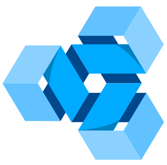


ReSolve
ASSET MANAGEMENT

SKIS & BIKES

THE UNTOLD STORY OF DIVERSFICATION

The article shows how diversification can provide the opportunity to invest in a variety of risky assets – with commensurately high expected returns - but at a fraction of the total risk that an investor would endure with any single asset on its own.

By investing in variety of assets that can thrive in different economic regimes we can protect portfolios against an uncertain future.

The most fundamental principle of investing is diversification. But in our experience, few investors understand what diversification means.

Sure, investors typically understand that diversification means “don’t put all your eggs in one basket”. But when we probe a little deeper, it seems many investors are still confused about how diversification works in practice. They wonder, “If I’m buying something that makes money when the other is losing money, doesn’t that just give me a zero return?”

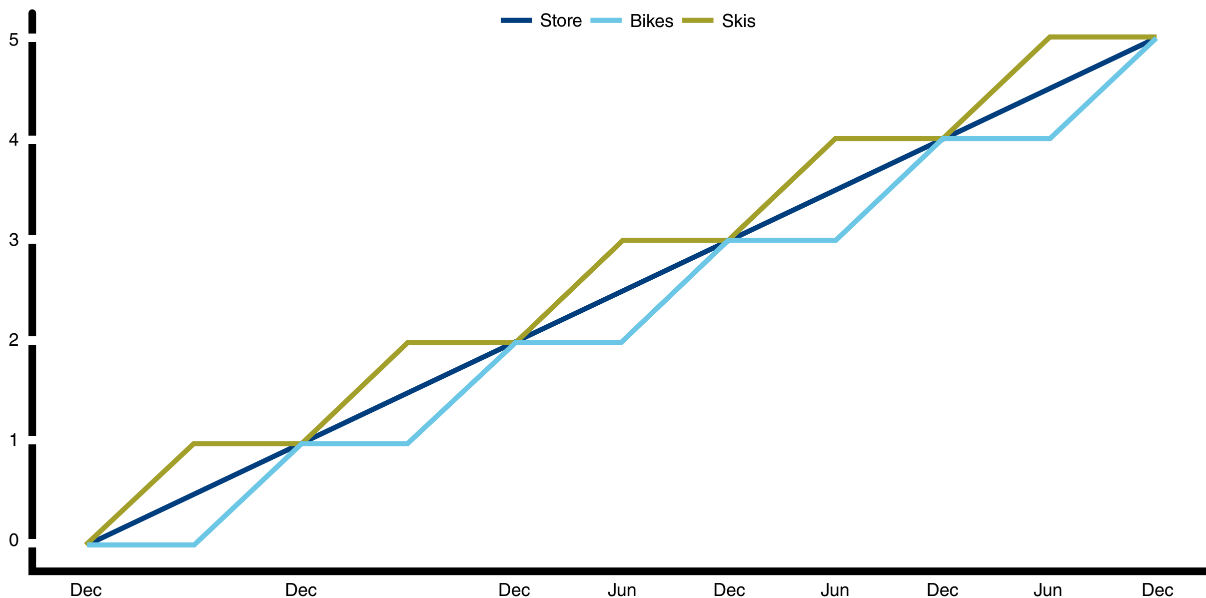
We can overcome this confusion with a simple example.

In Canada we have very distinct seasons. Some months of the year are temperate and relatively dry, while other months are cold and snowy. As a result, most Canadian towns of any size have stores that sell skis and bikes.

Of course, they don’t inventory both skis and bikes at the same time. Rather, in the spring they sell off all their ski related inventory and set out their bike gear, and in the fall they clear out the bike gear to make room for skis.

Let’s observe a simplified example of bike sales and ski sales over several years.

Figure 1. Theoretical sales of skis and bikes in Canada.



Source: ReSolve Asset Management. For illustrative purposes only.

As winter approaches, ski sales (gold line) accelerate while bike sales (light blue line) drop off. As summer approaches people stop buying skis but ramp up their purchases of bikes. The store (dark blue line) runs a steady profit all year long.

This is the nature of diversification.

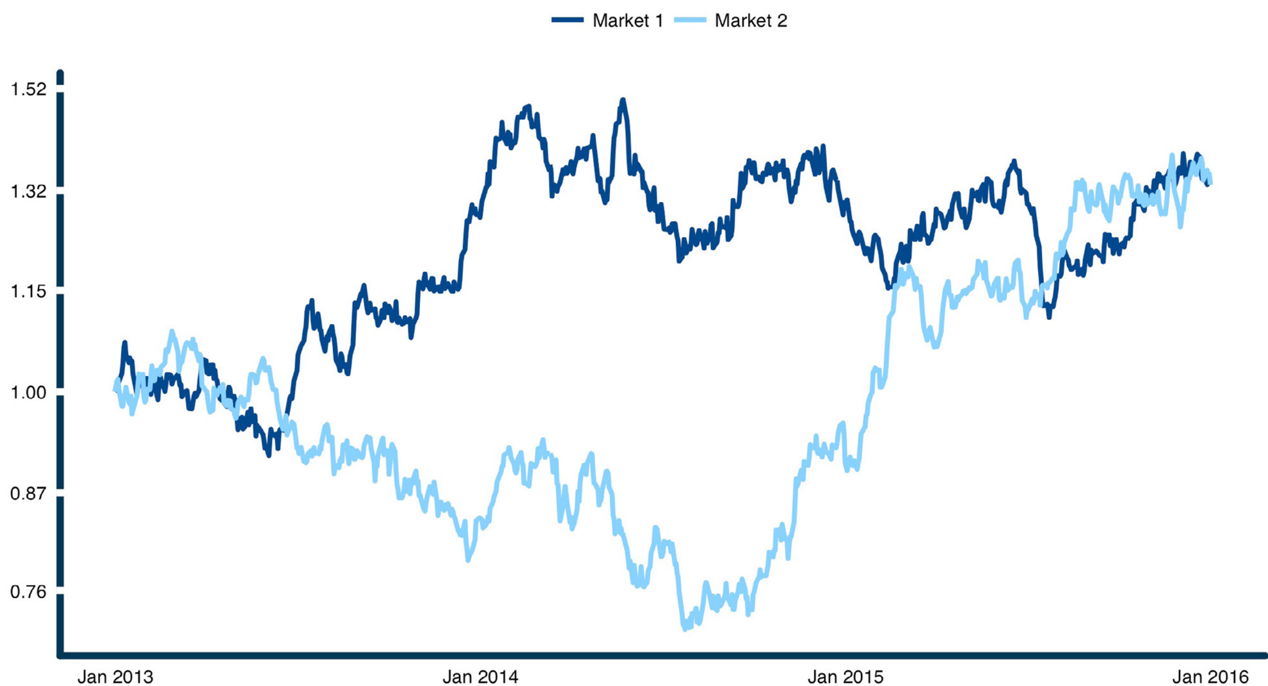
WELL EXECUTED DIVERSIFICATION IS INDISTINGUISHABLE FROM MAGIC

The skis and bikes example above shows how deriving cash-flows from two independently profitable businesses, which produce returns at different times, reduces the variability of cash-flows throughout the year.

The skis and bikes example extends quite intuitively to the domain of investment portfolios.

Consider a simple example where we have two assets: Market 1 and Market 2 (see Figure 2. below). To make this example more real, assume that the markets in Figure 2. represent the returns to a long-duration bond index [Market 1] and a diversified stock index [Market 2] over the three-year period from April 2013 through March 2016.

Figure 2. Two uncorrelated markets



	Market 1	Market 2
Compound Return	10.0%	10.0%
Volatility	20.0%	20.0%
Return Risk Ratio	0.5	0.5
Maximum Peak Trough Loss	-26%	-34%

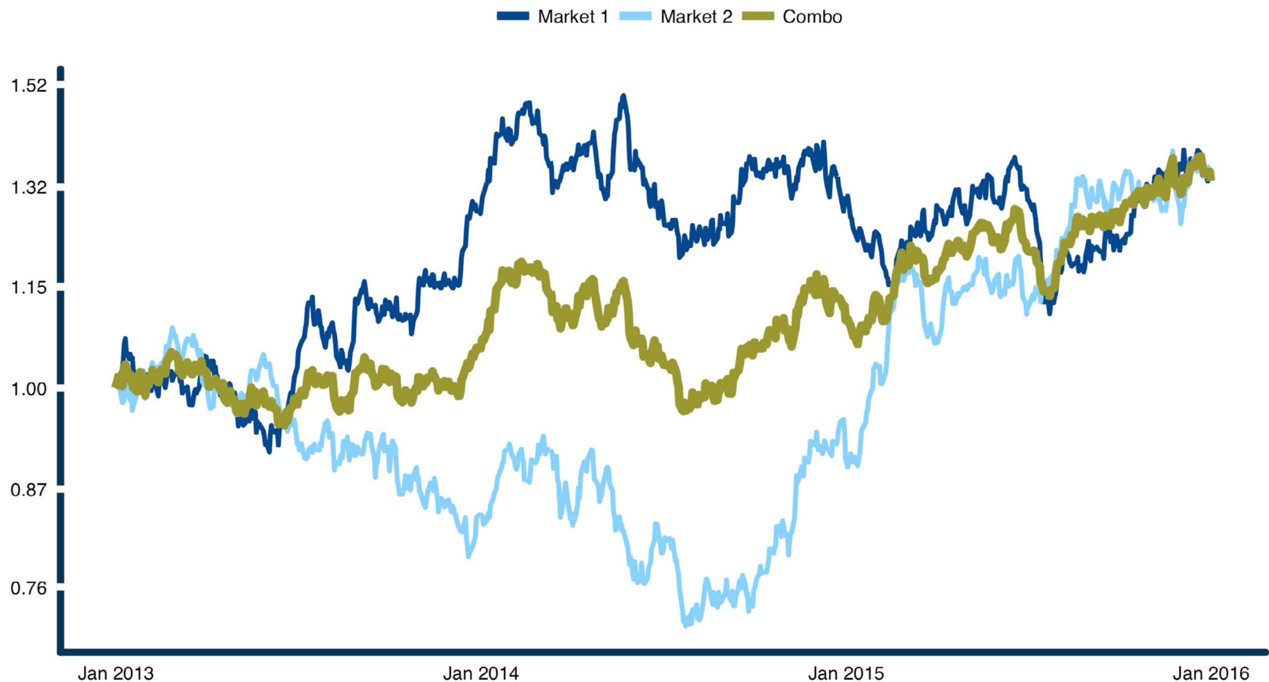
Source: ReSolve Asset Management. For illustrative purposes only. Simulated results.

From the table below Figure 2. you will notice that both Market 1 and Market 2 have the same average returns over the period but achieve those returns in very different ways. In other words, they are uncorrelated assets.

The lesson from our skis and bikes example above, as well as from Nobel prize winning financial theory, is that if we expect the same average outcome from both markets, and they are different, then we should take advantage of the opportunity for diversification.

This is exactly what we've done in Figure 3. by placing half of a fictitious investor's capital in Market 1 and half in Market 2.

Figure 3. Combining two uncorrelated markets



	Market 1	Market 2	Combo
Compound Return	10.0%	10.0%	10.0%
Volatility	20.0%	20.0%	13.7%
Return Risk Ratio	0.5	0.5	0.73
Maximum Peak Trough Loss	-26%	-34%	-18%

Source: ReSolve Asset Management. For illustrative purposes only. Simulated Results.

It's clear that diversification produces a gentler ride. While the diversified "Combo" portfolio produced the same return, it did so with about 33% less volatility.

Even better, because the declines in the two markets occurred at different times, the Combo portfolio achieved its returns with a 40% smaller maximum loss than what was endured by either of the individual markets.

If the concept is so clear cut, why do so few investors maximize their opportunity for diversification? Despite the clear benefits of diversification with perfect hindsight, we know from a behavioural perspective diversification can be a tough slog.

To illustrate this point, lets revisit how each investor might have felt half-way through.

By the mid-point in our simple example investors who chose to diversify were probably regretting their decision, as Market 1 had produced about 25% in extra returns. Only after the completion of the period, once Market 1 experienced its own 26% decline, would diversified investors finally have felt vindicated.

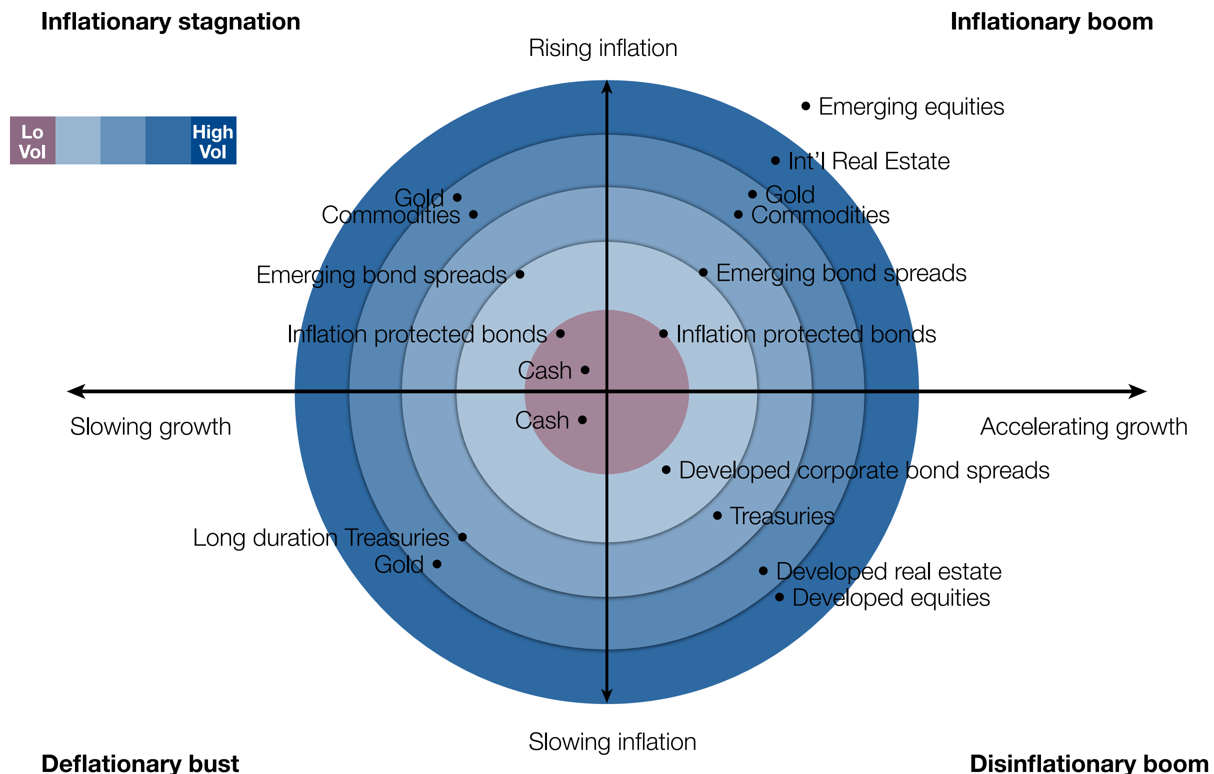
TAKEAWAYS

Many investors are fundamentally confused about how two assets can move in different directions without canceling each other out.

Unfortunately, traditional portfolios get diversification wrong, for two reasons. First, they fail to account for the fact that asset classes have very different risk profiles.

Second, most portfolios fail to invest in a diverse enough universe of asset classes that thrive in different economic states of inflation and growth. Instead, investors are conventionally overly reliant upon domestic stocks and bonds, which would only be expected to thrive in periods of sustained global growth, benign inflation, and abundant liquidity (see Figure 4. below).

Figure 4. Global asset class sensitivities to growth and inflation



Source: ReSolve Asset Management.

Diversification provides the opportunity to invest in a variety of risky assets – with commensurately high expected returns - but at a fraction of the total risk that an investor would endure from an investment in any single asset on its own.

Few investors have the opportunity to invest at Hindsight Capital, where it is always a good year. We've yet to meet anyone with a crystal ball that can perfectly predict the future.

Diversification is our greatest opportunity for protection against an uncertain future. It is paramount that investors look beyond domestic stocks and bonds into a variety of global asset classes.

Much like the store that sells only skis or bikes is prepared only for one season, portfolios that rely exclusively on just domestic stocks and bonds are prepared only for one of the four major economic regimes.

Diversification is therefore not only an explicit recognition that we cannot predict the future but also a way to ensure the portfolio's survival, regardless of what economic regime comes next.

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