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How Has Low Volatility Performed in Down Markets?

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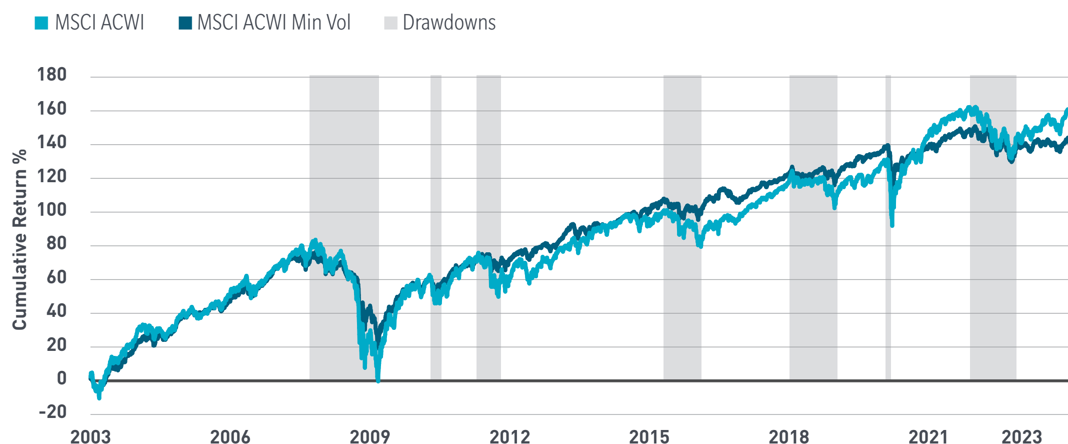
Because of the speed, severity and indiscriminate nature of the Covid drawdown in 2020, investors may believe that lower-volatility strategies have not provided the downside protection expected in those types of market environments. Over the longer term we've seen equity markets post strong returns fueled by low rates and accommodative monetary policies. The MSCI ACWI and S&P 500 indices yielded positive returns in 15 of the past 20 years, and posted returns of more than 15% in half of those years. In an era when acronyms such as TINA (there is no alternative to equities) were used, it's reasonable to assume a more defensively positioned strategy would have trailed. In this paper we will look at the MSCI ACWI & S&P 500 indices versus their comparable minimum-volatility or low-volatility indices across a number of drawdown periods to help us understand how the lower-risk indices did and whether they kept pace in the 20 year long risk-on environment.

Exhibits 1 and 2 show the 20-year cumulative return of both cap-weighted indices along with their minimum-volatility counterparts. Given the strong equity market returns over the past two decades, it's surprising to see the minimum-volatility index performed almost as well as the cap-weighted one despite a lower-risk profile.

Exhibit 1: Cumulative performance of global stock index and its minimum-volatility counterpart



Source: Bloomberg. Cumulative returns from 1/2/03 to 12/31/23 for the MSCI All Country World Index and the MSCI All Country World Minimum Volatility Index. The MSCI ACWI Min Vol index is calculated by optimizing the MSCI ACWI IMI Index, its parent index, in USD for the lowest absolute risk (within a given set of constraints). It is not possible to invest directly in an index.

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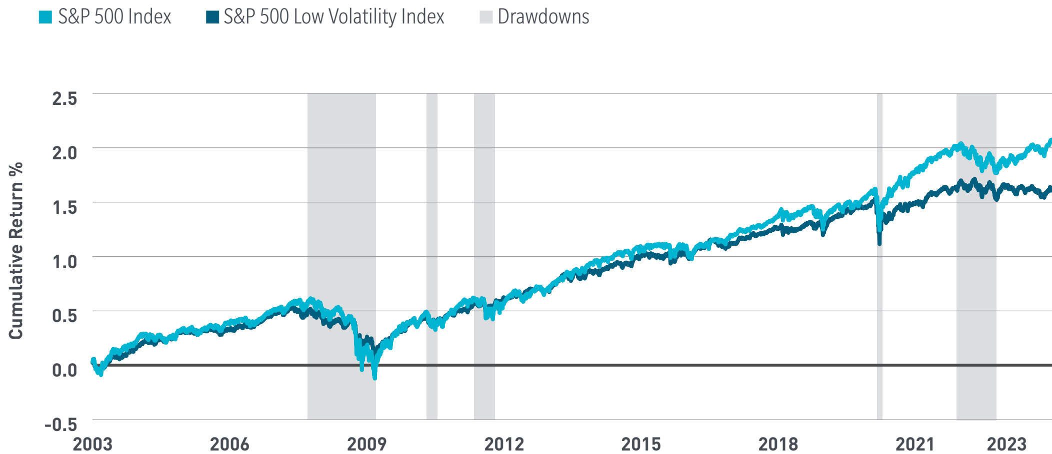
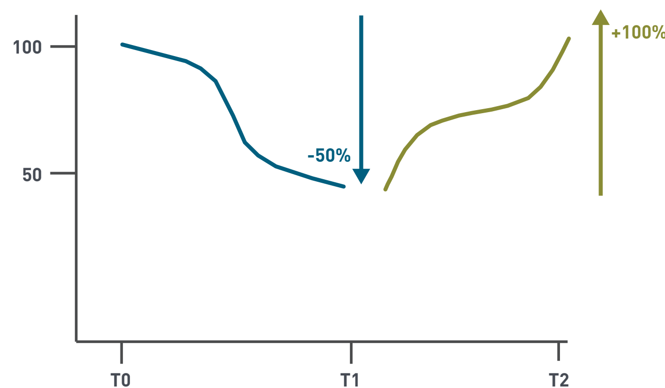
Exhibit 2: Cumulative performance of US stock index and its low-volatility index



Source: Bloomberg. Cumulative returns from 1/2/03 to 12/31/23 for the S&P 500 Index and the S&P 500 Low Volatility Index. The S&P 500 Low Volatility Index measures the performance of the 100 least volatile stocks in the S&P 500. It is not possible to invest directly in an index.

The reason low-volatility stocks can keep pace with the overall market is the emphasis placed on downside protection, or not losing as much in a downturn. Take, for instance, the stylized example in Exhibit 3. At T0, an asset is worth $100. If that asset were to lose 50% of its value at T1, it would be worth $50. To get back to its original value, how much would it need to increase? One hundred percent. This simple math helps explain how a more defensive strategy can keep pace through a market cycle.

Exhibit 3: The asymmetry of losses



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How Has Low Volatility Performed in Down Markets?

The ability to keep pace with broad indices on a cumulative basis across market environments is an important characteristic of low-volatility stocks, but investors may be questioning how effective they are at providing downside protection during drawdowns. Exhibit 4 looks at all global market selloffs of greater than 15% since October, 2007. Have minimum-volatility strategies always held up in market drawdowns consistent with expectations? Not necessarily. However, on an absolute basis, they went down less than the cap-weighted benchmark in all seven instances. If we use a 75% or less downside capture as a reasonable expectation for a lower volatility strategy over the long term, but especially in extreme down markets, we see that the min vol index performed very well, the exception being the Covid sell-off in early 2020. We believe that those types of unusual drawdowns are the exception and not the rule. In the other six periods the average drawdown was 52% of the cap-weighted index.

Exhibit 4: Minimum volatility has shielded investors from the full decline

Drawdown Period				
Start Date	End Date	MSCI ACWI	MSCI ACWI Min Vol	Drawdown Capture
10/31/07	3/9/09	-59.6%	-44.7%	75%
4/15/10	7/1/10	-16.1%	-7.2%	44%
5/2/11	10/4/11	-23.9%	-9.2%	38%
5/21/15	2/11/16	-20.2%	-8.1%	40%
1/26/18	12/24/18	-20.5%	-10.2%	49%
2/12/20	3/23/20	-33.9%	-28.7%	84%
11/16/21	10/12/22	-27.5%	-18.2%	66%

Exhibit 5 is a similar analysis of the US low-volatility index and shows how much it declined compared to the cap-weighted index both on a relative basis and as a percentage. We see a similar experience in the US, with the low-volatility index capturing less of the drawdown than the cap-weighted index in four out of five periods, the Covid drawdown being the outlier. In that short period of time sectors that typically exhibited low volatility became much more volatile while those with higher forecasted volatility, such as technology, were viewed by investors as defensive in the new reality of remote work. We believe the market environment of early 2020 was extremely unusual in historical terms and was driven largely by the unique economic circumstances we found ourselves in at that time.

Exhibit 5: The US low-volatility index in past downturns

Drawdown Period				
Start Date	End Date	S&P 500 Index	S&P 500 Low Vol Index	Drawdown Capture
10/9/07	3/9/09	-56.8%	-41.7%	73%
4/23/10	7/2/10	-16.0%	-8.1%	50%
4/29/11	10/3/11	-19.4%	-7.0%	36%
2/19/20	3/23/20	-33.9%	-36.3%	106%
1/3/22	10/12/22	-25.4%	-17.2%	67%

Source: Bloomberg. Cumulative returns within the periods shown. Drawdown capture is a statistical measure of an investment manager's overall performance in down markets. The ratio is calculated by dividing the manager's returns by the returns of the index during the down market and multiplying that factor by 100. It is not possible to invest directly in an index.

In conclusion, we believe that lower-risk strategies highlighted by minimum- and low-volatility indices have managed to keep up with their cap-weighted counterparts while also meeting expectations to provide downside protection in the most severe drawdowns, the early 2020 drawdown being the exception. We believe that a low volatility investment approach may provide solid risk-adjusted returns and a smoother ride to solid long-term capital appreciation. Over a full market cycle with ups and downs, a low volatility portfolio that avoids big losses should compound capital at a higher rate, and in doing so, it may "win by not losing".

Endnotes

[1] Source, Factset, as of 12/31/23.

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