

PRIMER

# Tactical Asset Allocation

JUNE 2023

## Transparency

The Purpose Tactical Asset Allocation (Tactical) management team has guiding principles, including transparency. It is your money, and we believe you should not only see what you own but how we manage it.

Tactical is a quantitative rules-based portfolio, but it is not a black box. In the coming pages, we will share our models, sensitivities, how and why we developed the strategy, and analytics on what kind of market it works best and what kind of market it doesn't. Plus, we examine how it has performed since launching in 2011 on the Separately Managed Account platform, in 2015 as a mutual fund and in 2017 as an ETF. We dislike the lack of transparency present in many strategies in the financial industry and strive to be different and transparent. It is your money.

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## Characteristics

<b>Asset class</b>	Tactical Balanced
<b>Geographic</b>	North American
<b>Focus</b>	Equity & Bond ETFs
<b>Objective</b>	Risk Reducing Side Care Strategy
<b>Approx. # of holdings</b>	3-8
<b>Estimated annual trades</b>	High Turnover
<b>Benchmark</b>	40% TSX/20% S&P 500/40% FTSE Dex

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## Manager Team



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# WHAT IS THE PURPOSE TACTICAL ASSET ALLOCATION FUND/ETF (TACTICAL)

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- The Tactical strategy uses a systematic, rules-based approach to increase equity exposure in up markets and increase bond exposure in down markets.
  - The holdings can oscillate between 100% equity and 100% bonds/cash, implementing this strategy by using a selection of broad-based exchange-traded funds (ETFs).
  - With 90% of the portfolio following disciplined multi-factor signals, emotion is largely eliminated from the decision of whether to be more bullish or bearish. The remaining 10% invests in long-only ETFs or cash-based at the manager's discretion.
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- This tactical investment strategy uses ETFs as a vehicle that can easily and efficiently change the equity/bond allocation for the portfolio. This is not a model ETF portfolio that uses static asset allocation approaches.
  - Market swings have become bigger and occur more rapidly, an environment that is not ideal for a static asset allocation approach. Adding Tactical to complement a diversified portfolio can provide a tactical tilt to an overall portfolio and reduce total volatility while not sacrificing expected returns. This is the foundation of the Tactical strategy.
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- The primary objective is to get defensive quickly when markets correct, to provide a stabilizer for the portfolio, and to retain value. The second objective is to capture a reasonable amount of market upswings. It is much easier to make money if you don't lose it first.

# 1.0 WHY BE TACTICAL WITH YOUR ASSET ALLOCATION

## **Asset allocation is often the most significant factor in determining a portfolio's returns and volatility.**

This is why asset allocation sits as the foundation of just about every portfolio, attempting to find the “optimal” mix of asset classes to create the highest likelihood of achieving the investor objectives. Asset class characteristics, such as return and volatility, are usually based on history, sometimes a very long-term history. Ultimately, you have a long-term asset allocation that best matches the investor's long-term goals. This allocation is then populated with various investment vehicles, whether individual securities, pooled funds, ETFs, etc.

This approach has worked for investors over the decades, and we believe it should remain the foundational core of properly constructed portfolios. However, we also believe this prescribed asset allocation is not written in stone, and value can be added by tactically tilting around this baseline allocation. Here are some additional reasons to support being tactical:

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### **a. Markets have evolved**

Most investors would agree that markets have changed. To be fair, markets have always changed and evolved. It would seem today that the markets are now faster than ever before due to the behaviour of participants, technology, and available investment vehicles. **Could society's ever-shortening attention span be translating into shorter investment time horizons?** Whatever the cause, this evolved market appears to be creating bigger up-swings and down-swings and appears more suited for a tactical component to asset allocation than a static, set it and forget it, allocation.

### **b. Defence has become harder to find**

There was a time that international diversification really helped reduce portfolio volatility. Today, markets are more and more interconnected, reducing this risk reduction benefit. Or how about complex strategies that sound great yet often fail to deliver. Or the king of portfolio stabilizers – bonds. Clearly dropped the ball in 2022, but now with yields, dare we say, back to normal, bonds are back. This is good news for all portfolios that

own bonds. Unfortunately, with yields so low for so many years, many investors/ portfolios have tilted their bond allocation towards more credit exposure. While this has helped with the yield issue, it has reduced the defensive characteristics of the bond allocation.

### **c. Muted return expectations**

Longer-term forward return expectations for bonds are clearly better today than many years past, given higher yields. Equities may not deliver as much performance in the next cycle. In the long run, equity performance's biggest determinant is earnings growth. More normal yields have stopped financially engineered earnings growth (issue bond, buyback stock) while margins are falling as costs catch up. With less stimulus, higher yields, and higher costs with rising uncertainty, the years ahead are likelier to be below average from an equity performance perspective. That doesn't mean market swings will be below average, and tilting a portfolio to have more equity in upswings and less equity in downswings will have a more material impact in a lower-return world.

## 1.0 WHY BE TACTICAL WITH YOUR ASSET ALLOCATION

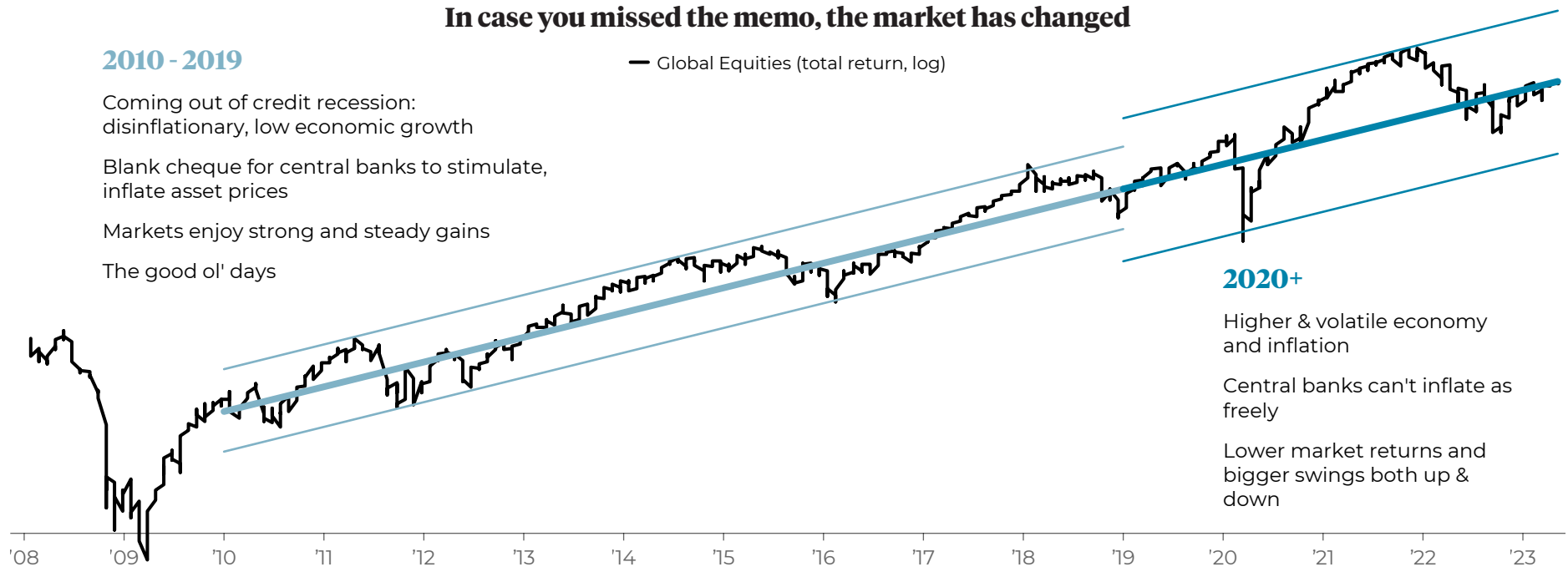
### Markets have evolved

Over the years, both investors and advisors have been taught “it’s about time in the market that matters, not market timing.” We do not disagree with this for the core of investor portfolios; however, markets evolve

over time, and so should your investment process. The 2010s was a great time for investing, with lots of stimuli, dormant inflation keeping yields low, and the increased use of leverage – a perfect elixir

for markets. But this has changed. You can blame the pandemic, the overuse of central bank balance sheets, inflation, or the rise of the quants. The path forward is likely bigger swings and a flatter trajectory.

### In case you missed the memo, the market has changed



Market swings have become larger and more pronounced in recent years, both up and down, due to a combination of fund flows, high-frequency trading, and more fast money. There was a time a few decades ago that the average holding period for an NYSE-

listed stock was over a decade. Now it is between 2 and 3 years. ETF flows, measured in the billions, can change from inflows to outflows from one month to the next (or one day to the next) due to investor appetite or changing mood. In addition, there are

sizable amounts of capital allocated to quantitative strategies that move in and out of the market relatively quickly ***[ironically, that does include our Tactical strategy]***. This all feeds bigger, faster market swings.

## 1.0 WHY BE TACTICAL WITH YOUR ASSET ALLOCATION

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### **A static asset allocation appears ill-equipped for today's markets.**

We believe the need to have a tactical component within a diversified portfolio has never been greater. The chart above highlights how things have changed. Truthfully, we believe the 2010s were the anomaly, and we are now re-entering a more normal market. Normal equalling bigger swings, **making this a challenging investing environment, especially for buy-and-hold static allocations.**

Of course, the difficult part is how to be tactical successfully. One approach used by many of the greats is to be contrarian. This requires an unyielding internal fortitude to make calls, often against the consensus or prevailing views, which could just as easily prove wrong. Or be the wrong call for quarters, even years, before being proven right. This does create business risk for advisors as contrarians are rarely popular.

Then there is implementation. You need a repeatable approach that can be

implemented quickly and easily across many households to be effective. Historically, however, the private wealth industry has been primarily hamstrung in this goal, given the many administrative hurdles and a lack of suitable tools.

This was our motivation to create the Tactical strategy back in 2011. Ours is a rules-based strategy that removes human emotion from the equation and can oscillate from as much as 100% equity to 0% equity and 100% bonds/cash. While nobody should change their asset allocation that much, Tactical moves to such a large degree to allow a small allocation within the portfolio to tilt the overall asset mix. As equity markets rise, Tactical will tilt the portfolio slightly more towards equities, and as equity markets weaken, the portfolio tilts more towards bonds.

**This strategy is designed to add a tactical rules-based component to an overall portfolio.**

### **Timing is challenging**

Full disclosure, launching Tactical in 2011 was poor timing on our part as investors should have just strapped on market beta and turned off their quote machines for near a decade. Tactical performed as designed but it wasn't until the volatility of 2018/2019+ returned that our strategy began to garner increased attention.

**The 2010s were a beta market, we believe the 2020s will prove to be a tactical market.**

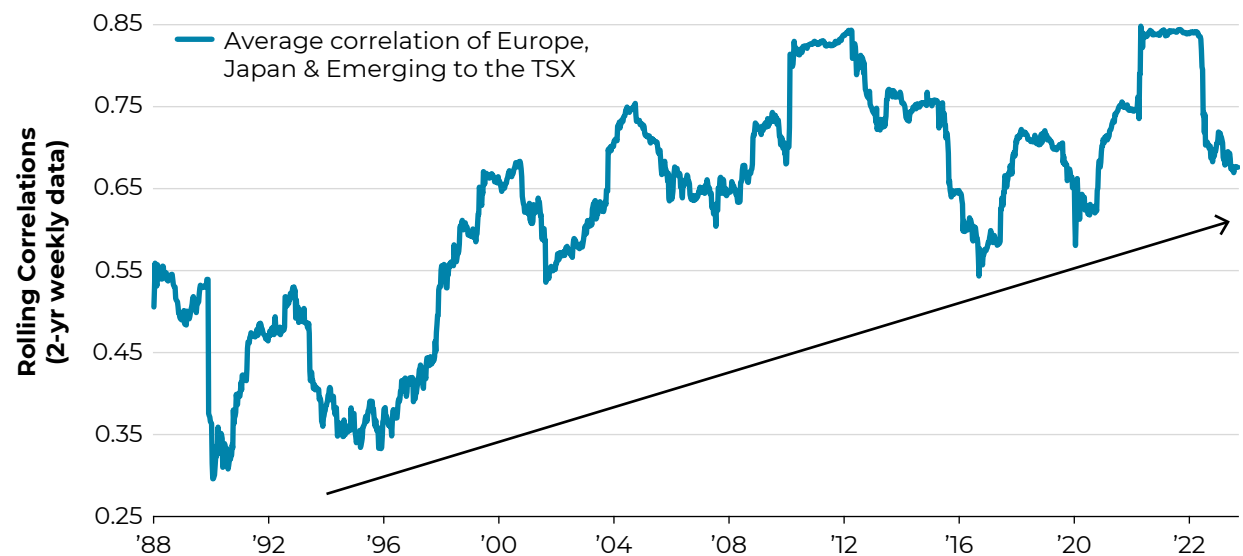
## 1.0 WHY BE TACTICAL WITH YOUR ASSET ALLOCATION

### Defence has become harder to find

Historically, finding and incorporating stabilizing components within a portfolio was easier. One more reliable source was international diversification. More often than not, markets would move on their own idiosyncratic factors, greatly benefitting portfolios as adding more international equities provided a different performance stream and, combined, a less volatile portfolio. Unfortunately, the correlations between various equity markets and the Canadian equity market has risen over the past few years. In other words, markets are moving more in unison.

There are likely a number of contributing factors that have made international equity markets move more as one compared with decades past. First, the speed of news is certainly a factor. Twenty or thirty years ago, news still travelled quickly but not with as much detail as today's world. If an earthquake occurred, it was first a headline, then text, then maybe pictures would gradually make the rounds on the news wires. Today, you could probably get a live feed from someone's smartphone, as pictures and videos circulate almost in real time.

### International diversification is not the diversifier it used to be



Source: Bloomberg, Purpose Investments

Another factor that has likely reduced the risk benefits of international diversification is the current macro world in which we live and invest. Central banks and policy are now bigger drivers of asset prices, impacting all asset prices. For example, the U.S. Fed raising or cutting rates or buying and selling bonds impacts the prices of U.S. assets and assets in other countries. The world is just more connected.

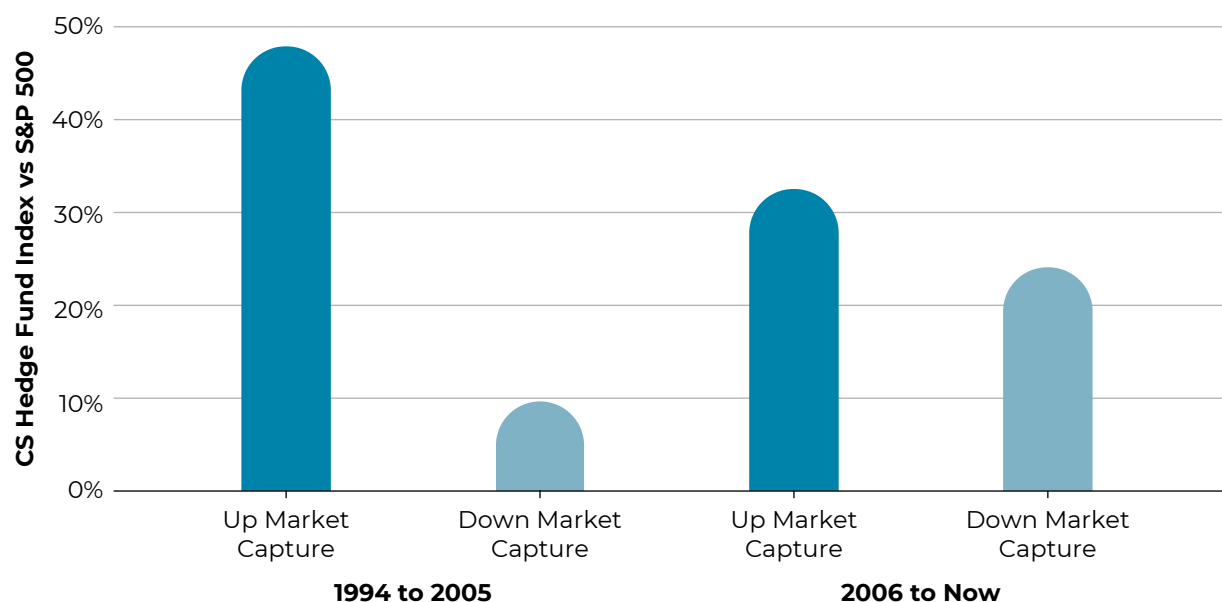
There is still a **huge** benefit of international diversification. Long term it provides investors exposure to companies and economies that are growing at different paces than the domestic economy. This provides a performance or return benefit. It is just the risk reduction benefit is not what it used to be. Comparing the correlation of several international markets to the TSX, you can easily see an upward move in correlations in the past decade compared with decades past.

## 1.0 WHY BE TACTICAL WITH YOUR ASSET ALLOCATION

Defence has also become harder to find in the alternatives universe. Alternative strategies have been steadily gaining acceptance and a place among many portfolios over the years. This is good news as many of these strategies do provide a differentiated performance stream – sometimes more growth, sometimes more defence, sometimes more income. We continue to support the adoption of alternatives within a portfolio, but we have noticed the diversification benefits are not what they used to be.

In the 1990s and early 2000s, the up-and-down market capture of the Credit Suisse Hedge Fund index provided a decent amount of upside with excellent downside protection. Unfortunately, the upmarket capture has fallen in the last 15 years while the downmarket capture has increased. There are likely a few causes. First, as hedge funds grow in assets, it does become more challenging to implement unique strategies that may not scale. Also, since markets have been so strong over the past few decades, many have likely tilted their strategies to have more market exposure. Good for returns but bad for risk reduction.

### Alternatives still offer diversification, but not nearly as much as they used to



Source: Bloomberg, Purpose Investments

We would note that a hedge fund index captures so many different strategies; some have worked fantastically, others have not. In this space, due diligence is a must.

Then there are bonds, historically a provider of income and stabilization for a portfolio. However, with yields so low for so long, most portfolios have tilted the bond allocation increasingly towards investment grade,

high yield, preferreds, or other strategies that incorporate much more credit risk vs duration risk. There is nothing wrong with this; it was almost required, given the yield environment and cash flow needs of investors. But credit-heavy bond allocations do not have the defensive characteristics that traditional government bonds offer. Defence has been sacrificed for cash flow.



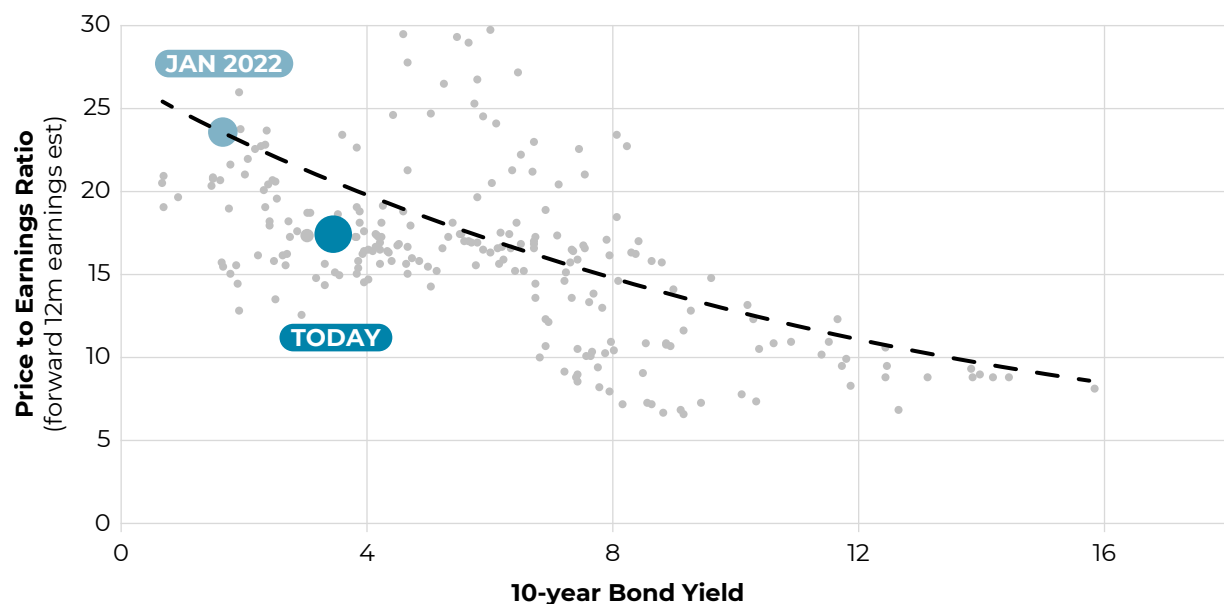
## 1.0 WHY BE TACTICAL WITH YOUR ASSET ALLOCATION

### Muted return expectations for equities, better for bonds

Investing is not easy and never has been. However, the healthy performance of bonds and equities over the past 30 years has certainly helped reduce the portfolio impact of any missteps along the way. The adage “a rising tide lifts all boats” certainly holds true. Over the past three decades, Canadian equities (8.4%), global equities in C\$ (8.1%) and Canadian bonds (5.2%) have all enjoyed pretty robust annualized returns. Sure, that bond return has been lower, but at a much smoother path. This is a pretty friendly environment for creating wealth with a standard 60/40 buy-and-hold strategy.

The previous decade was still kind to a standard 60/40 mix, but worth noting almost all the returns came from the equity side of the portfolio. Fortunately, with stimulus and increased financial leverage among corporations, earnings growth was strong. Helping the 60 overcompensate to offset a more muted contribution from the 40. Then there was 2022 when both went down together. This great reset, while painful, has a positive after-effect – bonds have a reasonable yield again.

### S&P 500 P/E Ratio & Bond Yields



Source: Bloomberg, Purpose Investments, S&P, 1962-2023

What about the next five years? The good news is that bonds now have a decent yield, which historically is the best proxy for return expectations. The Canadian bond universe has a yield to worse of 4.3%, one of the higher levels available in a number of years. This means equities will not have to contribute as much to reach a respectable overall rate of return. This is good news since equities may be challenged to deliver

as much as in years past for a few reasons. Equity returns can be decomposed into three components:

**Dividends** – This is the steady eddy. While dividends have been known to fall a bit in recession times, the dividend stream of a diversified index is pretty stable and grows over time. We expect this performance contribution to remain stable in the coming years.

## 1.0 WHY BE TACTICAL WITH YOUR ASSET ALLOCATION

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Multiple expansion – By far the most volatile of the components, in the long turn, this is a zero-sum contributor. Some years provide a positive boost, and some years a negative. However, in the coming years, with the belief that inflation and yields will remain higher than in years past, multiple expansion may be hard to come by.

Earnings growth – There is no denying many years of ample liquidity and low yields enabled companies to enhance earnings growth. Issuing debt and buying back shares resulted in earnings growth on the back of increasing corporate leverage (debt). But now, with the cost of debt much higher and the availability less ubiquitous, this financial lever for driving earnings growth is much less effective.

It gets a bit worse as margins are starting to come under pressure. Even as inflation rose,

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companies maintained profit margins by either passing on costs or being proactive in cost reduction strategies to help maintain those juicy margins. However, the costs seem to be catching up in many forms, from higher interest expenses (due to higher rates) to rising wage costs.

Add this up, and earnings growth now has many headwinds compared with past years. With earnings growth slower, and less available multiple expansion, equity returns could be more muted than in the past decade.

What is an investor to do? Suppose you agree with the above analysis that a static buy-and-hold 60/40 portfolio utilizing broad market exposure investment vehicles for bonds and equities will be challenged; there are options to help address this.

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Even if returns end up being muted over the coming years, say 3-5%, that does not mean there won't be big swings up and down. For instance, over the past twenty years, only four years ranged from 0-10%, with the other 16 years either up more than 10% or down in the red.

A buy-and-hold static asset allocation strategy simply goes along for the ride without any adjustments. When return expectations are higher, that is often an easier strategy to implement, as the rollercoaster ride finishes at a much higher level. However, if return expectations are low, utilizing a process to have greater equity exposure during the upswings and less during the downswings along the way can help your portfolio finish at a higher level than the static 60/40 strategy.

## 2.0 HOW TO BE TACTICAL

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### What we set out to build

In 2011, we concluded that investors should incorporate a tactical component to their portfolios, tilting their long-term asset allocation to be slightly more offensive at times or a bit more defensive at other times. We based this conclusion on our view that the markets would continue to experience big market swings, both up and down. Thus, sticking with a static asset allocation and simply going along for the ride didn't seem optimal. We also believe that given lower return expectations in the coming years, protecting value during downturns will become increasingly crucial for longer-term performance.

This raised the question of how to be tactical. One approach is fundamentals, using valuations, sentiment, economic data, or “gut feel” to determine when to tilt above or below baseline equity. However, once you have been investing long enough, you realize the market makes fools of just about

everyone over time. Few investors saw 2008 or 2020 coming. And if they saw the 2020 bear coming, did they also see the rebound? So instead of trying to “outsmart” the market, which is comprised of many astute market participants, we opted instead to be faster.

This prompted us to create a quantitative strategy that would quickly turn defensive if the market lost momentum and headed into a corrective phase or a bear market. We also wanted to participate in any equity market uptrend to a reasonable degree. Finally, we wanted our Tactical strategy to be very tactical – meaning it could not only make small asset allocation changes of 5% or 10% but would be capable of moving as much as 100% equity or even 100% bonds/cash with no equity. While we do not believe any investor should change their overall asset allocation to such a degree, tactical moving to such a degree enables a smaller allocation within a portfolio to make a meaningful difference to the overall portfolio asset allocation.

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**Tactical enables the Portfolio Manager or Advisor to outsource a portion of the tactical decision-making for a portfolio to an emotionless rules-based strategy.**

## 2.0 HOW TO BE TACTICAL

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### Going under the hood – The “algos”

The Tactical Portfolio is a risk-on/risk-off momentum-based quantitative strategy. Let's explain what that really means. Tactical uses several momentum or trend-following models (explained below) to determine if the equity markets are in an uptrend or a downtrend. For example, if in an uptrend, Tactical is in risk-on mode, meaning it holds a higher-than-usual equity weight. If the equity market is in a downtrend, Tactical will hold much less equity and park the proceeds in bond ETFs – thus, risk-on/risk-off. This differs from most momentum strategies that are investing where momentum is strongest. Tactical simply tries to get defensive quickly when markets lose momentum, providing a stabilizer for the portfolio during periods of market stress. When markets rise, it seeks to capture a reasonable amount of the upside.

That may make it sound easy, but it isn't. Developing and managing a rules-based strategy (quant, algo, etc.) is a balancing act. For Tactical, it was designing rules that would react quickly enough when the market weakens but not so quickly to get fooled by random market noise. Sometimes, the market drops 2% and then resumes its

upward trend. Sometimes that 2% drop is the first step towards a 10% or 20% decline. Whipsaws or abrupt changes in market direction are a weakness for all momentum-based strategies, which must be managed within the rules. You also don't want to trade too excessively, as this will erode returns due to commissions and trading friction costs.

Finally, keep it relatively simple. Excessively complex and sophisticated models or strategies often sound compelling or “smart.” Unfortunately, adding more bells and whistles to a strategy can often lead to unforeseen exposure or unintended consequences. It may not sound as “smart,” but a simpler, robust model is usually better, which sums up our Tactical strategy.

We incorporated these key factors when developing the Tactical strategy and how it trades.

### The signals

Tactical is made up of 7 signals – 4 in Canada and 3 in the U.S. The signals attempt to determine whether the equity market is in an uptrend. If rising, we refer to it as Bullish; the opposite is Bearish. The signals only look at the equity markets and are mathematically very similar, but

each has a different sensitivity. Different sensitivities cause each signal to react either quicker or slower to changes in market momentum. Each of the seven signals has a predetermined weight within the portfolio. For example, if a signal is bullish, that portion of the portfolio is allocated to an equity ETF; if bearish, then a bond ETF or cash. These signals or models determine the portfolio's equity/bond allocation.

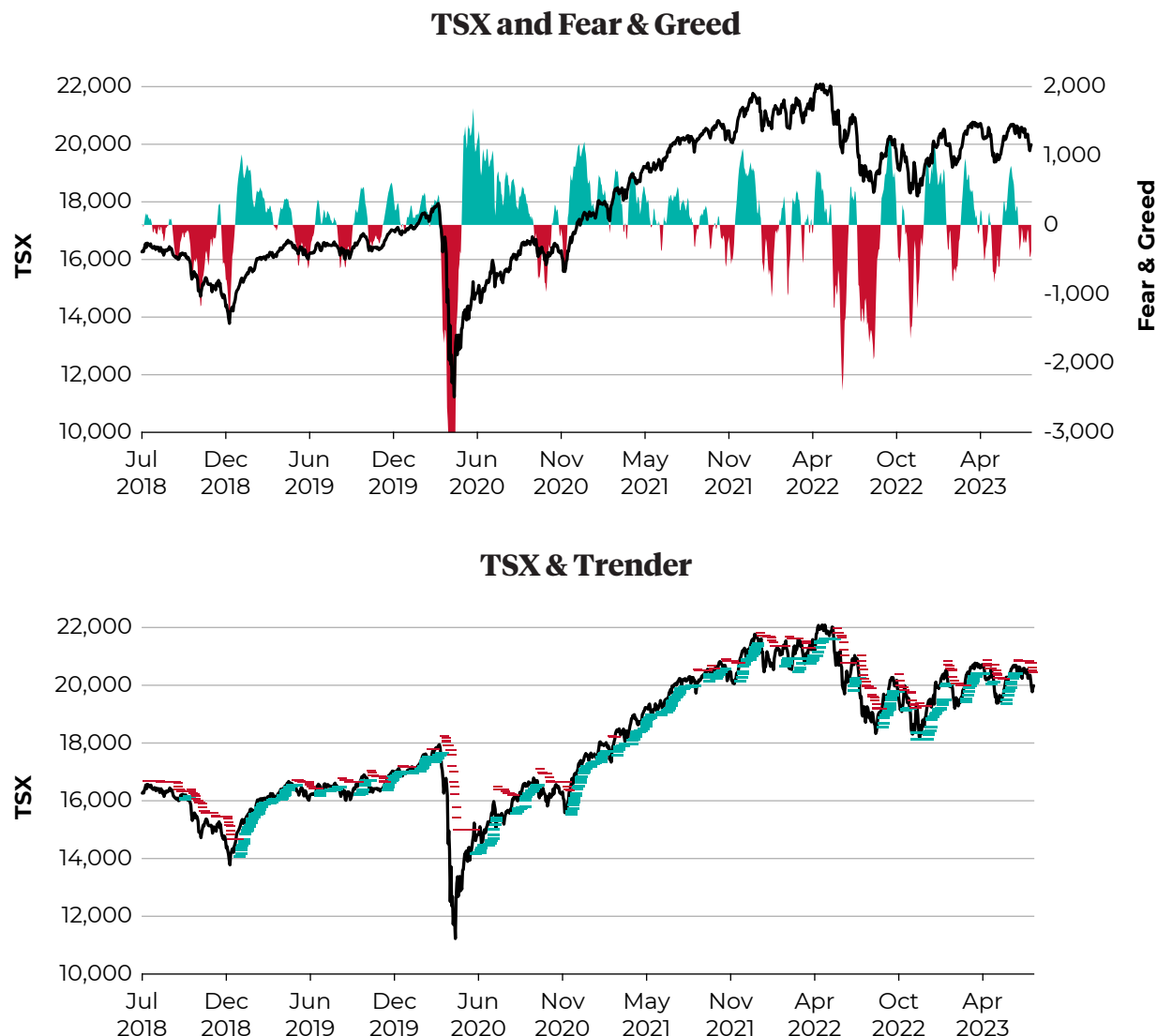
Each individual signal is based on a combination of two Bloomberg technical studies called **Fear & Greed (FG)** and **Bloomberg Trender**. FG is an oscillation indicator that measures the market's momentum. Trender is an adaptive indicator that attempts to minimize whipsaws. We combine these two studies in each signal as both are required to confirm a change in the equity/bond mix before we trade. In other words, if a signal is bullish, which has us allocated to equity, that signal's FG and Trender would need to turn bearish before we trade into bonds. Once in bonds, both would need to turn bullish for the portfolio to move that portion back into an equity ETF. We use this double-confirmation approach for each signal to reduce trading and increase the likelihood that the signal captures a true change in the market's direction.

## 2.0 HOW TO BE TACTICAL

**Fear and greed:** This technical study measures the buying-to-selling strength in the market, attempting to ascertain whether the bulls or the bears are in control. It is an excellent oscillator for divergence analysis and for identifying trend persistence. It incorporates a concept known as the True Range, which is the relationship between the current high and low compared with the previous day's close over several days. The buy/sell indicator is based on the relative position of two moving averages of the True Range for a stock, or in our case, an index. This is an oscillation-based signal.

The 1st chart is the FG for the TSX with a sensitivity of 6 over the past couple of years. The green bar denotes a bullish signal that the bulls are in charge, and the trend is positive. Red bars denote the opposite: bears are in charge, and the trend is lower. This indicator works best when there is a clear trend in the market, either up or down. However, it struggles when there is no consistent trend or a brief trend reversal period.

To help balance FG, we combine it with Bloomberg Trender. Keep in mind that for us to make a change in the portfolio, we need both FG and Trender to indicate a change in the signal.



## 2.0 HOW TO BE TACTICAL

**Bloomberg Trender:** As the name suggests, this indicator helps identify the current trend, either up or down. It is an adaptive indicator that defines the degree and direction of the trend in a way that attempts to capture the majority of the position profit while minimizing whipsaws. The tool is designed to stay just out of range of the typical pullbacks in price within the trend.

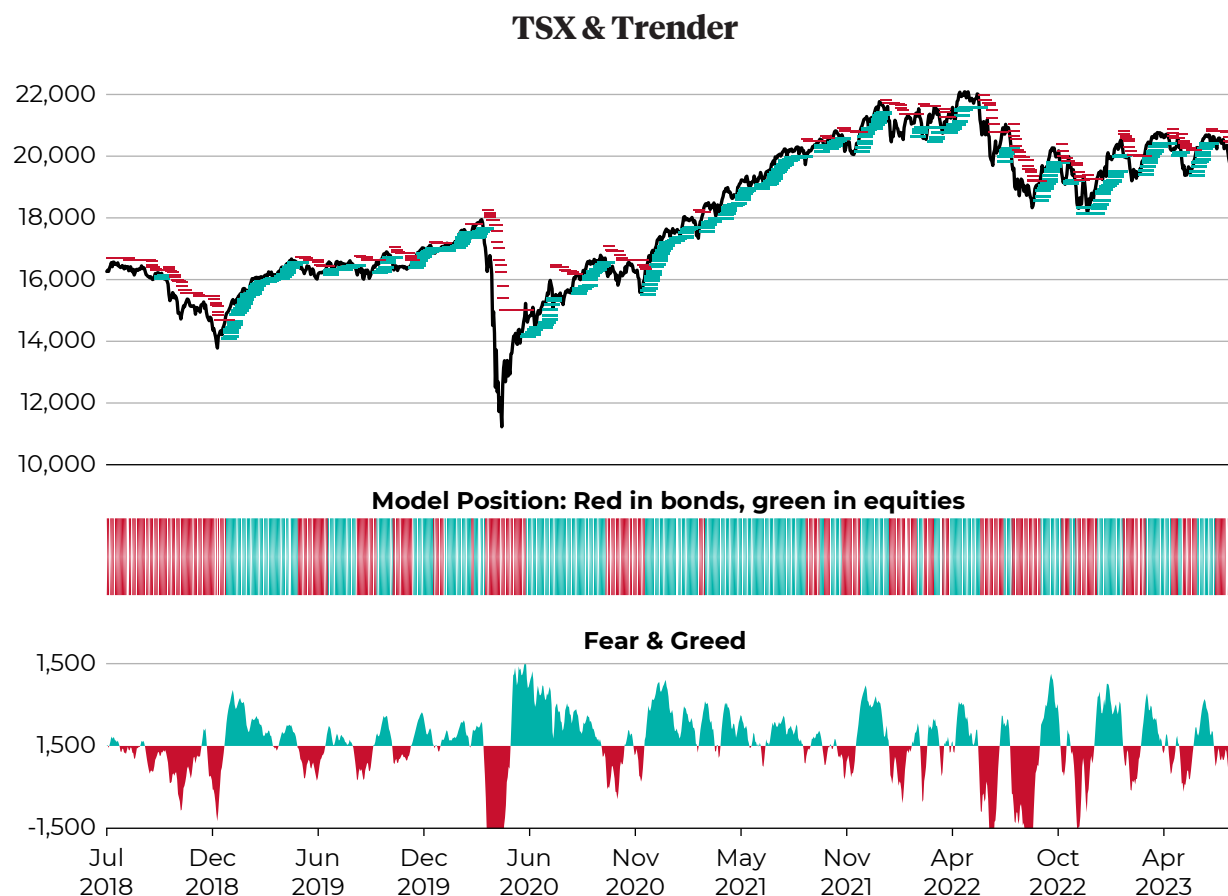
Another way to think about Trender is that while the market is in an uptrend, it provides a trailing stop. If the stop is breached, this indicates the trend has reversed and gives a bearish reading. Once the trend is bearish, Trender is a trailing “buy back in” level.

The 2nd chart is the TSX and Trender over the past few years. A green line underneath the TSX implies a bullish reading, and the price level of that line is the equivalent of a trailing stop. Once breached, it becomes a red line above the TSX.

Combining both the FG and Trender creates one of our signals. The bottom chart is a combination of the two charts above with an additional red/green bar that denotes the positioning of the signal (portfolio position): Red in bonds and green in equities. Using two models that are both required to

indicate a change in trend in the market before we make an asset allocation change in the portfolio reduces the risk or frequency

of whipsaws. Plus, since the calculation of FG and Trender are different, this also creates greater diversity.



Source: Bloomberg, Purpose Investments

## 2.0 HOW TO BE TACTICAL

### Why we use multiple signals and sensitivities

There is no perfect model, sadly. Similar to traditional investing, we diversify our strategy by incorporating several different signals with different sensitivities. We also want a balance between outcomes and portfolio turnover, which is a small drag on performance.

The above example was the Canadian medium signal. There is also a fast, slow, and very slow signal, each with different sensitivities. The more sensitive the signal, the faster it switches from bullish to bearish or vice versa. Being quicker is usually good as it will change relatively soon into a change in market direction. But it also leads to more false moves that are subsequently reversed. Once again, it is a balancing act, so we use multiple sensitivities.

We use varying sensitivities, which staggers how the portfolio trades. This helps reduce the amount of trading but, more importantly, enables the portfolio to move in stages or steps, not all at once, thereby creating diversification by sensitivity.

The accompanying chart includes the four signals used for the Canadian portion of the portfolio. The signal positions are in the green/red bars across the middle of the chart, with the total equity weight in the lower panel. As you can see, the faster the signal,

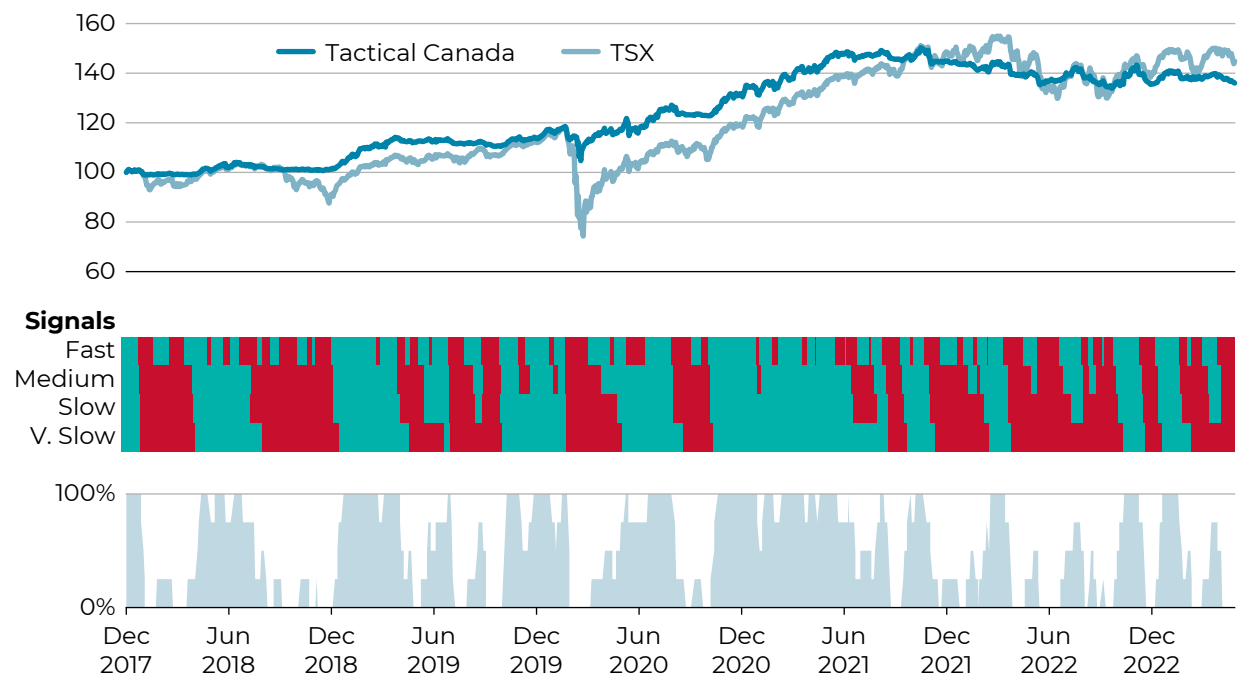
the quicker it changes when the market changes direction or trend.

However, the faster the signal, the more often it will change its reading only to change back shortly afterwards (we refer to this as getting fooled). A good example of this is June 2020, when the market dropped suddenly. The two faster signals subsequently went from equities into bonds, yet the market stabilized and recovered. Based on those two signals, nobody knew whether that market drop

was the start of another big leg down in the market. Fortunately, the other two slower signals stayed on course, thereby mitigating the impact.

This may sound like we don't like our faster signals – getting fooled now and again. However, the “Fast Canadian” signal was in bonds within two days of the start of the 2020 bear. And it was the first to buy back in after the market bottom. It is indeed a balancing act; everything is a trade-off.

**Tactical - Canadian Allocation only**  
(for illustrative purposes only)



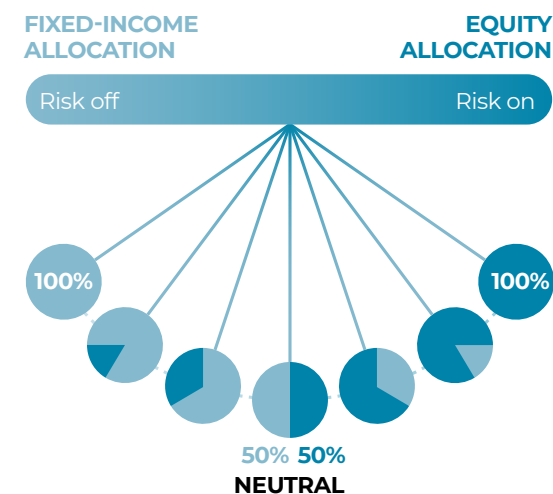
Source: Bloomberg, Purpose Investments

## 3.0 PUTTING IT ALL TOGETHER

The Tactical Portfolio has fixed weights in three equity and three bond ETF pairs driven by the signals determining about 90% of the portfolio. These include Canadian Equity versus Canadian Bonds for 55%, U.S. Equity versus U.S. Bonds for 25% and the NASDAQ versus U.S. Bonds for 10%. The allocation decision between equity and bonds is based on signals that incorporate a combination of momentum, oscillation, trend-following, and trend-exhaustion indicators. These signals, or

technical studies, are pointed at the various equity markets – the portfolio owns bonds/cash when some of the signals don't like equities. The signals are then broken down across varying sensitivities, some moving faster while some are slower to move or change. This results in staggered changes to the asset mix, not abrupt changes. However, if the market changes direction quickly, these signals can change very fast.

% of Portfolio	Signals	Equity ETF	Bond ETF
55%	4	Canadian equity ETF	Canadian bond ETF
25%	2	U.S. equity ETF	U.S. bond ETF
10%	1	NASDAQ ETF	U.S. bond ETF
10%		Managers Discretion ETFs	





### 3.0 PUTTING IT ALL TOGETHER

In the table below, we have outlined the various models used in the Tactical model. Fear and Greed (FG) and Trender are always paired and must confirm one another before a switch is made. The speed-related name of the signal denotes the signal's sensitivity setting:

EQUITY / BOND	WEIGHT	SIGNAL WEIGHT	MODELS
Canadian Equity vs Canadian Bonds	55%	13.75%	FG & Trender (fast sensitivity)
		13.75%	FG & Trender (medium sensitivity)
		13.75%	FG & Trender (slow sensitivity)
		13.75%	FG & Trender (very slow sensitivity)
U.S. Equity vs U.S. Bonds	25%	12.5%	FG & Trender (fast sensitivity)
		12.5%	FG & Trender (slow sensitivity) or 50 v 200DMA
NASDAQ vs Corp Bonds	10%	10%	Medium FG & Trender

The remaining 10% of the portfolio is at the managers' discretion. This helps manage cash flows and holds broad-based ETFs as well.

#### Exchange Traded Fund Selection

The portfolio uses plain vanilla ETFs. Selection is based on low cost and high liquidity. This mitigates the transaction costs and market impact when we make changes. We do not use levered or inverse ETFs to keep the strategy as simple as possible.

As an example of ETF selection, in 2021 we opted to use lower-duration bond ETFs amid concern about rising interest rates. This helped during 2022 as yields rose and we incorporated cash as well. Fast forward to 2023, with yields higher we are now using a mix of the full bond universe and short duration ETFs. However, duration is not as scary now that yields are higher and recession risk elevated.

### 3.0 PUTTING IT ALL TOGETHER

While we reserve the flexibility to select other ETFs on occasion, the table below lists the ETFs we currently use.

EQUITY ETFS	CATEGORY	AUM (\$B)	EXPENSE RATIO	AVG BID/ASK %
ISHARES CORE S&P/TSX CAPPED	Cdn Equity	\$8.9	0.06	0.05
HORIZONS S&P/TSX 60 INDEX ET	Cdn Equity	\$3.6	0.04	0.05
ISHARES S&P/TSX 60 INDEX ETF	Cdn Equity	\$10.5	0.18	0.05
VANGUARD TOTAL STOCK MKT ETF	US Equity	\$290.3	0.03	0.02
SPDR S&P 500 ETF TRUST	US Equity	\$395.9	0.09	0.00
VANGUARD S&P 500 ETF	US Equity	\$297.7	0.03	0.01
INVESCO QQQ TRUST SERIES 1	Tech	\$186.4	0.20	0.00
TECHNOLOGY SELECT SECT SPDR	Tech	\$47.2	0.10	0.01
ISHARES CORE S&P/TSX CAPPED	Cdn Equity	\$8.9	0.06	0.05

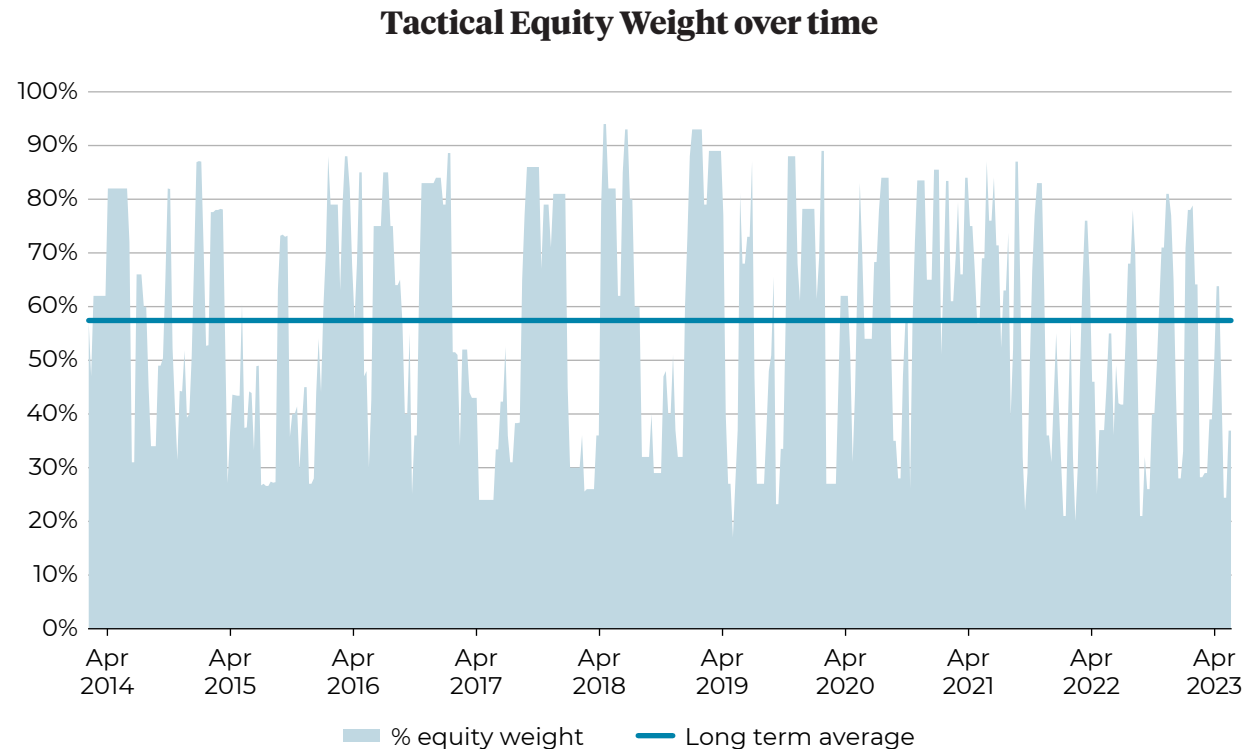
BOND ETFS	CATEGORY	AUM(\$M)	EXPENSE RATIO	AVG BID/ASK %
BMO AGGREGATE BOND INDEX ETF	Cdn Bond	\$6.3	0.09	0.11
ISHARES CORE CANADIAN SHORT	Cdn Bond	\$2.4	0.10	0.06
ISHARES CORE CAN UNIV BOND	Cdn Bond	\$5.0	0.10	0.06
VANGUARD CANADIAN ST BD ETF	Cdn Bond	\$1.2	0.11	0.07
VANGUARD TOTAL BOND MARKET	US Bond	\$91.4	0.03	0.01
VANGUARD SHORT-TERM BOND ETF	US Bond	\$37.2	0.04	0.01
ISHARES CORE U.S. AGGREGATE	US Bond	\$90.2	0.03	0.01
BMO AGGREGATE BOND INDEX ETF	Cdn Bond	\$6.3	0.09	0.11

Source: Bloomberg

## 4.0 HOW TO BEST USE TACTICAL: A SIDECAR STRATEGY

Given that Tactical can oscillate from as much as 100% equity to 100% bonds, this is not a standalone solution. Nobody should change their asset allocation to that degree. Instead, tactical oscillates its asset allocation to this degree as it is designed to complement or sit as a sidecar component of an overall portfolio. This provides a rules-based tactical addition to tilt the overall portfolio allocation more towards bonds during times of market stress and tilt more towards equities in uptrends.

Since the strategy launch in September 2011, it has been as low as 17% equity (83% bonds and cash) and as high as 94% equity. The chart at right contrasts the equity weighting in the portfolio since 2014 with the long-term average, clearly demonstrating the tactical component of the management style.





Source: Purpose Investments


## 4.0 HOW TO BEST USE TACTICAL: A SIDECAR STRATEGY

### Where does Tactical fit within a portfolio?

There is no hard and fast rule for where Tactical fits within a portfolio. The strategy holds both equity and bond ETFs, traditional asset classes. However, the method Tactical trades and changes its asset mix creates a more alternative performance history. Based on the prospectus, the risk rating is medium-low, making its placement more flexible. Here are several common approaches from several long-term Tactical users:

 **Balanced:** Tactical sits in the Tactical Balanced category of funds and has a long-term average asset mix of about 60% equity and 40% bonds and cash. The most common approach is allocating Tactical based on its long-term asset mix.

 **Equity:** A more conservative approach is to allocate Tactical in the equity allocation of a portfolio. While Tactical only has a 60% average equity weight, there are times when it is closer to 100%.

 **Partial Bond Replacement:** Based on volatility since launch, Tactical is riskier than bonds but potentially less risky than high yield. And since the design tilts much more towards bonds during

periods of equity market weakness, it carries some of the portfolio stabilizing benefits of bonds. With an attractive income series as well.



**Alternative:** Tactical is a volatility management strategy designed to provide a tactical stabilizer for a portfolio. This has similarities to other volatility-management strategies in the alternative space.

There is no right or wrong answer, as it often depends on how you construct and bucket different investments within your portfolio.

### How much Tactical?

The objective of the Tactical Portfolio is the following: to provide capital appreciation but, more importantly, to provide a strong diversifier/stabilizer and reduce the risk of the overall portfolio; to be defensive during those troubling corrections or bear markets, but also enjoy a reasonable amount of market upswings.

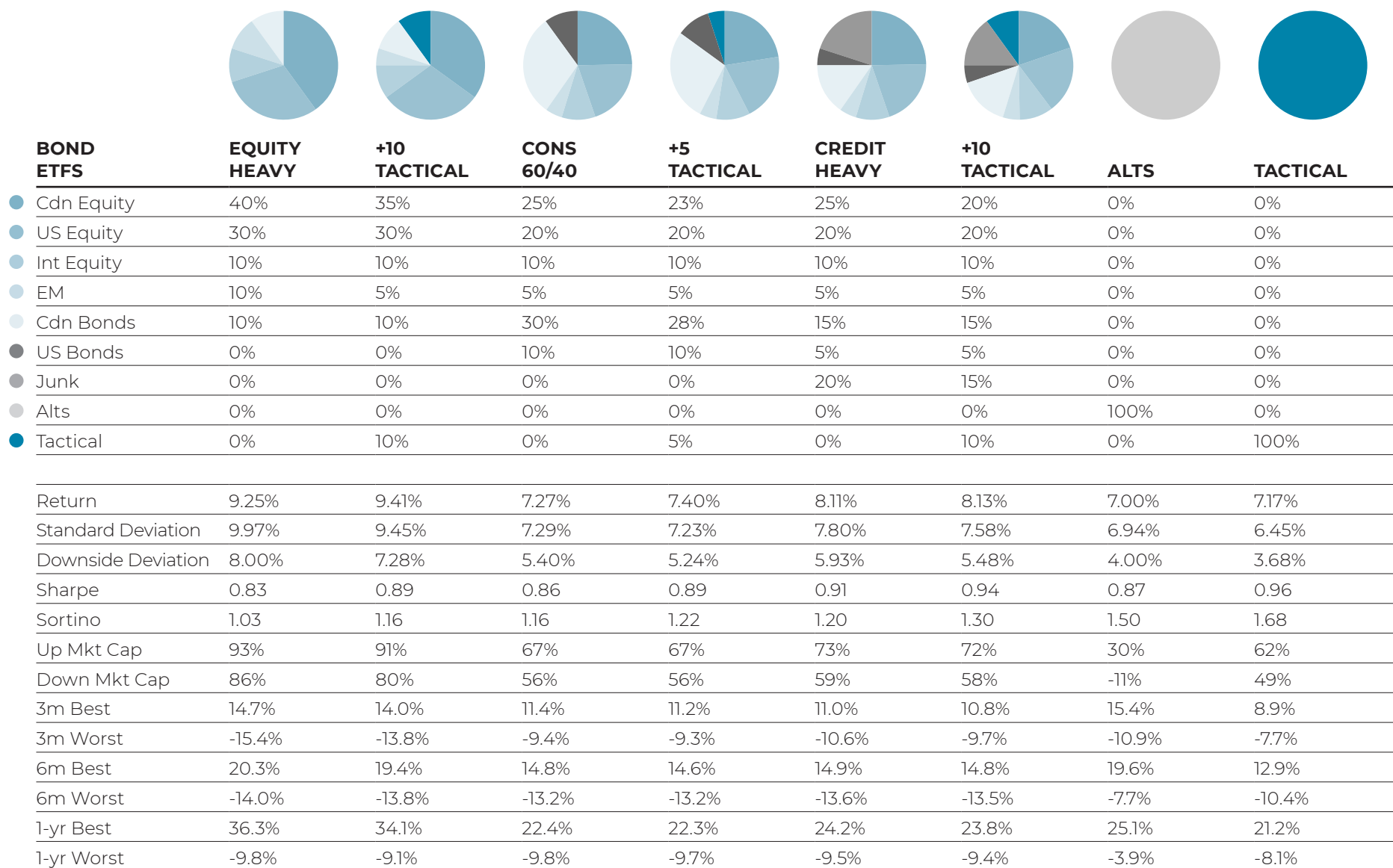
**The appropriate amount of Tactical within a portfolio really depends on what else is in the portfolio.**

In balanced portfolios that hold truly defensive bond allocations or defensive alternatives, a smaller allocation of Tactical makes sense (in the 5% range). Tactical is another defensive

component of the portfolio, providing tactical defence. For portfolios in which the bond allocation is very credit-heavy or a very low bond allocation, a larger Tactical weight makes sense (approximately 10%). Lower interest rates for so many years have caused many portfolios to shift down the credit curve, to pick up more yield. However, this neutralizes some of the defensive characteristics of the portfolio's bond allocation, making the entire portfolio riskier. Tactical can help address this, as when Tactical goes into bonds, it's typically in bond ETFs with a large government bond component.

The accompanying analysis uses performance data since we launched the strategy on the firm's Separately Managed Account (SMA) platform in 2011. We have contrasted the performance of various sample portfolios using index returns and the implications of adding a certain percentage of Tactical to the mix, adding more Tactical for the equity heavy and credit-heavy portfolios. Under all scenarios, Tactical helped improve the performance a little but was more impactful on the downside volatility reductions. The final two columns contrast the Credit Suisse Hedge Fund Index returns with Tactical. While Tactical is not an alternative and is available in either SMA, full prospectus or ETF formats, its return and risk profile is not that dissimilar to the alternative space.

## 4.0 HOW TO BEST USE TACTICAL: A SIDECAR STRATEGY



Note: Tactical SMA performance used from 2011 to present. Alternative performance is based on the Credit Suisse Hedge Fund Index. This framework is gross of (i.e. excludes) fees. Source: Bloomberg, Purpose Investments

## 4.0 HOW TO BEST USE TACTICAL: A SIDECAR STRATEGY

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**Improving downside deviation by half or a full point is a meaningful change for a portfolio when only making a 5% or 10% allocation change.**

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Improving a portfolio's Sortino or Sharpe ratio by 10% or more is also very meaningful. This is further evidence of the downside protection that Tactical can provide a portfolio.

Tactical is designed to add most of its value during periods of market weakness and avoid sacrificing much upside during better times.

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We believe this analysis supports this, and in the following pages, we dive deeper into the backtesting and model development. More importantly, on page 17, we highlight additional defensive results since launching the strategy into the real world in 2011.

## 5.0 BACK-TESTING ANALYSIS/MODEL DEVELOPMENT\*

**Caveat:** Backtesting should always be cautiously viewed as poor results are quickly discarded and changes are made until the strategy elicits a certain result. It is imperative to contrast backtesting to actual real-life performance once launched. Plus, attention should be focused on when the strategy works and when it doesn't, not just the final result (both appear later in this report). Nothing works in all markets. Still, backtesting can provide greater insight into a strategy in conjunction with the real performance data.

As 90% of the Tactical Portfolio follows the regimented technical/quantitative signals, we conducted extensive backtesting analysis during model development and have continued to do so since launching in 2011. During model or signal development, our goal was to create a strategy that would get defensive quickly during corrections or bear markets yet still enjoy a respectable amount of performance in up markets. We believe the last decade+ of performance have demonstrated our success in developing a successful strategy. However, during the backtesting analysis and since launching, we also learned that there is no “solving the markets.” Markets change, and there are environments that Tactical works well in and

markets that prove much more challenging. Maximizing the former and minimizing the latter is the ongoing objective.

From a return and risk perspective, the investment approach showed well in the backtest due to its defensive characteristics

in major down markets. Throughout the entire backtesting period, the Tactical Portfolio had an annualized return of 10.0% with 8.3% volatility (standard deviation) compared with 9.8% annualized return and 15.3% volatility for the TSX.

	ANNUALIZED RETURN	ANNUALIZED VOLATILITY	RISK-ADJUSTED RETURN
Tactical Model	10.0%	8.3%	1.08
TSX Composite	9.8%	15.3%	0.57
S&P 500	11.1%	13.9%	0.73

**Note:** Backtested data excludes the 10% manager discretionary component, which obviously can be accretive or detract from performance. It also assumes we are simply using broad based ETFs. While this is the case for equities, the management team often uses shorter duration ETFs or sometimes just cash for the bond component. This was very positive for actual performance compared with the model in 2021 and 2022 as yields really moved things.

The backtest also excludes fees and trading impact.

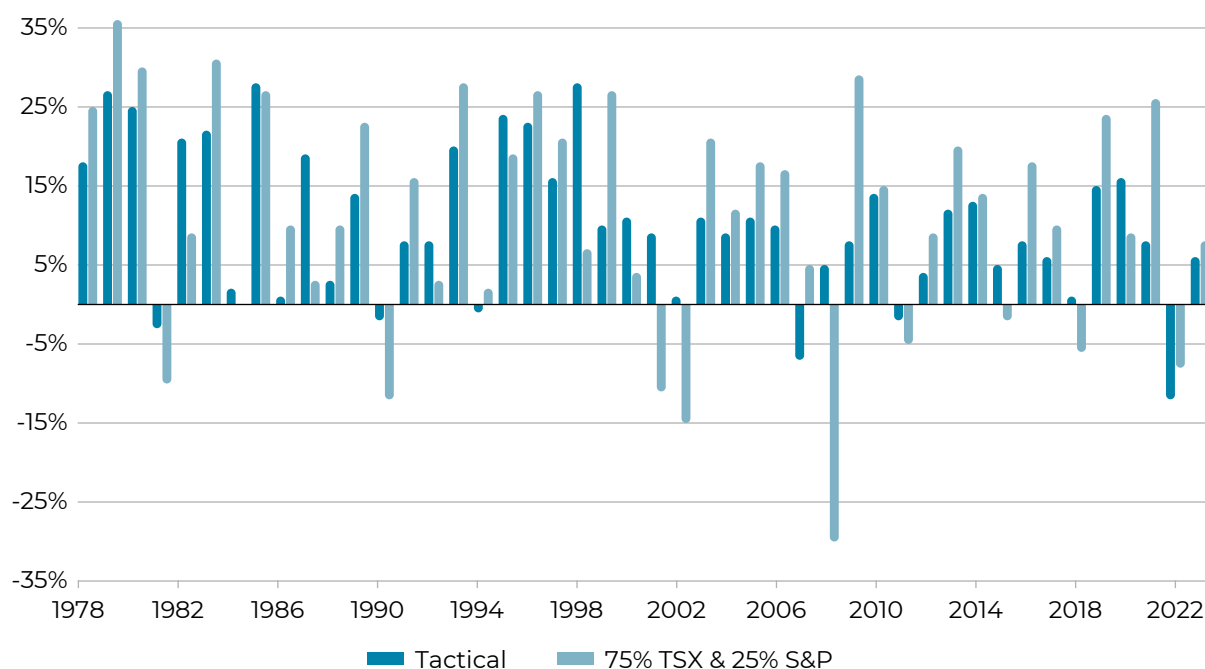
## 5.0 BACK-TESTING ANALYSIS/MODEL DEVELOPMENT\*

### Risk-reduction characteristics

There is no magic bullet when it comes to investing. And while the Tactical is designed to tilt towards equities in up markets and bonds in down markets, it doesn't necessarily catch market tops or bottoms. The strength of the investment process comes in helping to avoid the majority of the portfolio damage when markets take a significant decline. There is a trade-off, however, as the Tactical Portfolio will not fully participate in an upward move in the market. After all, when the signals are all bullish, it owns broad-based ETFs, which, by definition, are the market. This avoidance of extreme positive and negative performance can best be seen in the next two graphs.

Based on the backtested data, we plotted the calendar returns from 1978 until the present for the Tactical model and the equity markets comprised of 75% Canadian and 25% U.S. equity. While the Tactical did tend to underperform slightly in up markets (for example, 2009, 2016, 2021), it significantly outperformed in years that experienced material market declines (1981, 1990, 2001, 2008, 2020). 2022 with bonds and equities moving lower was

### Calendar return distribution of Tactical vs equity markets



Source: Purpose Investments, Backtested model data

a challenging year, similar to pricing behaviour last seen in 1994, the last time rates rose very quickly. More on this later.

As another way to cut through the data, we looked at months during which the equity markets fell by 2.5% or more and contrasted

the average performance of the Tactical during those months. We then sliced various return ranges of the equity benchmark and measured how the Tactical would have performed. This highlights how Tactical has protected in “down” months with some sacrificed return in strong “up” months.

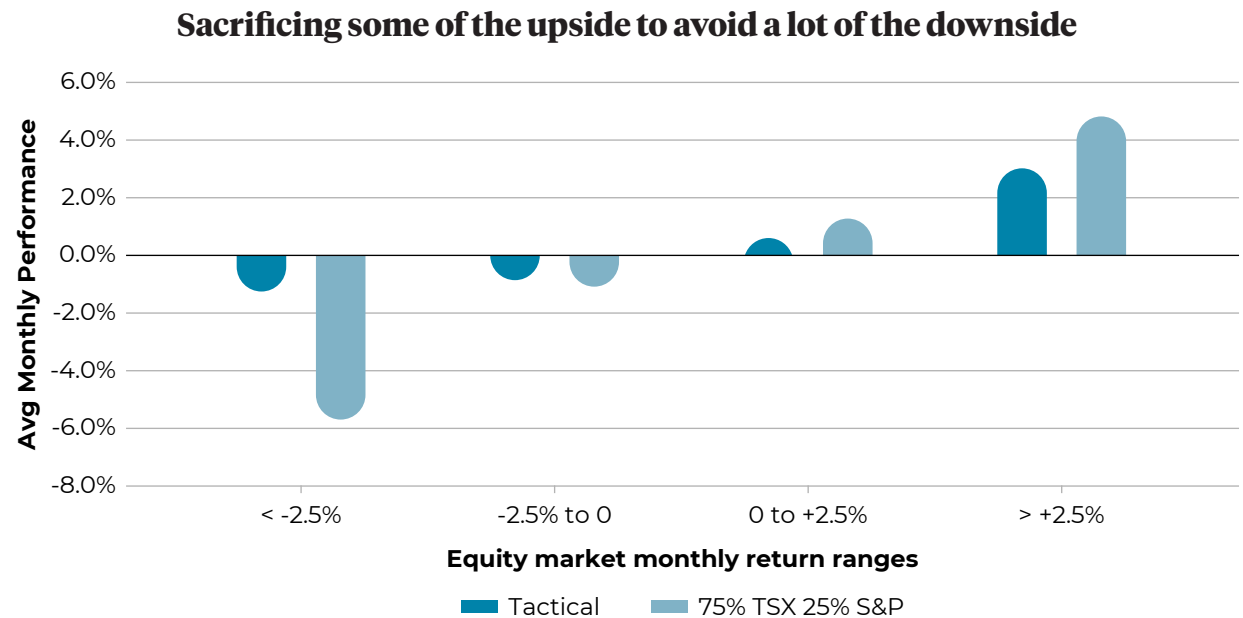


## 5.0 BACK-TESTING ANALYSIS/MODEL DEVELOPMENT\*

### Drawdown

While standard deviation remains the industry norm for measuring risk or volatility, some other metrics provide additional insight. One that has increasingly gained in popularity and use is drawdown. This measures the degree the portfolio and the equity markets have declined from their highs. This is how most investors think of risk: how much would the portfolio have gone down in the past, during difficult times? The chart to the right indicates the drawdown for the Tactical Model and equity markets. Once again, this is using backtested data from 1978.

While Tactical often suffered from short declines similar to the equity markets, the portfolio performed very well during any of the larger market declines during the backtesting period. Simply put, if the markets are going to drop 5% then recover, Tactical won't help much. However, if the drop is going to be 10%, 20% or 50%, Tactical provides a significant amount of stability for a portfolio. For those who prefer the hard numbers, the table right summarizes much of the data from the backtested period of 1978 to May 2023.



Source: Purpose Investments, Backtested model data 1978 to May 2023

## 5.0 BACK-TESTING ANALYSIS/MODEL DEVELOPMENT\*

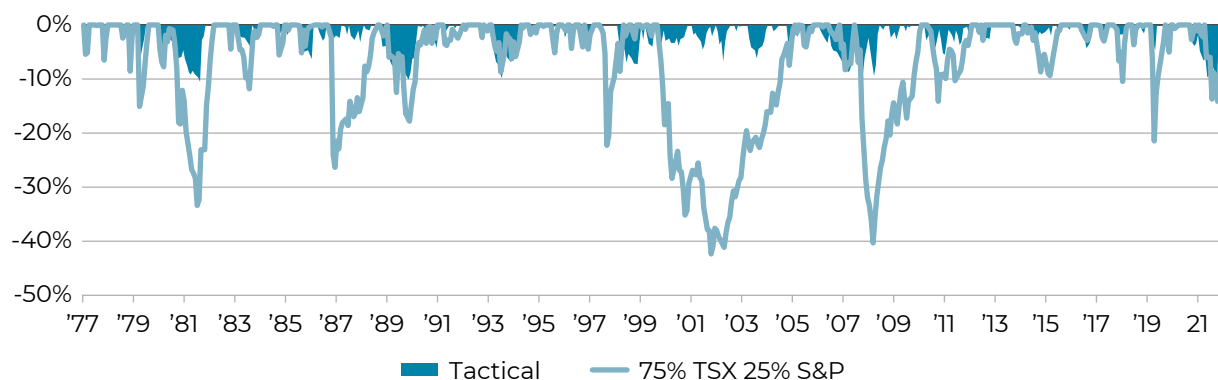
### Past bears:

#### When it would work and wouldn't

In our backtesting analysis and strategy development, we wanted to drill down on times of extreme market stress or declines to see how the Tactical strategy would have performed. After all, we designed a strategy to help protect a portfolio in bad markets, so we wanted to be confident in the approach before launching back in 2011. This out-of-sample analysis was enlightening, as it highlighted periods when the strategy worked well and what kind of markets in which it didn't work as well.

Based on the backtested data, Tactical certainly managed most big market declines in good fashion. Below, we have included charts for each, including the run-up to the period of weakness plus a few quarters as the market heals. The 0% level is set at the high of equity markets before the sell-off. This lets you see how far the market was down and how far Tactical had fallen during the period. Even Black Monday, which saw a one-day decline in the Dow of 23%, Tactical managed to avoid the drawdown largely. The market had already started to weaken before that really bad day, allowing Tactical to become more defensive.

### Tactical vs equity market drawdowns



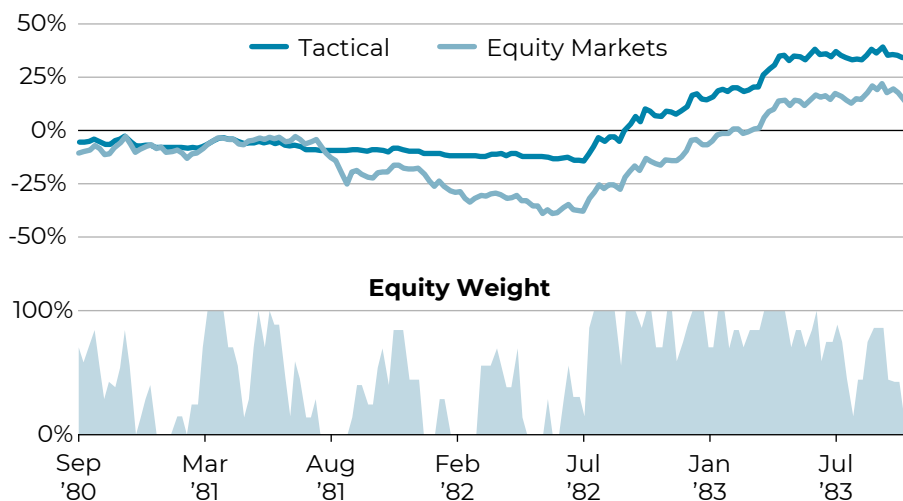
*Purpose Investments, Backtested Model 1978-May 2023*

	TACTICAL	75% TSX 25% S&P	TSX COMPOSITE
CAGR	10.0%	10.3%	9.8%
Annualized SD	8.3%	14.0%	15.3%
Downside Deviation	4.0%	11.3%	12.4%
Sharpe Ratio	1.08	0.66	0.57
Sortino Ratio	2.22	0.82	0.71
Best 1-year	52.1%	76.5%	86.9%
Avg 1-year	10.5%	11.5%	11.4%
Worst 1-year	-12.4%	-35.3%	-39.2%
Worst Peak to Trough	-14.0%	-42.4%	-43.3%
Months to recover	5+	40	23
Correlation		0.71	0.68
Beta		0.42	0.37

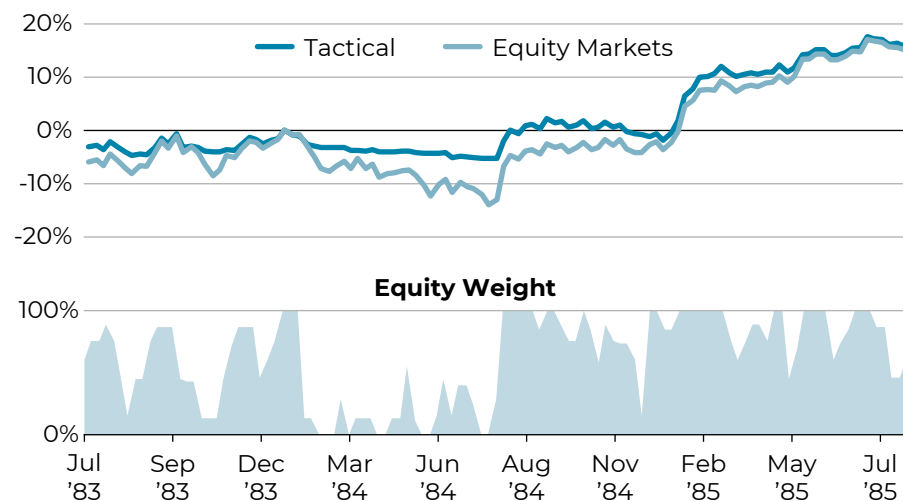
*Purpose Investments, Backtested Model 1978-May 2023*

## 5.0 BACK-TESTING ANALYSIS/MODEL DEVELOPMENT\*

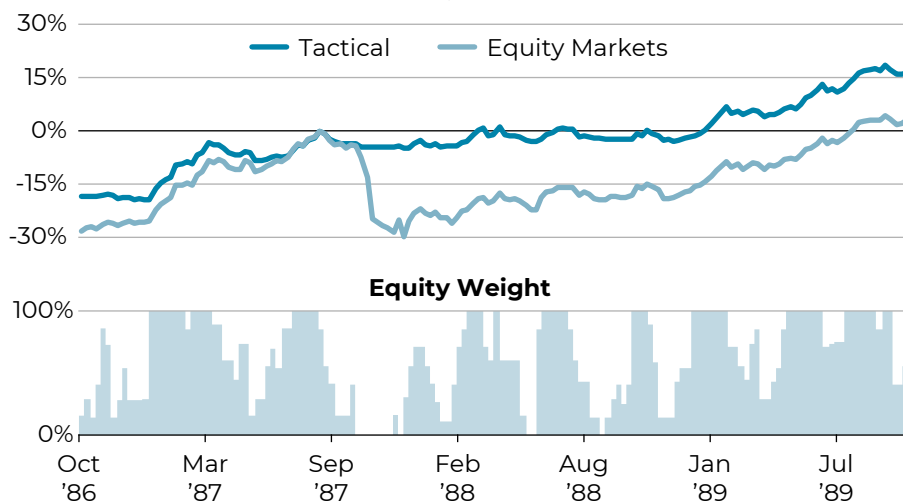
**1980/81 Recession - Worked well**



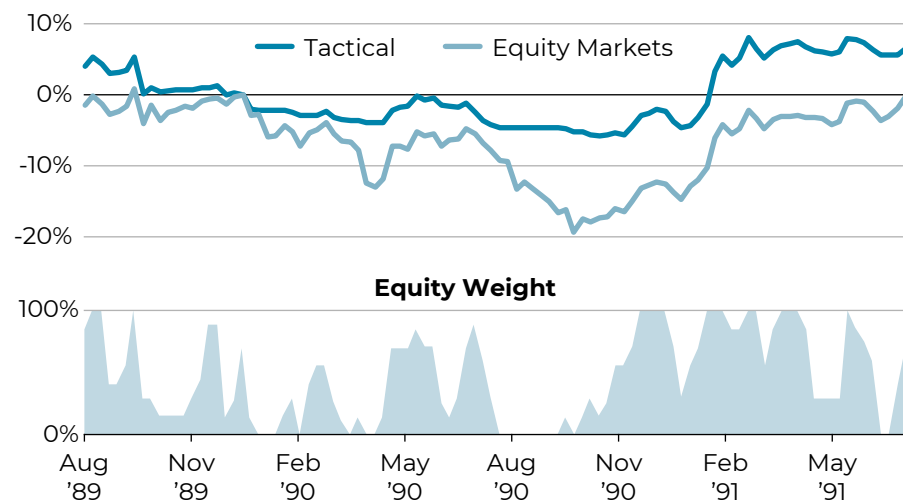
**1984 market pullback - Worked ok**



**Black Monday - Worked well**



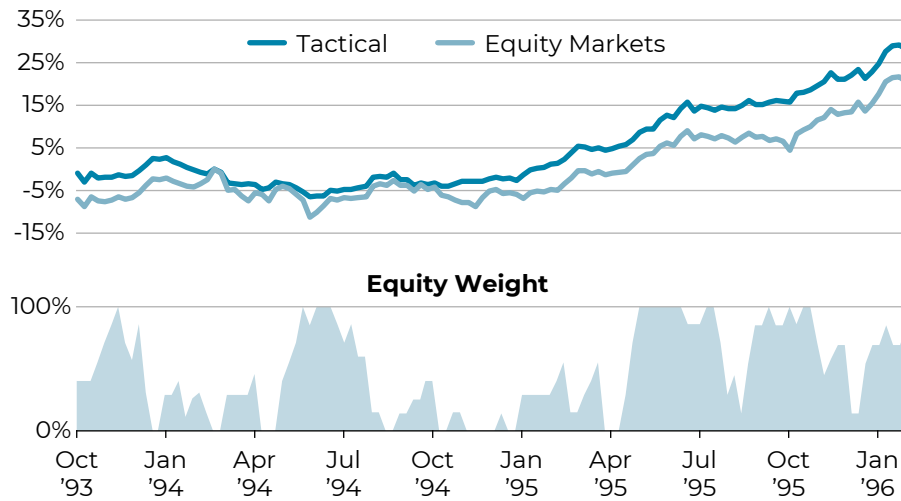
**1990 Recession - worked ok**



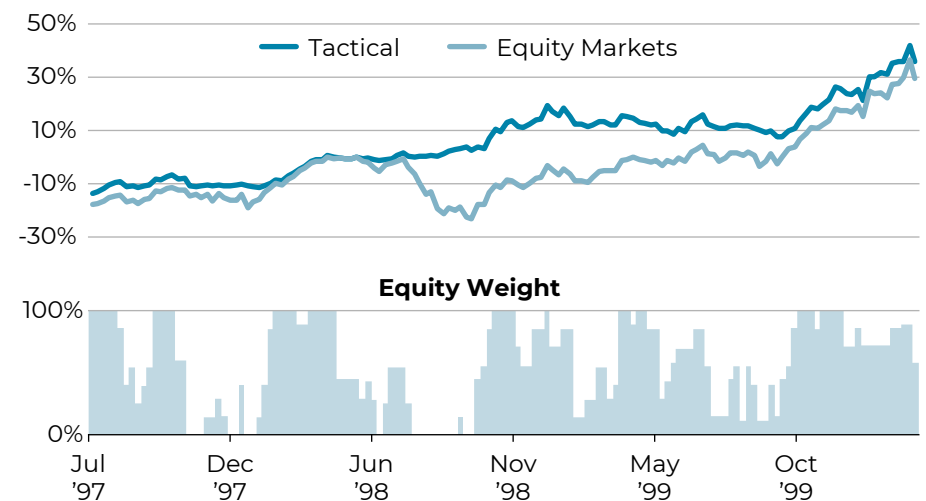
Source: Purpose Investments, Back-tested model data 1978 to 2011.

## 5.0 BACK-TESTING ANALYSIS/MODEL DEVELOPMENT\*

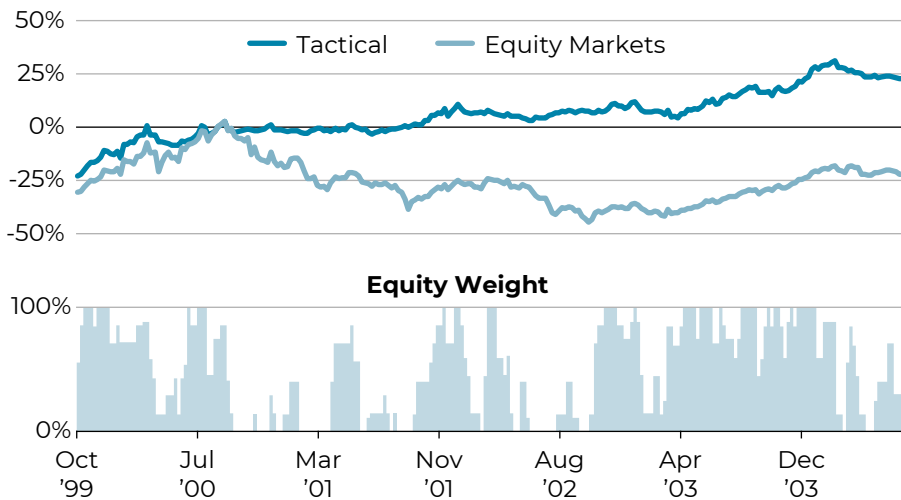
**1994 Recession - Not good**



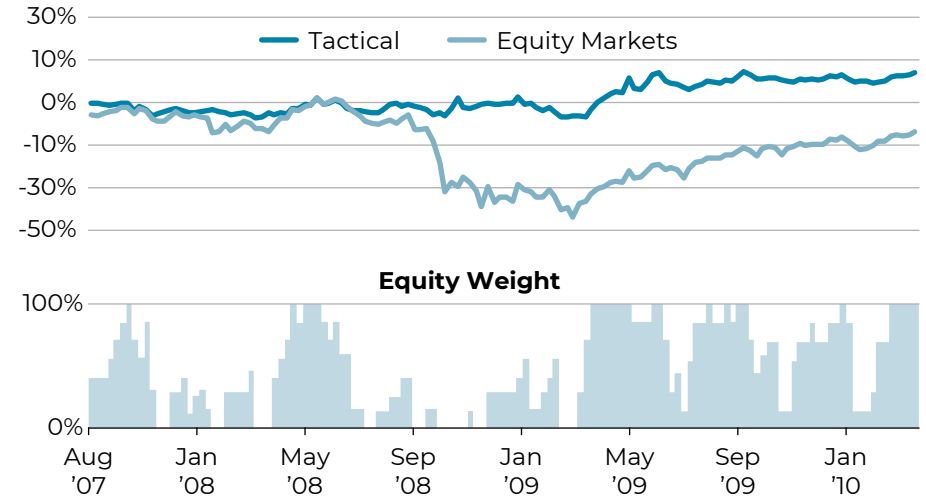
**1998 Asian Crisis - Worked well**



**Tech bust - worked well**



**2008 Global Financial Crisis - Worked Well**



Source: Purpose Investments, Back-tested model data 1978 to 2011.

## 5.0 BACK-TESTING ANALYSIS/MODEL DEVELOPMENT\*

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In most instances of market weakness, Tactical would have performed as designed, providing a stabilizer for portfolios. There were a few exceptions as every strategy can experience markets that are not ideal. Below we have noted a few of these:

**Falling equity prices and falling bond prices:** This occurred in 1994. While most periods of equity market weakness coincide with falling yields (higher bond prices), this did not hold in 1994, given rising concern over government debt levels. When Tactical goes risk-off, it moves to bonds, which was not ideal. While bond prices fell less than equities, they both fell, reducing the strategy's effectiveness.

**Flat oscillating equity markets at a certain cadence:** In 1999, equity markets were flat and oscillating at a cadence or frequency that was not ideal for our signals. Markets would strengthen enough to lure Tactical back into heavy equities, then roll over, and Tactical would exit for bonds. This occurred a few times that year that negatively influenced the strategy. This is not the norm but can occur from time to time.

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Don't mistake this for thinking Tactical has trouble in flat markets. We sliced the data to look at periods when North American equities were between -5% and +5% on a one-year basis. Tactical did rather well. It is when the markets oscillate at a certain speed that Tactical struggles. While we could attempt to address this, we found it reduced the efficacy in other market environments. The take-away is nothing works in all markets – honestly, we tried.

**Coming off the bottom:** Following material drops in the market, either bears or material corrections, Tactical does lag the market. In most instances, the equity market rebounds strongly as Tactical gradually moves from the defensive mode towards equities. This isn't a negative performance period but certainly a lag relative to the big move in equity markets. If we could determine when the bottoms have been put in during periods of weakness, that would solve this hurdle. Then again, that would probably solve everyone's wealth accumulation hurdles.

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**Late bull markets:** We also note that the Tactical tends to underperform very late in bull markets. Diving deeper into the data, it seems late in the cycle volatility is much higher, and returns tend to be higher. Often late in bull cycles is when the data becomes very uncertain, some good and some bad. The market thus reacts with greater variability. With the trend less certain, Tactical tends to be more defensive which hurts the performance, that is, until the bear market takes hold.

**No strategy works in every market (sadly) and while we have optimized for most environments, there are some that Tactical will struggle.**

## 6.0 SINCE LAUNCH

This strategy was launched live with client assets in September 2011 on a Separately Managed Accounts (SMA) platform, with the lead portfolio manager as the first client. In late 2015, we made the same strategy available in a full prospectus mutual fund and in May of 2017 in an ETF (ticker RTA). They are all managed identically, with the same signals and trading execution strategies. Typically there are some minor differences in performance between SMA/ Fund/ETF due to fees and the timing of fund/ETF cash flows. At the moment these differences are very minor. As SMA is quoted gross of fees, we adjusted performance to include the Fund (F-class) and ETF fees for a better apples-to-apples comparison.

<b>ANNUALIZED PERFORMANCE SINCE:</b>	<b>MODEL (LESS FEE ADJUSTMENT)</b>	<b>SMA (LESS FEE ADJUSTMENT)</b>	<b>FUND (F-CLASS)</b>	<b>ETF (RTA)</b>
September 2011	5.2%	6.3%		
December 2015	4.9%	5.7%	5.7%	
May 2017	4.2%	5.2%	5.2%	5.2%

*As of 31 May 2023*

### **Actual is better than model?**

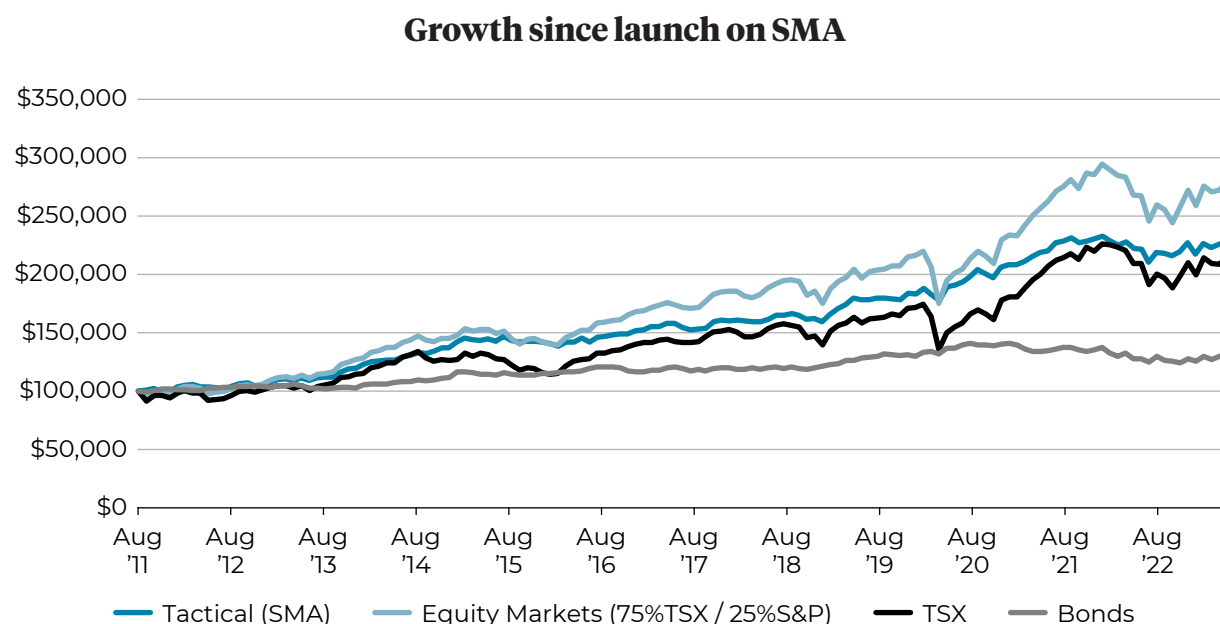
This is rare, most often a quant strategy once implemented underperforms the backtested model. Real life has many other moving parts compared with developing a model in a sandbox. We have outperformed the model for two reasons: 1) the discretionary component that is roughly 10% has been accretive and 2) bond duration management. The model performance assumes we are

using the full bond universe, such as XBB or BND in US. However, as yields fell we increasingly leaned on using shorter duration bond ETFs. After the 2020 pandemic bear, we moved to using 100% short duration ETFs as yields were just crazy low. As yields rose in 2022, we then opted to use short duration ETFs combined with cash. And now we are back to using a blend of short duration ETFs and the full universe. This helped.

## 6.0 SINCE LAUNCH

Based on SMA investor composite performance from launch in 2011 up until the end of May 2023, the strategy has returned 7.2% on an annualized basis, gross of fees. That is a bit better than the mandate's balanced benchmark: 6.8%, comprised of 40% TSX / 20% S&P / 40% FTSE TMX Cdn Bond with significantly lower drawdowns and less volatility. Tactical has trailed the overall equity market: 8.8%, based on 75% TSX & 25% S&P 500. The S&P 500 has been a star this past decade. Compared with the TSX's 6.3%, Tactical has kept up with materially less volatility, especially in market downdrafts. And clearly much better than bonds which have posted an anemic 2.2% since September of 2011. Given defence is job #1, we are pleased with these results over the past ten+ years.

The objective of Tactical is to provide positive returns in "up" markets, albeit it is not designed in the first instance to be as strong as the market. In "down" markets, Tactical is designed to be more defensive and protect



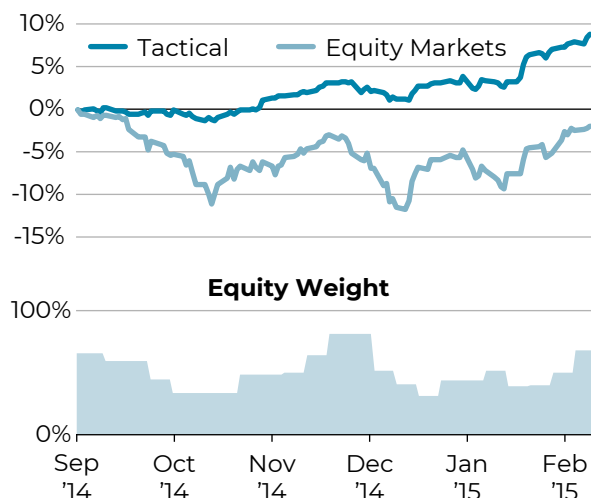
Source: Purpose Investments, Bloomberg

value, creating a stabilizer for the overall portfolio. Since launching in 2011, there have been a number of market corrections and now two bear markets. The charts below indicate how Tactical managed in those

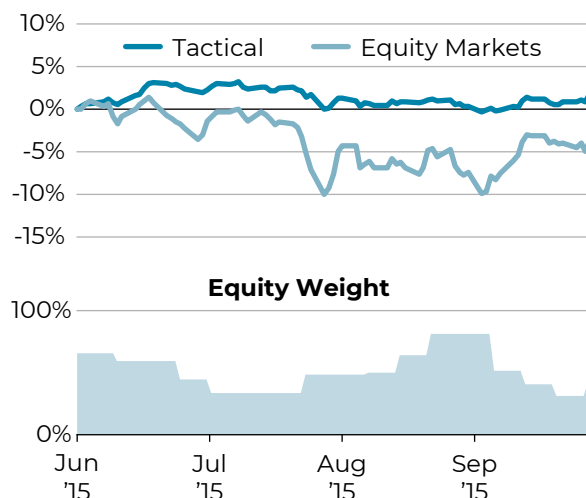
challenging environments. While each period of market weakness is different, the general pattern has been that Tactical holds onto value during those times, acting as a defensive stabilizer.

## 6.0 SINCE LAUNCH

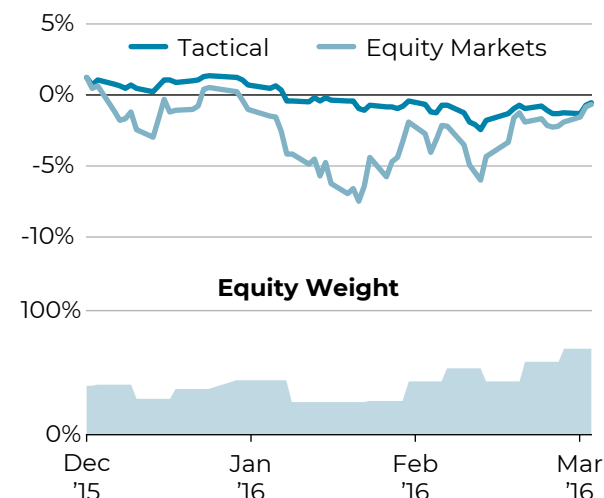
**Oil first starts to tumble in 2014**



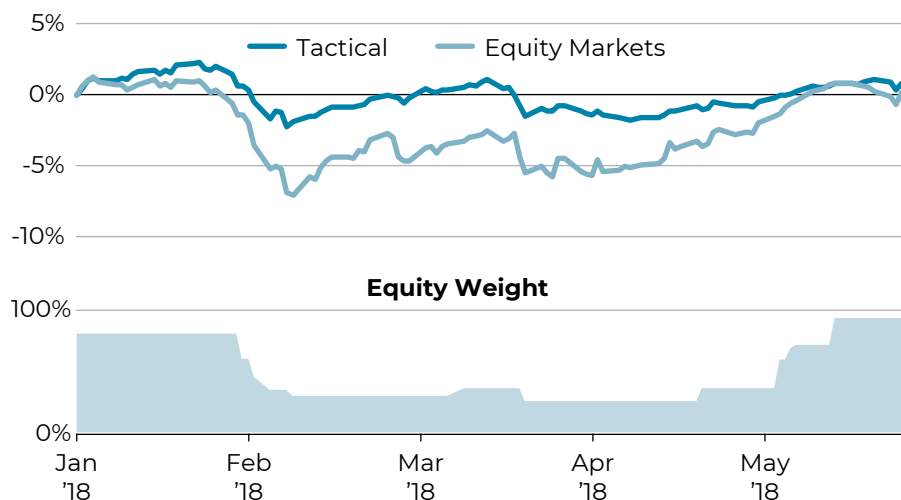
**2015 China's currency devaluation**



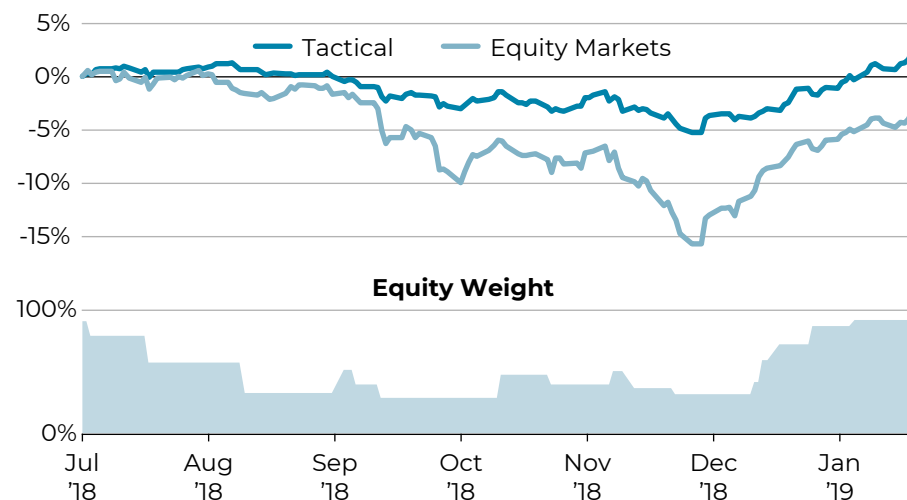
**China's economic fears, oil hits \$26**



**Market correction of Feb 2018**



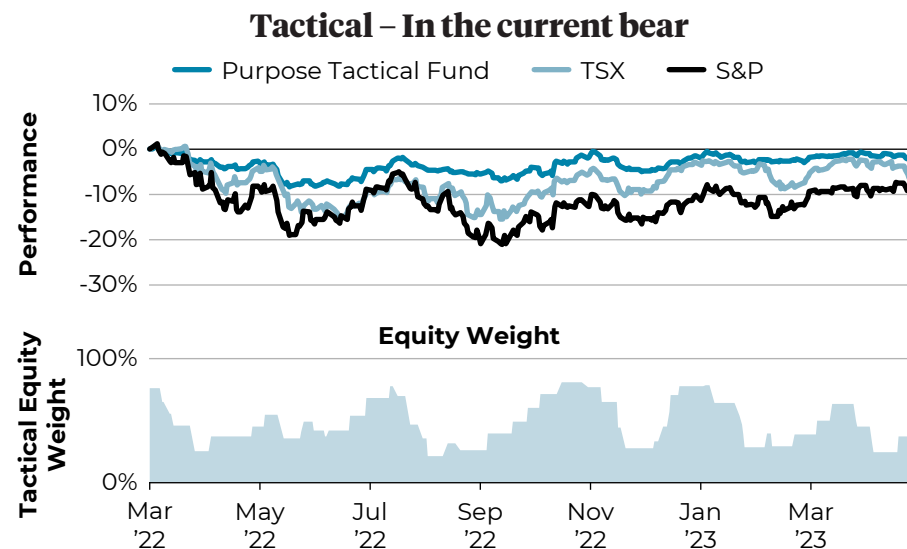
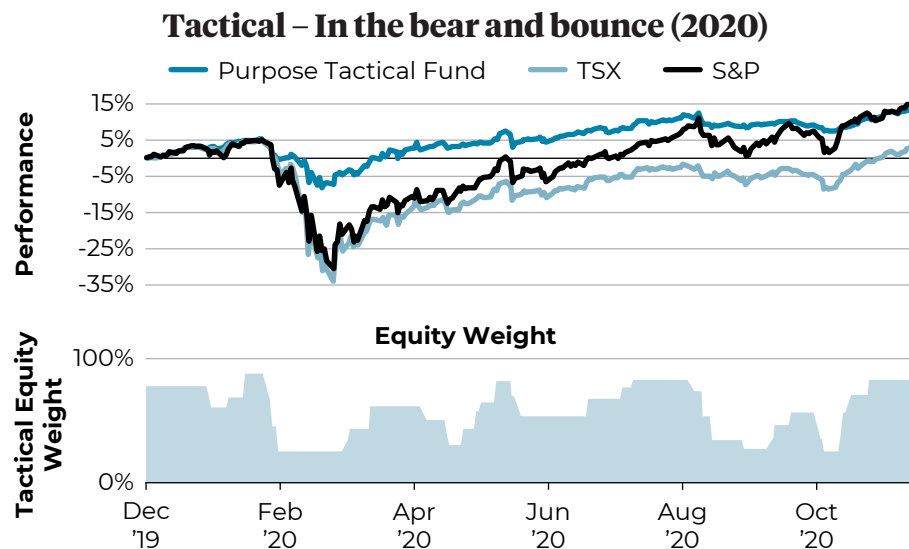
**How Tactical navigated Q4 2018**



Note: SMA performance denoted in charts before November 2015, Purpose Tactical Fund (F-class) in charts post 2015



## 6.0 SINCE LAUNCH



**Tactical performed as designed during each market correction by becoming more defensive by lowering its equity weight, providing a stabilizer to a traditional investment portfolio of stocks, bonds, and alternative products.**

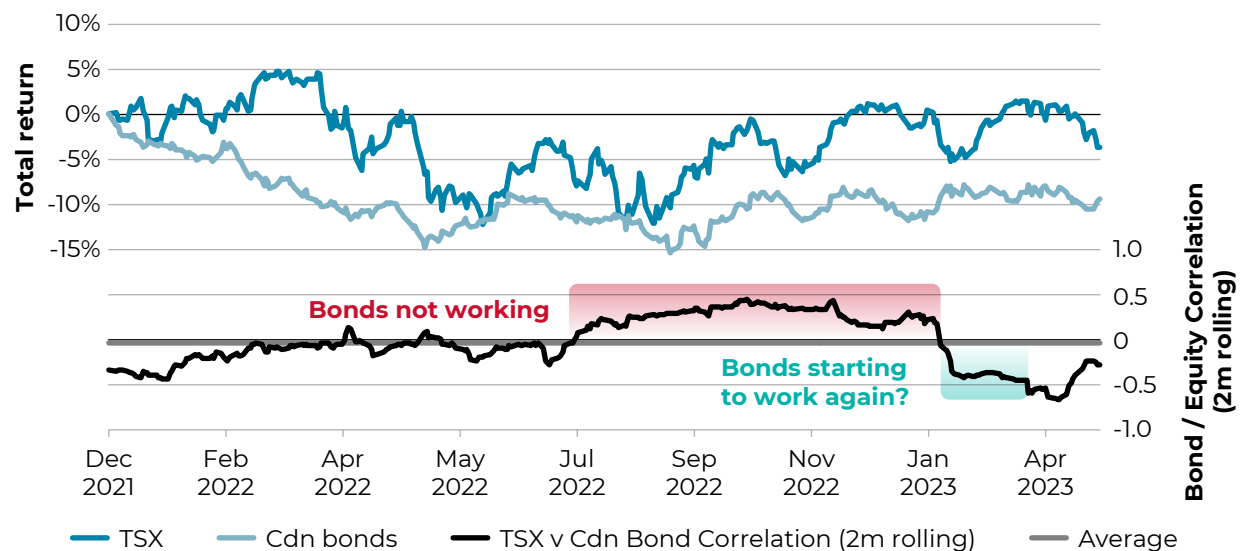
## 6.0 SINCE LAUNCH

### 2022 & 1994

The current bear market (assuming we are still in it) started with inflation and the central bank response as the biggest fear. The speed and magnitude of rate hikes was dramatic. This caused all asset prices to fall, including both bonds & equities, not ideal for multi-asset portfolios. And similar to 1994, a year we have continued to highlight as an environment Tactical may lag. Understanding this risk, we mitigated the impact by using short duration bond ETFs in conjunction with cash. Quant rules-based strategies are great, even better is a team that understands the models and the market. Still, not Tactical's kind of market.

The good news is it may be over. During the past few months, recession risk has been rising up as the biggest concern as inflation risk gradually fades. This has returned the correlation of bonds vs equities back into negative territory. A welcome development.

### Bond/equity correlations have turned back down, and bonds are working again!



With any rules based strategy, we continue to monitor and understand if the strategy is operating in real life as we believe it should. Deep understanding of the strategy helps this process and the

following charts contrast the back tested period to performance since launching. We remain pleased that the strategy has been operating as expected in the real world.

## 6.0 SINCE LAUNCH

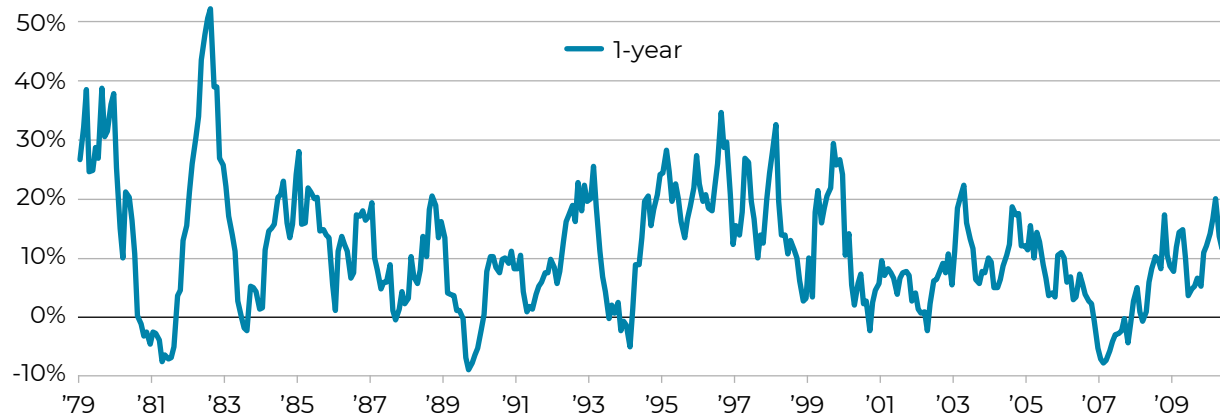
With any rules based strategy, we continue to monitor and understand if the strategy is operating in real life as we

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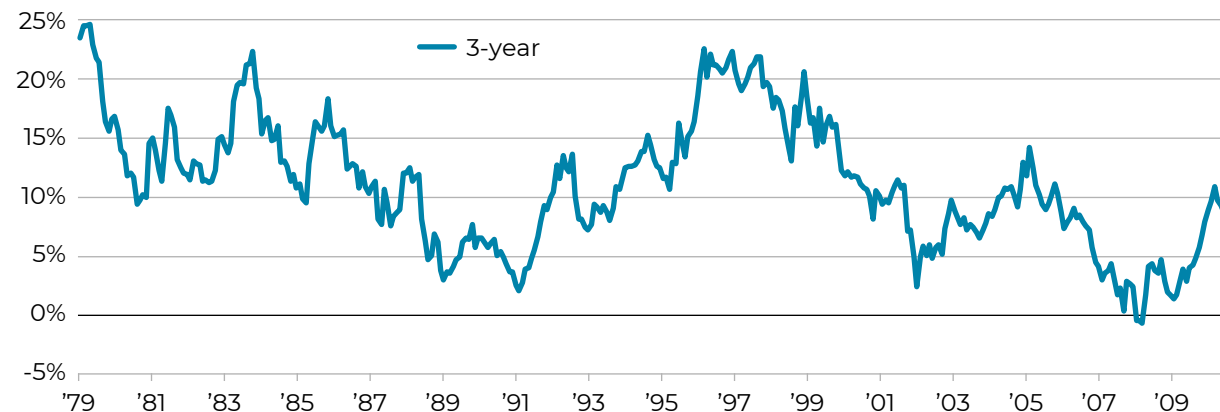
### Tactical Model Backtest

Rolling 1-year performance



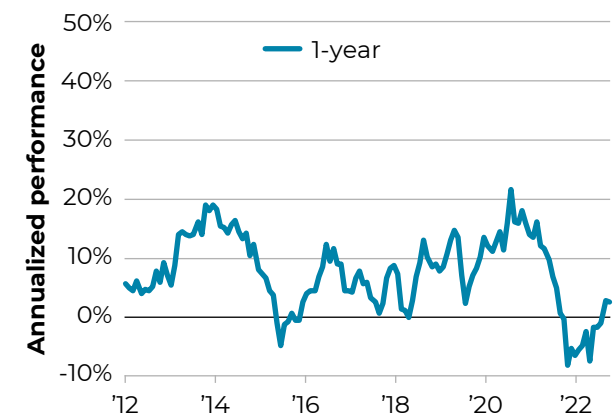
### Tactical Model Backtest

Rolling 3-year annualized performance



### Tactical SMA

Rolling 1-year annualized performance



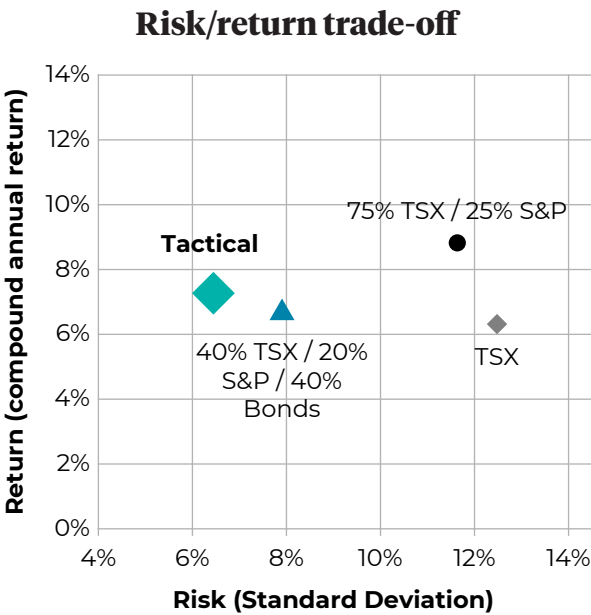
### Tactical SMA

Rolling 3-year annualized performance



6.0 SINCE LAUNCH

Decent performance with less risk, that is the goal. And while the future remains unknown, 50 years of back testing combined with over 12 years of live performance, we remain confident in this strategy as a great way to add a tactical component to portfolios. Risk adjusted return, peer analysis, take your pick, Tactical stacks up well.



Source: Purpose Investments, Bloomberg, SMA Sep 2011-May 2023



Source: Morningstar, month end rankings 31 May 2023 for PFC3901 (F-class)

## 7.0 PORTFOLIO MANAGEMENT TEAM'S FINAL THOUGHTS

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Our team believes we have created a unique strategy that offers investors a powerful tactical diversification tool. We also believe both the Separately Managed Accounts platform and our Purpose mutual fund / ETF format offer cost-effective access to the strategy. The performance since launching in 2011 supports our development process and provides efficacy for the strategy.

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Based on our backtesting and performance since launch, the risk-reduction characteristics effectively kick in during extended periods of market weakness. While it does not catch tops or bottoms during big swings, either up or down, the Tactical Portfolio tends to be more heavily weighted in the outperforming asset class. We believe this is an effective strategy to incorporate within a portfolio to create a more tactical solution.

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**If you want to learn more about the Tactical Portfolio, please contact your Investment Advisor.**



**Let's talk!**

1-888-557-5020 | [sales@purposeinvest.com](mailto:sales@purposeinvest.com)

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## 8.0 DISCLAIMER

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Commissions, trailing commissions, management fees and expenses all may be associated with investment fund investments. The prospectus contains important detailed information about the investment fund. Please read the prospectus before investing. The indicated rates of return are the historical annual compounded total returns including changes in share/unit value and reinvestment of all distributions and do not take into account sales, redemption, distribution or optional charges or income taxes payable by any securityholder that would have reduced returns. As with any investment, there are risks to investing in

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investment funds. There is no assurance that any fund will achieve its investment objective, and its net asset value, yield, and investment return will fluctuate from time to time with market conditions. Investment funds are not guaranteed, their values change frequently, and past performance may not be repeated. The opinions expressed are provided by the portfolio manager responsible for the management of the Fund's investment portfolio, as specified in the Fund's prospectus. Unless otherwise stated, the source for data cited in any commentary is the portfolio manager. Nothing in any commentary should be considered a recommendation

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to buy or sell a particular security. The Fund may sell these securities at any time, or purchase securities that have previously been sold. The securities may increase or decrease in value after the date hereof, and the Fund may accordingly gain or lose money on the investment in the securities. The statements by the portfolio managers in their commentaries are intended to illustrate their approach in managing the funds, and do not necessarily reflect the views of Purpose Investments Inc. All data sourced from Bloomberg and Purpose Investments, unless otherwise noted.