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Another Black Swan Event

Nassim Taleb is the author of *The Black Swan: The Impact of the Highly Improbable*. A former hedge fund manager and options trader, Taleb is now a best-selling author who writes about the unpredictability of historically significant events. He warns us to be wary of "suspicious experts" -- economic prognosticators whose few good guesses among their innumerable bad ones give the erroneous impression that they have insight into the future.

In England in the Middle Ages, the phrase "you'll see a black swan before...." was used to describe a highly improbable event. As far as anyone knew, all swans were white. Then, in the 17th century, black swans were discovered in Australia and the phrase "black swan" has come to refer to a rare, unexpected event that has substantial consequences for the future. When looking back at black swan events we often fall prey to hindsight bias and assume that the event should have been obvious before the fact

Taleb is critical of Wall Street quants who used computer analysis of past data to calculate the downside risk of the now infamous mortgage backed securities. The downside risk was never accurately measured, and the result was the financial crisis of 2008/2009. He recommends that we put less trust in computer models and more in human experience and perspective. Since the future is unpredictable, Taleb gives readers this advice about investing -

- Play defense. Like those who wish to live a long life, investors must avoid risks that have an unlimited downside.
- Charts showing past performance are of no value in predicting future risk.
- Keep your investments diversified. Failing to diversify increases portfolio fragility.
- Avoid derivatives and leveraged investments.
- Keep most of your portfolio in assets that you understand. Don't be enticed by complex investment products that are created by incomprehensible mathematics. Your financial advisor doesn't understand how they work either.
- If you can't resist the urge to speculate, do so with a small portion of your portfolio -- with money that you can afford to lose.

Contrary to what most people believe, not all black swans are tragic events; there are "good" black swans. The internet, FedEx and the personal computer are "good" black swans. World War I, the sinking of the Titanic, 9/11 and the current economic decline are "bad" black swans. The current pandemic isn't a black swan event - there's nothing new about pandemics. The unprecedented decision by governments to quarantine healthy as well as sick people and the forced closure of businesses is an unforeseen black swan event that has left 30 million people unemployed in the USA, causing an economic calamity that will be debated and studied for decades to come.

Today, economic forecasters are in Wall Street's kitchen cooking up a pot of alphabet soup -- using letters to describe what they think the economy will do once states reopen. Optimists are predicting a "V" shaped recovery. By this they mean that they expect a quick economic rebound. Less optimistic forecasters are predicting a "U" shaped recovery – we will see economic stagnation before recovery begins. Still others are predicting a "W" shaped recovery -- after a rather quick rebound we will experience another decline before recovery finally takes hold. The perpetual pessimists see the letter "L" – an economy that barely recovers from its present state. All forecasters have one thing in common – they have no idea what will happen. History's greatest lesson is that the future is unknowable and things rarely turn out as expected.

Fortunately, the shape of the recovery is irrelevant to the long-termed, goal-focused investor. All that matters is the inevitable recovery. "Here today, Gone Tomorrow: The Impact of Economic Surprises on Asset Returns" is the title of a report from Vanguard Research that concludes – "*Economic surprises reverberate through the financial markets, producing short-term volatility in asset prices…Although there is some correlation between economic surprises and asset returns in the short-term, we find that in the long-term, these surprises hardly matter.*" Like black swans, economic surprises can be good or bad. To maximize your chances of benefiting from positive surprises and not being ruined by negative ones, you need a diversified portfolio; one that is the product of a financial plan that is focused on your goals, risk tolerance and time horizon.

The lesson to learn from black swan events is that we should not treat the highly unlikely as impossible or the highly likely as certain. You might expect that anyone who would write a book about black swan events has a pessimistic worldview. But Taleb is an optimist and warns against falling prey to worst-case scenarios, because most black swans have been of the good variety. If this wasn't so, we'd still be in the Middle Ages where life expectancy was 40 years and 25% of children died before age five.

Bonds to the Rescue - Again

For the past decade, the low yield of US Treasury securities and investment grade corporate bonds has led many investors to seek higher yields elsewhere. Unfortunately, few investors realize that a bond's yield and risk are directly related. Even when government and high-quality corporate bonds offer historically low yields, they are still vital components of any well-crafted portfolio – as recent events have once again shown.

Let's start with some definitions. A *bond* is a marketable security in which the issuer must pay the lender periodic (usually semiannual) interest payments and upon *maturity* repay the principal in full. Most bonds have a *par value* (principal value) of $1,000 which is the amount upon which the *coupon rate* (interest) is calculated. A bond's *yield* is a percentage measure of its annual rate of return. There are many different types of yield calculations. The most common is *current yield* which is a bond's annual interest divided by its current price.

The most important concept to understand about bonds is that there is a direct relationship between a bond's yield and its risk. Here are some risks of bond ownership.

- Default risk – If the issuer fails to pay the promised interest or principal re-payment, the bond is considered in default.
- Inflation risk - Most bonds pay a fixed interest rate. Over time, inflation lowers the purchasing power of a bond's interest payments and its principal at maturity.
- Interest rate risk – High quality bonds generate predictable, reliable income and pay a fixed dollar amount upon maturity. Their pricing is primarily influenced by changes in interest rates. If interest rates rise, higher yields are available from comparable, newly issued bonds. Therefore, the price of a lower yielding, previously issued bond will decline in proportion to the time left until it matures. For example, the price of a bond ten years from maturity will decline more than a similar bond maturing in one year. Conversely, a decrease in interest rates will temporarily raise the price of higher yielding, previously issued bonds of similar quality. These changes in a bond's price can be easily computed with a financial calculator.

For this discussion, we will look at four types of bonds –

U.S. Treasury Securities (Treasury bills, Treasury notes and Treasury bonds) - Treasury securities are considered free from default risk. The only risk in U.S. Treasury securities is interest rate risk. If you own a bond yielding more than a comparable maturity Treasury security, you are taking on additional risk – no matter what your financial advisor says.

A unique bond is the U.S. Treasury's inflation protected security (TIP). In addition to yielding a fixed rate of interest, a TIP's principal value rises annually by the rate of inflation. TIPs provide a "real" (inflation-adjusted) rate of return rather than the "nominal" (non-inflation-adjusted) return offered by other bonds. Because of this inflation protection, TIPs have a lower yield compared to Treasury securities of similar maturity. For example, On May 1st the 10-year Treasury was yielding about 0.6% and the 10-year TIP about -0.5%. This means that the bond market is pricing in 1.1% inflation for the next decade -- the difference between the two yields. If inflation averages 1.1% over the next ten years an investor would be indifferent as to whether to own the TIP or the nominal bond. If inflation exceeds 1.1%, the TIP would be the better investment. Conversely, if inflation averages less than 1.1%, the nominal bond would be the better investment. I believe that the lower yield of TIPs is a reasonable price to pay to hedge against the risk of unexpected inflation and recommend having a significant allocation to TIPs, especially in retiree portfolios.

Corporate Bonds – The interest paid by a corporate bond is inversely proportional to the credit quality of the issuing company. Corporate bonds fall into two broad categories -- investment grade and high yield. Investment grade bonds have a higher yield than Treasury securities of similar maturity because of default risk. Bonds issued by companies that do not have an investment grade credit rating are known as high yield (or junk) bonds. They are popular among yield chasing fixed income investors when interest rates are low, and the economy is doing well because default risk is low. However, unlike high quality bonds, their risk characteristics are stock-like. During a recession, when the possibility of default rears its ugly head, investors flee them, their prices decline along with stocks – exactly the opposite of what we want our bonds to do. High yield bonds add unnecessary risk to the fixed-income (safe) side of your portfolio. If you desire a higher portfolio return, increase your stock allocation.

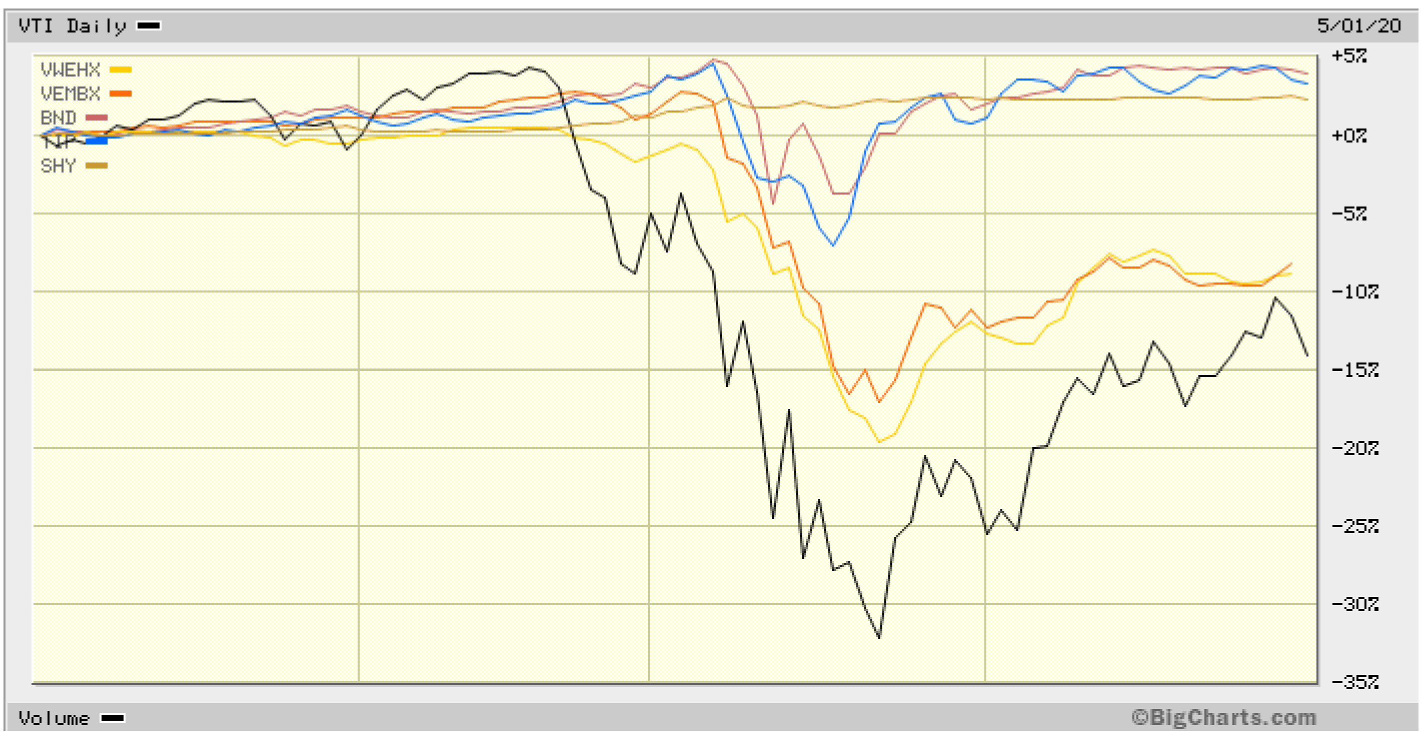
Municipal Bonds – State and local governments issue these bonds to finance public projects. Interest paid by municipal bonds is not subject to federal income tax. Consequently, interest rates offered by municipal bonds are typically less than those offered by taxable bonds. The historical default rate on municipal bonds has been significantly less than similarly rated corporate bonds.

Foreign Bonds - These bonds add two types of risk that do not exist in domestic bonds - political risk and currency risk. Foreign bonds are popular when the dollar is falling in value versus foreign currencies. If you desire to hedge against a declining dollar, do so by owning foreign stocks -- in the risk side of your portfolio.

High quality bonds, which I will define as Treasury securities and investment grade corporate and municipal bonds, are in a portfolio to preserve capital, not to create capital gain -- to mitigate the volatility generated by the stocks in your portfolio. High-yield and emerging market bonds are unlikely to provide this benefit.

The most often cited domestic bond index is the Aggregate Bond Index which contains all investment grade corporate bonds and Treasury securities with a time to maturity of one year or longer. The index does not include foreign bonds, high-yield bonds, municipal bonds or TIPs. There are many mutual funds and exchange traded funds (ETFs) that track this index at low cost, such as the Vanguard Total Bond Market ETF (BND). The bond holdings of your portfolio, just like the stock holdings, should be well diversified. BND is an excellent core holding along with a short-term Treasury securities fund, a TIPs fund and an investment grade corporate bond fund. Investors in high marginal tax brackets should also consider owning an investment grade municipal bond fund. Diversification doesn't eliminate portfolio risk but it's the best risk management tool you have to protect your portfolio against the unexpected.

This chart shows the year-to-date performance of the Vanguard Total Stock Market Index Fund ETF (VTI, the bottom line), as well as that of the Vanguard Total Bond Market Index Fund ETF (BND), the iShares 1-3 Year Treasury Securities fund (SHY), the iShares TIPs Bond ETF (TIP), The Vanguard High-Yield bond fund (VWEHX) and the Vanguard Emerging Markets Bond fund (VEMBX). Two things to note. The first is the steady performance of the short-term government bond fund (SHY). TIP and BND declined 5% during the initial market panic but soon recovered and all three funds have a positive return year-to-date. The second thing to note is how the high-yield and emerging markets bond funds mimicked the decline in stocks and are still down significantly year-to-date. As history has repeatedly shown, these bonds have risk and volatility characteristics that are stock-like -- making them highly correlated to stocks when diversification is most needed. Much better, in my opinion, to cede the potential for higher return in exchange for less volatile portfolio performance. Diversified investors who own high quality bonds should be pleasantly surprised at their portfolio's performance during the crisis thus far because these bonds have held their value and helped moderate portfolio volatility.



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