market or currency moves, and which portfolio will outperform over the short-term
- 5) Which manager or strategy will beat an index over any term

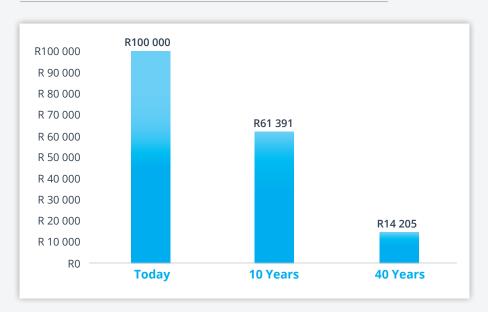


At 10X Investments we focus on the knowns that will increase your probability of success. We avoid the unknowns, which can have a devastating impact on your outcome if you get them wrong.

### 1) Asset allocation determines long-run returns

Achieving inflation returns means that your wealth remains constant as prices rise around you. You need to achieve returns above inflation to grow your wealth in real terms.

Figure 5: Impact of inflation on a starting value of R100,000



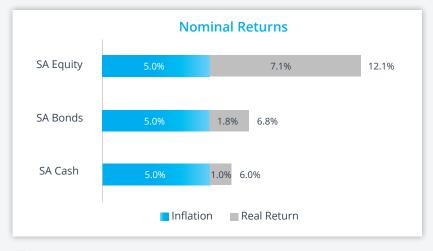
Inflation is a silent killer of your wealth. Over time it can be a huge unseen risk to your investment portfolio.

It erodes your purchasing power each year, which means that each year the same amount of money can buy less.

Figure 5 shows how inflation at 5% a year erodes the value of R100,000 over time.

Source: 10X Investments

Figure 6: Nominal and real returns since 1900



Source: 10X Investments; Dimson, Mash and Staunton

Equities have historically provided the best inflation-beating returns over the long run.

While it may feel safe to hold cash, as was the case in 2018, the reality is that, for long-term investors, cash is trash. Looking at data going back to 1900 it would have taken nearly seven times as long to double the value of your cash in real terms compared with being invested in equities.

Figure 7: Years to double money in real terms

SA Cash	SA Bonds	SA Equity
69	39	10

Source: 10X Investments; Dimson, Mash and Staunton



### 2) Diversification improves risk-adjusted returns

As discussed earlier, 2018 was a year of stock-specific risks, meaning that many isolated incidents impacted specific shares. In concentrated portfolios, there is a risk of being overly exposed to any one of these unforeseeable events.

At 10X, we cap our shares at 6% twice a year at rebalance. This means that in the 10X High Equity portfolio, which has 50% in SA equity, no one share will make up more than 3% at rebalance.

Also, clients are invested in a total of more than 8,000 global shares, local property, SA nominal and inflation-linked bonds, SA cash and international cash. Each of these asset classes performs differently under different market conditions, so part of your portfolio is delivering positive returns no matter what is happening in markets.

# 3) Fees have the highest predictive value

Morningstar, the leading global financial and fund research company, found in 2016 that the cheapest 20% of funds in the US were three times more likely to outperform the most expensive 20% of funds.

There are those, including many of the high cost providers, who insist that international research doesn't apply to South Africa. They say "net returns are all that matters" and that "the JSE is less efficient than international markets".

However, when Morningstar conducted the same research in South Africa in 2017, the results were in line with those of the US research: The cheapest 20% of funds had a much higher probability of delivering top 20% returns.

This should come as no surprise to those who understand the corrosive impact of fees over the long-term.

At 10X, we never charge clients more than 1%. When looking at all the fees involved in accessing a product (Investment management, platform and financial advisor) the average South African retail investor pays 3%.

The difference between 3% and 1% is significant over the long term. Assuming a long-term nominal return of 12.5% p.a, you can see the impact of the fee differential over your savings life.

Figure 8: The impact of fees

	Today	10 Years	20 Years	30 Years	40 Years
1% Fee	R100,000	R293,682	R862,491	R2,532,979	R7,438,899
3% Fee	R100,000	R239,465	R573,436	R1,373,181	R3,288,291

i Source: 10X Investments

The other thing about fees is that they are known with certainty.

While returns can vary significantly over the short run, fees are constant. When looked at through the lens of real returns, paying 3% in fees amounts to giving up 45% of your real return on average each year.

Figure 9: Fees as a % of real return



i Source: 10X Investments



# 4) Short-term market or currency moves, and which portfolio will outperform over the short-term

There is no way you can know these things in advance. Rather than speculating about next month's return you should have the right asset mix for your time horizon.

If you have five years or longer to invest you can afford to have a much higher weighting in shares because you have time on your side and can ride out what happens over the next year or two.

If you have a short time horizon your focus should be on preserving your pot to avoid the risk that short-term volatility takes a big chunk out of it. Then, if the market falls sharply, it might hurt emotionally, but should not matter too much financially.

As your time horizon increases, the chance of negative returns in SA shares decreases.

Figure 10: Chance of negative returns over different time periods - SA Equity



Source: 10X Investments; Datastream; Dimson, Marsh and Staunton. 1 Day - 1 Month 1973-2018, 1 Year to 10 Years 1902-2018

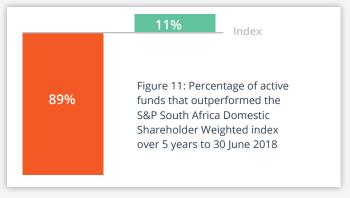
# 5) Which manager or strategy will beat an index over any term?

No one can reliably and consistently predict which fund will outperform an index over any period. While it is true that some active funds will outperform an index, the percentage that do is low, and those that do are very seldom the same ones over time.

No one wants to be average, and some people think that investing via an index fund is like settling for mince because you can't afford the prime cut of rib-eye. But the reality is that you are not: Index investors don't settle, they win.

This point is often incorrectly framed: earning the market average return is not the same as earning the average investor return. After fees, the average index investor return will always be higher than the average active investor return.

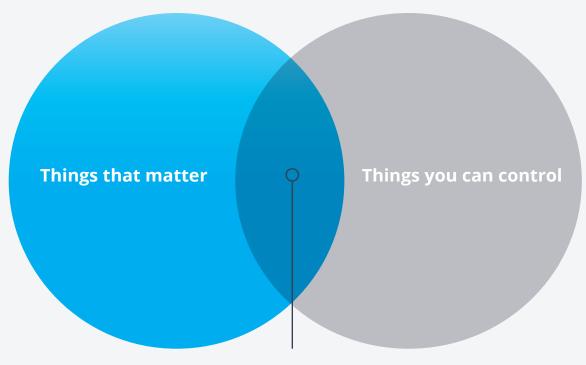
When it comes to the active versus indexing argument, the evidence is clear: "settling" for an index strategy means top quartile returns. The latest research by S&P Dow Jones Indices shows that only 11% of active equity funds in South Africa were able to beat the benchmark over five years.



Source: SPIVA® South Africa Scorecard Mid-Year 2018



Figure 12:



What you should focus on

At 10X Investments we pride ourselves on simplifying investing down to the core ingredients that will increase your probability of success.

We incorporate all of the above into one optimal solution. Our simple, award-winning strategy increases your probability of success by combining the knowns and avoiding the unknowns. This can be distilled into the four key points of our one solution:

- 1) Index tracking
- 2) Diversified portfolios
- 3) Life-stage investing (investing in a portfolio that is appropriate for your time horizon)
- 4) Low fees

# 10X asset class performance

2018 was all about dollar strength with most asset classes delivering soft returns.

Figure 13: 10X asset class performance as at 31 December 2018

	2018	2017	2016	3 Years	5 Years	7 Years	10 Years
SA Equity	-8.0%	16.9%	2.9%	3.4%	5.2%	10.5%	12.8%
SA Property	-25.3%	17.2%	10.2%	-1.2%	5.7%	10.0%	12.1%
SA Bonds	3.5%	6.6%	10.4%	6.8%	6.2%	6.8%	7.7%
SA Cash	7.0%	7.1%	7.0%	7.0%	6.6%	6.2%	6.4%
International Equity	5.2%	13.2%	-3.3%	4.8%	11.3%	16.3%	13.1%
International Cash	17.2%	-9.6%	-11.5	-2.1%	6.7%	8.7%	4.3%
SA Inflation	4.5%	4.7%	6.8%	5.3%	5.3%	5.4%	5.3%

i Source: 10X Investments, StatsSA

**SA Equity** delivered the first negative annual return since the Great Financial Crisis of 2008, this on the back of strong returns in 2017. This underlines the volatile nature of share market returns over the short run.

Over the last decade, SA Equities have been broadly classified as either "rand hedge" or "SA Inc." stocks. Rand hedge stocks typically do well when the rand depreciates because they derive most of their income and/or value from overseas. The SA Inc. stocks, including banks and retailers, have exposure to the South African economy and move in tandem with sentiment associated to the local economy over the short term. In previous years, whenever the rand has sharply depreciated, the rand hedge stocks have tended to rally, supporting the SA equity market.

Although the rand weakened significantly against the US dollar during 2018, local investors did not reap the expected benefit of holding these rand hedge

stocks due to stock-specific reasons. Many of the stock-specific shocks mentioned earlier related to rand hedge stocks, including Aspen, Naspers, British American Tobacco, Richemont and MTN.

Resource shares also have rand hedge characteristics as their revenue is earned in dollars, whereas their costs are predominantly in rand, or other emerging markets currencies. All else equal, a strengthening dollar will thus boost their profitability.

Resources were the one bright spot in the SA stock market with the Resources Index delivering 17.8%, compared with -17.9% from the Industrial Index and the SA-focused Financial Index's -4%.

**SA Property**, once the darling asset class in South Africa, has fallen from grace, delivering -25% over 2018.

Listed property should have lower, more stable, longrun returns than listed equities. This is due to the steady, bond-like nature of rental income that this asset class provides. The prior 20 years defied this with listed property delivering returns far superior to that of listed equity. The sector sold off sharply at the beginning of 2018 in response to concerns around misrepresentation by the Resilient group of companies, which made up c. 40% of the index prior to their sell-off. As the year progressed, the rest of the sector was impacted by the low economic growth environment. With 2018's price correction, the yield on the sector has almost doubled since its low in 2016 and is now offering the best yield since 2008.



Our **SA Bonds** asset class is equally split between government bonds (6.9%) and inflation-linked government bonds (0.3%), with the combined asset class returning 3.4%.

In the face of relatively soft inflation (4.5%) in 2018, inflation-linked bonds delivered flat returns. Inflation-linked bonds perform well in an environment of high inflation and deliver soft returns in environments of falling inflation. This is because the amount of

interest paid by these bonds is linked to the CPI index. SA nominal government bonds benefited from the low inflationary environment and the additional risks priced into SA Government Bonds.

**SA Cash** delivered strong returns, benchmarked against inflation. The SARB hiked the repo rate by 25bps at its November meeting to counter "second round inflation" risk as a result of a weaker currency.

With strong relief from the falling oil price in the last quarter of 2018, we saw inflation end the year right at the mid-point of the inflation targeting band,

at 4.5%. This means that cash has delivered a real return of 2.5% in 2018 and 2.4% in 2017. These can be considered exceptional returns for SA Cash.

**International Equity** saw the US stock market (approx. 60% of developed market equity) diverge from other markets during a large part of 2018, encouraged by massive tax cuts and strong economic growth.

However, by the fourth quarter, after yet another record S&P 500 high, there was a strong sense among investors that this was as good as it was going to get, and the US market began selling off sharply, converging with many global markets that were

already in negative territory. Local investors were spared the worst of the fallout by rand weakness: International Equity returned 5.2% in rand compared to -12% in dollars.

**International Cash** delivered a strong return (17.2%) given the broad-based dollar strength seen in 2018. This asset class continues to deliver volatile returns (albeit positive in 2018). The return was also boosted by rising interest rates in the US (USD Cash now earns 2.25% pa after earning virtually zero for most of the past decade).



# 10X portfolio performance

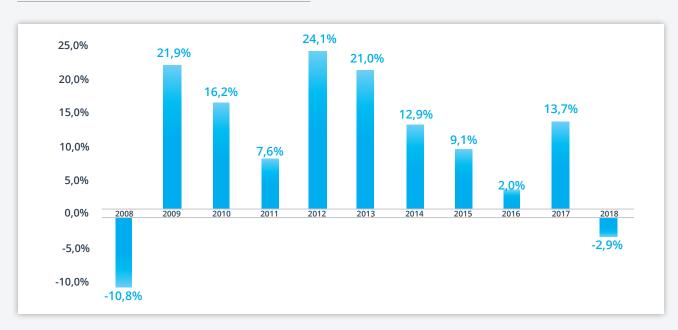
Figure 14: 10X portfolio performance as at 31 December 2018

	2018	2017	2016	3 Years	5 Years	7 Years	10 Years
10X High Equity	-2.9%	13.7%	2.0%	4.0%	6.8%	11.1%	12.3%
10X Medium Equity	-2.2%	11.8%	3.1%	4.1%	6.7%	10.3%	11.2%
10X Low Equity	2.7%	8.9%	4.7%	5.4%	7.1%	8.7%	9.3%
10X Defensive	5.2%	7.4%	6.2%	6.3%	7.1%	8.1%	8.5%
SA Inflation	4.5%	4.7%	6.8%	5.3%	5.3%	5.4%	5.3%

i Source: 10X Investments, StatsSA

Each 10X life-stage portfolio blends the returns of the various asset classes in proportion to its asset allocation. As the majority of asset classes delivered negative returns, globally, the 10X High Equity portfolio experienced its first annual decline since the Great Financial Crisis of 2008.

Figure 15: 10X High Equity annual performance



Source: 10X Investments

The returns across asset classes have essentially been in line with inflation over the last five years. This can be seen by looking at the five-year returns in the asset class table, which all fall between 5.2% and 6.7%, with the exception of International Equity (11.3%).

The result of this is that over five years all the 10X portfolios have delivered similar returns ranging from 6.7% to 7.1%. The five-year picture looks pedestrian, disguising what a volatile ride it has been.

Looking at the last five years, 10X High Equity has delivered 12.9%, 9.1%, 2%, 13.7% and, more recently, -2.9%. So, it's been a bumpy ride, especially when

compared to investors in the 10X Defensive portfolio which delivered a far more even 8.5%, 8.1%, 6.2%, 7.4% and 5.2% over the last five years, respectively.

By co-incidence, both portfolios ultimately delivered similar returns over the period. This is a rare occurrence because over periods of five years or longer a high equity portfolio has traditionally outperformed a defensive portfolio 85% of the time.

When we start looking at the long-term, however, despite the muted five-year returns, 10X High Equity has delivered a premium return relative to the 10X Defensive portfolio over seven and ten years.



# 10X performance relative to competitors

How do our portfolios measure up against the competition in the South African retirement fund industry?

To find out, we regularly compare the performance of the 10X High Equity portfolio (held by more than 90% of 10X fund members) against the median return delivered by the large retirement fund managers, as published monthly in the Alexander

Forbes Global Manager Watch Survey.

10X's goal is to beat the median fund managers returns over time, net of fees. To quantify the impact of our lower fees, we reduce the median fund manager return by 1% per annum. This is a reasonable (and conservative) estimate, especially for small and medium size funds, many of which pay total fees well above 2% pa (versus the average 10X fee of well less than 1% pa).

The table below shows that the 10X High Equity Fund has beaten the median manager by 1.7% since inception, after adjusting for our lower fees. The last 12 months has seen the High Equity portfolio delivering an outperformance of 0.4%.

While one-year returns need to be measured, they provide little insight. The benefit of our low cost, index tracking portfolio becomes more apparent over longer time periods. Over 10 years, the 10X High Equity portfolio has outperformed the median return by an estimated 1.8% pa, net of fees.

The power of compounding this seemingly small advantage can, over an average working life of 40 years, deliver up to 60% more money at retirement, and up to 150% more by the end of an investment lifetime (factoring in the post-retirement investment period).

Figure 16: 10X High Equity vs the average large manager

As at 31 Dec 2018	10X High Equity (before fees)	Global Manager Watch Median	Global Manager Watch Median (after fees)	10X Difference
1 Year	-2.9%	-2.3%	-3.3%	0.4%
3 Year	4,0%	4.2%	3.2%	0.8%
5 Year	6.8%	6.5%	5.4%	1.4%
7 Year	11.1%	10.5%	9.4%	1.6%
10 Year	12.3%	11.6%	10.5%	1.8%
Since Inception (Dec '07)	9.9%	9.3%	8.2%	1.7%

Source: Alexander Forbes Global Manager Watch, 10X Investments



# 10X portfolio tracking error

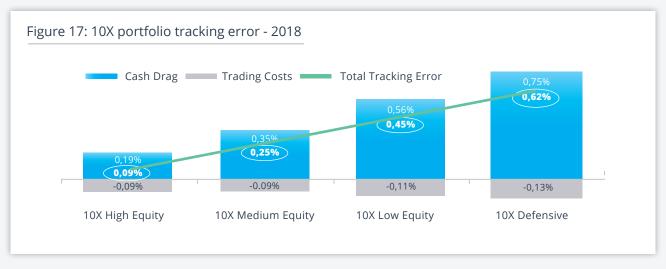
10X's indexed investment strategy aims to deliver the investment type (asset class) performance at a low cost.

We monitor our investment performance by comparing the 10X portfolio return to the benchmark return (i.e. the asset class return multiplied by its weighting in the portfolio over the period). This difference in performance is called the tracking error. It is our goal to keep the tracking error – positive or negative – **as low as possible**. The tracking error has two main sources.

Firstly, it relates to trading costs (brokerage), securities tax when buying shares (0.25%), the cost of investing internationally as well as money market and ancillary trading-related expenses.

Secondly, it reflects the time delay in receiving funds (contributions and dividends) and re-investing these funds. This is called the cash drag and represents the opportunity cost of not being fully invested in an asset class (e.g. equity markets). Cash drag can be positive (i.e. improve the return) or negative (reduce the return).

In the graph below, we have broken the tracking error down into trading costs (grey columns) and cash drag (blue columns). The green line shows the net tracking error (trading costs and cash drag combined).



Source: 10X Investments

This year, the cash drag was positive across all the portfolios ranging from 0.19% for the 10X High Equity portfolio to 0.75% for the 10X Defensive portfolio.

The 10X portfolios' trading costs for the year ranged from 0.13% for 10X Defensive to 0.09% for 10X High

Equity. Our trading costs are typically much lower than active funds as indexing is largely a buy and hold strategy. As the portfolios become larger the scale tends to reduce trading costs even more. The net tracking error ranged between 0.09% for 10X High Equity to 0.62% for 10X Defensive.

The returns published by 10X in this review (as well as on the fact sheet and in your benefit statement) are net of this tracking error.



Andy Grove, the former CEO of Intel, describes a **force that changes the fundamental rules** of an industry as a **10X force**, making it ten times harder for the existing players to compete. The name is appropriate given that 10X is **challenging and changing the fundamentals** of the retirement fund industry.

# We say "ten ex".

We manage more than **R10 billion** in private and corporate retirement investments for companies in all industries, including finance, retail, education, telecommunications, property, media, advertising, engineering and technology.

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