WEALTHSHIELD WHITE PAPER SERIES

THE INVESTMENT FRAMEWORK

ECONOMIC GROWTH

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May 2020

INTRODUCTION: PROCESS OVER OUTCOME

Process over outcome. This, in our opinion, is the ultimate motto for successful investing. Unfortunately, most investors fall victim to outcome bias and fail to follow a disciplined, rules-based process for making decisions. Outcome bias leads investors to overemphasize the outcome of an investment without thinking critically about what led to that outcome. Therefore, we believe there is an advantage to following a disciplined process. The investment process must have sound academic underpinnings, be tested for robustness and historical efficacy, and be evaluated in the real world. The investor must also remain disciplined to follow the process during times when it doesn't work. In any investment approach, following the rules will sometimes result in an undesirable outcome. These negative outcomes are unavoidable and part of the game. What an investor should seek to avoid is abandoning or violating the rules of an investment approach, regardless of the outcome.

We created the WealthShield Investment Framework with the goal of building a process that could be followed with discipline regardless of the type of outcome faced. This requires discipline and conviction. To gain that conviction we researched the most notable investors, traders, Nobel prize winning economists, and academics in the industry, including but not limited to Benjamin Graham, David Dodd, Seth Klarman, Jeremy Grantham, Clifford Asness, Stanley Drukenmiller, Ray Dalio, and many others. Through this study we arrived at a framework that is grounded in academic discipline, thoroughly tested and scrutinized, and consistently validated in practice. The framework started with the belief that the economy, markets, and business environment all experience cycles, and these cycles are grounded in human behavior and observable phenomena. Instead of focusing our efforts on predicting cycles, we decided to concentrate on measuring, mapping, and observing.

Through this series of whitepapers, we'll introduce the four prongs of our framework, and how they can work in unison to structure investment portfolios around a business cycle. Observing Valuations, Market Sentiment, Economic Growth and Inflation, and Monetary Policy informs us of approximately where in the business cycle we fall and what that means for our positioning, from risk mitigation to return enhancement. The idea is that when valuations are low, market sentiment is improving, economic growth is starting to accelerate, and monetary policy is accommodative, we are positioned to enhance returns and take adequate risk. On the flip side, when valuations are high, market sentiment is deteriorating, economic growth is decelerating, and monetary policy is tight, we want to be in full risk mitigation mode, shifting portfolios more defensively. In between these two poles, portfolios fall along the spectrum in accordance with the weight of the evidence. This white paper series will provide a detailed review of each component of our framework, and how this framework is applied during construction of investment portfolios.

ECONOMIC GROWTH: FACTORS & THE ECONOMY

According to Ray Dalio, the founder of Bridgewater, the largest and most profitable (in dollars) hedge fund, the best predictor of asset class returns are economic growth and inflation. Economic growth and inflation go through periods of acceleration (sometimes simultaneously) and deceleration. The ebb and flow of growth and inflation determine the business cycle.

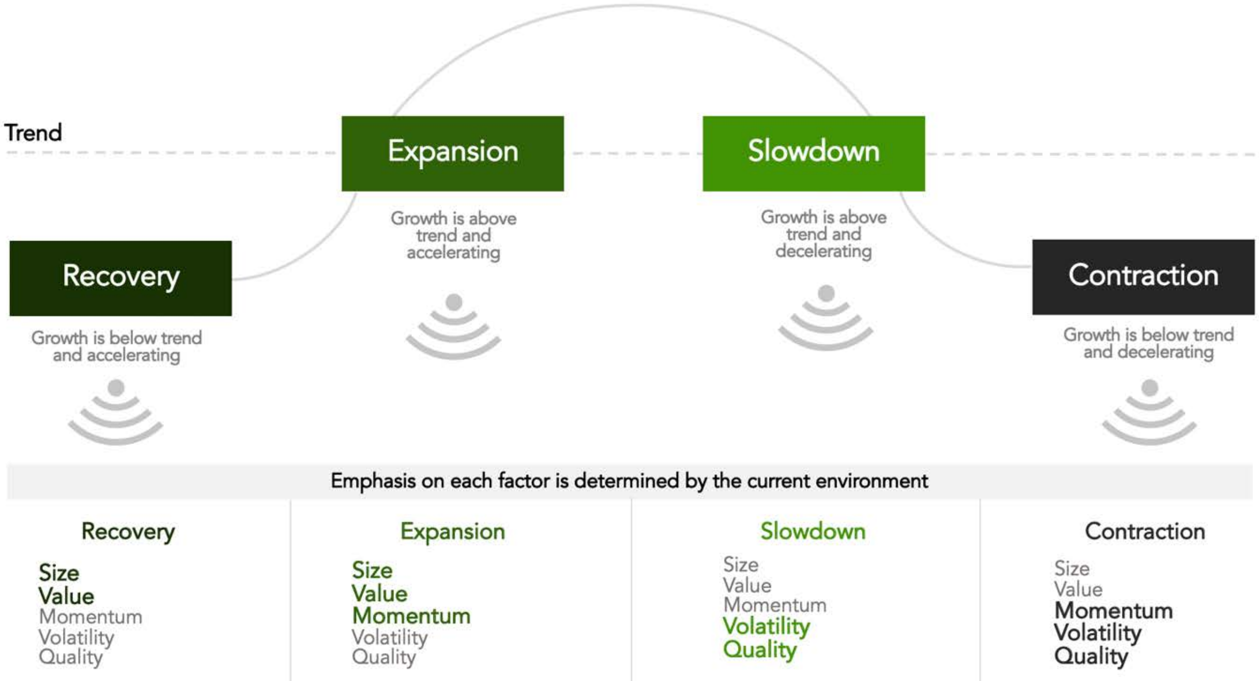

Figure 1: Business Cycle Illustration; Source: WealthShield; As of May 2020

If you get the business cycle right, in our opinion, you get the market cycle right. Therefore, it is important to measure where you are in the business cycle and make investment decisions given that information. In this paper we will dig deeper into the US business cycle to observe economic growth and inflation trends throughout the cycle. We'll use these observations to determine what factors and investment exposures may perform best in each phase. We will also test a simple system of adapting a portfolio allocation given the observed business cycle environment throughout history to determine if business cycle investing is valid and a worthwhile pursuit.

PHASES OF THE BUSINESS CYCLE

RECOVERY

The business cycle can be broken down into four different regimes. The first is the recovery. This is the part of the cycle when growth is starting to accelerate, but below trend, after a contraction or recession. During this part of the cycle, equity market returns tend to be attractive and factors like small company and value tend to outperform. Allocating to small companies and value factors can work across asset classes during this environment.

For instance, in fixed income, spreads are typically wide for high yield corporate bonds and distressed debt. Within alternative investments, venture capital is attractive during the early recovery period due to depressed valuations. This is usually the most difficult of periods to invest in because the economic news, although improving, is typically terrible. Leading into the recovery, the Federal Reserve and global central banks have probably cut interest rates significantly and increased their balance sheet through asset purchases. As long as inflation is decelerating, the Fed should allow growth to occur without tightening policy.

EXPANSION

After the initial recovery phase, the business cycle migrates to the expansion phase. This is typically marked by the above trend and accelerating growth as well as accelerating inflation. Momentum starts to become a favored factor during this phase as well as small company and value. Momentum investing is essentially buying what has been performing the best over the past.

In recent times, FAANG stocks were a great example of momentum investing in equities. Facebook, Apple, Amazon, Netflix, and Google were some of the top performing equities year in and year out during the bull market of 2009-2019, and they continued to attract investor attention each and every year, putting up stellar returns.

The momentum factor captures investing in assets that are performing well. This factor can also be expressed in fixed income and alternative investments. Eventually as growth and inflation accelerate, the Federal Reserve begins to tighten policy through either interest rate increases and/or balance sheet reductions (selling bonds in the open market).

SLOWDOWN

Eventually, the Fed tightens policy too much and growth begins to slow. They are typically attempting to stop inflation from moving too high by tightening policy; however, the result can sometimes lead to a slowdown. The slowdown phase is typically when growth is above trend but decelerating and inflation typically decelerates as well. You can also have a stagflationary slowdown where inflation accelerates while growth slows. Nevertheless, this is the time when high quality and low volatility assets tend to be ideal. In equities, the low volatility factor is typically found in sectors like utilities, consumer staples, health care and real estate. In fixed income, these assets are Treasuries, high quality investment grade corporates, and high-quality municipal bonds. Within the alternative investment landscape, the recommendation is typically to move to risk mitigation strategies or allocate to strategies that can successfully dampen volatility in a difficult market event. Essentially, the rotation to these factors is defensive in nature. The Fed tends to ease policy if both growth and inflation are decelerating. However, if growth is decelerating and inflation accelerating, they are stuck.

CONTRACTION

Either growth is reignited by easy monetary policy or the economic environment slips into a contraction. During a contraction, growth is below trend and decelerating and inflation can either be accelerating or decelerating. If decelerating, the environment is deflationary in nature. On the other hand, if inflation is accelerating, stagflation is occurring. Either way, the playbook from a factor perspective remains the same: low volatility, high quality, and momentum factors tend to outperform during economic contractions. During this period of time, the Fed has been easing for quite some time and risk assets have fallen considerably. Defensive positions tend to benefit during the contraction through either relative or absolute performance gains.

MEASURING & MAPPING THE BUSINESS CYCLE

How do we measure whether an economy is accelerating or decelerating? To answer this question, it is important to understand how the National Bureau of Economic Research (NBER) defines recessions. This is the party responsible for identifying turning points in the business cycle. Contrary to popular belief, "The NBER does not define a recession in terms of two consecutive quarters of decline in real GDP. Rather, a recession is a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales." [1]

[1]www.nber.org/cycles.html

Therefore, in our opinion it is important to measure various components of the economy, especially those mentioned above, on a year over year rate of change basis to understand whether the economy is accelerating or decelerating (See Figure 2 below).

Figures Below (In Visual Order)

			3	-->	Industrial Production YoY %
1	-->	US Real GDP YoY %	4	-->	Retail Sales YoY %
2	-->	Non Farm Payrolls YoY %	5	-->	Real Income YoY % (GDI)

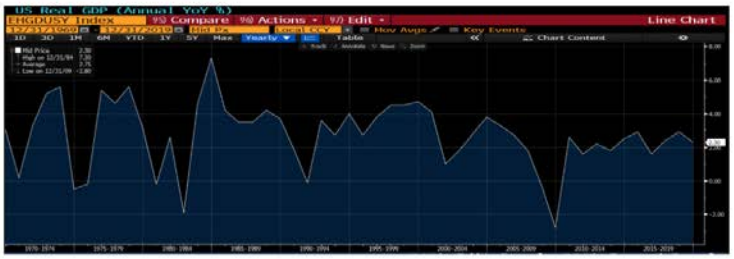

Figure 2: Components of the Economy; Source: Bloomberg; As of April 29, 2020

Another way to measure whether the economy is growing or slowing is to look at leading economic indicators. The Conference Board Leading Economic Index (LEI) for the US includes the following data points to determine whether the US economy is growing or slowing.

- Average weekly hours, manufacturing
- Average weekly initial claims for unemployment insurance
- Manufacturers' new orders, consumer goods and materials
- ISM Index of New Orders
- Manufacturers' new orders, non-defense capital goods excluding aircraft orders
- Building permits, new private housing units
- Stock prices, 500 common stocks
- Leading Credit index
- Interest rate spread, 10 year Treasury bonds less federal funds
- Average consumer expectations for business conditions

The data sets just mentioned are thought to lead GDP and the broad economic environment. One can use a year over year rate of change of the LEI to measure economic health in terms of acceleration and deceleration. Essentially, an environment where LEI YoY % change is less than zero and accelerating could be identified as a recovery. When LEI is greater than zero and accelerating, this would signal an expansion phase. If the LEI is greater than zero and decelerating, this would mean that a slowdown is likely, and if the LEI is less than zero and decelerating, a contraction is probable. Historically, the Conference Board LEI has had a track record of leading recessions and recoveries in GDP. In the chart below you can see that the index moved negative ahead of the last two recessions and moved positive during the last two recoveries.

Figure 3 & 4: Conference Board LEI (Absolute and YoY % Change); Source: Bloomberg, WealthShield; As of April 29, 2020

BUSINESS CYCLE INVESTMENT STRATEGIES

Now that we have demonstrated the different phases of the business cycle and identified a few ways to measure and map where we are at a moment in time, we are going to introduce a simple factor rotation system that can test the efficacy of investing in accordance with the business cycle.

The rules are as follows: If the Conference Board LEI year over year growth rate is above zero, the portfolio will be allocated to the momentum factor. If the LEI year over year growth rate is below zero, the portfolio will be invested in low volatility equities. We will use the MSCI US Momentum Total Return and S&P 500 Low Volatility Total Return equity indices for the test. Furthermore, we will change the portfolio on the date of the LEI release. Our hypothesis is that allocating according to the business cycle and rotating the factors will outperform the broad market and buying and holding the factors in isolation.

LEI data has proven to be an effective indicator historically. When looking at YoY data, factor rotation outperformed both factors used in the experiment (See Figure 5). Figure 6 further illustrates the success of the test. The strategy delivered significant outperformance over the standalone factor performances used in the test. Additionally, the max drawdown mirrored that of the lower volatility factor.

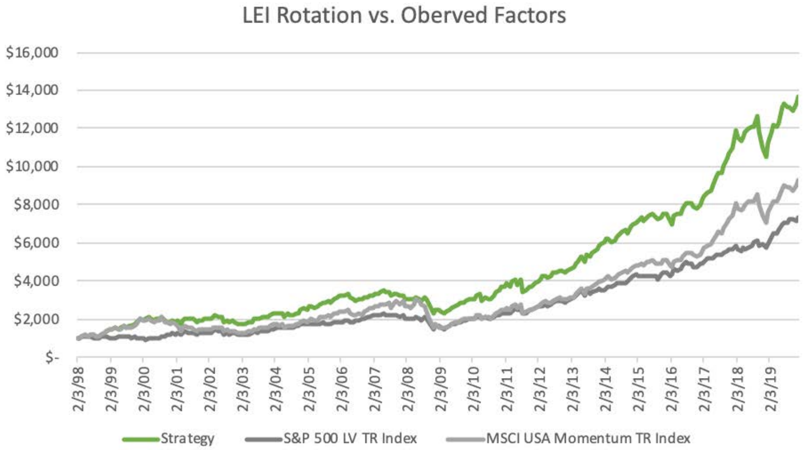

Figure 5: LEI Rotation Test
Source: Bloomberg, WealthShield, 02/1998 - 12/31/2019

Inv	CAGR	Max DD
Strategy	12.63%	-34.85%
Low Vol	9.45%	-34.85%
MTUM	10.64%	-49.60%

**1998-2019*

**If LEI YoY > 0, MTUM, if negative then Low Vol*

Figure 6: LEI Rotation Test (Cont.)
Source: Bloomberg, WealthShield
As of 02/1998 - 12/31/2019

Lastly, we analyze the consistency of the test results. The test delivered over 500bps of annual alpha, while reducing the max drawdown ~16% relative to the S&P 500. These are impressive overall results; however, consistent results are just as important in our opinion. The test not only provided more positive years than the benchmark, but also outperformed or produced in-line returns ~77% of years. Metrics that generate consistent results add significant value when assessing the business cycle and deciding how to position the portfolio. Overall, we prefer tests with consistent reliability rather than tests that were only successful due to just one impressive period as this can lead to long-term mediocrity.

Observation	Strategy	S&P
CAGR	12.63%	7.45%
Max DD	-34.85%	-51.00%
Positive Years	81.82%	77.27%
Negative Years	18.18%	22.73%
Outperforming Years	59.09%	
In-line Years	18.18%	
Out/In-Line Years	77.27%	
Underperforming Years	22.73%	

Figure 7: LEI Rotation Test Analysis
Source: Bloomberg, WealthShield
As of 02/1998 - 12/31/2019

In conclusion, we reiterate our view that it is important to measure where you are in the business cycle and make investment decisions given that information. Using leading economic indicators is an essential piece of the WealthShield framework as it allows us to gauge the business cycle environment and make aligned and informed investment decisions accordingly. Additionally, using a scientific, rules-based approach prevents us from letting emotions drive decision making. This is why we find historical reliability and let the data determine how to properly position portfolios.

DISCLOSURE:

Past performance is no guarantee of future returns. This is WealthShield's current assessment of the market and may be changed without notice. The visuals shown are for illustrative purposes only and do not guarantee success or certain level of performance.

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