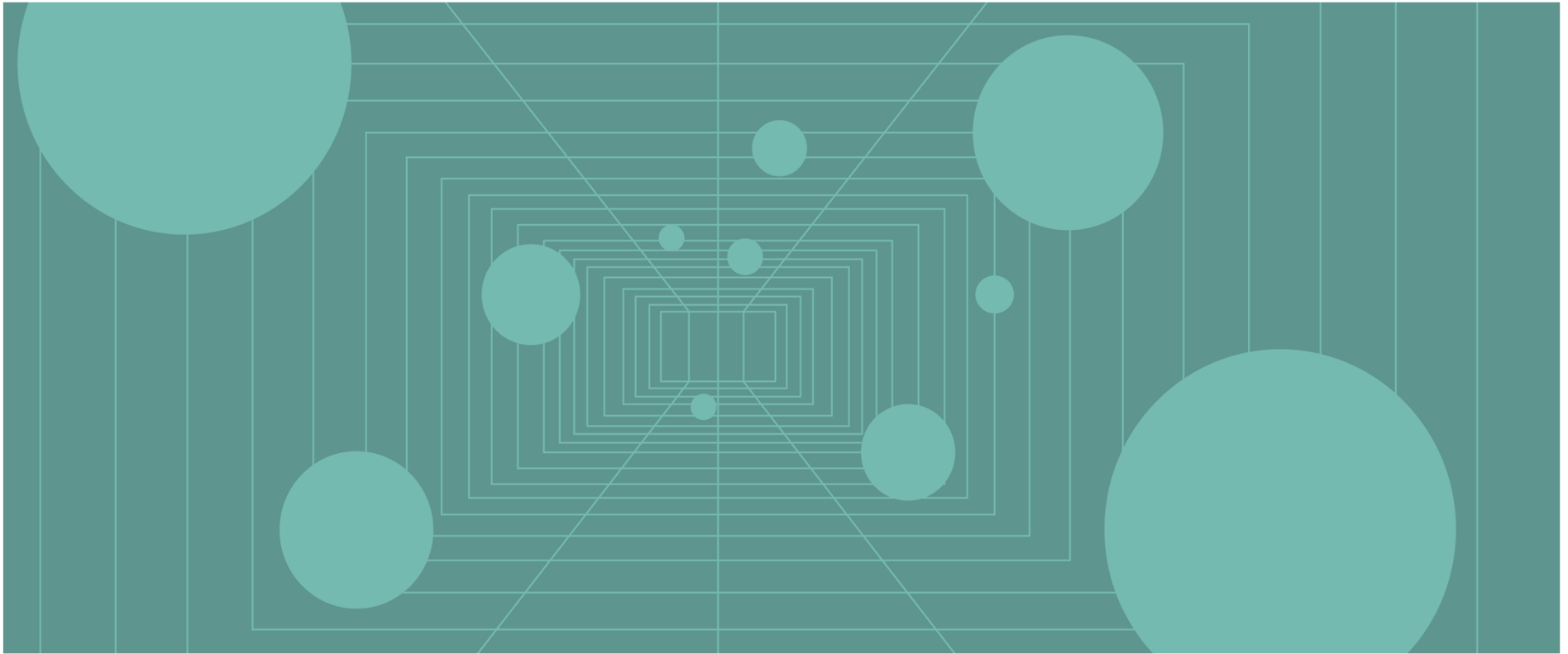


DECADES OF DATA: EMERGING MARKETS

1987–2019



Executive Summary

- **The MSCI Emerging Markets Index geographic composition has shifted dramatically over time.** Today, the Asia sub-region dominates the index with a nearly 75% weight; however, at index inception in the late 1980s, Asia made up less than 50% of index market capitalization. Latin America moved the opposite direction, constituting a little more than 10% of the index today versus nearly 50% at inception. The three largest countries in the Asia region—China (34%), Korea (12%), and Taiwan (12%)—make up more than half of the broader index market capitalization. Just ten years ago, China represented only 18% of the index. Changes in the Emerging Markets Index composition over time are a defining characteristic as local markets open to international investors. A prime example is China, whose investable equity universe is currently being reshaped by the inclusion of domestically listed A-shares in benchmark indexes.
- **The range of historical emerging markets equity returns is typically wider than that of developed markets across time periods.** Emerging markets exhibited a wider range of returns over one-, five-, ten-, and 20-year trailing periods relative to developed markets, in both nominal and real terms. As in developed markets, the range of investment results narrows as holding periods increase. Emerging markets equities exhibited greater potential upside over all trailing periods, but, somewhat surprisingly, less downside over ten- and 20-year periods. For investors that can stomach short-term volatility, emerging markets allocations proved fruitful in the long run, outpacing inflation.
- **Higher volatility resulted in a wider distribution of calendar year returns for emerging markets relative to those of developed markets.** While emerging markets are more likely to deliver stellar results in any given year, having achieved 50%+ gains in six calendar years since 1988, negative performance occurs more frequently and with greater severity than in developed markets. In 2019, emerging markets underperformed developed counterparts, but exceeded their average calendar year return since 1988.

Executive Summary (continued)

- **During periods of market stress, emerging markets equity drawdowns are typically more severe than those of developed markets.** Over rolling five-year periods, maximum drawdowns for emerging markets stocks are generally worse relative to developed markets. The 1997–98 Asian financial crisis and the 2008–09 global financial crisis (GFC) produced two severe emerging markets equity drawdowns. Corrections, defined as a peak-to-trough sell-off of more than 10%, are common occurrences in any given five-year period for emerging and developed markets alike.
- **Earnings growth is the primary contributor to emerging markets equity total return over time, exceeding dividend reinvestment by nearly 2x, while valuation multiple contraction has negatively impacted total returns.** Higher dividend yields in emerging markets translated to a higher return contribution from dividend reinvestment relative to developed markets. Somewhat surprisingly, despite the nascent nature of emerging markets (and thus the expectation of higher earnings growth), earnings growth contribution lagged that of developed markets over the common period. Valuation multiple derating dragged on emerging and developed performance alike, detracting nearly 1% on average from the average total returns since 1996.
- **Emerging markets have outperformed developed counterparts since inception, but relative performance cycles are significant in magnitude and span multiple years.** Emerging markets outperformed developed by nearly 300% cumulative in two outperformance cycles since 1987, which lasted roughly seven and 12 years, respectively. The 2000s commodity boom boosted earnings per share (EPS) in heavily resource-exposed emerging markets, helping drive outperformance versus developed counterparts. Following the GFC, emerging markets experienced a sustained drawdown relative to developed markets. The current period has not been as severe as the cycle ended in early 1999, which saw emerging markets lag developed counterparts by 73% cumulative in just over four years.

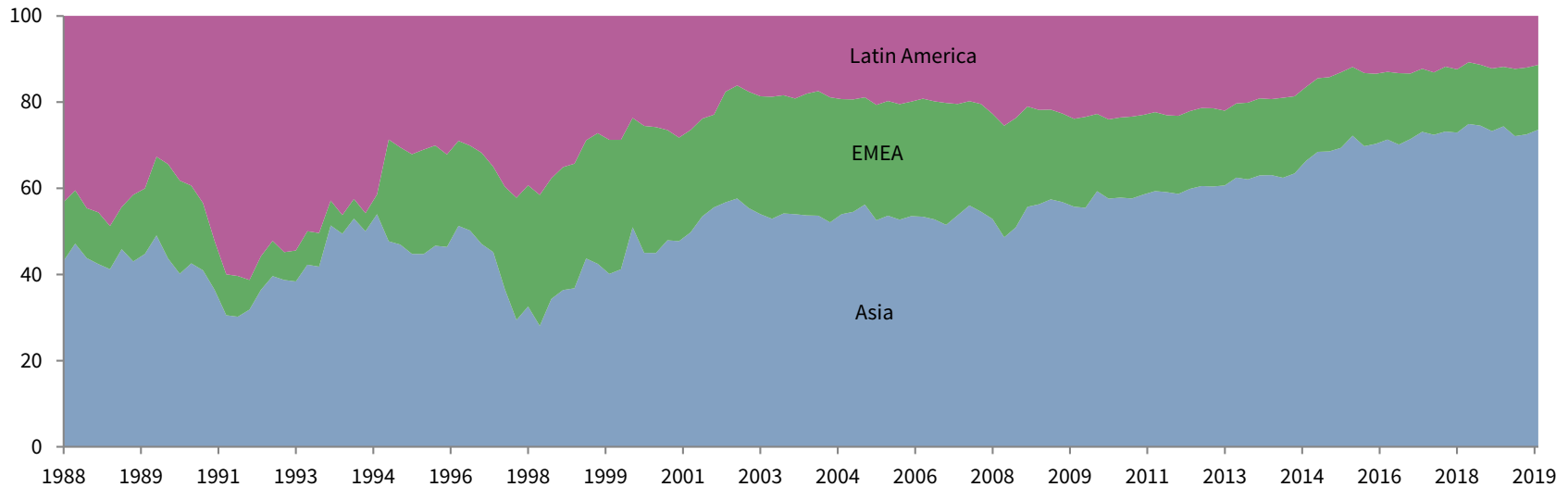
Executive Summary (continued)

- **Starting normalized valuations are a useful guide in setting longer-term return expectations.** For emerging markets, initial valuations, such as our cyclically adjusted price-to-cash earnings ratio, exhibit a strong relationship with subsequent ten-year returns, with an R^2 value of 0.69. However, the relationship weakens over shorter time horizons, with an R^2 of 0.24 versus subsequent five-year return periods. It should be noted that all normalized price/earnings ratios in the top percentile of historical observations occurred during the 2006–07 lead-up to the GFC; other starting valuation percentile ranges show a wider subsequent returns distribution.
- **Bear markets occur more frequently in emerging markets relative to developed markets but are similar in magnitude to developed bears.** The average bear market length and drawdown in emerging and developed markets is roughly the same. On the other hand, bull market lifespans in developed markets are about twice as long as those in emerging markets, but show roughly the same upside. One common characteristic of bull markets across emerging and developed markets is that they are, on average, longer in duration than their respective bear markets and tend to have a higher performance magnitude in absolute terms. This is consistent with the observation that equity markets are generally upwardly trending over time.

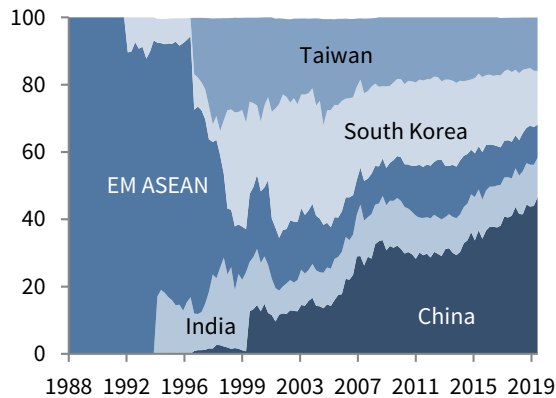
Emerging markets index country composition is dynamic over time

GEOGRAPHIC EXPOSURES OVER TIME

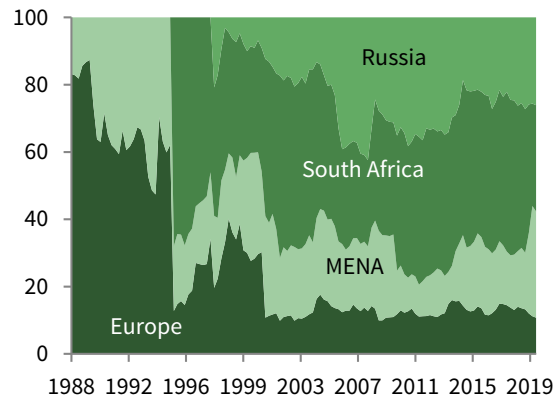
1988–2019 • Percent (%)



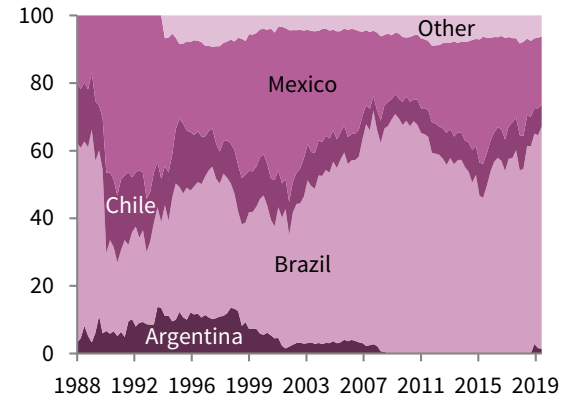
EM Asia



EM Europe, Middle East, and Africa



EM Latin America

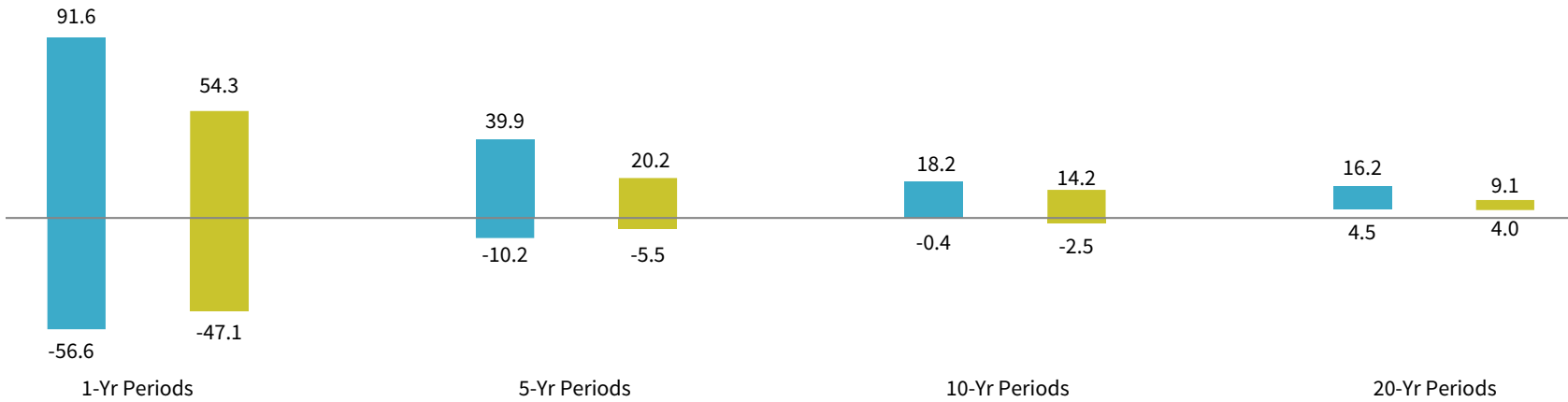


Emerging markets return distribution is wider than developed markets across all time horizons

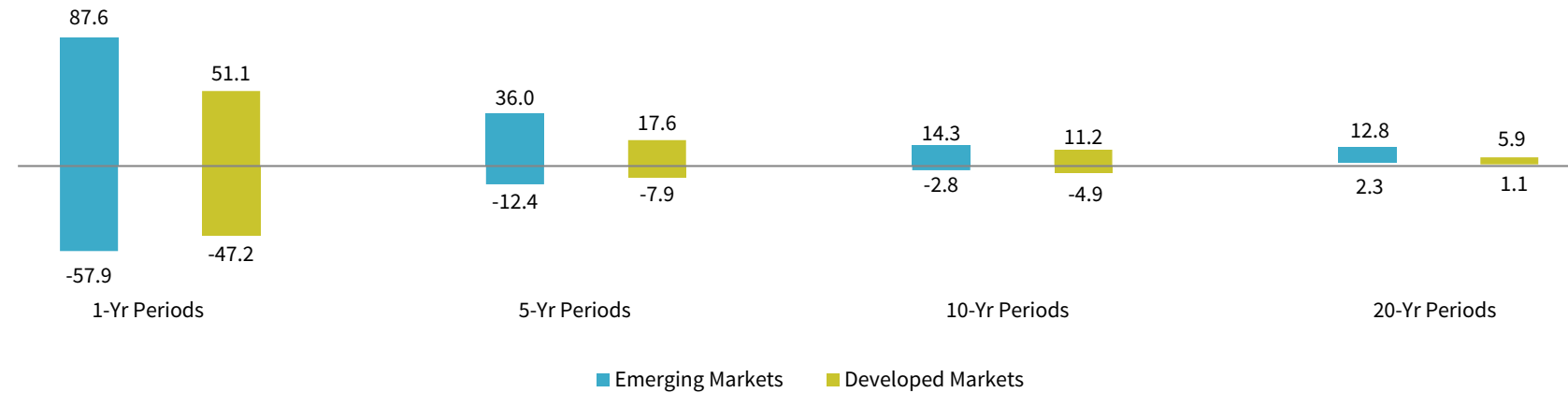
RANGE OF EQUITY RETURNS FOR VARIOUS ROLLING MONTHLY TIME HORIZONS

1987–2019 • Average Annual Compound Return (%) • US Dollar

Nominal Returns



Real Returns



■ Emerging Markets ■ Developed Markets

Calendar year returns in emerging markets can be more extreme than in developed markets

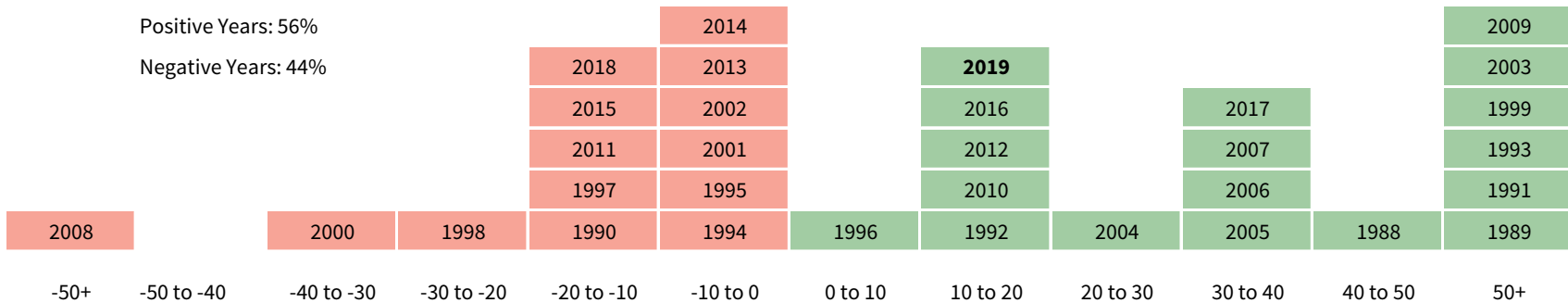
DISTRIBUTION OF CALENDAR YEAR RETURNS

1988–2019 • US Dollar

Emerging Markets

Positive Years: 56%

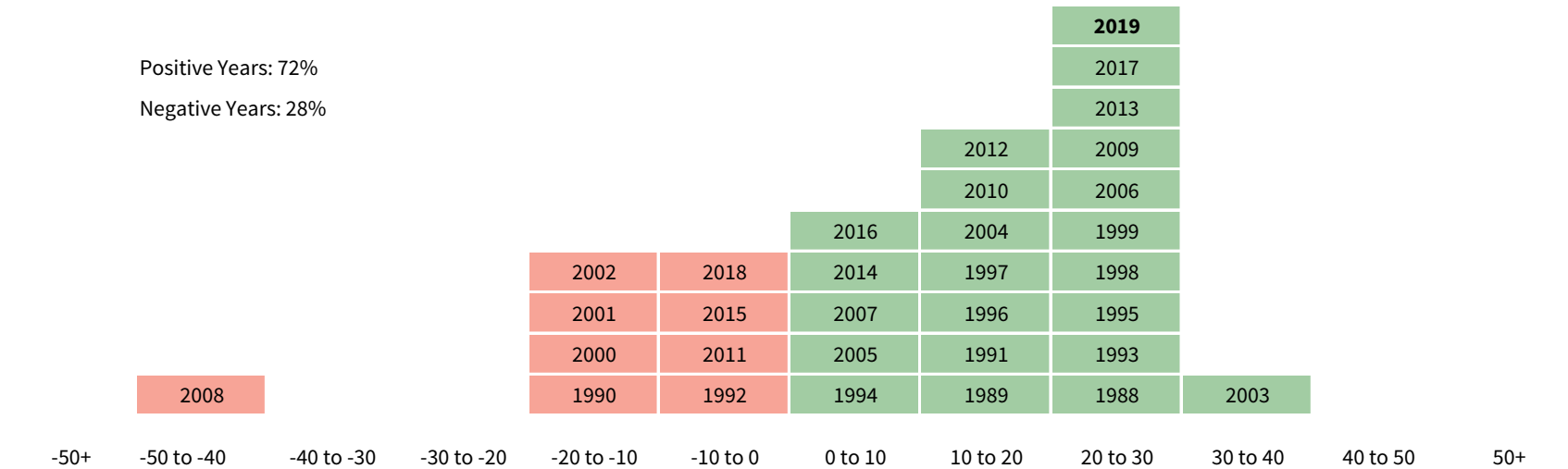
Negative Years: 44%



Developed Markets

Positive Years: 72%

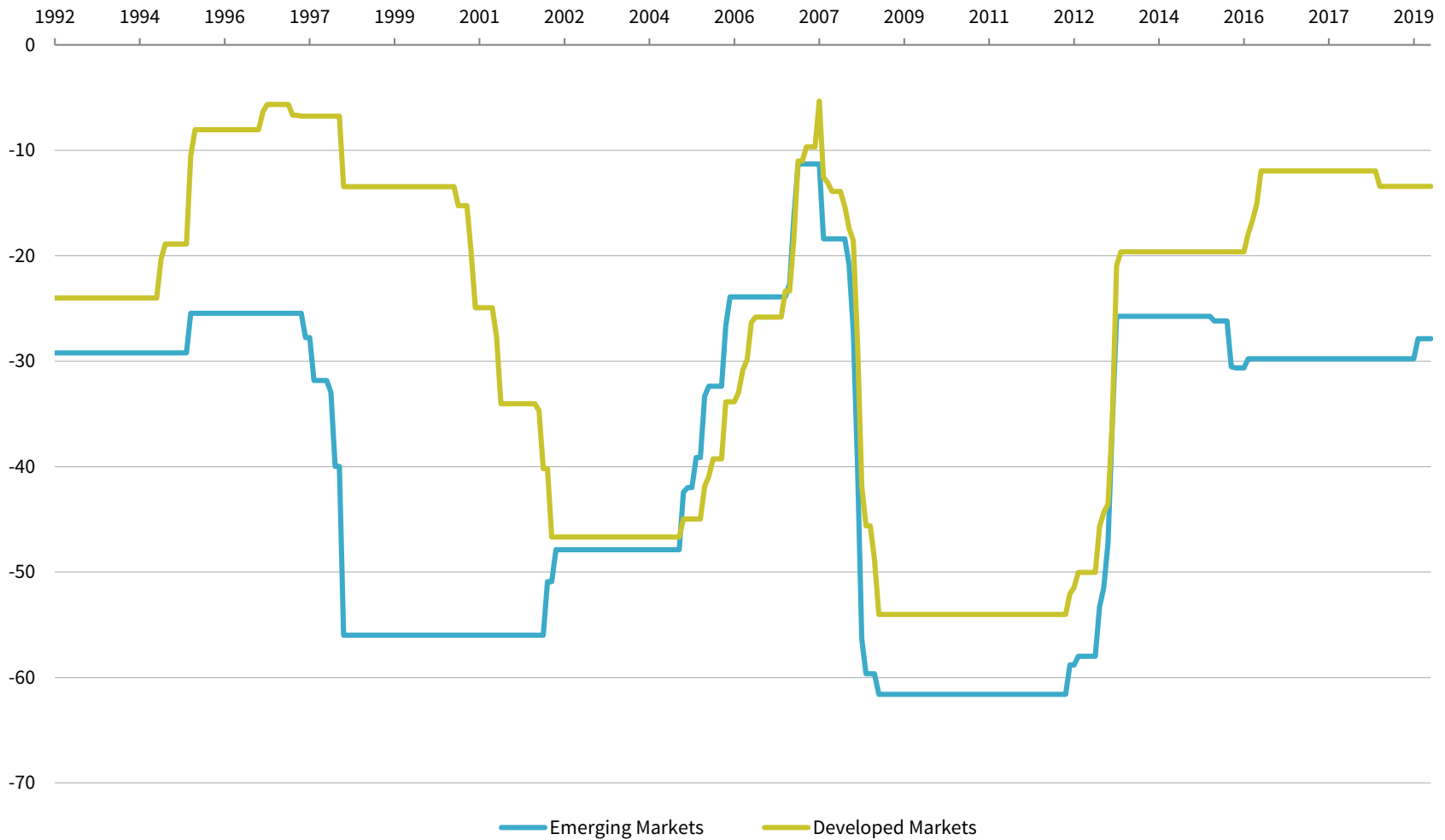
Negative Years: 28%



Emerging markets experience deeper drawdowns than developed markets

ROLLING MONTHLY 5-YR MAXIMUM DRAWDOWN OF EQUITIES

1992–2019 • Percent (%) • US Dollar



Components of equity returns are similar in emerging and developed markets

BREAKDOWN OF TOTAL RETURN AACR OVER TIME

1996–2019 • Percent (%) • US Dollar

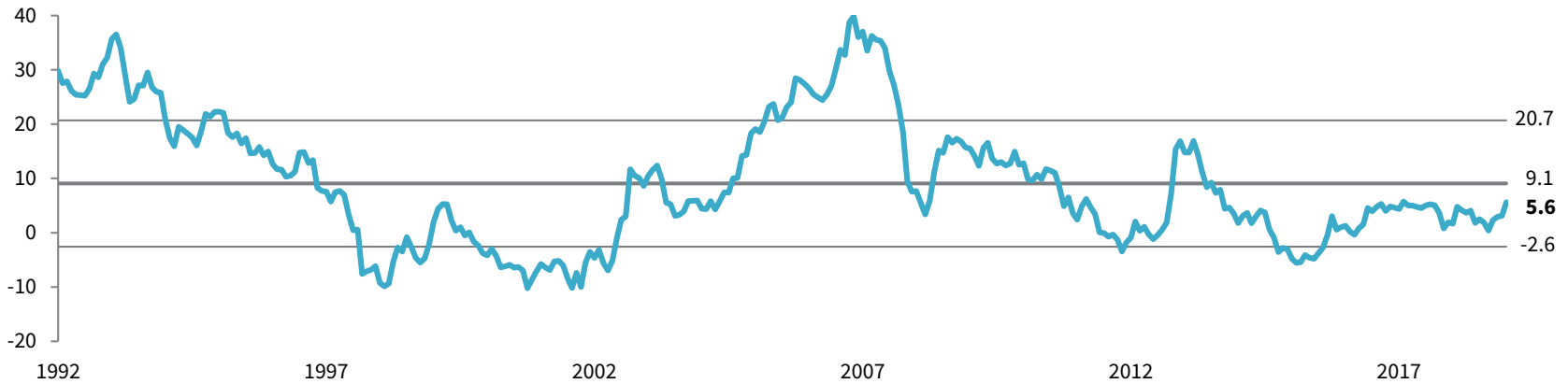


Emerging markets returns exhibit mean reversion, though the process is not smooth

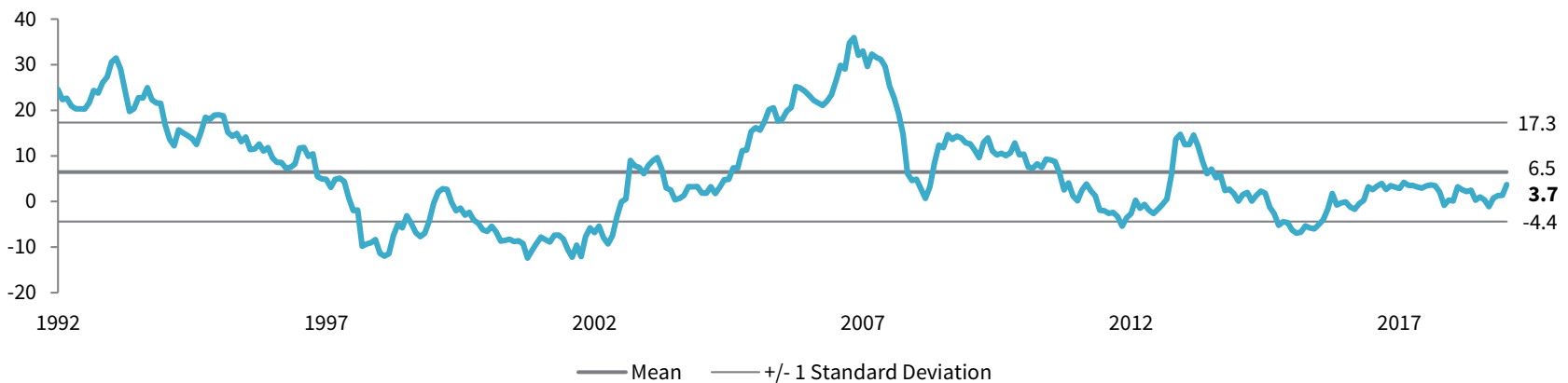
ROLLING MONTHLY TOTAL RETURN 5-YR AACR

1992–2019 • Percent (%) • US Dollar

Nominal Returns



Real Returns



Sources: MSCI Inc., Thomson Reuters Datastream, and US Department of Labor - Bureau of Labor Statistics. MSCI data provided "as is" without any express or implied warranties.

Notes: Total return data prior to January 1, 2001, are gross of dividend taxes. From January 1, 2001, to present total return data are net of dividend taxes.

Emerging markets display performance cyclicalities versus developed markets

RELATIVE PERFORMANCE

December 31, 1987 – December 31, 2019 • December 31, 1987 = 1 • US Dollar



Sources: MSCI Inc. and Research Affiliates. MSCI data provided "as is" without express or implied warranties.

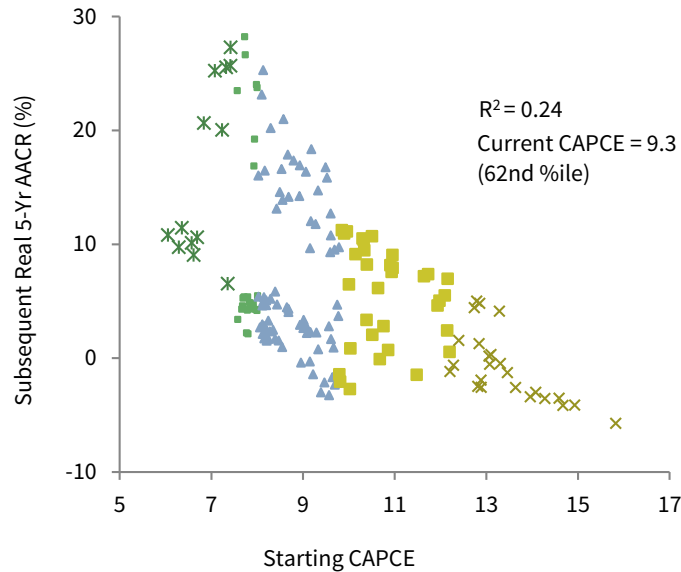
Notes: Data are monthly. Total return data prior to January 1, 2001, are gross of dividend taxes. From January 1, 2001, to present total return data are net of dividend taxes.

Starting valuations are a useful guide for longer-term return expectations

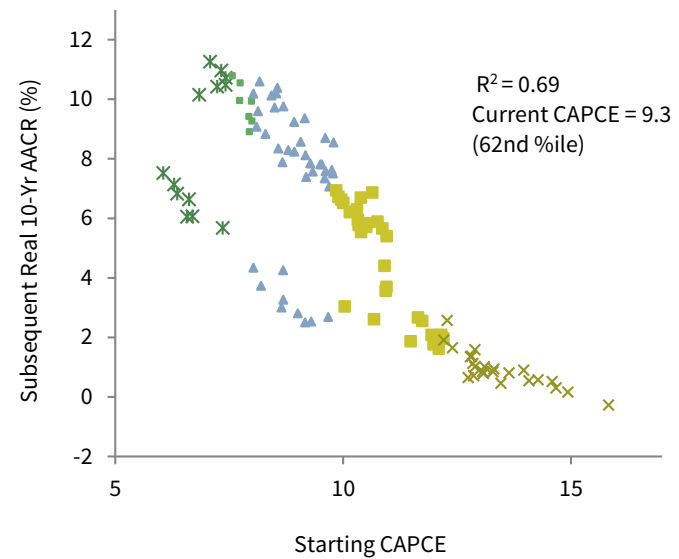
RELATIONSHIP BETWEEN CYCLICALLY ADJUSTED PRICE-TO-CASH EARNINGS RATIOS AND SUBSEQUENT REAL 5- AND 10-YR AACRS

August 31, 2000 – December 31, 2019 • Returns in Local Currency

Initial Valuation and Subsequent 5-Yr AACR



Initial Valuation and Subsequent 10-Yr AACR



P/CE Ratio Percentile	Starting Cyclically Adjusted Price-to-Cash Earnings Ratio			Subsequent Real 5-Yr AACR (%)			Starting Cyclically Adjusted Price-to-Cash Earnings Ratio			Subsequent Real 10-Yr AACR (%)		
	Median	High	Low	Median	High	Low	Median	High	Low	Median	High	Low
0-10	6.8	7.4	6.1	11.5	27.3	6.6	6.8	7.4	6.1	7.5	11.3	5.7
10-25	7.8	8.0	7.6	5.1	28.2	2.1	7.9	8.0	7.6	9.9	10.8	8.9
25-75	8.7	9.8	8.0	4.5	25.3	-3.2	8.9	9.8	8.0	7.9	10.6	2.5
75-90	10.6	12.2	9.8	6.5	11.2	-2.7	10.7	12.2	9.8	5.5	6.9	1.6
90-100	13.1	15.8	12.2	-1.2	5.0	-5.7	13.1	15.8	12.2	0.9	2.6	-0.3
Overall	9.1	15.8	6.1	4.7	28.2	-5.7	9.7	15.8	6.1	6.1	11.3	-0.3

Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

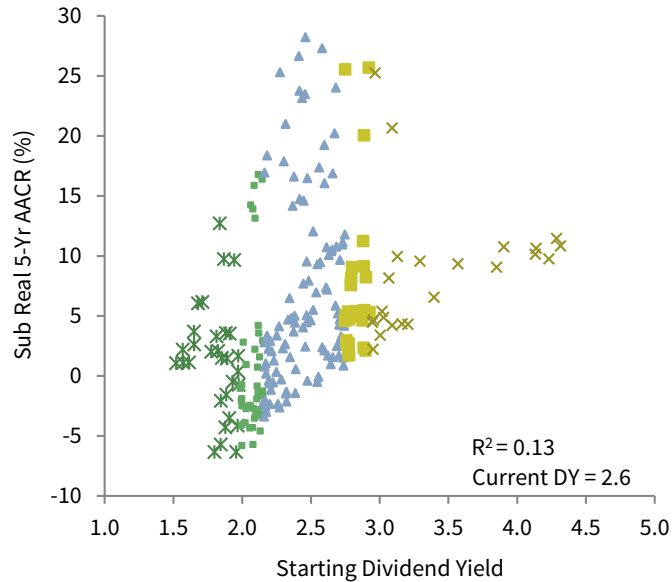
Notes: Data are monthly. The last full five-year period was January 1, 2015, to December 31, 2019, and the last full ten-year period was January 1, 2010, to December 31, 2019. Total return data prior to January 1, 2001, are gross of dividend taxes. From January 1, 2001, to present total return data are net of dividend taxes. Data are in local currency terms.

Very weak relationship between starting dividend yields and subsequent performance

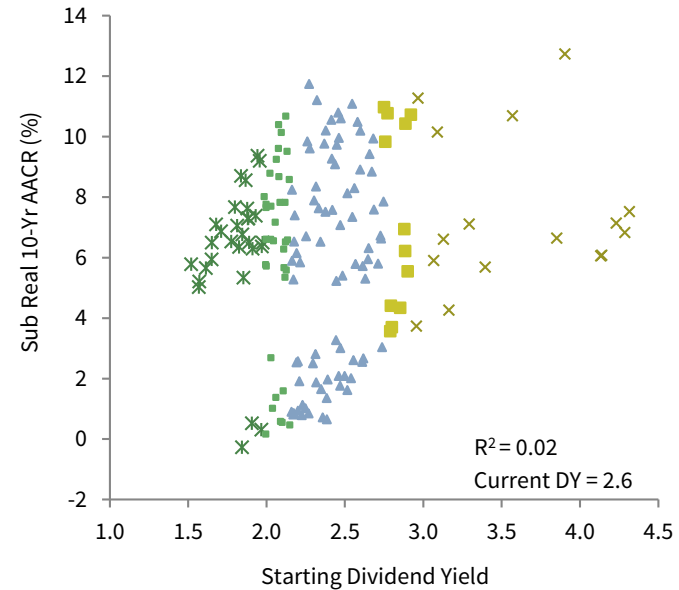
RELATIONSHIP BETWEEN DIVIDEND YIELDS AND SUBSEQUENT REAL 5- AND 10-YR AACRS

September 30, 1995 – December 31, 2019 • Returns in Local Currency

Dividend Yield and Subsequent 5-Yr AACR



Dividend Yield and Subsequent 10-Yr AACR



Dividend Yield Percentile	Starting Period Dividend Yield (%)			Subsequent Real 5-Yr AACR (%)			Begin Period Dividend Yield (%)			Subsequent Real 10-Yr AACR (%)		
	Median	High	Low	Median	High	Low	Median	High	Low	Median	High	Low
0-10	1.8	2.0	1.5	1.5	12.7	-6.3	1.8	2.0	1.5	6.5	9.4	-0.3
10-25	2.1	2.2	2.0	-1.9	16.8	-5.8	2.1	2.1	2.0	6.6	10.7	0.2
25-75	2.4	2.7	2.2	4.3	28.2	-3.4	2.4	2.7	2.2	6.0	11.7	0.7
75-90	2.8	2.9	2.7	5.3	25.7	1.7	2.8	2.9	2.7	6.6	11.0	3.6
90-100	3.2	4.3	2.9	9.1	25.2	2.2	3.5	4.3	3.0	6.7	12.7	3.7
Overall	2.4	4.3	1.5	3.5	28.2	-6.3	2.3	4.3	1.5	6.5	12.7	-0.3

Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties

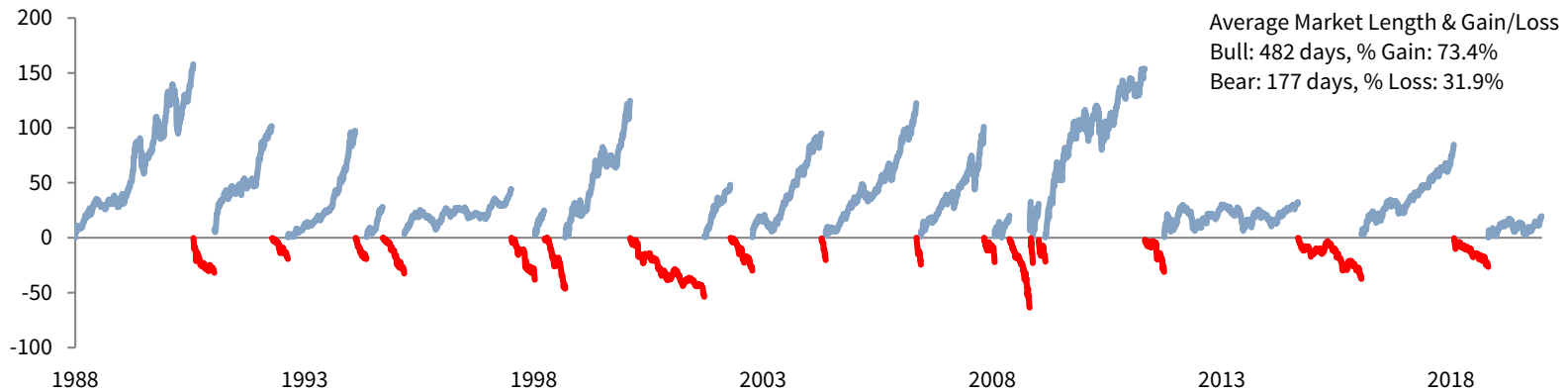
Notes: Data are monthly. The last full five-year period was January 1, 2015, through December 31, 2019. The last full ten-year periods was January 1, 2010, through December 31, 2019. Total return data prior to January 1, 2001, are gross of dividend taxes. From January 1, 2001, to present total return data are net of dividend taxes. Data are in local currency terms. In USD terms, the R² are 0.11 (5-yr) and 0.02 (10-yr).

Bull and bear market cycles turn more frequently in emerging markets

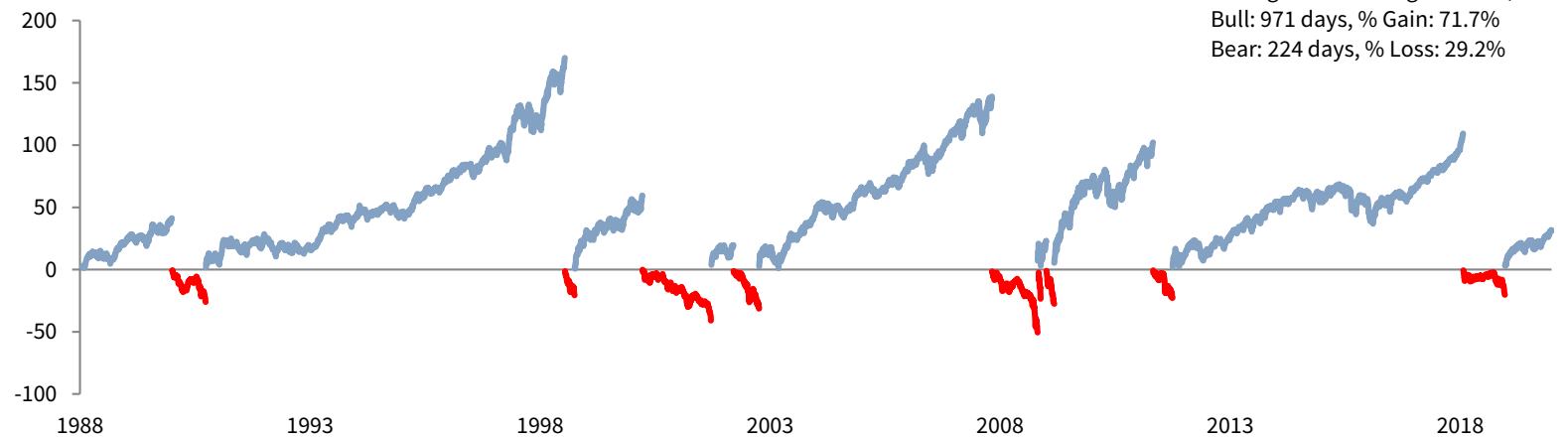
HISTORICAL LENGTH OF BULL/BEAR MARKET CYCLES

January 1, 1988 – December 31, 2019 • US Dollar • Percent (%)

Emerging Markets



Developed Markets





**CAMBRIDGE
ASSOCIATES**

Contributors to this report include Stuart Brown, Sean Duffin, Gabriel Fontana, Ilona Vdovina, and Graham Landrith.

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