Will U.S. Equities Stay on Top and Bond Yields Rise?

Morningstar indexes' short-term and long-term evolution can provide direction as investors position their portfolios in 2022.

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"There is nothing permanent except change," said Heraclitus. As investors position their portfolios at the start of 2022, it is useful to look back and examine the evolution of markets over the short and long term. How did market complexion change in 2021? What about over the past decade? Morningstar's global equity and bond indexes can serve as lenses through which to view shifts in sectors, regions, yield, and so on.

The degree to which capital markets evolve should make us humble about forecasting. Ten years ago, how many would have predicted a dominant decade for U.S. equities? In 2011, the United States was smarting from a credit rating downgrade after a debt-ceiling crisis. Its protracted low-growth recovery from the 2008 financial crisis was described using terms like the "new normal" and "secular stagnation." More recently, the U.S. has engaged in a trade war with China and has been hit hard by the coronavirus pandemic and inflation. Yet today, the world's top 10 stocks are all American, including companies that only came to market in 2010 and 2012. Could the coming years see the U.S. underperform other markets, just as the booms of the 1960s and 1990s were followed by deflated decades? Are the market leaders of tomorrow even public yet?

On the bond side, low current yields, inflation, and imminent rate hikes seem to portend meager future returns. But at the start of 2012, in the wake of a sovereign debt crisis and massive quantitative easing, did anyone expect that yields and rates would be even lower in 2022? Over the past decade, we have been warned of a "bond bubble" and heard fixed income dismissed as a "return-free risk." But bonds hardly produced a disastrous decade of real return, despite the U.S. downgrade, eurozone travails, the taper tantrum, four Fed rate hikes in 2018, and 2021's rising yields. Fixed income remains a useful portfolio diversifier, especially valuable during times of equity market stress.

Among the findings of this report:

- The U.S. now represents nearly 60% of the Morningstar Global Markets Index, a level not seen since the late 1990s and far out of proportion to the U.S.' roughly 25% share of the global economy. Today's 10 largest companies are all American, after a Chinese regulatory crackdown shrank global giants Alibaba BABA and Tencent TCEHY.
- We live in an era of corporate leviathans, where the combined market value of just three companies—Apple AAPL, Microsoft MSFT, and Amazon.com AMZN—exceeds the gross domestic product of Japan, the world's third largest economy.

- The top 10 stocks now represent 25% of U.S. equity market value, as it surpasses even the late 1990s in its concentration. In 2011, the top 10 was less than 16% of U.S. market value. In Europe, the top 10 represents just 16.5% of the market; in Asia Pacific, it is 14.7%.
- It is one thing to attain blue-chip status; it is another to retain it. Apple and Microsoft deserve kudos for remaining in the global top 10 for a decade. Microsoft, of course, was the largest company in 1999; its status today is the result of reinvention as a cloud leader. Two of 2011's largest companies–General Electric GE and Johnson & Johnson JNJ–are now in the process of splitting their operations.
- A semiconductor-related company was the largest stock in Asia (Taiwan Semiconductor TSM), the second largest in Europe (ASML Holding ASML), and eighth in the U.S. (Nvidia NVDA) at the end of 2021. Technology has benefited from secular trends, including cloud, 5G, and the "Internet of Things"–all accelerated by the pandemic.
- The energy sector expanded its share of global equity markets in 2021 in a remarkable comeback story. In April 2020, oil futures slipped into negative territory; by the third quarter of 2021, the price of West Texas Intermediate crossed $80 per barrel for the first time since 2014. Compared with 10 years ago, however, energy and materials represent a far smaller share of global equities. In 2011, oil was more than $100 per barrel. A slowing Chinese economy, the shale revolution, and focus on renewable energy in response to climate change are all to blame.
- Emerging markets as a share of global equities fell in 2021, thanks to China. Their decline over the past 10 years is a result of numerous factors, including soft natural-resources prices and U.S. strength. Emerging-markets "convergence," a popular theme 10 years ago, is hardly inevitable.
- Thanks to rising yields in 2021, the Morningstar U.S. Core Bond Index now offers a higher income stream than the U.S. equity market (the same could not be said in 2020). But yields are, incredibly, lower than 10 years ago–another period of low rates and massive fiscal and monetary stimulus.
- The Morningstar Global Treasury Index's rising exposure to the U.S. reflects its massive response to the pandemic. The index's paltry yield does not bode well for future returns. Amazingly, the yield is less than half its 2011 mark, despite conventional wisdom at the time that yields had "nowhere to go but up."
- The Morningstar Emerging Markets Sovereign Bond Index sports a yield of 4.23%, lower than 10 years ago but far above its developed-markets equivalent. Rampant defaults among emerging-markets issuers demonstrate the risk inherent to the asset class. But Gulf state issuance during the pandemic has improved index-level credit quality.
- Looking forward, equities outside the U.S. look more attractive than within, especially the United Kingdom, Germany, and Japan.
- Value and small-cap equities have more upside than growth, after a long period of large-cap and growth dominance.
- Corporate bonds are likely to outperform the broader bond market.
- Emerging-markets bonds look more attractive than their developed-markets counterparts.

Morningstar Global Equity and Bond Indexes

The Morningstar global equity indexes include large-, mid-, and small-cap stocks from developed and emerging markets, targeting 97% of equity market capitalization within their segment. As of December 2021, the family spanned 49 markets. To be eligible, constituents must meet liquidity requirements. Certain classes of listed securities are excluded, including limited partnerships and funds. The indexes' inception date is December 2014, and their performance inception date is June 30, 1998, when the first back-tested index value was calculated. The indexes are market-capitalization-weighted and are reconstituted (membership reset) on a semiannual basis (June and December).

The Morningstar Global Markets Index[1] is the most comprehensive member of the family, representing the investable universe for global equities investors. The index included 8,510 securities from 49 developed and emerging markets as of December 2021. Carve outs of Global Markets include:

- Morningstar U.S. Markets Index
- Morningstar Europe Index
- Morningstar Asia Pacific Index
- Morningstar Emerging Markets Index

On the fixed-income side, the Morningstar U.S. Core Bond Index represents the broad investable universe for bonds in the United States. Securities must have a fixed coupon rate and must have a minimum of 24 months to final maturity to enter. The index's inception date is May 1, 2019, and its performance inception date is Dec. 31, 1999. The index is market-capitalization-weighted and contained 8,553 securities from 1,252 distinct issuers as of December 2021.

The Morningstar Global Treasury Bond Index includes sovereign bonds with maturities greater than one year issued by developed-markets countries. The index's inception date is April 1, 2019, and its performance inception date is Dec. 31, 1999. It is market-capitalization-weighted and contained 1,071 securities from 23 issuers as of December 2021.

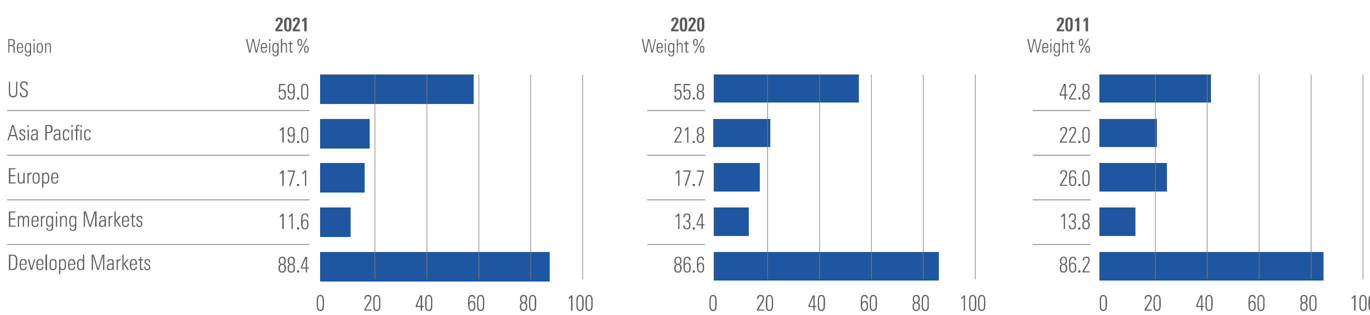
The Morningstar Emerging Markets Sovereign Bond Index includes USD-denominated, fixed-rate investment-grade and high-yield sovereign bonds issued by emerging-markets countries. For fixed-income markets, Morningstar Indexes classifies countries as emerging if they are identified by the World Bank as low-income, middle-income, or upper-middle income or by the International Monetary Fund as a nonadvanced country, with some exceptions. Securities must have a minimum of 30 months to maturity to be included in the index. The index's inception date is Jan. 1, 2019, and its performance inception date is Dec. 31, 1999. It is market-capitalization-weighted (with some capping constraints) and included 494 securities from 53 issuers as of December 2021.

1 Construction Rules for the Morningstar Global Markets Index
https://assets.contentstack.io/v3/assets/bltabf2a7413d5a8f05/blt21d0e60f1429fce1/5f648b36f972ad4f3941f258/20200626_MorningstarGlobalMarketsIndex_Final.pdf

Morningstar Global Markets Index

Lofty returns for stocks added more than $10 trillion of equity market value globally in 2021. U.S. equities expanded their global market share. Nearly 60% of the Morningstar Global Markets Index weight is now represented by U.S. stocks, up from 46% in 2011. The U.S. share of global equities now rivals 1998, when it exceeded 61%. In a reversal of trend, Asia Pacific equities declined, thanks in large part to China, where government actions resulted in falling market capitalizations for some of the largest Chinese companies. Japan's weight fell to 6.7% from 8.4% in 2011. European representation within the global equities universe is down considerably from 10 years ago. That is partly due to the struggles of the U.K. market, which extend beyond Brexit. The past decade's tech-driven market has been unfavorable to a continent heavy on sectors like consumer defensive, financials, energy, and basic materials. Interestingly, the emerging-markets share of global equities has declined over the past 10 years. Emerging-markets bulls have told us that the "rise of the rest" is inevitable. But emerging-markets growth isn't guaranteed; economic growth does not always translate to market gains; and developed-markets companies, such as Apple, can also benefit from growth in the developing world.

Exhibit 1 Morningstar Global Markets Index—Regional Exposure



Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

From a sector perspective, the Morningstar Global Markets Index saw its technology share rise in 2021. Unsurprisingly, given the global chip shortage, semiconductor-related companies are among the largest in Asia, Europe, and the U.S. Over the past 10 years, global equities have become far more tech-oriented, and that's even after many companies have been reclassified. Google-parent Alphabet GOOGL, Meta FB (nee Facebook), and Tencent are communications services stocks, while Amazon.com and Alibaba are consumer cyclicals. Energy also had a good year in 2021, as the price of oil rebounded strongly from its pandemic nadir. But compared with 10 years ago, the energy sector, as well as basic materials, are much diminished. Other value-leaning sectors, like industrials, consumer defensives, and utilities, have also been out of favor.

The index-level price/earnings ratio fell in 2021 compared with 2020, despite strong market appreciation. Earnings on many companies were depressed in 2020 because of the pandemic and were generally strong in 2021. But the more than 7-percentage-point increase in index-level P/E over the past 10 years speaks to exceptional price returns from equities over the period. Meanwhile, the market's dividend yield has come down.

Exhibit 2 Morningstar Global Markets Index—Sector Weights, Yield, and Valuation

Sector	2021 Weight %	2020 Weight %	2011 Weight %
Cyclical			
Basic Materials	4.9	5.0	8.4
Consumer Cyclical	11.9	12.4	9.9
Financial Services	15.2	15.0	15.6
Real Estate	3.6	3.5	3.3
Sensitive			
Communication Services	8.3	9.0	5.0
Energy	3.5	3.0	11.1
Industrials	10.8	10.8	11.6
Technology	21.0	19.2	11.8
Defensive			
Consumer Defensive	6.8	7.4	10.1
Healthcare	11.6	11.9	9.2
Utilities	2.7	2.9	3.9
Trailing 12-Mo Dividend Yield	1.7	1.8	2.3
P/E Ratio	19.5	24.7	12.3

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

The world's 10 largest stocks are all from the U.S. as of December 2021. The last time the Morningstar Global Markets Index had an all-American top 10 was the late 1990s. Chinese companies Alibaba and Tencent slipped because of the effects of a regulatory crackdown. The world's largest companies grew larger in 2021. The combined market value of Apple, Microsoft, and Amazon.com passed $6.5 trillion at the end of 2021, exceeding the gross domestic product of Japan, the world's third largest economy. Apple's market capitalization of roughly $3 trillion was larger than the United Kingdom's GDP. As a result, the global equities universe looks far more top-heavy than 10 years back. The top 10 represented nearly 15% of the Morningstar Global Markets Index's weight as of the end of 2021, double its proportion 10 years ago. Nvidia's rise has been astounding: In December 2011, it was index constituent number 700. Of course, Meta (nee Facebook) had not yet come to market in 2011, and Tesla TSLA had been only recently listed. That Exxon Mobil XOM was the world's largest public company 10 years ago speaks to how different the world looked before the shale revolution, the large-scale shift to renewables, and concerns about "stranded assets" cut the market values of traditional energy companies. Nestle NSRGY made 2011's top 10, but European companies are notably absent today. Nestle's and Procter & Gamble's PG relative declines reflect the struggles of traditional consumer defensive businesses. Two of 2011's largest companies–General Electric and Johnson & Johnson–are now in the process of splitting their operations. General Electric and AT&T T were two former dividend champions whose shareholder payouts fell victim to business struggles. Apple and Microsoft deserve kudos for retaining their top-10 status over a decade. Microsoft, of course, was also a behemoth in the 1990s. Achieving blue-chip status is one thing; keeping it is another.

Exhibit 3 Morningstar Global Markets Index—Top 10 Holdings

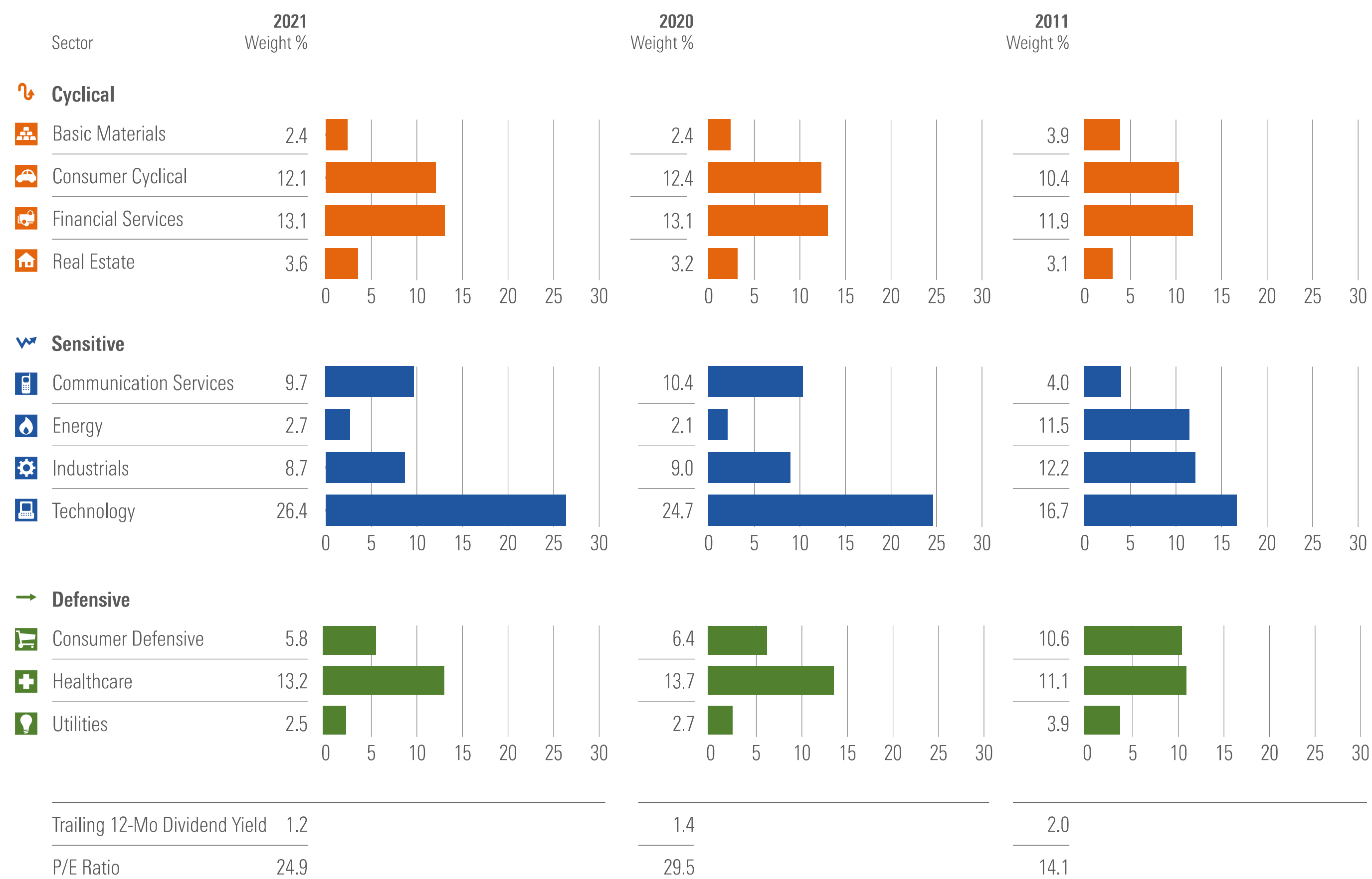
Company	2021 Weight %	Company	2020 Weight %	Company	2011 Weight %
Apple	3.4	Apple	3.1	Exxon Mobil	1.4
Microsoft	3.1	Microsoft	2.5	Apple	1.3
Amazon.com	1.9	Amazon.com	2.1	IBM	0.8
Alphabet A	1.1	Facebook	1.0	Chevron	0.7
Alphabet C	1.0	Tesla	0.8	Microsoft	0.7
Meta Platforms	1.0	Alphabet A	0.8	Procter & Gamble	0.6
Tesla	1.0	Alphabet C	0.8	General Electric	0.6
Nvidia	0.9	Berkshire Hathaway	0.7	Nestle	0.6
Berkshire Hathaway	0.7	Alibaba	0.7	Johnson & Jonhnson	0.6
UnitedHealth	0.6	Tencent	0.6	AT&T	0.6
Top 10 Constituent Weight	14.7		12.9		7.9
Total Index Market Value ($tril)	102.0		91.2		42.2

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Morningstar U.S. Market Index

The best performing of the Morningstar U.S. Market Index's sectors in 2021 was energy, as the price of oil passed $80 per barrel for the first time since 2014. But technology was also a big winner, and given its prominence in the market, it had a far larger impact. The U.S. market's technology weight is now roughly 10 percentage points higher than one decade ago. And communication services players Google and Meta, as well as consumer cyclical Amazon.com, are tech-related. Traditional telecoms struggled in 2021 amid brutal competition, 5G outlays, and AT&T's mergers and acquisitions complications. Industrials and consumer defensives were hurt by 2021's supply chain challenges and inflationary pressures. The decline of these sectors over the past decade speaks to the dominance of growth over value and has also contributed to a falling market-level dividend yield. In 2020, the equity index's yield was above that of the U.S. Core Bond Index–a most unusual situation. But rising bond yields and falling dividend yields in 2021 restored the normal relationship. While the U.S. market's price/earnings ratio fell in 2021 because of strong earnings, it was elevated relative to other regions and historically.

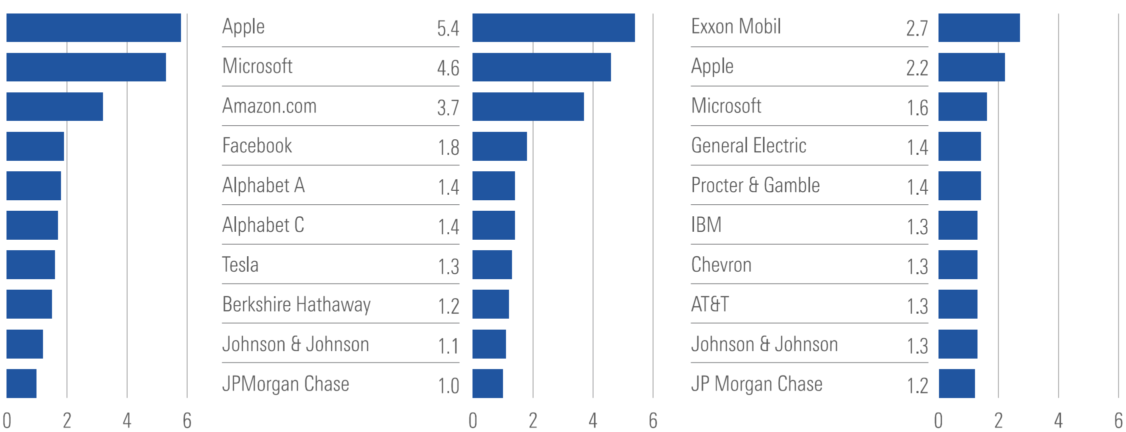
Exhibit 4 Morningstar U.S. Market Index—Sector Weights, Yield, and Valuation



Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Nvidia cracked the Morningstar U.S. Market's top 10 for the first time in 2021, while Johnson & Johnson and JPMorgan Chase JPM dropped out. J&J is in the process of splitting its operations. UnitedHealth UNH, the integrated healthcare provider, cracked the top 10 in 2021, partly on the market's expectation of a benign U.S. policy environment. Only one name remains from 2011's top 10–Microsoft. The company has reinvented itself into a cloud leader, and Office is protected by a wide moat driven by high switching costs and network effects, in the view of Morningstar Equity Research. General Electric, one of the market's largest companies 10 years ago, is, like J&J, in the midst of a major restructuring, demonstrating that today's blue chips may be fleeting. Exxon Mobil and Chevron CVX have also lost significant stature over the past decade, as the energy sector has faced secular challenges.

Exhibit 5 Morningstar U.S. Market Index—Top 10 Holdings



Company	2021 Weight %
Apple	5.8
Microsoft	5.3
Amazon.com	3.2
Alphabet A	1.9
Alphabet C	1.8
Meta Platforms	1.7
Tesla	1.6
NVIDIA	1.5
Berkshire Hathaway	1.2
UnitedHealth	1.0

Company	2020 Weight %
Apple	5.4
Microsoft	4.6
Amazon.com	3.7
Facebook	1.8
Alphabet A	1.4
Alphabet C	1.4
Tesla	1.3
Berkshire Hathaway	1.2
Johnson & Johnson	1.1
JPMorgan Chase	1.0

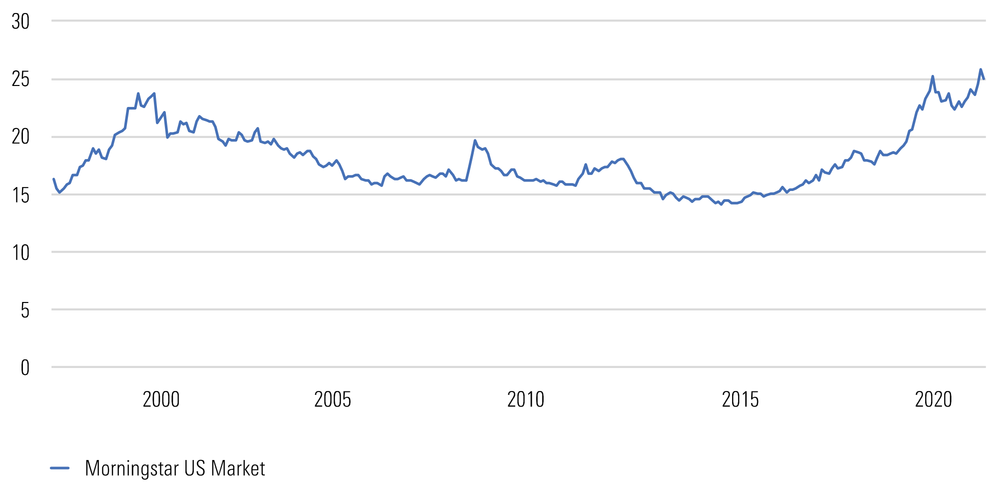
Company	2011 Weight %
Exxon Mobil	2.7
Apple	2.2
Microsoft	1.6
General Electric	1.4
Procter & Gamble	1.4
IBM	1.3
Chevron	1.3
AT&T	1.3
Johnson & Johnson	1.3
JP Morgan Chase	1.2

	2021	2020	2011
Top 10 Constituent Weight	25.0	22.9	15.7
Total Index Market Value ($tril)	48.4	39.5	

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

It is no secret that the U.S. equity market has become extremely concentrated. The top 10 constituents represented 25% of the Morningstar U.S. Market Index's weight as of December 2021. That exceeds even the 23.7% top-10 concentration level of August 1997, when the 10 largest stocks in the U.S. were GE, Intel INTC, Cisco Systems CSCO, Exxon Mobil, Microsoft, Pfizer PFE, Citigroup C, IBM IBM, EMC, and Sun Microsystems. The U.S. concentration level is far greater than that of Europe and Asia Pacific.

Exhibit 6 Morningstar U.S. Market Index—Increasingly Top Heavy (% of Weight in Top 10)

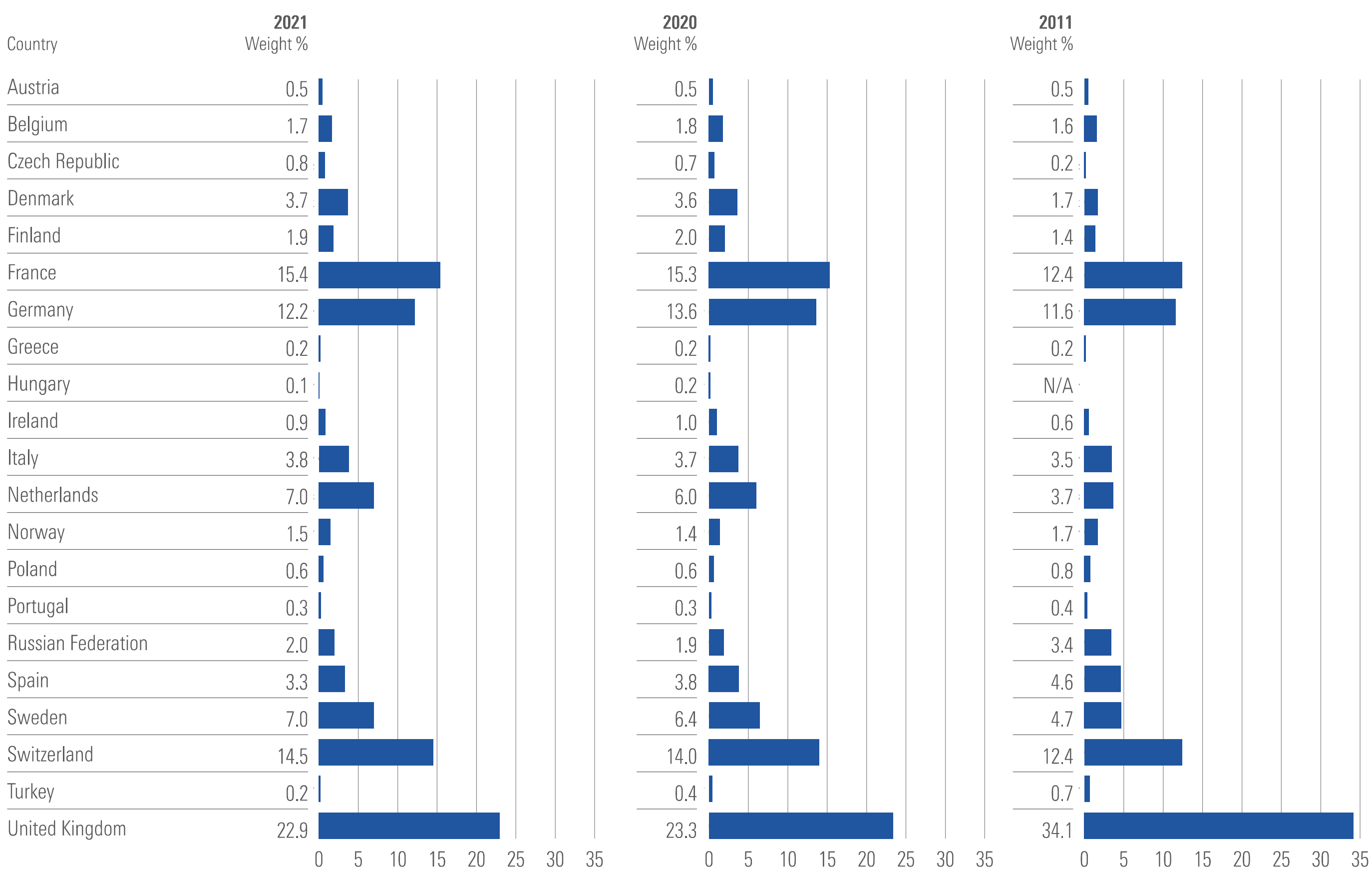


Source: Morningstar Direct.

Morningstar Europe Index

The Morningstar Europe Index includes stocks from more than 20 markets, across both developed and emerging Europe. The eurozone is represented, along with the U.K. and the Nordics. The U.K., which remains the largest equity market in Europe, saw its market share continue to decline in 2021. It has been a miserable decade for U.K. equities. Not only has Brexit had an effect, but the U.K. market also is heavy on old economy sectors, like energy, materials, and financials, that have been out of market favor. France has grown its market share, thanks to some stellar companies like LVMH Moet Hennessy Louis Vuitton LVMHF, L'Oreal LRLCF, and Sanofi SNYNF. The Netherlands has seen its share roughly double over the past decade, thanks in large part to the rise of ASML Holding ASML, a rare European technology champion, but also Adyen ADYYF, an e-commerce player founded in 2006. Russia's decline has tracked the waning fortunes of the energy sector in recent years.

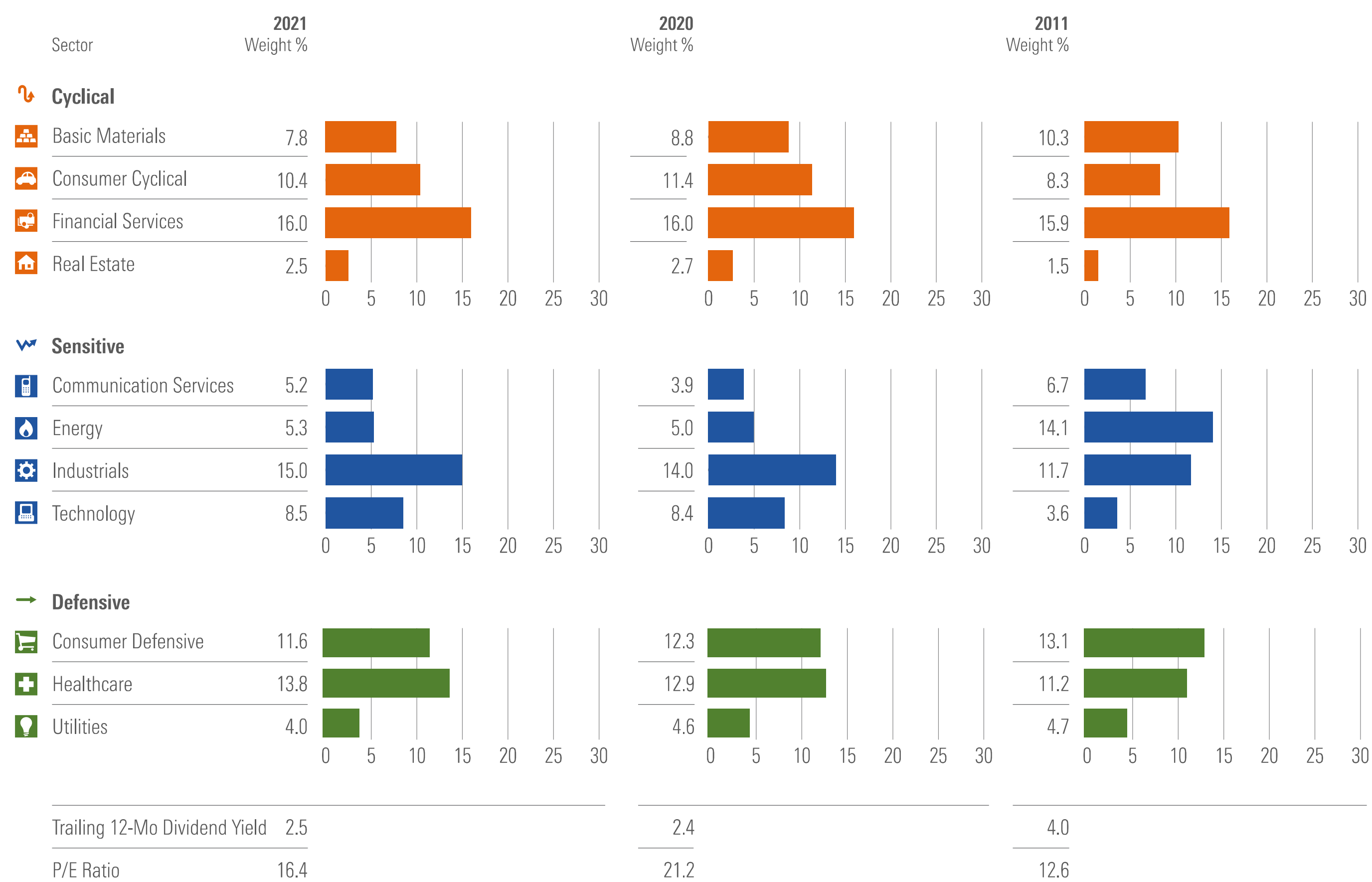
Exhibit 7 Morningstar Europe Index—Country Exposure



Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

From a sector perspective, the European market looks far more "Old Economy" than the U.S. The Morningstar Europe Index's technology weight is just one fourth that of the U.S. level, while materials, financials, industrials, energy, and consumer defensive are overrepresented. Healthcare is an area of real strength for Europe. Healthcare companies like Novo Nordisk NVO and Roche RHHBY had strong years in 2021, as did industrials like Schneider National SNDR and Siemens SMAWF. Several consumer cyclicals, including Adidas ADS, struggled. Over the past 10 years, Europe's technology weight has more than doubled, paralleling the global trend. Energy and basic materials look much diminished. At the end of 2021, the European market offered twice the yield of the U.S. market and is far cheaper from a price/earnings perspective.

Exhibit 8 Morningstar Europe Index—Sector Weights, Yield, and Valuation



Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

The relatively static nature of the Morningstar Europe Index's top 10 constituents reflects a lack of dynamism in the European equities landscape. Dutch technology company ASML Holding has benefited from insatiable global demand from semiconductors, but Europe lacks newly created companies turned market champions like Tesla, Meta, and the Chinese tech giants. Most of Europe's top 10 are well-established companies. Europe is clearly a global leader in healthcare, including vaccinemaker AstraZeneca AZNCF, but also Roche, Novartis NVS, and Novo Nordisk (and further down the index, Sanofi and GlaxoSmithKline GSK). Consumer products is another area of strength for Europe, with Nestle and Unilever UL as well as French luxury-goods maker LVMH Moet Hennessy in the top 10. Ten years ago, three energy companies were among Europe's largest stocks, but their fortunes have waned along with the sector. HSBC HSBC has also seen its status diminished.

Exhibit 9 Morningstar Europe Index—Top 10 Holdings

Company	2021 Weight %
Nestle	3.0
ASML Holding	2.3
Roche	2.2
LVMH-Moet Hennessy	1.6
Novartis	1.6
AstraZeneca	1.3
Novo Nordisk	1.3
SAP	1.1
Unilever	1.1
Siemens	1.0
Top 10 Constituent Weight	16.5
Total Index Market Value ($tril)	17.6

Company	2020 Weight %
Nestle	2.8
Roche	2.1
Novartis	1.9
ASML	1.7
LVMH-Moet Hennessy	1.4
Unilever	1.3
SAP	1.2
AstraZeneca	1.1
Novo Nordisk	1.0
Siemens	1.0
Top 10 Constituent Weight	15.5
Total Index Market Value ($tril)	15.5

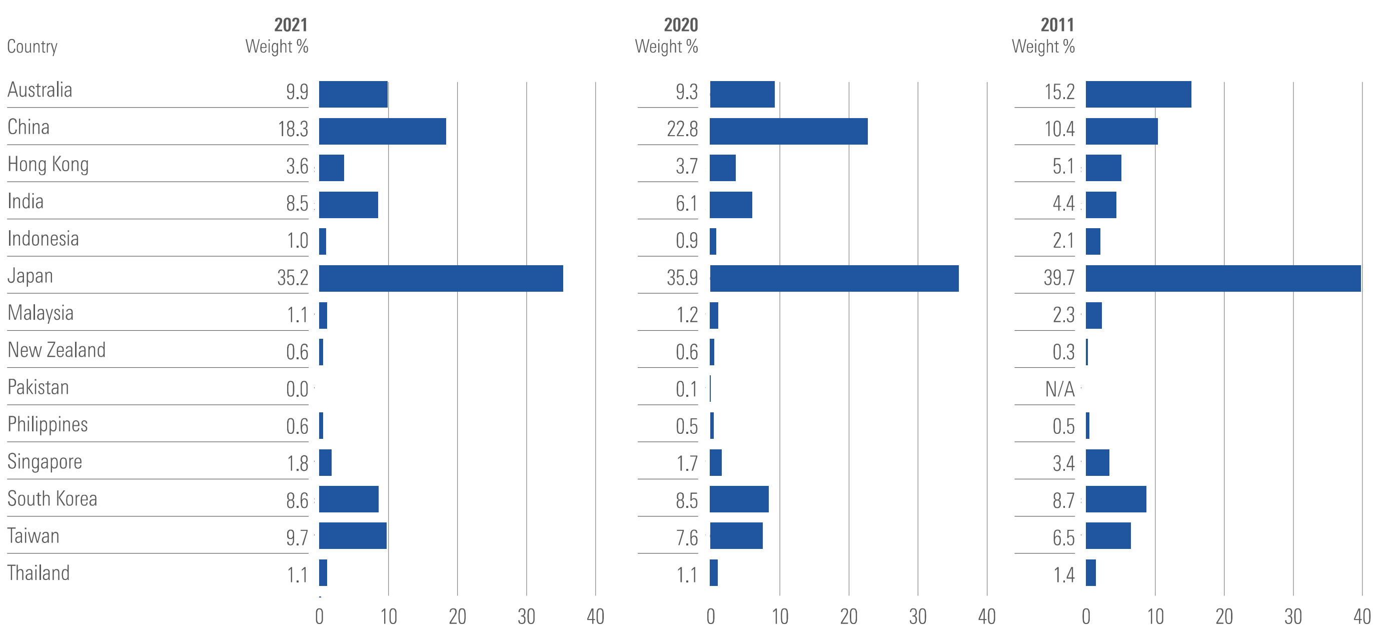
Company	2011 Weight %
Nestle	2.4
HSBC	2.2
Vodafone	1.7
BP	1.6
Novartis	1.6
Royal Dutch Shell	1.4
Total	1.4
Siemens	1.2
GlaxoSmithKline	1.2
Roche	1.2
Top 10 Constituent Weight	15.8
Total Index Market Value ($tril)	11.7

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Morningstar Asia Pacific Index

The biggest story in Asian equities in 2021 was the decline of the Chinese tech giants. China's weight in the Morningstar Asia Pacific Index fell by 4.5 percentage points thanks to a regulatory crackdown that undermined some of its biggest market players, including Alibaba and Tencent. Japan remains the largest equity market in the Asia-Pacific region, though its share has fallen over the past decade. Australia has also seen its share fall on the back of a weak market for natural resources and the struggles of its big banks. Taiwan's rising prominence within the Asian equities landscape owes principally to Taiwan Semiconductor, which is a global leader and a great beneficiary of long-running technology trends, as well as soaring demand for chips during the pandemic. India is another winner over both the short and long term. In 2021, global technology players like Infosys INFY were catalysts, as the country recovered from its brutal COVID-19 wave and investors rotated out of China.

Exhibit 10 Morningstar Asia Pacific Index— Country Weights



Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

From a sector perspective, rising demand for commodities pushed basic materials and energy weights higher in the Asia Pacific region, which includes Australia. But both sectors represent a smaller share of the Morningstar Asia Pacific Index than one decade ago, in line with global trend. In 2021, the consumer cyclicals and communications services weights fell as a result of the Chinese regulatory crackdown. The region boasts many global tech giants, including familiar names from Japan, Taiwan, Korea, India, that turned in a mixed performance picture in 2021 but have soared over the past decade. Financials had a strong recovery year in 2021 but are a diminished presence in the region, thanks in part to the struggles of the Australian banks. These dynamics have helped pushed the index's P/E ratio much higher over the past 10 years and its yield lower.

Exhibit 11 Morningstar Asia Pacific Index—Sector Weights, Yield, and Valuation

Company	2021 Weight %
Taiwan Semiconductor	2.78
Tencent	2.28
Samsung Electronics	2.27
Toyota Motor	1.59
Alibaba	1.48
Sony	1.02
Keyence	0.83
AIA Group	0.83
Commonwealth Bank Australia	0.82
Meituan Dianping	0.78

Company	2020 Weight %
Alibaba	3.28
Tencent	2.93
Taiwan Semiconductor	2.40
Samsung Electronics	2.35
Toyota Motor	1.33
Meituan Dianping	1.04
AIA Group	0.97
SoftBank	0.94
Sony	0.88
Commonwealth Bank of Australia	0.77

Company	2011 Weight %
BHP Billiton	2.17
Toyota Motor	1.55
Samsung Electronics	1.30
Commonwealth Bank of Australia	1.10
Mitsubishi UFJ Financial Group	0.97
Westpac Banking	0.96
Honda Motor	0.96
China Mobile	0.86
Taiwan Semiconductor	0.85
Australia & New Zealand Bank	0.85

	2021	2020	2011
Top 10 Constituent Weight	14.7	16.9	11.6
Total Index Market Value ($tril)	28.5	27.8	11.5

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

The top 10 holdings of the Morningstar Asia Pacific Index look decidedly "New Economy." Taiwan Semiconductor, a chipmaker, became the largest stock in Asia in 2021, benefiting from soaring demand for technology and a global chip shortage. It also vaulted to the top spot because the Chinese regulatory crackdown lowered the market value of Alibaba and Tencent. Japan's Sony SONY and Keyence KYCCF also rode the global tech wave. Toyota TM deserves credit for maintaining its top 10 position within Asia for 10 years. Of the three Australian banks that populated the index's top 10 in 2011, only CBA remains. Another Australian company, iron-ore miner BHP BHP, was the region's largest public company in 2011, but falling demand from China and many years of low commodities prices have taken a toll.

Exhibit 12 Morningstar Asia Pacific Index—Top 10 Holdings

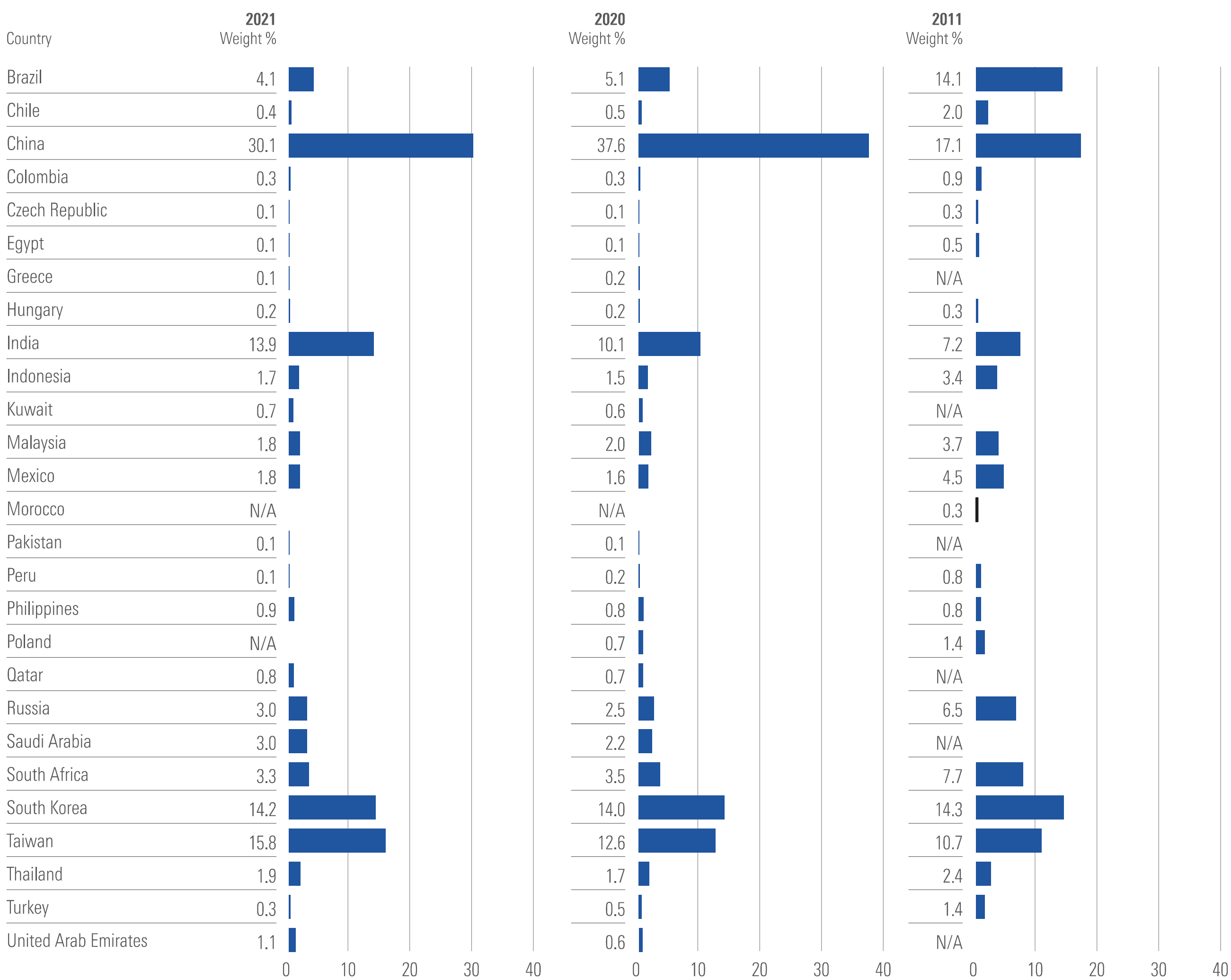
Company	2021 Weight %	Company	2020 Weight %	Company	2011 Weight %
Taiwan Semiconductor	2.78	Alibaba	3.28	BHP Billiton	2.17
Tencent	2.28	Tencent	2.93	Toyota Motor	1.55
Samsung Electronics	2.27	Taiwan Semiconductor	2.40	Samsung Electronics	1.30
Toyota Motor	1.59	Samsung Electronics	2.35	Commonwealth Bank of Australia	1.10
Alibaba	1.48	Toyota Motor	1.33	Mitsubishi UFJ Financial Group	0.97
Sony	1.02	Meituan Dianping	1.04	Westpac Banking	0.96
Keyence	0.83	AIA Group	0.97	Honda Motor	0.96
AIA Group	0.83	SoftBank	0.94	China Mobile	0.86
Commonwealth Bank Australia	0.82	Sony	0.88	Taiwan Semiconductor	0.85
Meituan Dianping	0.78	Commonwealth Bank of Australia	0.77	Australia & New Zealand Bank	0.85
Top 10 Constituent Weight	14.7		16.9		11.6
Total Index Market Value ($tril)	28.5		27.8		11.5

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Morningstar Emerging Markets Index

The Morningstar Emerging Markets Index is more dynamic from a country perspective than other indexes. Up and coming markets are added to the universe, such as Kuwait, Saudi Arabia, Qatar, the United Arab Emirates, and Pakistan over the past several years. Morocco dropped out because its market did not meet requirements, and Greece was downgraded from developed-markets status, even though it is part of the eurozone. In 2021, Poland went the opposite direction and graduated. China saw its share fall substantially after a regulatory crackdown kneecapped some of the market's biggest players. India was one beneficiary of China's woes. It also benefited from its market's tech orientation, as did Taiwan. Over the past 10 years, India and China have been big emerging-markets winners. Brazil, Russia, and South Africa, which are commodity-driven and once helped comprise the BRICS markets–a popular investment theme of the early 2000s–have seen their market shares fall substantially.

Exhibit 13 Morningstar Emerging Markets Index— Country Weights



Country	2021 Weight %	2020 Weight %	2011 Weight %
Brazil	4.1	5.1	14.1
Chile	0.4	0.5	2.0
China	30.1	37.6	17.1
Colombia	0.3	0.3	0.9
Czech Republic	0.1	0.1	0.3
Egypt	0.1	0.1	0.5
Greece	0.1	0.2	N/A
Hungary	0.2	0.2	0.3
India	13.9	10.1	7.2
Indonesia	1.7	1.5	3.4
Kuwait	0.7	0.6	N/A
Malaysia	1.8	2.0	3.7
Mexico	1.8	1.6	4.5
Morocco	N/A	N/A	0.3
Pakistan	0.1	0.1	N/A
Peru	0.1	0.2	0.8
Philippines	0.9	0.8	0.8
Poland	N/A	0.7	1.4
Qatar	0.8	0.7	N/A
Russia	3.0	2.5	6.5
Saudi Arabia	3.0	2.2	N/A
South Africa	3.3	3.5	7.7
South Korea	14.2	14.0	14.3
Taiwan	15.8	12.6	10.7
Thailand	1.9	1.7	2.4
Turkey	0.3	0.5	1.4
United Arab Emirates	1.1	0.6	N/A

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

The Morningstar Emerging Markets Index's changing 2021 sector weights were partly the result of the Chinese regulatory crackdown. Consumer cyclicals and communication services weights fell. Technology increased, thanks to Taiwan Semiconductor and some of the Indian tech players. In line with the global trend, the emerging-markets equities universe is techier and far less exposed to energy and materials than a decade ago. Financials, including Indian banks like ICICI IBN and HDFC HDB, and Chinese insurer Ping An PNGAY remain an important part of the universe. Emerging-markets equities look attractive from a yield and valuation perspective.

Exhibit 14 Morningstar Emerging Markets Index—Sector Weights, Yield, and Valuation

Sector	2021 Weight %	2020 Weight %	2011 Weight %
Cyclical			
Basic Materials	9.1	7.9	14.3
Consumer Cyclical	12.7	16.0	9.4
Financial Services	19.4	18.2	21.4
Real Estate	2.5	2.8	2.3
Sensitive			
Communication Services	9.9	11.8	7.9
Energy	5.4	4.8	11.2
Industrials	6.9	5.5	6.5
Technology	20.8	18.5	13.5
Defensive			
Consumer Defensive	6	6.7	8.3
Healthcare	4.7	5.4	1.4
Utilities	2.7	2.4	4.0
Trailing 12-Mo Dividend Yield	2.5	2.0	2.2
P/E Ratio	12.2	18.6	10.5

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Morningstar Emerging Markets Index's top 10 constituents at the end of 2021 were all Asian, which was also true in 2020. In 2011, they included Russian and Brazilian companies as well, which were benefiting from high prices for natural resources. Taiwan Semiconductor and Samsung SSNLF are perennial emerging-markets champions, but the former has benefited especially from global chip demand. Chinese "New Economy" players Tencent, Alibaba, Meituan MPNGY, and JD.com JD maintain their top-10 status despite the regulatory crackdown. The soaring Indian market contributes three top-10 companies in 2021 from three different economic sectors.

Exhibit 15 Morningstar Emerging Markets Index—Top 10

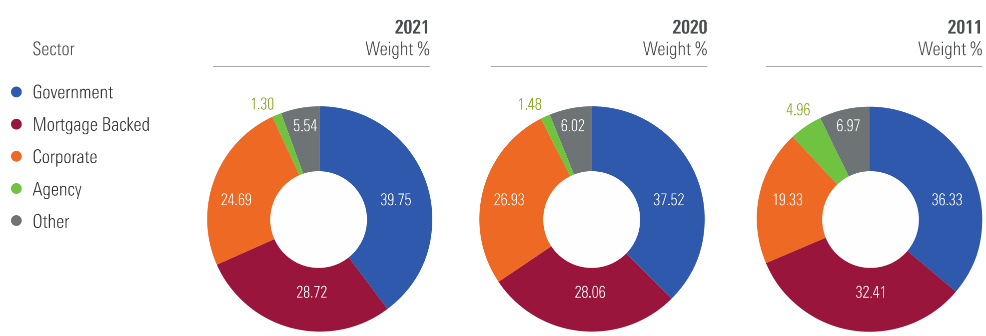
Company	2021 Weight %	Company	2020 Weight %	Company	2011 Weight %
Taiwan Semiconductor	4.6	Alibaba	5.4	Samsung Electronics	2.6
Tencent	3.7	Tencent	4.8	Taiwan Semiconductor	1.6
Samsung Electronics	3.7	Taiwan Semiconductor	4.0	China Mobile	1.6
Alibaba	2.4	Samsung Electronics	3.9	Gazprom	1.6
Meituan Dianping	1.3	Meituan Dianping	1.7	Petrobras Prfd.	1.3
Reliance Industries	1.1	Naspers	1.0	America Movil	1.3
Infosys	1.0	Reliance Industries	1.0	Itau Unibanco	1.1
China Construction Bank	0.8	JD.com	0.8	Vale	1.1
JD.com	0.7	China Construction Bank	0.8	Petrobras	1.0
Housing Development Finance Corp	0.7	Ping An Insurance	0.8	ICBC	1.0
Top 10 Constituent Weight	20.0		24.2		14.2
Total Index Market Value ($tril)	24.7		23.6		8.2

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Morningstar U.S. Core Bond Index

The Morningstar U.S. Core Bond Index's yield rose sharply in 2021, as persistent inflation, a bumpy economic recovery, and tighter monetary policy led to a sharp steepening of the yield curve. The index logged its worst performance since 2013, the year of the taper tantrum. But the core bond index's loss of just 1.6% supported the adage that a bad year for bonds is like a bad day for stocks. Coming into the year, yields were depressed by rock-bottom interest rates and monetary stimulus in response to a pandemic-stricken economy. Reopening, recovery, and reflation sent yields up, especially in the first quarter. But amazingly, even after 2021, Morningstar U.S. Core Bond Index's current yield of 1.72% is lower than 10 years ago—another period of low rates and massive stimulus in response to crisis. The rising share of Treasuries in the index over the short and long term reflects quantitative easing and the massive government borrowing designed to rescue the economy. Government issuance has also contributed to increased index-level interest-rate sensitivity (measured by duration). Whether Fed rate hikes materialize as expected, and whether they are already priced in, remains to be seen. What is certain is that the low-rate environment of the past decade has spurred massive corporate borrowing, displayed in the index's mushrooming number of securities. The index's exposure to BBB rated corporate credits, at the lower end of the investment-grade spectrum, has risen dramatically over the past decade. Some of this debt has been used for acquisitions and to buy back shares. Higher-yielding credits have also been prized by investors because of depressed yields higher on the quality spectrum.

Exhibit 16 Morningstar U.S. Core Bond Index — Portfolio Evolution



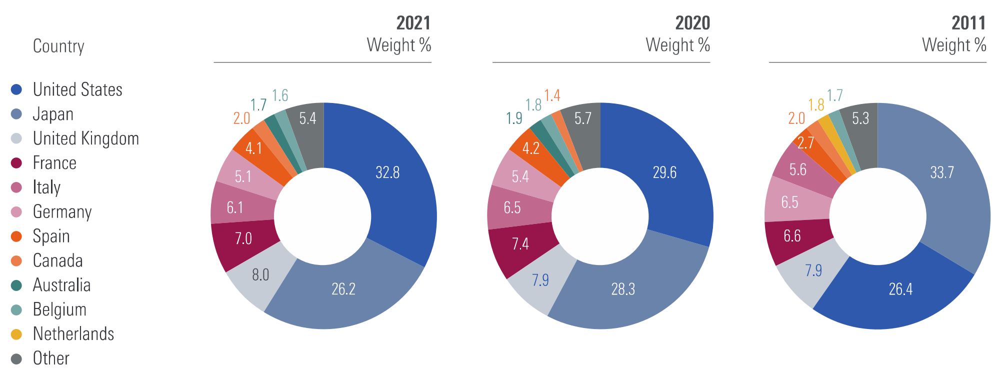
	2021	2020	2011
Avg Corporate Credit Quality	A-	A-	A
BBB Credits as % of Corporate Market Value	52.47	51.27	33.97
Market Value ($tril)	25.8	24.2	14.7
Number of Issuers	1,252	1,200	765
Number of securities	8,553	8,302	4,675
Average Coupon (%)	2.43	2.79	3.94
Average Yield To Maturity (%)	1.72	1.01	1.95
Effective Duration (Years)	6.39	5.96	4.59
Term to Maturity (Years)	8.48	7.81	6.02
BBB Credits as % of Total Market Value	14.09	14.99	7.55

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Morningstar Global Treasury Bond Index

The U.S. increased its share of the Morningstar Global Treasury Bond Index in 2021 thanks to massive government issuance in response to the crisis–the world's largest pandemic response by far. Ten years ago, Japan was the largest issuer in the index; its debt issuance, already high to fight persistent deflation, had spiked in response to an earthquake, and it earned a sovereign credit rating downgrade for its efforts. Germany's reduced weight in the index reflects its fiscal restraint. Index-level yield rose considerably in 2021 from its ultra-depressed levels of 2020. But its 0.61% yield is paltry and shockingly stands at less than half its 2011 mark. In 2011, the conventional wisdom was that bond yields had nowhere to go but up. We were warned of a "bond bubble" and an imminent "bond crash." Yields did rise–the Fed hiked four times in 2018–but high-quality government debt wasn't a disastrous investment in a low-inflation environment and served an important portfolio diversification role during times of market stress, like the first quarter of 2020. When the pandemic hit, developed markets reverted to their crisis playbook of ultra-low rates and massive debt issuance.

Exhibit 17 Morningstar Global Treasury Bond Index — Portfolio Evolution



	2021	2020	2011
Market Value ($tril)	30.7	30.6	19.9
Number of Issuers	23	23	26
Number of securities	1,071	1,026	792
Average Coupon (%)	1.54	1.72	2.75
Average Yield To Maturity (Yrs)	0.61	0.17	1.59
Effective Duration (Years)	8.80	9.00	6.97
Term to Maturity (Years)	10.16	10.39	8.69
BBB Credits as % of Total Market Value	6.76	7.21	0.44

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Morningstar Emerging Markets Sovereign Bond Index

Emerging markets are a dynamic investment universe, on both the equity and debt side. Saudi Arabian bonds retained their top position within the Morningstar Emerging Markets Sovereign Bond Index in 2021, reflecting massive 2020 issuance by the world's top oil exporter as the pandemic pushed the price of crude to record lows. Other Persian Gulf energy producers, like Qatar and the U.A.E., are also prominently featured in the index. Of those three, only Qatar made the index's top 10 in 2011. Two top countries from 2011–Venezuela and Lebanon–have experienced economic implosions, demonstrating the risk inherent to this asset class. In fact, five emerging-markets-debt issuers defaulted in 2020, including Argentina and Lebanon. Turkey, another prominent emerging-markets-debt issuer, carries high yields because of its risks, which include a currency crisis, rampant inflation, and an unfavorable policy environment. In 2011, Brazil was the largest emerging-markets issuer, but its government has prioritized debt reduction. At 4.23%, the index's yield is lower than 10 years ago but far exceeds its developed-markets equivalent. Thanks to Gulf state issuance, index-level credit quality has improved compared with 10 years ago. By some measures, index-level diversification has improved. The top 10 markets represent a smaller share of the index than in the past, and the number of securities has more than doubled from 10 years ago. Interest-rate sensitivity, as measured by duration, has increased, though.

Exhibit 18 Morningstar Emerging-Markets Sovereign Bond Index — Portfolio Evolution

Country	**2021**	Country	**2020**	Country	**2011**
Saudi Arabia	7.8	Saudi Arabia	7.9	Brazil	12.3
Mexico	7.3	Mexico	7.8	Turkey	10.4
Turkey	7.1	Turkey	7.2	Mexico	10.2
Indonesia	6.6	Indonesia	6.9	Philippines	7.6
Qatar	6.0	Qatar	6.7	Venezuela	7.3
United Arab Emirates	5.6	United Arab Emirates	5.1	Indonesia	6.2
Brazil	4.5	Brazil	4.6	Colombia	4.1
Philippines	4.1	Colombia	3.8	Russian Federation	4.1
Colombia	3.7	Egypt	3.8	Lebanon	3.7
Egypt	3.7	Philippines	3.7	Qatar	3.6
Total	56.4	Total	57.4	Total	69.5

	2021	2020	2011
Market Value ($bn)	876	871	373
Number of Issuers	53	51	43
Number of securities	494	449	222
Average Coupon (%)	5.0	5.1	7.3
Average YTM	4.2	3.3	5.3
Effective Duration (Years)	9.1	9.1	7.0
Term to Maturity (Years)	14.7	14.3	11.8
BBB Credits as % of Total Market Value	0.4	0.4	0.4

Source: Morningstar Indexes. Data as of December 2021, 2020, and 2011.

Looking Forward: Diversify Globally and Consider Emerging-Markets Debt

Market behavior over the past decade should make us question our ability to forecast future shifts. Market leadership of tomorrow is a known unknown. Longtime contrarians will testify that just because a market segment is currently depressed does not mean that a rebound is imminent. Nor will today's highfliers inevitability crash to earth. The champions of the future may not even be investable today. Diversification–across asset class and geography–isn't known as the only free lunch in investing for nothing. A wide opportunity set exposes a portfolio to an array of potential winners and inevitably contains parts that move in different directions. Sticking with a long-term strategic asset allocation and eschewing major asset class bets is sensible.

That said, valuation-driven insights from Morningstar Equity Research and Morningstar Investment Management can provide some direction going forward. Here, more caveats are required. Valuation is a long-term guide. Asset prices move for all kinds of reasons in the short term, many of them unforeseeable and inexplicable. Patience is required for investors betting that asset prices and intrinsic values eventually converge.

And now some views at the start of 2022:

- Stocks are more attractive outside the United States. The U.K., Germany, and Japan present the best values.
- Emerging markets hold "moderate appeal," in the view of Morningstar Investment Management. The words of Antoine van Agtmael, who coined the term "emerging markets" in 1981, are worth remembering: "Avoid emerging markets when everyone talks about them and invest twice as much as usual when nobody likes them."
- The energy and financials sectors, which are cyclical, value-leaning, and inflation-sensitive, offer more current upside than the overall equity market. Technology looks overvalued. In general, the value side of the market looks more attractive than growth.
- Smaller-cap stocks, which have badly underperformed, are generally more attractive than larger caps.
- A selective approach to equities is sensible in this environment. Companies with economic moats, or sustainable competitive advantages, can maintain pricing power amid inflation.
- Emerging-markets debt in local currency is "the only place for positive real return in fixed income" according to Morningstar Investment Management.
- That said, corporate bonds look poised to outperform the broader bond market.

About Morningstar Indexes

Morningstar Indexes combine the science and art of indexing to give investors a clearer view into the world's financial markets. Our indexes are based on transparent, rules-based methodologies that are thoroughly back-tested and supported by original research. Covering all major asset classes, our indexes originate from the Morningstar Investment Research Ecosystem — our network of accomplished analysts and researchers working to interpret and improve the investment landscape. Clients such as exchange-traded fund providers and other asset management firms work with our team of experts to create distinct, investor-focused products based on our indexes. Morningstar Indexes also serve as a precise benchmarking resource.

To learn more about Morningstar Indexes, visit: http://global.morningstar.com/indexes

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