A Little Book of

Financial Wisdom

Clarity in the midst of a financial crisis

Lifetime
Advice For Life

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By Ben Brinkerhoff
Head of Adviser Services, Consilium

in partnership with

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Foreword

In 2020, the world experienced an unprecedented health and financial storm named COVID-19. After setting new highs in late February, the New Zealand share market fell close to 30% over the following month as the world struggled to absorb and process the potential implications of COVID-19.

Contemplate for a moment the reality of investing in markets. You can spend 30 years acquiring 100% of your wealth and in 30 days see it fall by one-third. Extrapolating that math, you'd be penniless by the time the ski season started.

At Consilium, we focus on the long term and try not to pay attention to momentary market noise. Historical precedents such as SARS, for example, flamed out quickly and had minimal impact on markets. However, it quickly became evident that COVID-19 was unlike anything the world had seen before.

Amid the turmoil in March, panicked investors were rushing to get out of markets. Unfortunately, trading just because you are afraid, is usually never the basis for long term investment success. Through this period we began communicating with advisers, providing evidence and examples to help them guide their clients through this maelstrom.

We wrote one article. Markets kept falling. A few days later we wrote another one. Markets still kept falling. Along with my colleague Damon O'Brien, Chief Investment Officer, we committed ourselves to conveying timeless investment principles through a series of daily articles. Those articles have been collated in this book.

In one of the first articles, we showed 15 different market events where prices from month end to month end had fallen by 10% and then noted the subsequent market recovery. History consistently shows that markets always recover, and often very quickly.

COVID-19 has followed this same path. Since the market bottomed on 23 March 2020 until the end of December 2020, the NZX50 Index gained approximately 54% in nine months. This is despite New Zealand's Gross Domestic Product falling 12.2% in the June quarter alone. Imagine predicting that extraordinary combination of factors!

Although this collection of articles were written in the midst of the COVID-19 crisis, they contain timeless wisdom. As we quoted Harry Truman in one article, "The only thing new in this world is the history that you don't know."

If you've been given this book by an adviser, you are a very fortunate. Only about 20% of New Zealanders get financial advice. About 40% suggest they don't see any benefit in getting financial advice. However, in March 2020 alone, about $1.4 billion dollars in unadvised KiwiSaver accounts were switched from share-heavy funds to cash and conservative funds. These investors are likely to have missed out on much of the subsequent strong rise in global share markets.

We encourage you to read these short articles to pick up the pearls of wisdom contained within. The better understanding you have of markets, the more likely you are to stick to your financial plan, even when it looks like the sky is falling.

Please then enjoy this little book of financial wisdom.

Ben Brinkerhoff

Head of Adviser Services, Consilium
Proud Partners of Lifetime

The information contained in this book is intended to be of a general nature. It does not take into account the objectives, financial situation or needs of any particular person, and does not constitute financial advice.

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01

“The only thing new in this world is the history that you don’t know”

Harry Truman, the 33rd President of the United States had a profound love of history. Truman looked to history for guidance on many of the issues he faced during his presidency, including the establishment of the United Nations, the ending of World War II, the economy, civil rights, the recognition of Israel and the Korean War. Although each of these issues were "new", in Truman's view they were also "old". Truman reflected on history to help make better decisions in the present.

In our day, the current Coronavirus pandemic is new, but a crisis having an impact on share markets is not new at all.

The table below shows all the S&P 500 downturns of more than -10% (month end to month end) since WWII, and their subsequent recoveries.

Start of downturn	Low point of downturn	Recovery date	Peak to low point (months)	Low point to recovery date (months)	Peak to low point loss	12 month return after low point	36 month return after low point	Index value at market peak	Index value at low point of downturn
Jun-46	Nov-46	Oct-49	6	35	-21.76%	+8.01%	+32.11%	3.16	2.47
Aug-56	Feb-57	Jul-57	7	5	-10.25%	-1.70%	+44.61%	14.60	13.11
Aug-57	Dec-57	Jul-58	5	7	-14.96%	+43.37%	+61.29%	14.71	12.51
Jan-62	Jun-62	Apr-63	6	10	-22.28%	+31.16%	+69.20%	25.60	19.90
Feb-66	Sep-66	Mar-67	8	6	-15.63%	+30.60%	+33.97%	37.82	31.91
Dec-68	Jun-70	Mar-71	19	9	-29.23%	+41.87%	+57.39%	48.52	34.34
Jan-73	Sep-74	Jun-76	21	21	-42.62%	+38.13%	+72.74%	60.30	34.60
Jan-77	Feb-78	Jul-78	14	5	-14.12%	+16.62%	+76.29%	64.30	55.22
Dec-80	Jul-82	Oct-82	20	3	-16.91%	+59.40%	+105.41%	102.99	85.57
Sep-87	Nov-87	May-89	3	18	-29.53%	+23.20%	+55.48%	326.46	230.04
Jun-90	Oct-90	Feb-91	5	4	-14.69%	+33.50%	+68.72%	393.80	335.95
Jul-98	Aug-98	Nov-98	2	3	-15.37%	+39.83%	+22.98%	1,528.84	1,293.87
Sep-00	Sep-02	Oct-06	25	49	-44.73%	+24.40%	+59.01%	2,104.43	1,163.04
Nov-07	Feb-09	Mar-12	16	37	-50.95%	+53.62%	+97.94%	2,423.67	1,188.84
Oct-18	Dec-18	Apr-19	3	4	-13.52%	+31.49%	tbd	5,763.77	4,984.53

The table above has a lot of numbers. But they are more than just numbers.

To the keen eye, the table summarises history. For example, it includes the period of the oil embargo of the 1970's. It includes the runaway inflation of the 1980's. It includes the share market crash of 1987. It includes the Global Financial Crisis just over a decade ago. These have each been amongst the largest threats to our economic existence in living memory. And it's all captured in the table above.

Given the wealth of historical information represented above, what can we learn? Well, here are a few important observations:

1. In the past we've experienced events that have significantly impacted markets on average every five years. In other words, they are fairly common. If you plan to be an investor over the next 20 years and this average is maintained, you could reasonably expect to experience four more of these market downturns.
2. There's never been a bad time for long term investors to buy into markets. Let's say that you had the worst timing in the world and bought in at the peak of the market in September 2000 and sold at the low point in December 2018. You would still have more than doubled your money.
3. Since the end of WWII, the market has increased in value about 150 times. That's 150x in about 75 years. Those 75 years effectively represent the living memory of the planet. You might ask yourself, how anyone could possibly lose money in this sort of market? Yes, it would be hard. But those that did were probably trying to predict or avoid the downturns, but only succeeded in missing out on too many of the strong gains that occurred on either side of a downturn.

4. Markets recover fast. Although we can never pick the bottom of the market, the average return for the next 12 months following a low point has been positive 33% and over 3 years it's positive 63%. These historical recovery rates should provide great encouragement to all investors to stay in their seats in a crisis.

For the investors who might be asking themselves, "Given all I can see throughout the history of capital markets, how should I respond to this latest drop in prices?", this history is critical. It provides an important basis for making better decisions in the present.

Unfortunately, even though the history of financial markets is easily accessible, we are not always quick to embrace its lessons. Although a history buff himself, Truman expressed his frustrations of humans often being too slow to learn from the past.

Truman once told American author and novelist Merle Miller,

> *"The next generation never learns anything from the previous one until it's brought home with a hammer... I've wondered why the next generation can't profit from the generation before, but they never do until they get knocked in the head by experience."*

It's fair to say that many investors have now been 'knocked in the head' by experience, and some younger investors are going through this for the first time. But here's hoping, despite Truman's scepticism, that we can all profit from the generations before us and use our knowledge of history to help us make better decisions today.

“The next generation never learns anything from the previous one until it’s brought home with a hammer...

I’ve wondered why the next generation can’t profit from the generation before, but they never do until they get knocked in the head by experience.”

– Harry Truman

02

A portfolio well invested doesn't do things in excess

A wise person once said that balance means never letting success go to your head and never letting failure go to your heart. We can all see an application of this in our everyday lives, but could it also apply to our investment portfolio?

An investment portfolio also has a balance, and it has similarities to the quoted balance between success and failure.

At the heart of a portfolio are two competing desires. Firstly, there is the desire for returns. The bigger the better, most of us would say. Secondly, there is a desire to avoid losses, even temporary ones, often referred to as volatility. The smaller the better, most of us would say.

If this isn't a balance, I'm not sure what is!

On one side of the equation, if we got great returns, we might want to just keep doubling down. We might even let this success go to our head. On the other side, if we experience poor returns, it could go to our heart and we might want to take all our investments off the table. Although this often means we would leave ourselves with little or no chance of achieving the goals we originally targeted when we first started investing.

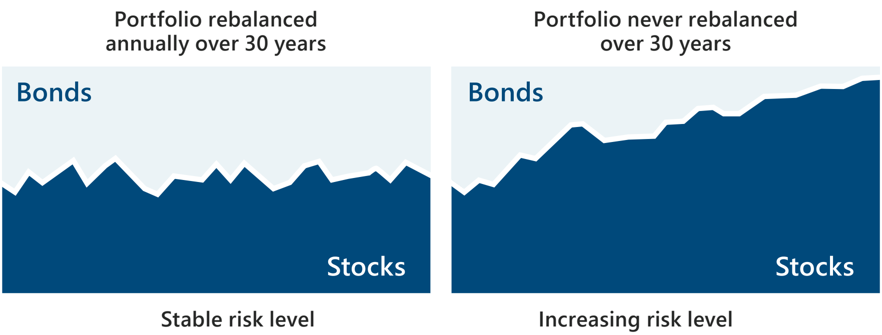
A portfolio needs balance. And if it needs balance then, reasonably, from time to time it will need to be rebalanced.

Rebalancing is the practice of restoring your investment mix to its original target allocation. It's achieved by selling assets that have gone up in value and adding to those that gone down in value (relative to each other).

The purpose of rebalancing is simple. It's to ensure your portfolio is positioned to achieve the investment outcomes you want, without taking more risk of temporary losses (volatility) than necessary.

A portfolio that never rebalances will eventually look very different from your starting portfolio. The chart below was produced by Vanguard[1] and shows how a portfolio that originally contained 50% shares and 50% bonds might change over time if it was either annually rebalanced, or never rebalanced at all. The difference is stark.

If you have a portfolio that is never rebalanced, it is likely to mean your portfolio will get riskier and riskier over time. It's an important point because,



as investors age, they typically prefer portfolios that are less and less risky over time.

Over recent weeks, the opposite has occurred. Share market weakness has meant many portfolios currently have a lower weighting in shares than their original allocation. If this lower weighting in shares was maintained it would have the effect of reducing the long term expected return of the portfolio.

So, does rebalancing deliver investors better outcomes?

Charles Rotblut, CFA, published an excellent study in May 2014 in the "American Association of Individual Investors Journal,"[2] to help answer that very question. In simple terms, he found that yes, rebalancing works.

Rotblut evaluated three different investor behaviours regarding rebalancing, using a portfolio originally comprising 70% shares and 30% bonds, over a 26-year time period starting in 1988.

The three different behaviours were:

- **Discipline:** Rebalance a portfolio each time the allocation to shares was greater than 75% or less than 65% (remember the original target was 70% in his study).
- **Drift:** Never rebalance a portfolio. Just let the share and bond weights inside the portfolio change over time however the market moved them.
- **Panic:** Simulate a panicked investor by selling out of shares entirely every time the market fell by more than 20%.

Rotblut found that the Disciplined portfolio outperformed the other two portfolios AND had less measurable up and down price movements (volatility) than the Drift portfolio. It had about the same up and down price movement as the Panic portfolio. In other words, the Disciplined portfolio was the more "efficient" portfolio. It delivered the best ratio of returns for the amount of volatility the portfolio experienced.

Rotblut wrote in his study,

> ***"Although the goal of pulling out of the market was to stop the pain of the bear markets, over the last 26 years, an investor would have experienced the same level of volatility by simply sticking with shares and rebalancing as necessitated."***

In other words, Rotblut was surprised to find that the Panic portfolio didn't make the investing ride more comfortable with less overall up and down price movements, even though that's what it was intended to do.

But why would the Disciplined investor that regularly rebalanced get higher returns? There are two main reasons:

1. Rebalancing allows a portfolio to ride out a market sell off.
2. Rebalancing enforces a rule where you are selling recent winners and buying recent losers (relative to each other).

Put simply, rebalancing enforces good investor behaviour. In a valuation sense, rebalancing means you are always selling assets that are relatively more expensive and buying assets that are relatively less expensive. It's smart, as Rotblut proved, but it can also be psychologically challenging because you are often needing to buy the types of investments that aren't popular at the moment and selling the ones that are. This is very hard for most investors to do.

In summary, rebalancing helps prevent an investor letting success go to his/her head or failure to his/her heart. Or, as another wise person said[3],

> "A life well lived
> (or a portfolio well invested)
> doesn't do things in excess."

1. Vanguard is one of the largest fund management firms in the world
2. https://www.aaii.com/journal/article/the-danger-of-getting-out-of-stocks-during-bear-markets
3. Daniel Smith https://everydaypower.com/balance-quotes/

03

It’s okay to look away

A few curious professors decided to run an experiment. The fact that two of them later became Nobel Prize winners… well, that probably has a bit to do with the outcome.

The experiment was simple. They told volunteer students that they were the portfolio manager of the Berkeley Endowment and they had two investment options. The first was riskier but had higher returns. The other was a safer investment option with lower returns. The students could initially select and then modify their portfolio allocation between the two investment choices.

So, what exactly was the purpose of the experiment?

The portfolios provided to the students were identical. But the professors also controlled how often their subjects could look at the performance of their investments. One group of students were allowed to check their investment performance eight times per year. The other group was only allowed to view the performance once a year.

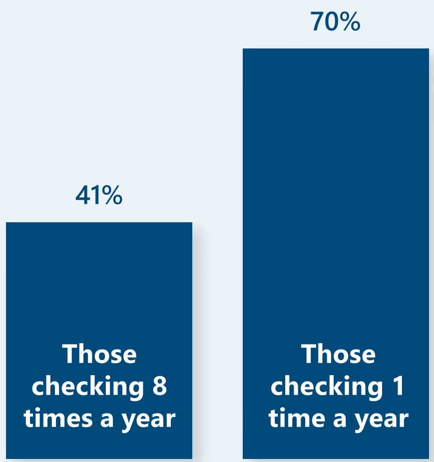
What the professors hoped to find out was — does the frequency that you look at the performance of a portfolio change the type of asset allocation you think is best?

Those checking performance eight times a year allocated 41% of their portfolio to shares, on average.

Those checking performance once a year allocated 70% of their portfolio to shares, on average.

In other words, the frequency with which you looked at the results fundamentally changed your portfolio preference.

Percentage of the portfolio in shares



Recently, another professor replicated the study with a twist. In a 14 day trial, the professor gave one group of students continuous access to returns information on their portfolio. He gave a second group information on price changes only every four hours. Both groups were trading an investment with the exact same price movements. The only difference was the frequency the two groups saw those price movements.

The professor also made it a high stakes contest, so the students were all motivated to do well.

> *Over the 14 day experiment the professor found, those with less frequent price information invested **33% more** in shares and earned on average **53% higher** profits.*

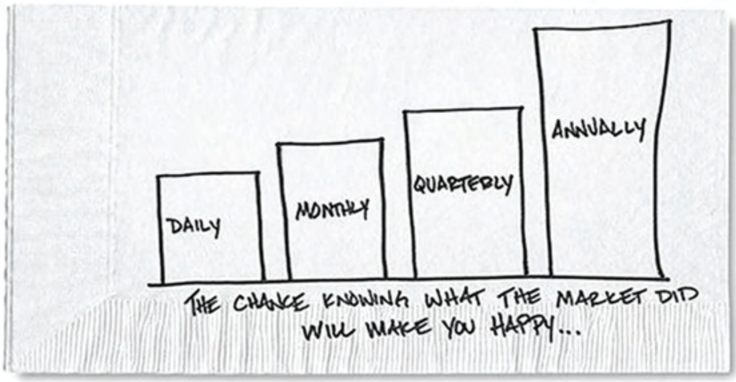
The conclusions here are fascinating. Both studies seem to suggest that the more information you have about the price movements of your portfolio, the worse your results. That feels counter intuitive. Shouldn't it be that access to more information helps us to be better and smarter?

Well, not when that information is infused with emotion. What the studies demonstrate is something academics call "Myopic Loss Aversion". Most of us would simply describe this as "not happy to see losses in my portfolio."

The way the professors describe the reaction, is that losses feel bad approximately twice as much as gains feel good. We probably know that intuitively. I know that because my kids just played paper, scissors, rock and the loser was grumpy for 30 minutes while the winner moved on to the next thing in 30 seconds. Losing feels worse than winning feels good.

But what does that have to do with frequency of seeing portfolio returns? As it turns out, everything. If you look at a portfolio often you are more likely to see a loss. On a daily basis, a share portfolio will be up only about 51% of the time. But if we look on an annual basis, a share portfolio tends to be up about 81% of the time.[3]

Carl Richard, author of The Behaviour Gap, puts it's more simply in a drawing he titled *"The chance knowing what the market did will make you happy."*



Why is this important? Well, if you are comfortable with disappointment, feel free to check the value of your portfolio as frequently as humanly possible. For everyone else, it is a studied fact that the less frequently you check your portfolio the happier you are likely to be. Checking too often can also tempt some investors into abandoning a well-conceived plan simply on the basis that it momentarily doesn't feel good.

Perhaps just as interesting, if you are happy not to look at your portfolio value too often, you can probably tolerate a higher percentage of your portfolio in shares. This means an opportunity for higher long-term returns.

What's the bottom-line? After wide ranging studies and intensive analysis, some of the most highly credentialled behavioural economists in the world distilled a simple guiding principle for you and your portfolio... don't look at it! Or, to put it another way, it's okay to look away. If you do, you are likely to be a much happier and more successful investor as a result.

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1. https://www.jstor.org/stable/2951249?seq=1
2. https://www.behavioraleconomics.com/myopic-loss-aversion-a-behavioral-answer-to-the-equity-premium-puzzle/
3. https://www.ifa.com/portfolios/100/#9

04

The value of advice

Am I getting value?

It's only natural to ask that question when you spend money on anything. Whether it's buying groceries or choosing a lawyer, we always want to feel like we are getting good value.

The same question should be asked about financial advice.

Hiring an expert financial adviser to make strategic decisions when the consequences are high, the situation complex, and the available information confusing, always makes good sense.

Some of the greatest benefits of expert advice, are that they can help investors to...

- know how to use their wealth to lead a very satisfying life,
- know they are balancing the benefits of spending in the short term against their requirements for it to last, and
- trust the process and the people involved so they are freed from both worry and regret.

How does a great adviser deliver these benefits?

An analogy (written from the perspective of an adviser) probably explains it best.

We (advisers) are like a sea captain and our clients are our passengers. The passengers talk to us about their ideal destination and we select a very seaworthy boat appropriate for the journey. The plans we create are like a map. There's no sense in setting off on a journey without knowing where you are going. So, with our plan in hand, we set sail.

But as sure as anything, the tides, currents, and winds blow us off course. Sometimes this is gentle, sometimes it is strong, but occasionally moving off our plotted course is a near certainty.

As an experienced captain, we anticipated this. So, to keep things on course, we regularly do three things.

1. We check with the passenger to ensure they still want to journey to the same destination
2. We make an accurate assessment of where we are now
3. We take corrective action, when needed, to get the passenger back on course

In the world of financial advice, plans can be underfunded or overfunded, and a degree of drift is normal and acceptable. There is no sense oversteering. But at a certain point, we will find clients are at a real risk of under spending or overspending their wealth, either because planned cashflow did not marry up with reality, or because markets performed better or worse than expected. Over the course of time, we often find our clients' goals and objectives have also changed. How were they to know with certainty 5 or 10 years ago, what they would spend/save/need today? They weren't, so some adjustments over time are almost inevitable.

As the captain planning the voyage, we are inevitably dealing with two uncertainties.

1. Uncertainty about the winds of the markets
2. Uncertainty about the final port of call

Nevertheless, if we consistently take time to discuss with our clients their goals and desired outcomes, and we regularly assess how their plan is placed relative to those goals, we can make the small course adjustments necessary to get clients back on track.

If the plan is performing better than expected, we can discuss with clients where additional money can most improve their life, or we could consider removing some volatility from the portfolio.

Likewise, if we have run into rough weather, we can consider what changes we could make to get the plan back on track, whilst causing the least possible discomfort. There is no right answer and it depends on every client's circumstances and point of view.

To extend the analogy, we find that if we had been able to predict with full accuracy all of the weather along the journey, we may have picked a different boat. And occasionally on the journey, we might see another boat sail by better suited for the weather of the day. This doesn't bother us, and we don't want it to bother you. We have chosen a boat that is seaworthy and has come through every storm since the sea of capital markets was first sailed. It has been chosen because, regardless of the conditions ahead, we are confident this craft will get us to our destination.

It was the Cheshire Cat from the wonderful story Alice and Wonderland that said,

"If you don't know where you're going, any road will take you there."

In our experience, the only way to fail on this journey is to do two things:

1. To not know where you are going. In essence, to not have a plan, or worse, to have a plan only to "make more money"
2. To anticipate only fair weather along the journey

It's our job to ensure all our clients are prepared to be successful during the ups and downs of a long-term investment plan. With a plan in place we help them navigate even the roughest of seas to arrive safely at their chosen destination.

This is the true value of advice. It's providing a map to help clarify where it is you want to go. It's providing the expert navigational skills to help you get there. And it's giving you the peace of mind that you will successfully complete the journey.

05

Why you should think of your adviser as your personal financial trainer

Growing up we had one of those indoor exercise bikes. You know the type, the ones you purchase with dreams of sweating off the pounds and getting into top shape. It came one day in a big cardboard box. We unwrapped it, marvelled at it, sat on it and spun the wheels... and then mostly treated it like a piece of artwork. It was there to be admired but not touched.

I don't know if anyone else has had a similar experience, but my fitness regime using the exercise bike (artwork/clothes hanger) was in stark contrast to a former colleague who worked with a personal trainer. Month by month, spin class by spin class, I could see him getting fitter and fitter.

Of course, a personal trainer should know a tremendous amount regarding the human muscular skeletal system and exercise techniques. But I don't think the trainer's technical acumen was the reason they worked together. I mean, I'm sure the technical skill was valuable, but, honestly, if we want to get into shape, we all know how to ride an exercise bike, right?

The problem most of us have isn't that exercise is too complicated or the human body too difficult to understand. For most of us the issue is the motivation to exercise consistently in order to achieve the desired results.

In other words, the value of the personal trainer probably has more to do with the discipline of consistent exercise, than with the technical nature of how to correctly perform the exercise. And, for my former colleague, this discipline outweighed any other benefit, especially when compared to the stopping, starting, chopping and changing most of us go through when left to our own devices.

There is evidence of this value. In an academic article in the Journal of Sports Science & Medicine titled "*The Effectiveness of Personal Training on Changing Attitudes Towards Physical Activity*," the author claims that

> *"One-on-one personal training is an effective method for changing attitudes and thereby increasing the amount of physical activity. Secondly, it seems that using problem-solving techniques is of value for successful behavior change."*[1]

As with a personal trainer, it's a financial adviser's job to change their client's "attitudes" and provide key "problem solving" techniques that improve their client's financial health.

Ben Graham, who wrote one of the most referenced books on investments titled *The Intelligent Investor,* once quipped,

"An investor's chief problem – and even his worst enemy – is likely to be himself".

Graham, who died in the 1970's, would not have heard of behavioural finance. But he knew by experience what hundreds of academic articles have subsequently proven regarding poor investor behaviour.

In a 2011 paper titled *"The Behaviour of Individual Investors"*[2], Professors Brad Barber and Terrance Odean summarise two decades of work into the poor performance of individual investors.

Their five conclusions were that, in general, individual investors:

1. Underperform standard benchmarks (e.g. a low cost index fund)
2. Sell winning investments while holding losing investments (the 'disposition effect')
3. Are heavily influenced by limited attention and past return performance in their purchase decisions
4. Engage in naïve reinforcement learning by repeating past behaviours that coincided with pleasure, while avoiding past behaviours that generated pain
5. Tend to hold undiversified share portfolios

They state, *"these behaviours deleteriously affect the financial well-being of individual investors"*.

In fact, there have been significant efforts made to quantify the impact on investors who reject a buy and hold market portfolio and instead allow their decisions to be influenced by fear, hunches, intuition, hope or even greed. Professor Barber himself wrote a study which showed that individuals trading portfolios underperformed the broad market by 3.8% a year[3].

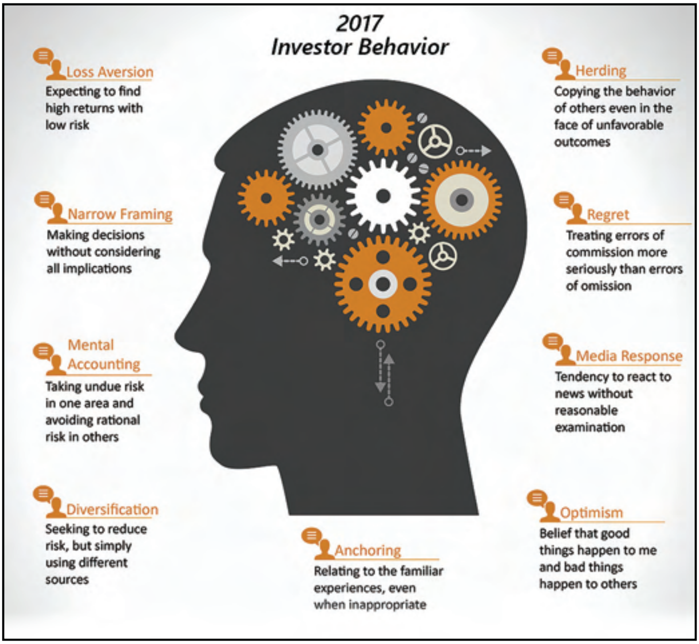
Financial research company DALBAR, has also attempted to quantify the effects of poor behaviour on investors' long term returns. According to their 2016 study[4], the average individual investor underperformed the broad sharemarket by 2.89% over the past 20 years.

DALBAR made the following observation:

> *"Investors lack the patience and long-term vision to stay invested in any one fund for much more than four years. Jumping into and out of investments every few years is not a prudent strategy because investors are simply unable to correctly time when to make such moves."*

In the image below, DALBAR noted nine behavioural reasons why investors have done so poorly, which an adviser must systematically try to correct.

The job of an adviser is to counteract each of these common biases which will otherwise undermine good, sound, long term investment decision making. And, as supported by the DALBAR (and other) research, this is often the greatest value an adviser can deliver.



As the saying goes,

"We don't have people with investment problems; we have investments with people problems".

To change behaviour, an adviser must help each client define what they really want their money to achieve for them in life. The adviser must then substantially increase the probability that their client is able to achieve those outcomes. The key is to help clients make smarter investment decisions and prioritise what matters to them the most. The best advice is honest and sometimes confronting, but it is decisive and adaptable to changes in markets and lifestyle.

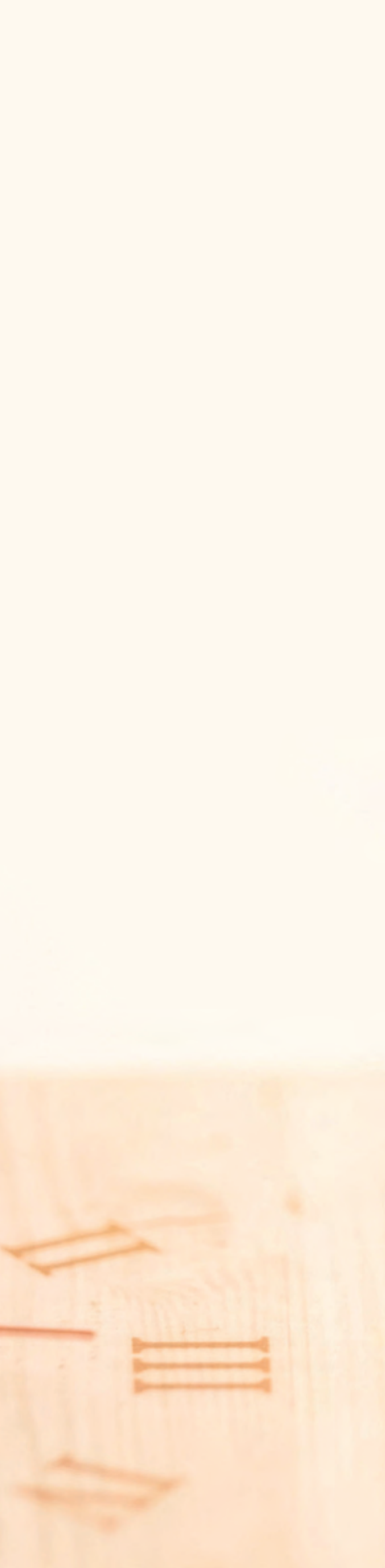
It's not that investing is difficult, it's just difficult for most individuals to do it consistently well. Like exercise, it's not about making a big effort every once in a while. Great advice is best to be implemented consistently and carefully over a long period of time.

Investors would do well to think of their financial adviser as their personal (financial) trainer. Not just because an adviser is more likely to help us make better long term investment decisions, but because he or she will keep us motivated and on track when we might otherwise succumb to poor behaviour.

After all, it's a bit harder to say, *"Exercise? I thought you said extra fries"* when your personal trainer is on your team.

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3937569/
2. Barber, Brad M and Odean, Terrance, The Behavior of Individual Investors (September 7, 2011).
3. https://academic.oup.com/rfs/article-abstract/22/2/609/1595677
4. https://svwealth.com/wp-content/uploads/2018/04/dalbar_study.pdf


XII



06

Market timing is a wicked idea

Renowned investor and author Charles Ellis once said "Market timing is a wicked idea — don't try it, ever"

If having impressive credentials is any guide, then Charles Ellis should know what he's talking about.

His famous article *"The Loser's Game"* won a Graham and Dodd award in 1977. He was twice appointed to the faculty of Harvard Business School and went to the Yale School of Management in 1986. He chaired the investment committee at Yale from 1997 to 2008 and served on the Board of Directors of Harvard Business School. He also served as the Chair of the Board of the Institute of Chartered Financial Analysts.

So, what is it that convinced Charles Ellis that market timing is a bad idea? A balanced consideration of the evidence.

On the surface, market timing is a zero-sum game. If I sell, someone else buys, and if I buy, someone else sells. Equal and opposing actions in which both parties typically think their side of the trade is the correct one. Given the speculative nature of the trade (i.e. there will be a winner and a loser), one might think that it's the professional managers that would usually come out on top.

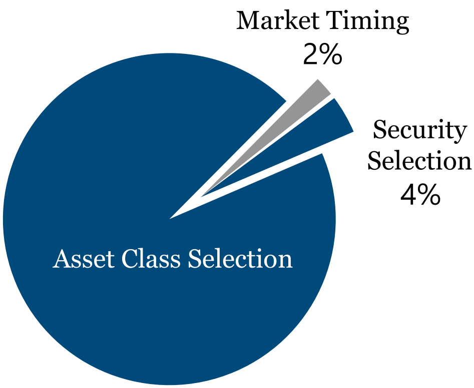
However, many studies have shown that even professional managers are highly likely to get market timing decisions wrong.

One landmark contribution was by Gary P. Brinson, L. Randolph Hood and Gilbert L. Beebower who published an article in the Financial Analysts Journal in July/August 1986 entitled *"Determinants of Portfolio Performance."* It's an impressive sounding title. To understand this subject, the authors studied 91 major corporate pension plans over a 10 year period which included both good and bad markets.

Determinants of Investment Performance

Their conclusion was stunning. They looked at the contribution to returns that resulted from asset allocation, security selection and market timing. They found that large pension funds, with access to the best investment consultants, had LOST 0.66% per year in returns as a result of market timing decisions and that overall market timing only determined 2% of the overall investment performance. The implication was huge. If these large professionally managed pension funds didn't know how to time markets, what chance did the rest of the industry have?

Study of 91 major corporate pension plans over a ten year period which included both good and bad markets.



Gary P. Brinson, L. Randolph Hood and Gilbert L. Beebower, "Determinants of Portfolio Performance," Financial Analyst Journal, July/August 1986.

Important conclusions

Even though selection and market timing explained 6 percent of the viability of returns, the overall contribution to perform was negative. The average plan lost:

- 0.66% per year from market timing decisions
- 0.36% from security selection

— *Gary P.Brinson, L. Randolph Hood and Gilbert L. Beebower, "Determinants of Portfolio Performance," Financial Analysts Journal, July/August 1986.*

The net result of their study led the authors to this conclusion,

> *"Because of its relative importance, investment policy should be addressed carefully and systematically by investors."*

In other words, investors should have a policy that ensures that they behave appropriately and systematically to achieve the desired investment outcomes. Don't leave big decisions to gut feel and speculation but have a system for making good decisions.

Charles Ellis was right. Market timing is a wicked idea. Even the most sophisticated investors seem to lose money trying. The best approach is to have a policy and stick to it. Over time, you are much more likely to get the results you are planning for.

"Market timing is a wicked idea – don't try it, ever."

– Charles Ellis

07

Looking back at market environments helps us look forward

It was March 2nd 2009 and across America people woke up to the headline, "Stocks fall to lowest level since 1997 as Dow drops below 6,800."

The expectations were that it would go even lower and for good reason. More bad news was on the way. At the start of April, the New York Times announced that 663,000 jobs were lost in March in the US alone[1]. Later that month, George Soros, one of the most successful investors of all time said US Banks were basically insolvent[2]. On May 1st, Chrysler filed for bankruptcy, followed one month later by General Motors. The economic outlook was still bleak in June when renowned investor Warren Buffett said that the US economy was a shambles and not showing any signs of recovery[3].

By March 2009, shares had fallen in value by about 50% and, to all observers, markets were getting worse not better. And they were right as evidenced above. But a strange thing happened. Shares started going up. In March alone, shares as measured by the S&P 500, increased in value by a little over 8.5%[4]. Then they went up another 9.5% in April[5] and a little over 5.5% in May[6].

In other words, share prices started to rise before the economy started to recover. They didn't start to rise when the crisis was in hand. They didn't start to rise when the banks were clearly solvent. They didn't start to rise when the bankruptcies had all finished being filed. They didn't start to rise when the job losses had staunched. No, they started to rise when further economic deterioration seemed a near certainty.

> ***Economist and Finance Professor Dr Robert Arnott put it this way, "In investing, what is comfortable is rarely profitable." The market environment in March 2009 reinforced the wisdom of these words.***

As we look at the current crisis, none of us know when things will turn around. But one thing we can be sure of, it won't turn around when the Center for Disease Control and Prevention rings the bell and gives us the all clear! It won't be when the Central Bank gives a rosy report and starts to raise interest rates again. No, by then shares will have already been on the way up for a long time.

Don't miss the recovery, and especially don't miss it waiting to feel comfortable. That's not likely to be a profitable strategy.

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1. https://www.nytimes.com/2009/04/04/business/economy/04jobs.html?pagewanted=all
2. http://in.reuters.com/article/2009/04/06/idINN0638646120090406
3. http://www.cnbc.com/id/31526130
4. https://www.ifa.com/calculator/?i=sp500&g=100000&s=3/1/2009&e=3/31/2009&af=true&aorw=true&perc=true
5. https://www.ifa.com/calculator/?i=sp500&g=100000&s=4/1/2009&e=4/30/2009&af=true&aorw=true&perc=true
6. https://www.ifa.com/calculator/?i=sp500&g=100000&s=5/1/2009&e=5/31/2009&af=true&aorw=true&perc=true

08

Don’t change long term plans due to short term “noise”

You are sitting in your nice, new, comfortable home. You purchased it intending to live there indefinitely which, given your health, you figure is several decades. Just as you are taking it all in, you hear a knock at the front door.

Opening the door, you see someone looking rather stressed and bedraggled.

"Yes?" you say cautiously. Your unexpected visitor announces, *"I'm your neighbour. I just wanted you to know that I'm willing to buy your house today for 60% of what you just paid for it..."*

You quickly interject, *"Uhhh... no thanks,"* and you close the door... firmly.

Unfortunately for you, day after day, that same neighbour shows up to tell you how much he's willing to pay for your house. On most days you manage to ignore him. But he seems to shout the loudest when his price is either really high or really low compared to the price you paid.

Most of us would call the police on such an annoying neighbour. However, we can't call the police on the news outlets that constantly tell us what the market is willing to pay us for our portfolio. But it can be just as annoying.

Similar to buying a house, most people purchase an investment portfolio to provide them with a lifetime of benefits. Despite that very long time horizon, we are exposed, on almost a daily basis, to information about what the market is willing to pay us if we decided to sell out today. But here's the rub, we're not selling out our entire portfolio today, we're not selling out tomorrow and, in fact, we're not selling out for the rest of our lives if we can help it.

Selling out now is counterintuitive anyway. When our noisy neighbour offers us a low price for our house, we ignore him. But when offered a low price for an investment portfolio, people can surprisingly react quite differently. The reason they might act differently is usually a combination of fear and uncertainty.

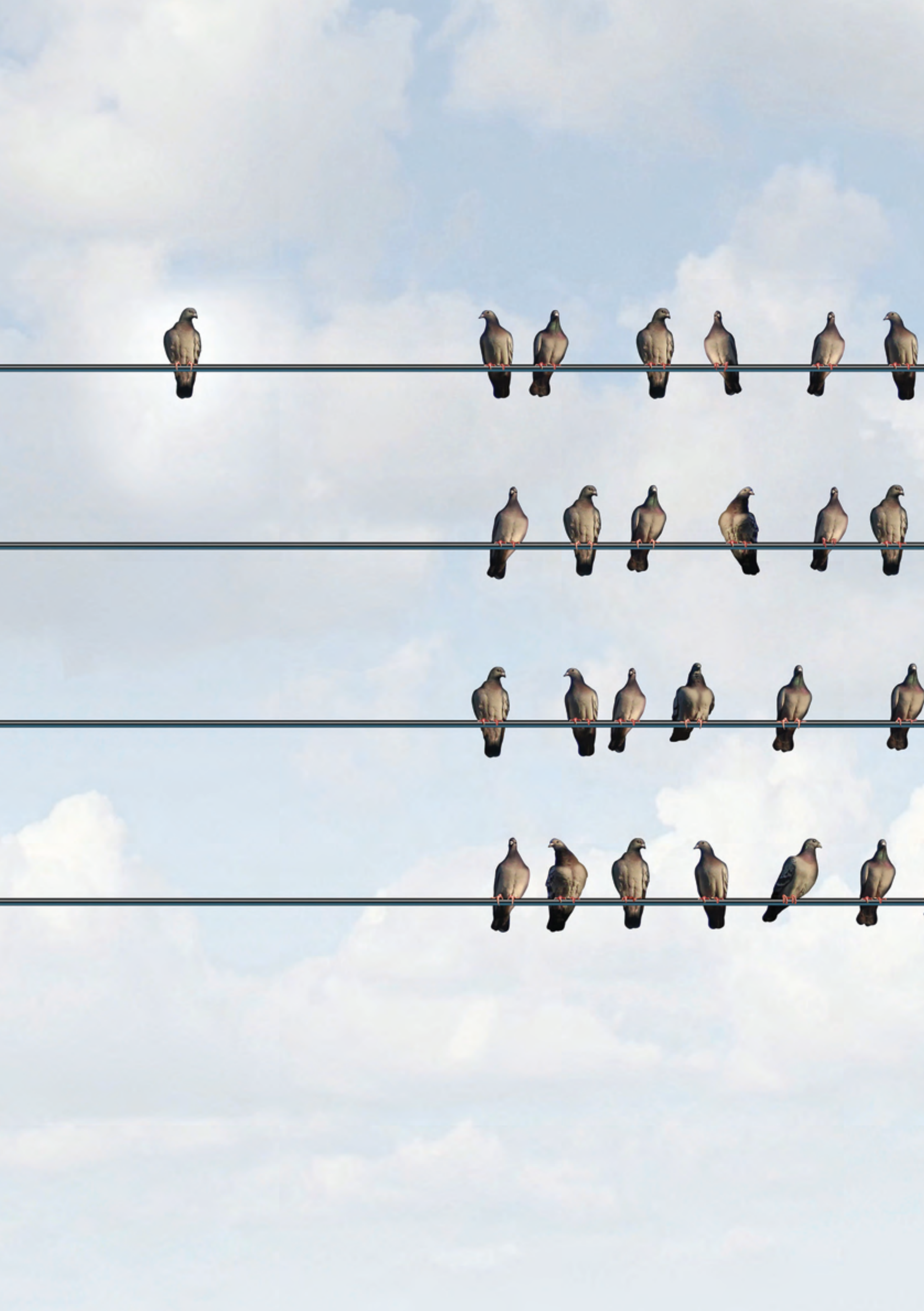
But the ironic part is that many investors feel compelled to sell out just because someone is willing to pay them less than they paid for the same portfolio.

In the long term, selling assets at lower prices than you paid for them is not a profitable strategy. If you were a trader, it would be a fast track to the poor house. It's an especially bad idea to sell long term investment assets just because daily prices may have fallen.

There may not be a worse reason to sell than simply for the reason that someone will pay you less than you paid for the same thing. This is especially true when history tells us that diversified portfolios have always recovered, every single time.

You might say, "but I've lost money and I need to sell while I still can." But the reality is, you only "lose" when you do sell and crystallise the loss. Until then, it's just another crazy price proposal being put forward by your noisy neighbour, Mr Market.

If instead we could view our portfolio like a house which we fully intend live in for decades, perhaps we could treat the daily market noise like an annoying neighbour, one which we are only too happy to ignore.



09

Resist the itch to switch

Day after day we are bombarded by the media and at the moment, we are seeing nothing but bad news. Coverage of the share market is full of headlines with words such as “plunge”, “recession” and “loss” repeated over and over again.

You know you shouldn’t, but just can’t help it; you take a glimpse at your KiwiSaver balance. Gulp! The gains from the previous one or two years are gone.

Your first instinct is to stem the drop, to take some control of the situation.

> ***You think, “I’m not going to sit around and let this happen to me. I’m going to switch from the growth to the conservative fund.” But to avoid sounding too radical, you console yourself by thinking, “When things get better, I’ll switch back.”***

This scenario is unfolding in real time. On 26 March one of the nation’s largest KiwiSaver supervisors commented that “switching,” an industry term for changing your KiwiSaver asset allocation, had increased over 1000% from the previous week.[1]

KiwiSaver is the quintessential long-term investment strategy. Given the average age of the New Zealand workforce is around 43[2], most KiwiSaver investors will have a time horizon of many decades, and some longer than 50 years. Given this time horizon, what could possibly be the reason investors are looking to make changes right now? In a word, “fear.”

Hindsight is a wonderful thing. With the benefit of hindsight, we can evaluate if there is any benefit to switching portfolios in the middle of a crisis.

One of the best studies comes from a financial advisory firm in the USA, Index Funds Advisors (IFA). They analysed the returns of 533 existing client strategies in place as of 1 January 2008 and analysed how their switching decisions during the global financial crisis (GFC) affected their long-term returns.
IFA categorised its clients into three buckets (see chart on page 64):

» **Category 1 (green bar),** were those that followed advice and kept their recommended portfolio.

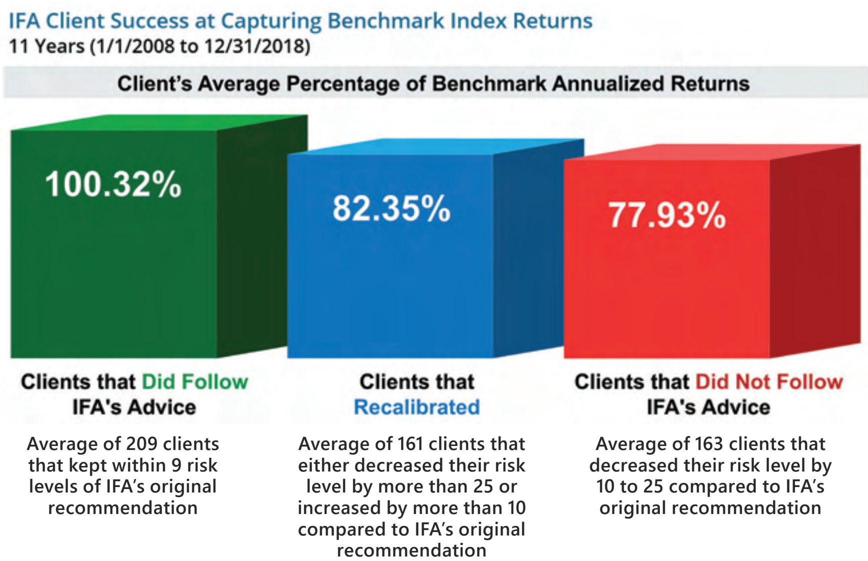
» **Category 2 (blue bar),** were those that recalibrated, generally by decreasing their risk levels by 10% to 25% (e.g. moving from growth to balanced).

» **Category 3 (red bar),** were those that changed their portfolio allocation by more than 25% (e.g. moving from growth to conservative).

So, how successful were those three client categories in capturing the return of the markets over the subsequent 10 years? Clients that took advice and followed it received 100.32% of the return achieved by their original benchmark portfolio. Clients that reduced risk received only 82% of the return achieved by their original benchmark portfolio. Clients in the third category only received 78% of the return achieved by their original benchmark portfolio.

In other words, in the 10 years since the GFC, switching resulted in a significant but altogether avoidable destruction of wealth.

This isn't theory. These were real clients achieving (or not achieving) actual returns.



Source: Internal analysis of 533 portfolios of IFA clients that were clients as of 1/1/2008 and stayed through 12/31/2018. Returns calculated as annualized returns. The benchmark is IFA's recommended IFA Index Portfolio at the beginning of the client relationship. All client index portfolios were evaluated for that 11-year period, which we consider to be a difficult period because it includes a steep drop followed by a full recovery. This is not to be construed as an offer, solicitation, recommendation, or endorsement of any particular security, product, service, or considered to be tax advice. There are no guarantees investment strategies will be successful. Investing involves risks, including possible loss of principal. IFA Index Portfolios are recommended based on an investor's risk capacity, which considers their time horizon, attitude towards risk, net worth, income, and investment knowledge. Take the IFA Risk Capacity Survey to determine which index portfolio matches your risk capacity. © 2021 Index FundAdvisors, Inc. (IFA.com)

Switching due to fear is the equivalent of the common English phrase "to close the stable door after the horse has bolted." In other words, implementing a solution that won't solve the problem. But in the case of switching KiwiSaver allocations, the solution is worse than bolting a gate because it could bring real harm. It has similar logic to accepting amputation as a solution to a sprained ankle.

Of course, when we find ourselves struck by fear, we may not stop to consider the best path to recovery. We are just trying to make the pain stop.

However, we encourage you to "resist the itch to switch." Given a time horizon of decades rather than days, it's your best chance to achieve the long term outcomes you have planned for, and the reason you invested in the first place.

1. https://www.goodreturns.co.nz/article/976516525/kiwisaver-switching-soars.html
2. http://archive.stats.govt.nz/browse_for_stats/population/estimates_and_projections/NationalLabourForceProjections_HOTP15-68/Commentary.aspx

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CASIO

10

Business will never go out of business

Benjamin Roth was a lawyer in Youngstown, Ohio, when the stock market crashed in 1929. Two years later he decided to keep a diary to detail the effects that the financial collapse had on himself, his neighbours, and the nation. Mr. Roth kept his diary for ten years. In the late 1930s, when the depression had mostly passed, he summarised a few points he had learned from the experience. He wrote:

> *"Business will always come back. It will remain neither depressed nor exalted... Depression is a time of greatest profit. The investor who has liquid funds and the courage to act can lay the basis for great profits."*

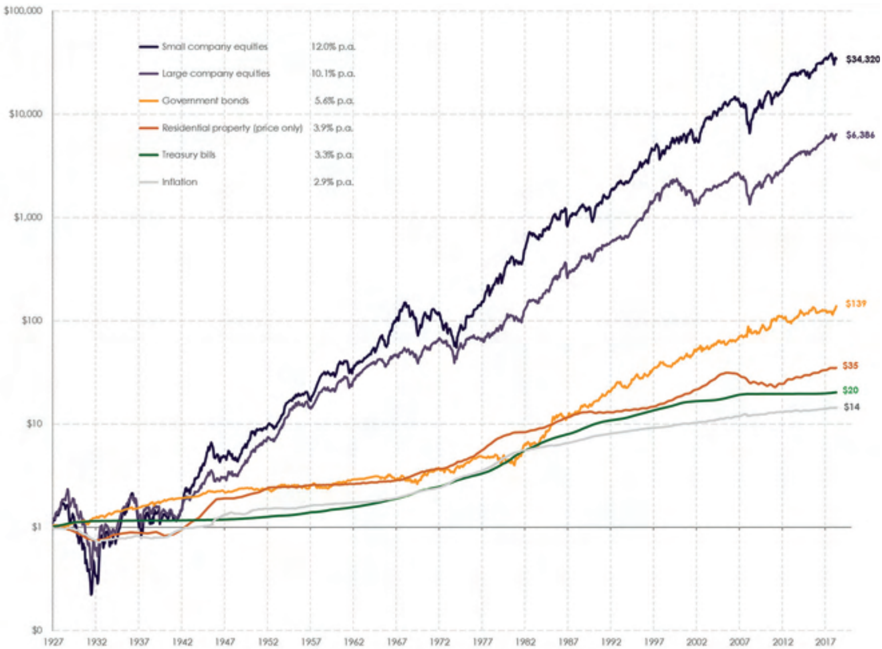
If I could summarise these words of Mr Roth, I would say,

"Whilst any business can go out of business. Business itself will never go out of business."

In a recession (or even a depression) some businesses will fail. They could be businesses chasing unprofitable objectives, businesses overloaded with debt or businesses shackled with poor management. The odds of those businesses failing will be reflected in their price. Each day, every day, the share market is weighing those odds and pricing them accordingly.

But one thing is 100% true. That business in the general, the trading of goods and resources, has never gone out of business. It stared down the great depression. It stared down World War 2. It stared down the oil embargoes. It stared down the global financial crisis. And it will stare down the pandemic of 2020 as well.

The chart below illustrates the point. It shows the growth of various financial market assets over the last 90 or so years.



Analysis period is for June 1927 to March 2019. All returns are in US dollars

Sources: **Small company equities:** 06/1927 to present - Dimensional US Small Cap Index. **Large company equities:** S&P 500 Index (01/1990 to present - the S&P data are provided by Standard & Poor's Index Services Group, 01/1926 to 12/1989 - S&P 500 Index Ibbotson data courtesy of © Stocks, Bonds, Bills and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated works by Roger C. Ibbotson and Rex A. Sinquefield)). **Government bonds:** 01/1926 to present - Long Term Government Bonds (source: Morningstar; former source: Stock, Bonds, Bills and Inflation, Chicago: Ibbotson and Sinquefield, 1986). **Residential property:** 01/1920 to present - Shiller Home Price Index (source: Grebler, Five-CityMedian, PHCPI, FHFA, S&P/Case-Shiller). **Treasury bills:** 01/1926 to present - One-Month US Treasury Bills (source: Morningstar; former source: Stocks, Bonds, Bills and Inflation, Chicago: Ibbotson And Sinquefield, 1986). **Inflation:** US Consumer Price Index (source: Stocks, Bonds, Bills and Inflation, Chicago: Ibbotson and Sinquefield, 1986. Represented by Consumer Price Index for All Urban Consumer (CPI-U), not seasonally adjusted. The CPI is updated with a one month lag).

Note: These materials are only prepared for client education purposes. Consilium has taken every care in preparing this information. Although the data has been sourced from publically available information and/or provided by the investment managers, we are not able to guarantee its accuracy. Past performance, whether actual or simulated, is no guarantee of future performance.

There are many things that could be learned from this chart, but today I'd just like to make the most obvious of points. All lines trend up. Business has never gone out of business.

Now it must be observed that many businesses have failed in the last 90 years. In fact, only about 10% of the original list of S&P 500 firms are still in the S&P 500 today[1]. Yet, for each firm that came and went, another took its place. That's no concern to diversified investors. An investor who did little else but invest in the index earned about 10% per annum (represented by the large company line above). It didn't matter to them that 90% of the businesses came and went. Sure, many businesses failed. But business itself never went out of business.

Fortunately for our investors this is the way their portfolio is structured. They don't own a single "business" as much as they own "business" in general. In their portfolios they own over 8,000 companies traded in over 44 different countries with operations extending around the planet. In effect, they own the power of global capitalism to produce and manufacture goods and services that people want to pay for. This investment has had its up and downs. But such an investment has never failed. Through each and every crisis throughout history, business has survived and thrived every time.

So, let's again quote Mr Roth above, "*Business will always come back.*" And because it will always come back Mr Roth's second observation is also true. When things are bad and prices are low, "*The investor who has liquid funds and the courage to act can lay the basis for great profits.*"

It was true in the 1930's and it's just as true today. Because if history tells us one thing, it's that business will never go out of business.

1. https://books.google.co.nz/books?id=yHV3CAAAQBAJ&pg=PA92&lpg=PA92&dq=Original+S%26P+500+firms+that+have+survived

“Business will always come back. It will remain neither depressed nor exalted... Depression is a time of greatest profit. The investor who has liquid funds and the courage to act can lay the basis for great profits.”

– Benjamin Roth

11

Should I invest, delay or drip feed into the market?

New investors are facing a dilemma.

They might have recently come into a large amount of money due to a business sale or inheritance, or perhaps they've been sitting on term deposits for months now waiting.

They know they want to invest, but they are troubled by the question, *"Do I invest now, because now seems like a frightening time to invest. Or, if I invest at all, should I drip feed my money in over the course of the next year?"* It certainly doesn't help to see headlines like "When will the stock market stop going down?"[1]

However, the above questions and headline have one thing in common — the issue of timing.

I remember years ago when I was a younger adviser and a prospective client walked into the office. They had money to invest but markets were volatile. Our firm suggested they should ignore the headlines and the market volatility and invest now.

"Now?" the investor replied, *"But the market is going down."*

That's when I heard words from an older and much wiser adviser, that I have never forgotten. *"No,"* he said, *"the market isn't going down. It's gone down, and it takes wisdom to know the difference."*

So, what's the difference and why does it take wisdom to know?

"Going" implies something is in the process of happening and that you know where it will end up. When you say the market is "going" down it suggests it is merely in the process of continuing to fall, and you know the market will go lower from here.

If you say instead that the market has "gone" down, it implies that you know what has happened, but you don't necessarily know what will happen next. That is wisdom.

Since the "going down" headline in March, up to the day this was written, the world share index is up about 15%. Was the market really "going" down? Can you ever know where the market is "going"? No, you only know where it's been.

To demonstrate this, we have summarised in the table below the long term performance data of the S&P 500 Index after it has experienced declines. First, we identified any decline of greater than 5% (month end to month end) since World War II until the end of 2019. There were 39 separate instances of a decline of 5%. Then we looked at declines of 10%, 15%, 20%, 25%… all the way up to 50%.

From the point each decline was observed, we then calculated the median return over the subsequent 12, 24 and 36 month periods. If it was true that a decline at any point in time was evidence the market was "going down", then we would expect to see that a 5% decline predicts at least a 10% decline, and so on. In other words, we'd expect the median return after any decline to also be negative.

But that's not what the data shows. What we see is that every time we observe a decline, median returns over the next 12, 24 and 36 month periods are always positive, without exception.

Decline	Number of observations	12-month return after decline	Median case 24-month return after decline	36-month return after decline
-5%	39	+10.83%	+24.94%	+40.09%
-10%	15	+9.97%	+36.90%	+34.08%
-15%	10	+15.91%	+33.93%	+29.28%
-20%	7	+6.45%	+22.77%	+24.47%
-25%	5	+17.36%	+42.24%	+41.79%
-30%	3	+9.80%	+27.94%	+38.29%
-35%	3	+10.65%	+27.94%	+42.81%
-40%	3	+25.39%	+41.65%	+59.01%
-45%	1	+33.14%	+62.67%	+69.54%
-50%	1	+53.62%	+88.30%	+97.95%

Based on the monthly returns of the S&P 500 Index (gross) and in US dollars. Monthly returns current to 30 April 2019 provided by Standard & Poor's Index Services Group. For the purposes of this analysis a downturn is only considered to be completed once a new high watermark index level is achieved. As a downturn increases in magnitude it will be included in subsequent decline thresholds. For example, the -50% event relates to the GFC. This was initially recorded as a -5% decline in its early stages and, as the declines increased, it was progressively analysed as a -10% event, -15% event, etc, as well. The 'return after decline' columns refer to the subsequent change in the value of the index after each of these thresholds have been breached the first time. For example, based on the five observations of the index falling by at least 25%, the median subsequent 12-month return was +17.36%.

Recently the world equity markets experienced a greater than 30% decline peak to trough. History tells us that once such a decline has been observed in the past, the median return 12 months later is a positive 9.80% and 24 months later it is positive 27.94%. This analysis can't rule out the possibility that a 30% decline may lead to a greater decline 12 months later. But history tells us that, on average, that is not what we should expect.

All of this provides some context to the dilemma faced by the investor with cash to invest right now. Do they invest? Do they delay? Do they drip feed in slowly over time?

The reason you would delay, or put assets in slowly, is because you have some expectation that prices will fall. If they do, you would be better off waiting. But where is the evidence that prices are going down from here, relative to even a 12 month time horizon? You don't get that evidence based on an analysis of history, and you certainly don't get that evidence from newspaper headlines.

Back in 2017, Consilium conducted a study looking at a 60% share and 40% fixed interest portfolio. They analysed how often investors were better off investing their cash all at once compared to stretching it out by investing a bit at a time. Consilium's findings were that since 1990, you were better off approximately 70% of the time by investing all your money all at once.[2]

In other words, if you decide to delay investment, you are likely to give up some potential returns. But, even then, there is still a 30% chance that drip feeding could end up being better. Whilst historical analysis can help guide us, the future, as always, is unknowable. And it is impossible to know, with perfect foresight, when it is the right time to invest.

I'm reminded of the quote, *"They say, timing is everything. But they also say, there is never a perfect time for anything."*[3]

Maybe I'm saying the same here. There is never a perfect time.

If you looked unemotionally at the history of markets and of similar investment decisions, you'd go with the odds and invest everything now. However, if you have a tendency to suffer from a fear of regret[4], which, by definition "can play a significant role in dissuading someone from taking action," then perhaps you would be more comfortable to drip feed over time.

Putting in something has a higher expected return than doing nothing. If you can overcome that psychological barrier then perhaps the best advice is:

> **Invest only when you have cash and don't need it. Withdraw only when you need cash and don't have it. Beyond that, laugh, love, live and relax.**

1. https://www.usatoday.com/story/money/personalfinance/2020/03/18/dow-jones-when-stock-market-stop-going-down-bear-marke/5074110002/
2. Study uses Consilium model portfolios from Jan91-Dec17. Risk free asset is NZ 1m bank bills. Returns are in NZD returns and are net of fund management fees, but before custodial, administration, adviser fees and transaction costs, and before tax.
3. https://www.goodreads.com/quotes/7167475-they-say-timing-is-everything-but-then-they-say-there
4. https://www.investopedia.com/terms/r/regrettheory.asp

12

Avoid the prediction addiction

1968 was a great year. New Zealand won a gold in rowing at the Mexico Olympics, The Beatles recorded "Hey Jude", the United States at long last passed the Civil Rights Act and an expert biologist at Stanford predicted the end of humanity.

Well, perhaps that last item wasn't so great.

In 1968, Paul Ehrlich also wrote a best-selling book called The Population Bomb. Drawing on his observations with other animal species, the premise of the book was simple. The world was already overpopulated and still growing exponentially. The earth didn't have enough resources to feed humanity. The result was inevitable. There would be mass starvation leading to nuclear world war, resulting in even worse environmental damage and more starvation.

We have a natural tendency to trust experts.

They usually have impressive credentials to their name and they surely must know more than we do. But while experts can often explain in great detail about what has already happened, it's an open question of how accurate they are at predicting what will happen in the future.

We know this because we can easily test their forecasts for accuracy. Whenever an expert makes a prediction about the future, you simply write it down and check later whether it came true.

Philip Tetlock, noted academic and author, has made a living out of testing the accuracy of forecasts. He conducted a study that included 82,361 expert forecast[1]. To make the analysis simpler he grouped the forecasts into three possible alternatives.

Groupings were based on whether the forecast was for:

1. The status quo remaining;
2. More of something; or
3. Less of something.

So, how impressive were the experts at picking which of those three options the future had in store?

Well, not very as it turned out.

Tetlock found that experts performed worse than they would have if they had simply assigned an equal probability to all three outcomes. In other words, experts were poorer forecasters than random dart-throwing monkeys. Further, Tetlock found that the more famous the forecaster, the worse they were at forecasting!

If this is true of general social sciences, how much better do you think experts will be at predicting the share market?

I'll tell you. They're rubbish.

If you think about it, the price of a share is already a prediction of the future profits of a company. What's knowable is in the price. To predict shares beyond a general trend is the equivalent of trying to predict a prediction. That doesn't sound like an easy task and it's not.

An advisory firm in the US grew tired of the poor quality of forecasts made by so-called experts and decided to test how accurate they really were. They called the test the "Guru Grades". They eventually tracked 68 gurus and graded 6,582 market forecasts. They found the average 'guru' made the right call only 46.9% of the time[2].

Despite forecasting records that make circus fortune tellers look good, market crises, like the one we are currently experiencing, still attract guru economic predictions in their droves. For example:

- Goldman sees 15% jobless rate and 34% GDP decline[3]
- White House Economists Warned in 2019 a Pandemic Could Devastate America[4]
- Coronavirus forecast to cut UK economic output by 15%[5]

Of course, these predictions could turn out to be true. Or, they could turn out to be overstated, or even understated. But what is a fact is that they are merely predictions, guesses if you will, about an uncertain future.

Perhaps Paul Ehrlich was one of these early "gurus". After publishing his theories about overpopulation, he made a bet based on his predictions. The basis of the wager was that Ehrlich could select $1,000 worth of five metals he was sure would become more expensive, as the economy went into collapse because of overpopulation. The bet was that if in 10 years' time the metals were worth more than $1,000 then Ehrlich would be paid the difference. However, if in 10 years' time the metals were worth less than $1,000, Ehrlich would pay the difference. The bet was finalised in 1980.

To give Ehrlich credit, at least he wagered on his own prediction. Ten years later though… he wrote a check for $576.07. It turns out that in the 1960s, 50 out of every 100,000 global citizens died of starvation. By the 1990s that number was 2.6.[6]

It has been over 50 years since Paul Ehrlich wrote ***The Population Bomb*** and, fortunately for all of us, his expert prediction about the end of humanity was, shall we say, premature. And it certainly wasn't reflected in the performance of the share market as measured by the S&P 500, which has increased by about 10,700% in that time.[7]

Fortunately, good investment outcomes don't depend on guru predictions. They depend on having a plan, adjusting the plan as required to stay on track, and staying disciplined.

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3. https://www.cnbc.com/2020/03/31/coronavirus-update-goldman-sees-15percent-jobless-rate-followed-by-record-rebound.html
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13

Hindsight (in) 2020

The stakes were high. Over the last 25 years there had been practically no communication or diplomatic ties between China and the United States. Finally, in 1972, Richard Nixon, of all presidents, was going on an official visit to mainland China.

Would it be a success? Everyone had an opinion, but no one knew for certain.

To a couple of psychologists named Ruth Beyth and Baruch Fischhoff, this presented the perfect test case for a theory known as 'Hindsight Bias', which had never been formally described or studied academically.

Beyth and Fischhoff devised the first experiment to directly test hindsight bias[1]. They asked participants to judge the likelihood of several outcomes of US president Richard Nixon's upcoming visits to Beijing and Moscow. Later, the participants had to recall the probability they originally assigned to the outcomes.

You can guess the result.

The participants in the experiment significantly overestimated the likelihood that the event that did happen, would happen. In fact, the participants "seldom perceived having been very surprised by what had or had not happened."

The psychologists titled their paper "I knew it would happen".

Hindsight bias "refers to the common tendency for people to perceive events that have already occurred as having been more predictable than they actually were before the events took place. As a result, people often believe, after an event has occurred, that they would have predicted, or perhaps even would have known with a high degree of certainty, what the outcome of the event would have been, before the event occurred"[2].

Have you recently thought to yourself something along the lines of, "I could see it coming"? I knew this pandemic would cause mayhem. I should have acted. Well the damage is done now, but next time I'll be smarter."

If you haven't, you'd probably be in the minority. Most have had that thought because that is how we process things as humans. And according to Beyth and Fischhoff, hindsight bias is part of being human.

One question we can ask is this, "does hindsight bias help or hinder good investment outcomes?"

That's the exact question asked by a few different researchers. In a paper titled "Hindsight bias and investment performance"[3], researchers studied investment bankers in Frankfurt and London. They found that (shock and surprise) the investment bankers exhibited strong hindsight bias. But the more interesting finding was that "more biased agents have lower performance." In other words, a high level of hindsight bias seems to lead to worse investment results.

In another study, "Hindsight bias and investment decisions making empirical evidence..."[4], researchers studied stock market investors, bank financial managers and students. They found that "The respondents were unable to learn from previous errors and unable to detect their errors in estimate and recall. This error in prediction leads the investor to bear the risk above their accepted level which is harmful to their wealth."

In other words, if you think the past was more predictable than it really was, you are also likely to think the future is more predictable than it really is. Those prone to a higher hindsight bias may be prone to taking unacceptably higher risks.

Nobel Prize winner Robert Schiller would agree with this hypothesis. In his book *Irrational Exuberance*, Schiller says

> ***"The reason for overconfidence may also have to do with hindsight bias, a tendency to think that one would have known actual events were coming before they happened... Hindsight bias encourages a view of the world as more predictable than it really is."***

One anticipated result of hindsight bias is that it may also lead to regret. In other words, "I knew it would happen and I didn't avoid it and now I'm angry at myself." This might lead to taking risk off the table reasoning that once bitten, twice shy.

2012	**"Middling Year Expected"** Otago Daily Times, 1 Jan 2012	NZX50 Index rose 24%
2013	**"Economic headwinds lurking"** Dominion Post, 29 Jan 2013	NZX50 Index rose 16%
2014	**"We're probably fully valued"** NZ Herald, 1 Jan 2014	NZX50 Index rose 18%
2015	**"Bull run near end of tether"** NZ Herald, 3 Jan 2015	NZX50 Index rose 14%
2016	**"End of golden run"** NBR, Jan 2016	NZX50 Index rose 9%
2017	**"The easy gains for share investors appear to be over"** Noted, Jan 2017	NZX50 Index rose 22%
2018	**"Are you ready for the great stock market melt-up?"** NZ Herald, 26 Jan 2018	NZX50 Index rose 5%
2019	**"The bull market is dead, the stock market party is over'** NZ Herald, 17 Dec 2018	NZX50 Index rose 30%

One way to correct hindsight bias is to look at the many predictions that have been made that are just flat out wrong. Here are a few about the New Zealand share market...

Clearly, future events aren't as predictable as they appear. I mean who could have known for certain that Richard Nixon would successfully thaw relations with China and the USSR? Before the trip, there weren't many regarding that as a likely outcome.

So, if you feel like you saw the Coronavirus coming and regret not taking more decisive action, well that just makes you… normal. We are all programmed to feel that way. Our minds desperately want to live in a sensible, predictable world, not one with remote probabilities that can become big problems.

That's okay, in fact, it's human nature. By acknowledging that, you can hopefully avoid coming to the 'hindsight biased' conclusion "I knew it would happen."

As Sophocles put it in Oedipus Rex,

"I have no desire to suffer twice, in reality and then in retrospect."

1. https://www.sciencedirect.com/science/article/abs/pii/0030507375900021
2. https://en.wikipedia.org/wiki/Hindsight_bias#History
3. https://warwick.ac.uk/fac/soc/wbs/subjects/finance/events/recentevents/pastevents/behaviouralfinance-1day/biaisweber2006_2.pdf
4. https://www.researchgate.net/publication/282757809
5. Irrational Exuberance, Schiller (2000, p. 143)

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When is the best time to be in shares?

I love orchards and fruiting plants. So, I have a habit of visiting plant nurseries and gardening stores just to gather information, even when I'm not sure what I'll buy. One day I went to a garden centre to look at apple trees.

I asked the owner, *"So when is the best time of year to plant an apple tree?"* He responded, *"Now."*

Unfortunately, I still needed to do quite a lot of work to prepare the ground and I wasn't quite ready to purchase an apple tree at that moment. But I made a note to myself to come back at the same time next year.

About 6 months later, I found myself back at that garden centre gathering more information. Again, I was looking at apple trees and once again asked, *"When is the best time of year to plant an apple tree?"* The owner responded, *"Now."*

"Wait a minute," I retorted, *"didn't you say that six months ago was the best time to plant an apple tree?"* The owner looked at me wisely and said, *"The best time to plant an apple tree was actually 10 years ago."*

A lot of investors ask themselves the question, "When is the best time to invest in shares?" They may think, "prices are down, now is a good time to invest." Or perhaps they think, "prices are down, maybe I should wait." But by trying to figure out the right time to invest in shares most investors really just accomplish one thing.

They don't invest in shares.

Most investors we work with count their investing time horizon in decades. With advances in modern medicine, a 65-year-old, new retiree should really think about their money lasting three decades. If that's true of a 65-year-old, then a 40 or 50-year-old may have half a century to invest.

The reality is that for an investor that counts their time horizon in decades rather than months, there is never really a bad time to invest in shares.

But how can that be true?

Well, just look at the long-term data. It's possible to look at 30-year investment windows to see how shares have performed. We can view data for the S&P 500 Index going back to January 1926. For example, if you invested in January 1926, you would have completed 30-years of investment by December 1955. This 30-year window would have included the Great Depression, World War II and the Korean War. Given these events, you'd think this time frame wouldn't be a particularly good time to invest. However, over that 30-year window, the S&P 500 Index earned a compound return of 10.2% per annum.

From December 1955 until March 2020, we can examine a further 772 different rolling 30-year windows to see how all long term investors in the S&P 500 Index would have fared. What is startling in the chart below is the consistency of returns which, two thirds of the time, range between 9% and 12%.

During the best performing 30-year window, an investor earned a compound return of 14.8% per annum. But even over the lowest performing 30-year window, an investor still earned a tidy 7.8% per annum compound return. The investors who achieved the 7.8% p.a. returns started investing the month before the 1929 share market crash. Still, if they stayed the course and maintained their investment, their returns would have been just fine. The median return over all rolling 30-year periods was 10.9% p.a.

In New Zealand, we can look at NZX50 gross index returns going back to July 1991. For those counting, that is 345 months ago. So, it will be a little over a year until we complete our first 30-year time horizon using that particular index. However, we can still calculate the returns if an investor had started investing in July 1991, and simply bought and held the NZX50 index.

Our last complete month of observations was March 2020 when the NZX50 index experienced a negative 13% return. All the same, an investor who began investing in the index July 1991 and maintained their investment, experienced a compound return of 9.54% p.a. Remember, this time period includes the Asian Financial Crisis, the tech wreck, the Global Financial Crisis and the start of the COVID-19 downturn. It includes all those shaky markets, yet the compound return is still 9.54% p.a.

With this in mind, I can see the wisdom of the person selling fruit trees. In my back yard I have a pear tree which is approximately 30 years old. This season it produced a bumper crop of fruit, so much that I gave fruit away, bottled what I could, ate fruit every day along with my entire family and I still couldn't keep up. But those apple trees I bought just a few years ago... well let's just say that they are coming along.

If I want a productive garden of fruit trees the most important thing is to start. The timing isn't the critical element. The man at the store knows that when people feel it isn't the perfect time to plant a tree they delay, they move on to other things, they forget about it, and often they'll miss years of productive growing time, all because they were waiting for the perfect time.

For most of us investing for a lifetime, the time to start is nearly always now or even better, 10 years ago. As the phrase goes, it's time in the market rather than timing the market that really matters, for the investor and for the amateur orchardist.

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The genius of regular saving into KiwiSaver

George Soros, billionaire and famous investor once said,

> *"If investing is entertaining, if you're having fun, you're probably not making any money. Good investing is boring."*[1]

Bolstered then by Soros's quote, and supported by a lot of math, we embark on a discussion of the most "boring" but perhaps the most "good" of all investment techniques. That is...ready for it... **a regular savings plan.**

But why at a time like this would we talk about regular savings?

Flashback to the GFC around November 2008. The market had been going down for months and months. Investment banking firm Lehman Brothers was already bankrupt, and it looked like the entire financial system might crumble.

My sister phoned me and said *"Hey, at my work people are talking about suspending all their regular savings. Everything is just going down. Should I suspend my savings?"*

Most employed people who sign up for KiwiSaver are in the same category. Every time they are paid, a portion of their salary goes into their KiwiSaver account. Through this mechanism they persistently purchase more and more shares each time.

Behind the scenes, there is absolute genius in this "boring" investment methodology, and it can only be truly appreciated when markets are volatile, either going down or up in price. So, what makes this such a powerful approach?

Let’s say that you are regularly contributing $1,000 a month into a savings scheme. When markets go down, that $1,000 per month purchases relatively more shares. When markets go up that $1,000 a month purchases relatively less shares.

That’s just obvious. But why would that be a form of genius? Well, think about it. You have just instituted a system that automatically buys more of something when prices are low and less of something when prices are high. That sounds like a good investment plan.

For those readers that are mathematicians or engineers, let me prove this to you mathematically. The table below is from one of the best investment authors of the past 20 years, Nick Murray[1]. It highlights a market that over 24 months makes 0.00% return. However, over the first 12 months prices go down 30%, and then over the next 12 months prices recover back to where they started.

Most investors would look at such a market from start to finish as just treading water. But they’d be mistaken. To the regular saver, such a market has been a total success. By employing their technique of buying relatively more shares as prices fall and relatively less as prices rise, the regular saver has soundly beaten the market during the dip.

Let's trace what happens month by month.

Month	Investment	Net Asset Value	Shares Purchased	Total Shares Owned	Ending Investment Value
1	$1,000	$20.00	50.00	50.00	$1,000.00
2	$1,000	$19.50	51.28	101.28	$1,975.00
3	$1,000	$19.00	52.63	153.91	$2,924.36
4	$1,000	$18.50	54.05	207.97	$3,847.40
5	$1,000	$18.00	55.56	263.52	$4,743.42
6	$1,000	$17.50	57.14	320.67	$5,611.66
7	$1,000	$17.00	58.82	379.49	$6,451.32
8	$1,000	$16.50	60.61	440.10	$7,261.58
9	$1,000	$16.00	62.50	502.60	$8,041.53
10	$1,000	$15.50	64.52	567.11	$8,790.23
11	$1,000	$15.00	66.67	633.78	$9,506.68
12	$1,000	$14.50	68.97	702.74	$10,189.79
13	$1,000	$14.00	71.43	774.17	$10,838.42
14	$1,000	$14.50	68.97	843.14	$12,225.50
15	$1,000	$15.00	66.67	909.80	$13,647.07
16	$1,000	$15.50	64.52	974.32	$15,101.97
17	$1,000	$16.00	62.50	1036.82	$16,589.13
18	$1,000	$16.50	60.61	1097.43	$18,107.54
19	$1,000	$17.00	58.82	1156.25	$19,656.26
20	$1,000	$17.50	57.14	1213.39	$21,234.38
21	$1,000	$18.00	55.56	1268.95	$22,841.08
22	$1,000	$18.50	54.05	1323.00	$24,475.55
23	$1,000	$19.00	52.63	1375.63	$26,137.06
24	$1,000	$19.50	51.28	1426.92	$27,824.87
Ending Value		**$20.00**		**1426.92**	**$28,538.33**

Total Investment	$24,000
Shares Owned	1426.92
Net Asset Value Per Share	$20.00
Ending Investment Value	$28,538.33
Share Return	0.00%
Investor Return (IRR Annualised)	17.59%

The shares started at $20 and finished at $20, so they clearly generated 0.00% return over 24 months. But the regular saver, who did nothing more than automatically invest their $1,000 a month, earned an internal rate of return (IRR, also known as money weighted return) of 17.59%.

The regular saver was able to purchase the greatest monthly quantity of shares at the lowest prices. For example, when prices (represented by the term Net Asset Value) had dropped to $14.00, the regular saver purchased 71.43 units. When the price was $20.00 the investor only purchased 50 units.

By the time the market recovered, those shares purchased at a price of $14.00 had strongly appreciated in value. In fact, by the end of the period, all the monthly share purchases were showing a profit, except for the shares purchased at $20, which were breaking even.

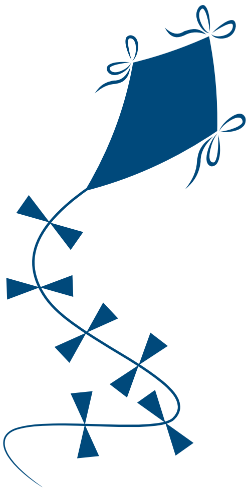
> *Once the regular saver catches on to the power of this methodology, their fears of volatile (or bear) markets should disappear, or at least reduce significantly. Nick Murray probably put it best when he said regular saving "makes you love — and long for — bear markets."*

For those of you that are investing in a KiwiSaver scheme, **you are regular savers.** This technique is at work for you right now, but **only if** you keep contributing.

Who knows when markets will get back to where they were in early February 2020. But for a regular saver, the longer they can purchase shares at low prices the better off they'll be in the long run.

Whilst this may seem a little "boring" just remember what George Soros said, "if you're having fun, you're probably not making any money."

As for my sister, she continued to contribute into her saving scheme and did pretty well. I made a point to check on her balance a year later and she was up 45%. Her workmates, who 12 months prior thought it was a good time to stop their regular savings, hadn't done anywhere near as well. When they looked at their respective balances, I'm pretty sure I knew who was having more fun!



1. George Soros, As quoted in The Winning Investment Habits of Warren Buffett & George Soros (2006) by Mark Tier, p. 217
2. https://www.amazon.com/Simple-Wealth-Inevitable-Revised/dp/0966976347

“If investing is entertaining, if you’re having fun, you’re probably not making any money. Good investing is boring.”

– George Soros

16

The greatest sharebroker tip of all time

It was the early 1950s. A young PhD student at the University of Chicago was working on ideas for his PhD. He was waiting patiently in a lounge for a chance to talk to his dissertation adviser. Little did he know that he was about to have a conversation which 40 years later would see him awarded the Nobel Prize in Economics.

But this life changing conversation wasn't with his dissertation adviser.

Sitting in the lounge that day was a sharebroker. The student and the sharebroker struck up a conversation and they soon began discussing the student's ideas for his PhD. The sharebroker asked if the student could apply his ideas about statistics and linear programming to the problems of the share market. The student was intrigued and so was his dissertation adviser (when he eventually saw him). His thesis topic was beginning to develop, and the student was sent to meet with the dean of the business school to get more insight on shares.

The dean also found this to be an interesting idea and recommended the student read a book by John Burr Williams. At the time it was considered one of the best scholarly pieces on shares. Williams himself had been a sharebroker, but this was a challenging vocation during the Wall Street crash of 1929 and the subsequent economic depression. He enrolled at Harvard in 1932 to study what caused these events, and his eventual thesis was "*The Theory of Investment Value.*"

The name of our young student was Harry Markowitz. He read John Burr Williams' paper and was struck almost immediately by the illogic of it. Williams began his paper by saying,

"No buyer considered all the securities equally attractive at their present market prices... on the contrary, he seeks "the best at the price."

Taken to its logical conclusion, to follow Williams advice would be to find the very best security at the very best price and put all your money into it. Most would think that's foolhardy. Didn't grandma say, *"Don't put all your eggs in one basket?"*

Markowitz realised that investors don't simply seek the best return. They also want that return to be as certain as possible. In his 1952 paper *"Portfolio Selection"*, Markowitz noted that portfolio selection is for investors who "consider expected return a desirable thing and variance of the return an undesirable thing."

Markowitz never actually mentions the word "risk" in his paper. He simply says that variance of return is undesirable. With this single insight, Markowitz totally rejected Williams' idea that a good investment is simply "the best at the price."

Markowitz argued that the best investment was the one that gave investors the best expected return with the least amount of uncertainty.

But how can this be achieved? In his paper, Markowitz showed that by owning many different securities instead of just a few (an approach known as diversification), investors can achieve greater certainty of investment outcomes, without any reduction in expected return.

> *Peter Bernstein put it this way, "The mathematics of diversification helps to explain its attraction. While the return on a diversified portfolio will be equal to the average of the rate of return of its individual holdings, it's volatility will be less than the average volatility of its individual holdings. This means diversification is a kind of free lunch at which you can combine a group of risky securities with high expected return into a relatively low risk portfolio."*[1]

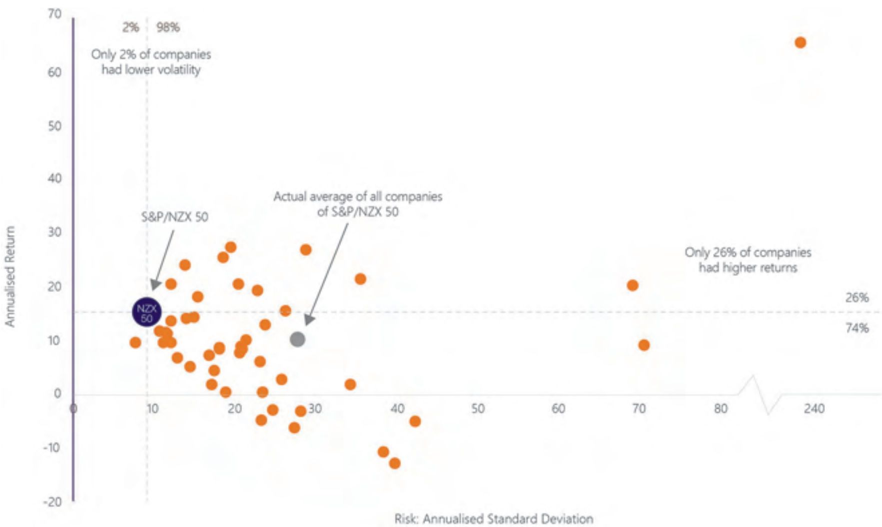
The risk and return of the S&P/NZX 50 Index graph (below) sums all this up. It shows the volatility and return of all components of the NZX 50 Index from May 2009 to April 2019 plotted on two axes. On the vertical axis is return. The higher the better. On the horizontal axis is volatility as a measure of uncertainty. The lower the better.

The orange dots represent the companies that make up the NZX50 Index. They look randomly scattered but the dot labelled NZX 50 is the combined market weighted return of all the orange dots. The NZX50 dot has two outstanding features:

- It has lower volatility than 98% of its component companies.
- It has higher returns than 74% of its component companies.

Now, you could play the John Burr Williams game of pick your favourite orange dot and hope. Or you could follow Harry Markowitz and simply buy a diversified portfolio of all the orange dots.

It could be that the anonymous sharebroker who met the young student Markowitz in the early 1950s gave him the greatest share "tip" of all time. It is simple to apply and easy to prove and provides investors greater certainty of achieving a better than average outcome. That's one tip worth taking.



Think of diversification as your buddy. In these days of social isolation (maybe especially in these days of social isolation), we need all the buddies we can get.

1. Peter L. Bernstein, "Against the Gods, The Remarkable Story of Risk".

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