Insights from the "Golden Cross"

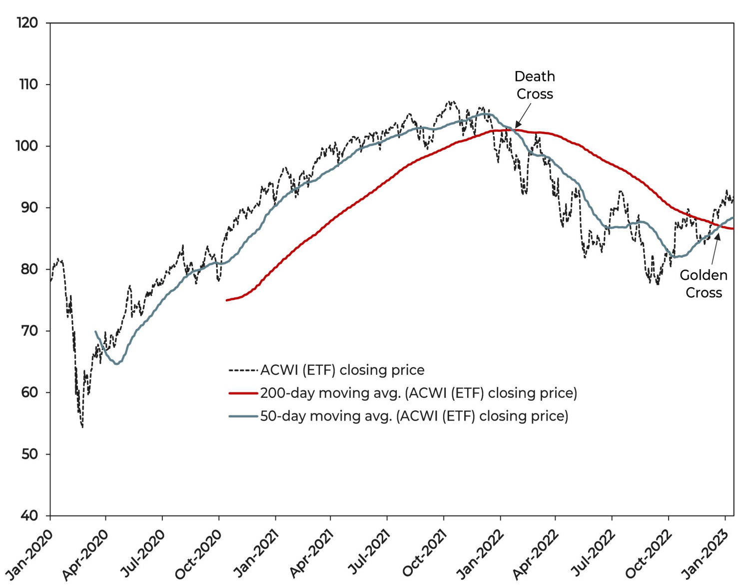
Broad economic expansions and contractions have occurred many times throughout history. However, business cycles tend to be anything but "regular." According to data from the National Bureau of Economic Research (NBER) for the time period December 1854 to April 2020, the shortest expansion in the U.S. only lasted 10 months (1920), whereas the longest lasted 128 months (2020). In contrast, the shortest contraction lasted 2 months (2020) and the longest lasted 65 months (1879).

Recognizing shifts in economic conditions can be a very daunting task for any individual, especially when uncertainty and volatility in the global markets are running rampant. However, one of the simplest ways to gauge if an economy is expanding or contracting is to use a series of moving averages. Moving averages have the impact of smoothing data, which in turn help the end user understand the broad picture of what's happening within a certain data set.

The MSCI All-Country World Index (MXWD Index), an index that measures movements in both developed and emerging markets, broke its uptrend around the time when the U.S. Federal Reserve announced it would begin tightening monetary policy in March 2022. From that point forward, broad markets witnessed a sustained period of heightened volatility (as measured by the Chicago Board Options Exchange Volatility Index (VIX Index)) as investors sought to find fair valuations given everchanging global economic conditions.

To illustrate this, below please see a daily price chart of the ACWI ETF (the exchange traded fund that tracks the MXWD Index) from January 31st, 2020 to February 13th, 2023.

Chart 1. ACWI (ETF) Closing Price and 50 and 200-day Moving Averages (1/31/2020-1/31/2023)



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Embedded in the chart you can see both the 50-day moving average (blue line), and the 200-day moving average (red line). On February 22, 2022, these two lines crossed in what is often referred to as the "Death Cross."

Such an occurrence is said to indicate an impending shift in broad global economic conditions. 335 days later on January 23, 2023 (just one week before the Federal Open Market Committee voted to raise the target range for the federal funds rate to 4.50-4.75%) the two lines crossed again with the 50-day moving average (blue line) ascending, marking what is referred to as the "Golden Cross." Like the Death Cross, the Golden Cross can also serve as a warning sign of a change in broad global economic conditions and/or valuation.

The beauty of using a series of moving averages is that no matter how volatile the day-to-day price swings of a broad market index can be, analyzing moving averages can help give investors a depiction of underlying market trends without the noise that daily volatility can have. In general, the larger the data set, the smoother the trend line will appear.

Given our analysis thus far, the next logical question is: how reliable has the Golden Cross been at serving as a key level of market support in the past?

Although past performance is in no way an indication of future returns, below is a breakdown of market data that examines a one-year closing price change of the ACWI ETF from the support point of the Golden Cross for the past 15 years. The support point of the Golden Cross is the price of the 200-day moving average at the time the Golden Cross occurred.

Table 1. ACWI (ETF) Performance Subsequent to the Golden Cross (last 15 years)

Date	*Price at Golden Cross*	*50-day moving avg.*	*200-day moving avg.*	*1-Yr. change from Golden Cross*
6/10/2009	$35.81	$32.74	$32.69	21.19%
10/6/2010	$44.39	$41.61	$41.57	13.57%
2/29/2012	$46.68	$44.26	$44.18	12.80%
8/31/2012	$45.46	$44.39	$44.39	15.09%
3/24/2015	$61.00	$59.58	$59.54	-7.24%
5/6/2016	$55.98	$55.76	$55.74	16.64%
9/10/2018	$72.56	$72.88	$72.86	1.14%
4/3/2019	$73.34	$70.66	$70.54	-14.96%
7/22/2020	$78.43	$73.81	$73.70	38.09%
1/23/2023	$90.46	$87.07	$87.02	5.67%
Avg. Return				**10.70%**

Bloomberg Finance, L.P. Past Performance is not a guarantee of future performance. 5.67% (highlighted in yellow) reflects the change from the most recent Golden Cross through February 13, 2023.

As we noted in the introduction, no global economic expansion or contraction is ever the same since there such a variety of independent variables that weigh into the continuously changing valuations within the markets. Despite this, based on our analysis of Golden Cross points over the past 15 years, we believe that global down-side risk is more limited after a Golden Cross occurs on the MXWD Index.

For other Karpus insights, please see our website.

Sources: Bloomberg Finance, L.P., the Board of Governors of the Federal Reserve System, The Corporate Finance Institute, Nasdaq, National Bureau of Economic Research.

Index Definitions: The MSCI All-Country World Index captures large and mid-cap representation across 23 Developed Markets and 24 Emerging Markets countries. With 2,885 constituents, the index covers approximately 85% of the global investable equity opportunity set as of 12/31/2022. Data provided by Bloomberg Finance, L.P.

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