Global Equity Markets Primer

PRESENTED BY
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For further details and additional information on the functioning of capital markets, please see:


Introduction

The U.S. cash equity markets are the largest in the world and continue to be among the deepest, most liquid and most efficient. While we have written this sentence quite a bit in other research reports, we have not published a thorough comparison of equity markets across the globe. This primer does just that, analyzing data on market size, formation, performance, costs, as well as markets in indexes.

Source: World Federation of Exchanges, SIFMA estimates (as of August)
Market Size
Market Cap & Number of Listed Companies

Disclaimer: Statistical analysis and trends do not account for changes to data source methodologies, index calculations and constituents, or restatements by data provider over the time series. Totals may not sum up due to rounding
MARKET SIZE

Market Cap Overview

Looking at market caps across the globe, we highlight the following trends.

• **The World**: The $120.4 trillion global equity market cap is split across the regions by Americas 43.4%, AsiaPac 32.7%, and EMEA 23.8%

• **Developed vs. Emerging**: Aggregate market cap for all developed markets is 2.7x that of emerging markets (developed $87.9 trillion, emerging $32.5 trillion)

• **Largest Region**: At $52.3 trillion, the Americas is the largest region for equity markets (43.4% of total global market cap); 1.8x EMEA and 1.3x AsiaPac

• **Largest Country**: At $47.0 trillion, the U.S. equity markets are the largest in the world; this represents 90.0% of total Americas market cap and 39.1% of total global market cap

• **Highest Growth**: AsiaPac saw the highest growth, +696.0 since 2000 or a +9.9% CAGR (from $4.9 trillion to $39.4 trillion); this was driven by growth in China, +2,518.8% since 2003 or a +18.8% CAGR (from $0.5 trillion to $13.4 trillion)

• **Lowest Growth**: EMEA saw the slowest growth, +205.7% since 2000 or a +5.2% CAGR (from $9.4 trillion to $28.7 trillion); the slowest growth country was Germany, +102.6% or a +3.3% CAGR (from $1.3 trillion to $2.6 trillion)

Source: World Federation of Exchanges, SIFMA estimates
Note: As of 2Q21; EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
Global Comparison

Global market cap grew to $120.4 trillion in 2Q21, from $30.7 trillion in 2000 (+291.5%, +6.4% CAGR), with AsiaPac representing the biggest gainer over the past few decades.

- **Americas**: $52.3T in 2Q21, from $16.4T in 2000 (+218.6%, +5.4% CAGR); from 53.4% total global market cap to 43.4%
- **EMEA**: $28.7T in 2Q21, from $9.4T in 2000 (+205.7%, +5.2% CAGR); from 30.5% total global market cap to 23.8%
- **AsiaPac**: $39.4T in 2Q21, from $4.9T in 2000 (+696.0%, +9.9% CAGR); from 16.1% total global market cap to 32.7%

Source: World Federation of Exchanges, SIFMA estimates
Note: EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
Developed vs. Emerging Markets

Global market cap grew to $120.4 trillion in 2Q21, from $30.7 trillion in 2000 (+291.5%, +6.4% CAGR), with emerging markets growth outpacing developed markets over the past few decades.

- **Developed**: $87.9T in 2Q21, from $28.4T in 2000 (+209.7%, +5.3% CAGR); from 92.3% total global market cap to 73.0%
- **Emerging**: $32.5T in 2Q21, from $2.4T in 2000 (+1,269.1%, +12.6% CAGR); from 7.7% total global market cap to 27.0%

Source: World Federation of Exchanges, SIFMA estimates
Market cap in the Americas grew to $52.3 trillion in 2Q21, from $16.4 trillion in 2000 (+218.6%, +5.4% CAGR), with Brazil representing the biggest gainer over the past few decades.

- **US**: $47.0T in 2Q21, from $15.1T in 2000 (+211.4%, +5.3% CAGR); from 92.0% total market cap to 90.0%
- **Canada**: $3.2T in 2Q21, from $0.8T in 2000 (+310.0%, +6.6% CAGR); from 4.7% total market cap to 6.0%
- **Brazil**: $1.1T in 2Q21, from $0.2T in 2000 (+377.2%, +7.4% CAGR); from 1.4% total market cap to 2.1%
- **Other**: $1.0T in 2Q21, from $0.3T in 2000 (+224.6%, +5.5% CAGR); from 1.88% total market cap to 1.92%
EMEA Comparison

Market cap in EMEA grew to $28.7 trillion in 2Q21, from $9.4 trillion in 2000 (+205.7%, +5.2% CAGR). In 2015, Italy and then France stopped being reported individually, as exchanges began reporting Pan-European results. This skews results to show an outsized growth in the other line.

- **UK**: $8.0T in 2Q21, from $2.6T in 2000 (+211.4%, +5.3% CAGR); from 27.5% total market cap to 28.0%
- **Germany**: $2.6T in 2Q21, from $1.3T in 2000 (+102.6%, +3.3% CAGR); from 13.5% total market cap to 9.0%
- **Switzerland**: $2.2T in 2Q21, from $0.8T in 2000 (+173.3%, +4.7% CAGR); from 8.4% total market cap to 7.5%
- **Other**: $15.9T in 2Q21, from $2.5T in 2000 (+529.9%, +8.7% CAGR); from 26.9% total market cap to 55.5%

Source: World Federation of Exchanges, SIFMA estimates
Note: EMEA = Europe, Middle East & Africa; France and Italy stopped reporting individually, as exchanges began reporting Pan-European results
AsiaPac Comparison

Market cap in AsiaPac grew to $39.4 trillion in 2Q21, from $4.9 trillion in 2000 (+696.0%, +9.9% CAGR), with China representing the biggest gainer over the past few decades.

- **China**: $13.4T in 2Q21, from $0.5T in 2000 (+2,518.8%, 1+8.8% CAGR); from 6.0% total market cap to 34.1%
- **Hong Kong**: $6.9T in 2Q21, from $0.6T in 2000 (+1,002.3%, +11.5% CAGR); from 12.6% total market cap to 17.4%
- **Japan**: $6.7T in 2Q21, from $3.2T in 2000 (+111.8%, +3.5% CAGR); from 63.8% total market cap to 17.0%
- **Australia**: $1.9T in 2Q21, from $0.4T in 2000 (+402.8%, +7.6% CAGR); from 7.5% total market cap to 4.8%
- **Singapore**: $0.7T in 2Q21, from $0.2T in 2000 (+338.7%, +7.0% CAGR); from 3.1% total market cap to 1.7%

Source: World Federation of Exchanges, SIFMA estimates
Note: AsiaPac = Asia Pacific, HK = Hong Kong, S. Korea = South Korea, NZ = New Zealand; China & India began reporting in 2003
Listed Companies Overview

Looking at the number of total listed companies across the globe, we highlight the following trends.

- **The World**: The 55.1 thousand total listed companies globally is split across the regions by AsiaPac 57.3%, EMEA 23.2% and Americas 19.5%

- **Developed vs. Emerging**: Total listed companies for all emerging markets is 1.1x that of developed markets (emerging 29.2 thousand, developed 26.0 thousand)

- **Largest Region**: At 31.6 thousand total listed companies, AsiaPac is the largest region for equity capital formation (57.3% of total global listed companies); 2.5x EMEA and 2.9x the Americas

- **Largest Country**: At 11.9 thousand, China has the highest number of total listed companies in the world; this represents 37.5% of total AsiaPac total listed companies and 21.5% of total global listed companies

- **Highest Growth**: AsiaPac saw the highest growth, +69.2% since 2000 or a +2.4% CAGR (from 18.7 thousand to 31.6 thousand); driven by growth in China, +991.9% since 2000 or a +11.5% CAGR (from 1.1 thousand to 11.9 thousand)

- **Lowest Growth**: EMEA saw the largest decline, -10.8% since 2000 or a -0.5% CAGR (from 14.3 thousand to 12.8 thousand); the largest country decline was India, -71.5% or a -5.6% CAGR (from 7.0 thousand to 2.0 thousand)

Source: World Federation of Exchanges, SIFMA estimates
Note: As of 2Q21; EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
MARKET SIZE

Global Comparison

The number of total listed companies grew to 55.1 thousand in 2Q21, from 44.7 thousand in 2000 (+23.2%, +1.0% CAGR), with AsiaPac representing the biggest gainer over the past few decades.

- **Americas**: 10.7K in 2Q21, from 11.7K in 2000 (-8.5%, -0.4% CAGR); from 26.2% total global listed companies to 19.5%
- **EMEA**: 12.8K in 2Q21, from 14.3K in 2000 (-10.8%, -0.5% CAGR); from 32.0% total global listed companies to 23.2%
- **AsiaPac**: 31.6K in 2Q21, from 18.7K in 2000 (+69.2%, +2.4% CAGR); from 41.8% total global listed companies to 57.3%

Source: World Federation of Exchanges, SIFMA estimates
Note: EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
Developed vs. Emerging Markets

The number of total listed companies grew to 55.1 thousand in 2Q21, from 44.7 thousand in 2000 (+23.2%, 1.0% CAGR), with emerging markets growth outpacing developed markets over the past few decades.

- **Developed**: 26.0K in 2Q21, from 24.8KT in 2000 (+4.5%, +0.2% CAGR); from 55.5% total listed companies to 47.1%
- **Emerging**: 29.2K in 2Q21, from 19.9K in 2000 (+46.6%, +1.8% CAGR); from 44.5% total listed companies to 52.9%

Source: World Federation of Exchanges, SIFMA estimates
MARKET SIZE

Americas Comparison

The number of total listed companies in the Americas declined to 10.7 thousand in 2Q21, from 11.7 thousand in 2000 (-8.5%, -0.4% CAGR), with Canada representing the biggest gainer over the past few decades.

- **US**: 5.7K in 2Q21, from 7.9K in 2000 (-27.4%, -1.4% CAGR); from 67.2% total listed companies to 53.3%
- **Canada**: 3.5K in 2Q21, from 1.5K in 2000 (+123.4%, +3.7% CAGR); from 13.2% total listed companies to 32.2%
- **Brazil**: 0.4K in 2Q21, from 0.5K in 2000 (-17.2%, -0.9% CAGR); from 3.9% total listed companies to 3.5%
- **Other**: 1.2K in 2Q21, from 1.8K in 2000 (-36.3%, -2.0% CAGR); from 15.6% total listed companies to 10.9%

Source: World Federation of Exchanges, SIFMA estimates
EMEA Comparison

The number of total listed companies in EMEA declined to 12.8 thousand in 2Q21, from 14.3 thousand in 2000 (-10.8%, -0.5% CAGR). In 2015, Italy and then France stopped being reported individually, as exchanges began reporting Pan-European results. This skews results to show an outsized growth in the other line.

- **UK**: 2.0K in 2Q21, from 2.9K in 2000 (-32.5%, -1.8% CAGR); from 20.5% total listed companies to 15.5%
- **Germany**: 0.5K in 2Q21, from 1.0K in 2000 (-49.8%, -3.1% CAGR); from 6.9% total listed companies to 3.9%
- **Switzerland**: 0.3KT in 2Q21, from 0.4K in 2000 (-37.0%, -2.1% CAGR); from 2.9% total listed companies to 2.1%
- **Other**: 10.0K in 2Q21, from 8.5K in 2000 (+18.2%, +0.8% CAGR); from 59.3% total listed companies to 78.6%

Source: World Federation of Exchanges, SIFMA estimates
Note: EMEA = Europe, Middle East & Africa; France and Italy stopped reporting individually, as exchanges began reporting Pan-European results
**AsiaPac Comparison**

The number of total listed companies in AsiaPac grew to $31.6 thousand in 2Q21, from 18.7 thousand in 2000 (+69.2%, +2.4% CAGR), with China representing the biggest gainer over the past few decades.

- **China**: 11.9K in 2Q21, from 1.1K in 2003 (+991.9%, +11.5% CAGR); from 5.8% total listed companies to 37.5%
- **Hong Kong**: 2.6K in 2Q21, from 0.8K in 2000 (+223.3%, +5.5% CAGR); from 4.2% total listed companies to 8.1%
- **Japan**: 3.8K in 2Q21, from 3.4K in 2000 (+11.1%, +0.5% CAGR); from 18.2% total listed companies to 12.0%
- **Australia**: 2.1K in 2Q21, from 1.4K in 2000 (+46.8%, +1.8% CAGR); from 7.5% total listed companies to 6.5%
- **Singapore**: 0.7K in 2Q21, from 0.4K in 2000 (+81.7%, +2.8% CAGR); from 2.0% total listed companies to 2.2%
MARKET SIZE

Domestic vs. Foreign Listings

Finally, we analyze the split between domestic versus foreign company listings across the globe (number of listed companies), highlighting the following trends.

• **The World**: The domestic/foreign company split for the 55.1 thousand total global listed companies is: World 92.7%/7.3%, Americas 85.8%/14.2%, EMEA 86.0/14.0%, and AsiaPac 97.7%/2.3%

• **Developed vs. Emerging**: The domestic/foreign company split for all developed markets is 87.9%/12.1% versus 96.9%/3.1% in emerging markets

• **Americas**: The percent of domestic company listings across the Americas has declined -5.0 pps since 2000; currently the U.S. is 78.2% domestic listings (-9.5 pps since 2000), Canada 98.6% (+1.3 pps) and Brazil 99.2% (-0.1 pps)

• **EMEA**: The percent of domestic company listings across EMEA has declined -0.6 pps since 2000; currently the U.K. is 81.9% domestic listings (-1.0 pps since 2000), Germany 89.9% (+14.7 pps) and Switzerland 88.0% (+27.5 pps)

• **AsiaPac**: The percent of domestic company listings across AsiaPac has declined -1.0 pps since 2000; currently China is and always has been 100.0% domestic listings, Hong Kong 92.8% (-5.8 pps), Japan 99.9% (+1.1 pps), Australia 92.7% (-2.0 pps), and Singapore 66.1% (-20.9 pps)

Source: World Federation of Exchanges, SIFMA estimates
Note: As of 2Q21; EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
Disclaimer: Statistical analysis and trends do not account for changes to data source methodologies, index calculations and constituents, or restatements by data provider over the time series. Totals may not sum up due to rounding. Regional/country breakouts may not add up to the global total, particularly in deal count, as some deals were listed as undisclosed location/not in a defined world region or some deals are attributed to two regions. IPOs include rank eligible deals; excludes BDCs, SPACs, ETFs, CLEFs & rights offers.
MARKET FORMATION

IPO Deal Value Overview

Looking at IPO deal value (converted to USD) across the globe, we highlight the following trends.

- **The World**: The $236.1 billion total IPO deal value in 2020 was split across the regions by Americas 41.2%, AsiaPac 47.7%, and EMEA 11.1% (YTD $186.3B; Americas 51.2%, AsiaPac 34.4%, and EMEA 14.4%)

- **Developed vs. Emerging**: Aggregate IPO deal value for developed markets in 2020 was 0.9x that of emerging markets (developed $122.2 billion, emerging $64.0 billion); YTD developed is 1.9x (developed $122.2B, emerging $64.0B)

- **Largest Region**: In 2020, AsiaPac was the largest region for IPO deal value at $112.5 billion (1.2x Americas, 4.3x EMEA); YTD Americas is the largest region at $95.4 billion (3.6x EMEA, 1.5x AsiaPac)

- **Largest Country**: At $84.5 billion, U.S. IPO deal value is the largest in the world; 86.9% of total Americas IPO deal value and 35.8% of global IPO deal value; YTD the U.S. remains the largest at $86.2 billion (90.4% Americas, 46.3% global)

- **Highest Growth**: AsiaPac saw the highest growth, +205.6 (2000 to 2020) or a +5.5% CAGR (from $36.8 billion to $112.5 billion; YTD $64.1 billion); driven by China, +33,488.3% (2000 to 2020) or a +31.9% CAGR (from $0.2 billion to $56.4 billion; YTD $33.0 billion)

- **Highest Decline**: EMEA saw the highest decline, -69.1% (2000 to 2020) or a -5.4% CAGR (from $84.8 billion to $26.2 billion; YTD $26.8 billion); France saw the worst decline, -97.7% (2000 to 2020) or a -16.4% CAGR (from $9.4 billion to $0.2 billion; YTD $1.3 billion)

Source: Dealogic, SIFMA estimates
Note: As of 2Q21; EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
Global Comparison

Global IPO deal value was $186.3 billion YTD. It was $236.1 billion in 2020, growing from $209.3 billion in 2000 (+12.8%, +0.6% CAGR), with AsiaPac representing the biggest gainer over the past few decades.

- **Americas**: YTD $95.4B; 2020 $97.3B, 2000 $87.6B (+11.1%, +0.5% CAGR), from 41.9% total global deal value to 51.2%
- **EMEA**: YTD $26.8B; 2020 $26.2B, 2000 $84.8B (-69.1%, -5.4% CAGR); from 40.5% total global deal value to 14.4%
- **AsiaPac**: YTD $64.1B; 2020 $112.5B, 2000 $36.8B (+205.6%, +5.5% CAGR); from 17.6% total global deal value to 34.4%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
Note: EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
Developed vs. Emerging Markets

Global IPO deal value was $186.3 billion YTD. It was $236.1 billion in 2020, growing from $209.3 billion in 2000 (+12.8%, +0.6% CAGR), with emerging markets growth outpacing developed markets over the past few decades.

- **Developed**: YTD $122.2B; 2020 $113.2B, 2000 $186.6B (-39.3%, -2.4% CAGR); from 89.1% total global IPO deal value to 65.6%
- **Emerging**: YTD $64.0B; 2020 $122.9B, 2000 $22.8B (+439.5%, +8.4% CAGR); from 10.9% total global IPO deal value to 34.4%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
Americas Comparison

IPO deal value in the Americas was $95.4 billion YTD. It was $97.3 billion in 2020, growing from $87.6 billion in 2000 (+11.1%, +0.5% CAGR), with Brazil representing the biggest gainer over the past few decades (albeit a small market).

- **US**: YTD $86.2B; 2020 $84.5B, 2000 $84.9B (-0.4%, 0.0% CAGR); from 96.9% total IPO deal value to 90.4%
- **Canada**: YTD $2.8B; 2020 $2.6B, 2000 $2.3B (+12.4%, +0.6% CAGR); from 2.6% total IPO deal value to 3.0%
- **Brazil**: YTD $6.3B; 2020 $8.5B, 2000 $0.02B (+43,199%, +33.5% CAGR); from 0.02% total IPO deal value to 6.6%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
IPO deal value in EMEA was $26.8 billion YTD. It was $26.2 billion in 2020, declining from $84.8 billion in 2000 (-69.1%, -5.4% CAGR), with France representing the biggest decliner over the past few decades.

- **UK**: YTD $12.5B; 2020 $6.7B, 2000 $13.1B (-49.3%, -3.2% CAGR); from 15.5% total IPO deal value to 46.5%
- **Germany**: YTD $10.0; 2020 $1.3B, 2000 $23.2B (-94.5%, -12.9% CAGR); from 27.4% total IPO deal value to 37.3%
- **France**: YTD $1.3B; 2020 $0.2B, 2000 $9.4B (-97.7%, -16.4% CAGR); from 11.1% total IPO deal value to 4.9%
- **Italy**: YTD $0.5B; 2020 $0.8B, 2000 $6.2B (-87.1%, -9.3% CAGR); from 7.4% total IPO deal value to 1.7%
- **Switzerland**: YTD $1.6B; 2020 $0.1B, 2000 $2.6B (-95.3%, -13.6% CAGR); from 3.1% total IPO deal value to 5.9%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
Note: EMEA = Europe, Middle East & Africa
AsiaPac Comparison

IPO deal value in AsiaPac was $64.1 billion YTD. It was $112.5 billion in 2020, growing from $36.8 billion in 2000 (+205.6%, +5.5% CAGR), with China representing the biggest gainer over the past few decades.

- **China**: YTD $33.0B; 2020 $56.4B, 2000 $0.2B (+33,488.3%, +31.9% CAGR); from 0.5% total IPO deal value to 51.5%
- **Hong Kong**: YTD $18.8B; 2020 $32.6B, 2000 $9.6B (+238.0%, +6.0% CAGR); from 26.2% total IPO deal value to 29.4%
- **Japan**: YTD $3.1B; 2020 $3.4B, 2000 $13.5B (-74.7%, -6.3% CAGR); from 36.7% total IPO deal value to 4.9%
- **Australia**: YTD $4.0B; 2020 $3.4B, 2000 $2.7B (+24.7%, +1.1% CAGR); from 7.3% total IPO deal value to 6.2%
- **Singapore**: YTD $0.2B; 2020 $1.0B, 2000 $1.9B in 2000 (-46.7%, -3.0% CAGR); from 5.2% total IPO deal value to 0.4%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
Note: AsiaPac = Asia Pacific, HK = Hong Kong, S. Korea = South Korea, NZ = New Zealand
Looking at IPO count (number of deals) across the globe, we highlight the following trends.

- **The World**: The 1,388 total IPO deal count in 2020 was split across the regions by AsiaPac 63.7%, Americas 20.9%, and EMEA 15.5%; YTD 815 (AsiaPac 57.2%, Americas 31.3%, and EMEA 11.5%)

- **Developed vs. Emerging**: Aggregate IPO deal count for all developed markets in 2020 was 0.8x that of emerging markets (developed 585, emerging 753); YTD developed 1.2x (developed 446, emerging 369)

- **Largest Region**: At 852 in 2020, AsiaPac was the largest region for IPO deal count (63.7% of total global IPO deal count); 4.1x EMEA and 3.1x the Americas; YTD 466 (57.2% of total global IPO deal count; 5.0x EMEA and 1.8x the Americas)

- **Largest Country**: At 252, China’s IPO deal count is the largest in the world; this represents 54.1% of total AsiaPac IPO deal count and 30.9% of total global IPO deal count

- **Highest Growth**: AsiaPac saw the highest growth, +2.3% (2000 to 2020) or a +0.1% CAGR (from 833 to 852; YTD 466); driven by China, +6,316.7% (2000 to 2020) or a +21.9% CAGR (from 6 to 385; YTD 252)

- **Highest Decline**: EMEA saw the highest decline, -69.9% (2000 to 2020) or a -5.6% CAGR (from 687 to 207 billion; YTD 94); Germany saw the worst decline, -95.6% (2000 to 2020) or a -13.8% CAGR (from 158 to 7; YTD 13)
Global Comparison

Global IPO deal count was 815 YTD. It was 1,388 in 2020, declining from 2,006 in 2000 (-33.3%, -1.9% CAGR), with AsiaPac representing the biggest gainer over the past few decades.

- **Americas**: YTD #255; 2020 #279, 2000 #524 (-46.8%, -3.0% CAGR), from 26.1% total global deal count to 31.3%
- **EMEA**: YTD #94; 2020 #207, 2000 #687 (-69.9%, -5.6% CAGR); from 34.2% total global deal count to 11.5%
- **AsiaPac**: YTD #466; 2020 #852, 2000 #833 (+2.3%, +0.1% CAGR); from 41.5% total global deal count to 57.2%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)

Note: EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
MARKET FORMATION

Developed vs. Emerging Markets

Global IPO deal count was 815 YTD. It was 1,388 in 2020, declining from 2,006 in 2000 (-33.3%, -1.9% CAGR), with emerging markets growth outpacing developed markets over the past few decades.

- **Developed**: YTD #446; 2020 #585, 2000 #1,499 (-61.0%, -4.4% CAGR); from 74.7% total global IPO deal count to 54.7%
- **Emerging**: YTD #369; 2020 #753, 2000 #507 (+48.5%, +1.9% CAGR); from 25.3% total global IPO deal count to 45.3%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
MARKET FORMATION

Americas Comparison

IPO deal count in the Americas was 255 YTD. It was 279 in 2020, declining from 524 in 2000 (-46.8%, -3.0% CAGR), with Brazil representing the biggest gainer over the past few decades (albeit a small market).

- **US**: YTD #215; 2020 #209, 2000 #438 (-52.3%, -3.5% CAGR); from 83.6% total IPO deal count to 84.3%
- **Canada**: YTD #13; 2020 #39, 2000 #90 (-56.7%, -3.9% CAGR); from 17.2% total IPO deal count to 5.1%
- **Brazil**: YTD #28; 2020 #28, 2000 #2 (+1,300.0%, +13.4% CAGR); from 0.4% total IPO deal count to 11.0%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
EMEA Comparison

IPO deal count in EMEA was 94 YTD. It was 207 in 2020, declining from 687 in 2000 (-69.9%, -5.6% CAGR), with Germany representing the biggest decliner over the past few decades.

- **UK**: YTD #49; 2020 #32, 2000 #229 (-86.0%, -8.9% CAGR); from 33.3% total IPO deal count to 52.1%
- **Germany**: YTD #13; 2020 #7, 2000 #158 (-95.6%, -13.8% CAGR); from 23.0% total IPO deal count to 13.8%
- **France**: YTD #16; 2020 #7, 2000 #72 (-90.3%, -10.5% CAGR); from 10.5% total IPO deal count to 17.0%
- **Italy**: YTD #13; 2020 #23, 2000 #43 (-46.5%, -2.9% CAGR); from 6.3% total IPO deal count to 13.8%
- **Switzerland**: YTD #3; 2020 #1, 2000 #19 (-94.7%, -13.1% CAGR); from 2.8% total IPO deal count to 3.2%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
Note: EMEA = Europe, Middle East & Africa
AsiaPac Comparison

IPO deal count in AsiaPac was 466 YTD. It was 852 in 2020, growing from 833 in 2000 (+2.3%, +0.1% CAGR), with China representing the biggest gainer over the past few decades.

- **China**: YTD #252; 2020 #385, 2000 #6 (+6,316.7%, +21.9% CAGR); from 0.7% total IPO deal count to 54.1%
- **Hong Kong**: YTD #42; 2020 #134, 2000 #84 (+59.5%, +2.2% CAGR); from 10.1% total IPO deal count to 9.0%
- **Japan**: YTD #56; 2020 #93, 2000 #203 (-54.2%, -3.6% CAGR); from 24.4% total IPO deal count to 12.0%
- **Australia**: YTD #70; 2020 #80, 2000 #142 (-43.7%, -2.7% CAGR); from 17.0% total IPO deal count to 15.0%
- **Singapore**: YTD #3; 2020 #11, 2000 #79 in 2000 (-86.1%, -9.0% CAGR); from 9.5% total IPO deal count to 0.6%

Source: Dealogic, SIFMA estimates (YTD as of 2Q21)
Note: AsiaPac = Asia Pacific, HK = Hong Kong, S. Korea = South Korea, NZ = New Zealand; China & India began reporting in 2003
Disclaimer: Statistical analysis and trends do not account for changes to data source methodologies, index calculations and constituents, or restatements by data provider over the time series. Totals may not sum up due to rounding. Prices in local currency.
Market Performance Overview

Looking at index performance (trends in representative index prices) across the globe, we highlight the following trends.

- **Developed vs. Emerging**: Emerging markets outperformed over the entire time series (2000-2Q21), emerging CAGR +6.1% vs. developed +3.8%; trend reversed post COVID, developed CAGR +11.2% vs. +8.6% emerging (2019-2Q21)

- **Best Performing Region**: The Americas is the best performing region for both the whole time series and post COVID, +4.8% and +12.9% CAGRs respectively

- **Worst Performing Region**: Europe is the worst performing region for both the whole time series and post COVID, -1.0% and +5.5% CAGRs respectively

- **Best Performing Country**: For the entire time series, Brazil is the best performing region at a +9.7% CAGR; post COVID, the U.S. is the top performer at a +12.8% CAGR (surprisingly, China was not on top: +6.5% and +11.1% CAGRs respectively)

- **Worst Performing Country**: The U.K is the worst performing country for both the whole time series and post COVID, +0.4% and -1.2% CAGRs respectively

Source: Bloomberg, SIFMA estimates
Note: As of 2Q21; EMEA = Europe, Middle East & Africa; AsiaPac = Asia Pacific
MARKET PERFORMANCE

World Comparison

Since the time series looks back to 2000, emerging markets outpaced developed (+6.1% CAGR vs. +3.8%) as many emerging countries like China experienced substantial growth rates. However, this trend reverses when looking at post COVID price appreciation for the representative indexes, developed +11.2% CAGR vs. emerging +8.6%.

- **World**: +121.1% from 2000 to 2Q21, +3.7% CAGR; +37.3% from 2019 to 2Q21 (vs. pre COVID), +11.16% CAGR
- **Developed**: +128.9% from 2000 to 2Q21, +3.8% CAGR; +37.6% from 2019 to 2Q21 (vs. pre COVID), +11.22% CAGR
- **Emerging**: +266.8% from 2000 to 2Q21, +6.1% CAGR; +28.0% from 2019 to 2Q21 (vs. pre COVID), +8.6% CAGR

<table>
<thead>
<tr>
<th>World</th>
<th>MSCI World Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed</td>
<td>FTSE Developed Index</td>
</tr>
<tr>
<td>Emerging</td>
<td>FTSE Emerging Index</td>
</tr>
</tbody>
</table>

Source: Bloomberg, SIFMA estimates (as of 2Q21)
MARKET PERFORMANCE

World Index Price Charts

**World: MSCI World Index**


**World - Developed: FTSE Developed Index**


**World - Emerging: FTSE Emerging Index**


Source: Bloomberg, SIFMA estimates
MARKET PERFORMANCE

Americas Comparison

As in the world view, the emerging market, Brazil, saw the largest earlier growth. Yet, as the largest market, the U.S. continues to drive growth for total Americas, particularly post COVID (+12.8% CAGR).

- **Americas**: +182.9% from 2000 to 2Q21, +4.8% CAGR; +43.9% from 2019 to 2Q21 (vs. pre COVID), +12.9% CAGR
- **US**: +193.1% from 2000 to 2Q21, +5.0% CAGR; +43.6% from 2019 to 2Q21 (vs. pre COVID), +12.8% CAGR
- **Canada**: +101.9% from 2000 to 2Q21, +3.2% CAGR; +20.0% from 2019 to 2Q21 (vs. pre COVID), +6.3% CAGR
- **Brazil**: +659.7% from 2000 to 2Q21, +9.7% CAGR; +22.7% from 2019 to 2Q21 (vs. pre COVID), +7.1% CAGR

<table>
<thead>
<tr>
<th>Americas</th>
<th>MSCI AC Americas Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>S&amp;P 500</td>
</tr>
<tr>
<td>Canada</td>
<td>S&amp;P/TSX Composite Index</td>
</tr>
<tr>
<td>Brazil</td>
<td>BOVESPA Index</td>
</tr>
</tbody>
</table>

Source: Bloomberg, SIFMA estimates (as of 2Q21)
MARKET PERFORMANCE

Americas Index Price Charts

Source: Bloomberg, SIFMA estimates
MARKET PERFORMANCE

Europe Comparison

Germany continues to be the outperformer, both for the whole time series and post COVID. The U.K. is still recovering post COVID versus other European markets (-1.2% CAGR).

- **Europe**: -20.6% from 2000 to 2Q21, -1.0% CAGR; +17.4% from 2019 to 2Q21 (vs. pre COVID), +5.5% CAGR
- **UK**: +10.1% from 2000 to 2Q21, +0.4% CAGR; -3.6% from 2019 to 2Q21 (vs. pre COVID), -1.2% CAGR
- **Germany**: +116.0% from 2000 to 2Q21, +3.6% CAGR; +27.1% from 2019 to 2Q21 (vs. pre COVID), +8.3% CAGR
- **France**: +1.9% from 2000 to 2Q21, +0.1% CAGR; +17.1% from 2019 to 2Q21 (vs. pre COVID), +5.39% CAGR
- **Switzerland**: +48.0% from 2000 to 2Q21, +1.8% CAGR; +17.0% from 2019 to 2Q21 (vs. pre COVID), +5.37% CAGR

<table>
<thead>
<tr>
<th>EMEA</th>
<th>Euro STOXX 50 Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>FTSE 100 Index</td>
</tr>
<tr>
<td>Germany</td>
<td>DAX Performance Index</td>
</tr>
<tr>
<td>France</td>
<td>CAC 40 Index</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Swiss Market Index</td>
</tr>
</tbody>
</table>

Source: Bloomberg, SIFMA estimates (as of 2Q21)
MARKET PERFORMANCE

Europe Index Price Charts

Source: Bloomberg, SIFMA estimates
Europe Index Price Charts

EMEA - Switzerland: Swiss Market Index

Source: Bloomberg, SIFMA estimates
MARKET PERFORMANCE

AsiaPac Comparison

China continues to perform well, outpacing post COVID growth for the aggregate region, +11.1% CAGR vs. +9.3% CAGR. Singapore’s post COVID recovery is lagging versus other AsiaPac countries, -0.6% CAGR.

- **AsiaPac**: +86.7% from 2000 to 2Q21, +2.9% CAGR; +30.4% from 2019 to 2Q21 (vs. pre COVID), +9.3% CAGR
- **Japan**: +69.1% from 2000 to 2Q21, +2.4% CAGR; +33.6% from 2019 to 2Q21 (vs. pre COVID), +10.1% CAGR
- **Hong Kong**: +79.1% from 2000 to 2Q21, +2.7% CAGR; +4.3% from 2019 to 2Q21 (vs. pre COVID), +1.4% CAGR
- **China**: +302.1% from 2002 to 2Q21, +6.5% CAGR; +37.1% from 2019 to 2Q21 (vs. pre COVID), +11.1% China
- **Australia**: +122.0% from 2000 to 2Q21, +3.7% CAGR; +10.5% from 2019 to 2Q21 (vs. pre COVID), +3.4% CAGR
- **Singapore**: +50.3% from 2000 to 2Q21, +1.9% CAGR; -1.8% from 2019 to 2Q21 (pre COVID), -0.6% CAGR

<table>
<thead>
<tr>
<th>AsiaPac</th>
<th>MSCI AC Asia Pacific Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Nikkei 225 Index</td>
</tr>
<tr>
<td>HK</td>
<td>Hang Seng Index</td>
</tr>
<tr>
<td>China</td>
<td>CSI 300 Index</td>
</tr>
<tr>
<td>Australia</td>
<td>S&amp;P/ASX 200</td>
</tr>
<tr>
<td>Singapore</td>
<td>FTSE Straits Times Index</td>
</tr>
</tbody>
</table>

Source: Bloomberg, SIFMA estimates (as of 2Q21)
MARKET PERFORMANCE

AsiaPac Index Price Charts

AsiaPac: MSCI AC Asia Pacific Index

AsiaPac - Japan: Nikkei 225 Index

AsiaPac - HK: Hang Seng Index

AsiaPac - China: CSI 300 Index

Source: Bloomberg, SIFMA estimates
MARKET PERFORMANCE

AsiaPac Index Price Charts

AsiaPac - Australia: S&P/ASX 200

AsiaPac - Singapore: FTSE Straits Times Index

Source: Bloomberg, SIFMA estimates
Market Costs
Trade Costs by Region
MARKET COSTS

Methodology Notes

Virtu’s Global Peer database is a broker-neutral peer transactional database, covering more than 20% of all global equity trading and is leveraged for performance insights and execution quality evaluation. Over 75% of the world’s largest global asset managers leverage Virtu’s multi-asset global transaction cost analysis (TCA) service which is the source of Virtu’s Global Peer database. We use the data from this source to compare trade costs across regions.

Costs to the buy-side trading desk

• Average Commission = (Shares Executed * Trade Price * Commission Per Share) / (Shares Executed * Trade Price); blended rate based on what is submitted, averaging the all-in and execution only rates

• Implementation Shortfall (IS) = The difference, or slippage, between the arrival price and the execution price for a trade

• Total Cost = The sum of Average Commission and IS Cost

Costs to the sell-side trading desk

• Broker Cost = The difference, or slippage, between the broker arrival price and the execution price for a trade; the cost of trading once the order has been routed to the broker

• Standalone measure as each buy-side trading desk order may have multiple broker routes

Source disclaimer: Virtu Financial. Many factors influence transaction cost including order size, volatility, and spread and the style and objective of the investment firm. Virtu’s Global Peer universe includes a variety of investment firm types trading orders of all sizes in various market conditions which may directly influence the end transaction cost outcome. Virtu’s Global Peer universe peer commission numbers represent a blend of both execution-only and fully bundled rates.
MARKET COSTS

Buy-Side: Cost Comparison

Looking at total trade costs across regions for the buy-side trading desk, we note that the U.S. is the lowest cost region for total trade costs at 34.3 bps. U.S. total trade costs are:

- 7.5% to the next closest region, Europe ex-U.K.
- 56.5% to the most expensive region, emerging markets in Europe
- 18.1% to Canada and 15.7% to the U.K., frequently compared to regions
- With the exception of Japan, developed markets have lower costs than emerging markets, for both implementation shortfall (implicit costs) and commissions (explicit costs)

Source: Virtu Financial, SIFMA estimates
Note: As of 2Q21. Converted to USD at daily exchange rates
MARKET COSTS

Buy-Side: Regional Costs vs. US

Looking at total trade costs across regions for the buy-side trading desk in relation to total trade costs in the U.S. (34.3 bps), we highlight the following:

- Several developed markets are inline with the U.S., yet still post higher costs
- Emerging markets post much higher costs

Source: Virtu Financial, SIFMA estimates
Note: As of 2Q21. Converted to USD at daily exchange rates
MARKET COSTS

Buy-Side: IS % Total Costs

Next, we look at implementation shortfall (IS) as a percent of total trade costs across regions for the buy-side trading desk. Since total trade costs are the sum of IS and commissions, the higher the IS as the percent of total, the lower the commissions, and firms have more control over IS costs than commissions, albeit dependent upon order size. In 2Q21, average costs across markets showed a 35bps difference between the 25th and 75th percentiles of the peer universe, implying significant potential costs savings for firms that are able to optimize trading. We highlight the following:

- Trade costs in the U.S. are mostly related to IS, 91.8% of total costs
- For regions more in line with U.S. total costs – Europe ex-U.K., APAC ex-Japan, U.K., Canada – the mix shifts somewhat to more commission based

Source: Virtu Financial, SIFMA estimates
Note: As of 2Q21. Converted to USD at daily exchange rates
MARKET COSTS

Sell-Side: Cost Comparison

Looking at trade costs across regions for the sell-side trading desk, or broker costs, the U.S. stands in the middle of peers at 17.6 bps. We highlight the following:

- The U.K. and Europe ex-U.K. are 0.76x and 0.78x the U.S.
- APAC ex-Japan and Canada are 0.81x and 0.89x the U.S.
- Most emerging markets are higher than the U.S.

Source: Virtu Financial, SIFMA estimates
Note: As of 2Q21. Converted to USD at daily exchange rates
Markets in Indexes
ETF Regional Breakdown
Investment Fund Products

An investment fund – exchange-traded fund (ETF), mutual fund, hedge fund, money market fund – is essentially a portfolio of stocks, bonds or other assets. Funds can be classified by:

- **Asset Class**: Equities, fixed income, commodities, currency or alternatives
- **Region**: Domestic securities only; international securities; country specific (U.S., Australia, U.K.); or regional groupings (developed, emerging, BRICs)
- **Sectors/Groups/Industries**: Financials, healthcare, retail, infrastructure, merger arbitrage, trend following, environment, artificial intelligence, etc.
- **Investment Style**: Broad market; market cap (large, mid, small); high dividend yield; smart beta (rules-based strategies aiming to deliver better risk-adjusted returns than traditional market-cap-weighted indexes); etc.

Funds provide investors a low-cost way to diversify their portfolios or gain exposure to a current investment theme, without purchasing individual securities. They can be used for direct investments or in retirement accounts, where the investor originally selects the funds and then each regular contribution automatically goes into those selected funds. While each investor retains ownership and control of his own shares, they do not make decisions about how a fund's assets are invested. A fund manager decides which securities to hold in what quantities and when to buy/sell securities, typically tracking an index.

ETFs are a popular type of investment fund product, showing significant growth over the past decade. We analyze various ETF trends and usefulness for country diversification over the next few pages.
Global ETF Landscape

Looking at the global ETF landscape, we highlight the following:

- **Breakout**: Americas 73.1%, EMEA 15.8%, AsiaPac 11.0%
- **Global**: YTD/2020 +22.6%, YTD/2010 +622.5%
- **Americas**: YTD/2020 +25.4%, YTD/2010 +637.4%
- **EMEA**: YTD/2020 +21.1%, YTD/2010 +424.1%
- **AsiaPac**: YTD/2020 +8.3%, YTD/2010 +1,117.4%

ETF Assets by Region ($T)

Source: ETFGI, SIFMA estimates
Note: Numbers may not add to total due to rounding. YTD as of August
### MARKETS IN INDEXES

#### Top 50 ETFs by AUM

Looking at the top 50 ETFs by assets under management (AUM), we highlight the following and list the first 25 below:

- Total Top 50 ETF AUM $3.4 trillion, around 36.1% of the global total AUM
- Total U.S. Only Top 50 ETF AUM $2.8 trillion, 80.5% of the top 50 ETFs
- Total Non-U.S. Only Top 50 ETF AUM $0.7 trillion, 19.5% of the top 50 ETFs

<table>
<thead>
<tr>
<th>Ticker</th>
<th>Name</th>
<th>Segment</th>
<th>Issuer</th>
<th>AUM ($B)</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPY</td>
<td>SPDR S&amp;P 500 ETF Trust</td>
<td>Equity: U.S. - Large Cap</td>
<td>State Street Global Advisors</td>
<td>390.2</td>
<td>0.09%</td>
</tr>
<tr>
<td>IVV</td>
<td>iShares Core S&amp;P 500 ETF</td>
<td>Equity: U.S. - Large Cap</td>
<td>Blackrock</td>
<td>300.6</td>
<td>0.03%</td>
</tr>
<tr>
<td>VTI</td>
<td>Vanguard Total Stock Market ETF</td>
<td>Equity: U.S. - Total Market</td>
<td>Vanguard</td>
<td>267.1</td>
<td>0.03%</td>
</tr>
<tr>
<td>VOO</td>
<td>Vanguard S&amp;P 500 ETF</td>
<td>Equity: U.S. - Large Cap</td>
<td>Vanguard</td>
<td>249.4</td>
<td>0.03%</td>
</tr>
<tr>
<td>QQQ</td>
<td>Invesco QQQ Trust</td>
<td>Equity: U.S. - Large Cap</td>
<td>Invesco</td>
<td>185.0</td>
<td>0.20%</td>
</tr>
<tr>
<td>VEA</td>
<td>Vanguard FTSE Developed Markets ETF</td>
<td>Equity: Developed Markets Ex-U.S. - Total Market</td>
<td>Vanguard</td>
<td>105.1</td>
<td>0.05%</td>
</tr>
<tr>
<td>IEFA</td>
<td>iShares Core MSCI EAFE ETF</td>
<td>Equity: Developed Markets Ex-North America - Total Market</td>
<td>Blackrock</td>
<td>101.8</td>
<td>0.07%</td>
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<tr>
<td>VTV</td>
<td>Vanguard Value ETF</td>
<td>Equity: U.S. - Large Cap Value</td>
<td>Vanguard</td>
<td>85.3</td>
<td>0.04%</td>
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<tr>
<td>VUG</td>
<td>Vanguard Growth ETF</td>
<td>Equity: U.S. - Large Cap Growth</td>
<td>Vanguard</td>
<td>83.4</td>
<td>0.04%</td>
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<tr>
<td>VWO</td>
<td>Vanguard FTSE Emerging Markets ETF</td>
<td>Equity: Emerging Markets - Total Market</td>
<td>Vanguard</td>
<td>80.2</td>
<td>0.10%</td>
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<td>IEMG</td>
<td>iShares Core MSCI Emerging Markets ETF</td>
<td>Equity: Emerging Markets - Total Market</td>
<td>Blackrock</td>
<td>79.1</td>
<td>0.11%</td>
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<tr>
<td>IWF</td>
<td>iShares Russell 1000 Growth ETF</td>
<td>Equity: U.S. - Large Cap Growth</td>
<td>Blackrock</td>
<td>73.5</td>
<td>0.19%</td>
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<tr>
<td>IJR</td>
<td>iShares Core S&amp;P Small-Cap ETF</td>
<td>Equity: U.S. - Small Cap</td>
<td>Blackrock</td>
<td>68.8</td>
<td>0.06%</td>
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<tr>
<td>IWM</td>
<td>iShares Russell 2000 ETF</td>
<td>Equity: U.S. - Small Cap</td>
<td>Blackrock</td>
<td>66.5</td>
<td>0.19%</td>
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<tr>
<td>IJH</td>
<td>iShares Core S&amp;P Mid-Cap ETF</td>
<td>Equity: U.S. - Mid Cap</td>
<td>Blackrock</td>
<td>63.7</td>
<td>0.05%</td>
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<tr>
<td>VIG</td>
<td>Vanguard Dividend Appreciation ETF</td>
<td>Equity: U.S. - Total Market</td>
<td>Vanguard</td>
<td>63.3</td>
<td>0.06%</td>
</tr>
<tr>
<td>EFA</td>
<td>iShares MSCI EAFE ETF</td>
<td>Equity: Developed Markets Ex-North America - Total Market</td>
<td>Blackrock</td>
<td>58.7</td>
<td>0.32%</td>
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<td>IWD</td>
<td>iShares Russell 1000 Value ETF</td>
<td>Equity: U.S. - Large Cap Value</td>
<td>Blackrock</td>
<td>55.4</td>
<td>0.19%</td>
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<tr>
<td>VO</td>
<td>Vanguard Mid-Cap ETF</td>
<td>Equity: U.S. - Mid Cap</td>
<td>Vanguard</td>
<td>52.1</td>
<td>0.04%</td>
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<tr>
<td>VXUS</td>
<td>Vanguard Total International Stock ETF</td>
<td>Equity: Global Ex-U.S. - Total Market</td>
<td>Vanguard</td>
<td>49.5</td>
<td>0.08%</td>
</tr>
<tr>
<td>VGT</td>
<td>Vanguard Information Technology ETF</td>
<td>Equity: U.S. Information Technology</td>
<td>Vanguard</td>
<td>49.2</td>
<td>0.10%</td>
</tr>
<tr>
<td>VB</td>
<td>Vanguard Small-Cap ETF</td>
<td>Equity: U.S. - Small Cap</td>
<td>Vanguard</td>
<td>47.4</td>
<td>0.05%</td>
</tr>
<tr>
<td>XLK</td>
<td>Technology Select Sector SPDR Fund</td>
<td>Equity: U.S. Information Technology</td>
<td>State Street Global Advisors</td>
<td>44.9</td>
<td>0.12%</td>
</tr>
<tr>
<td>VNQ</td>
<td>Vanguard Real Estate ETF</td>
<td>Equity: U.S. Real Estate</td>
<td>Vanguard</td>
<td>43.9</td>
<td>0.12%</td>
</tr>
<tr>
<td>XLF</td>
<td>Financial Select Sector SPDR Fund</td>
<td>Equity: U.S. Financials</td>
<td>State Street Global Advisors</td>
<td>42.7</td>
<td>0.12%</td>
</tr>
</tbody>
</table>

Source: etf.com, SIFMA estimates (as of August)
MARKETS IN INDEXES

Top 50 ETFs by AUM

We list below the bottom 25 of the top 50 ETFs by AUM:

<table>
<thead>
<tr>
<th>Ticker</th>
<th>Name</th>
<th>Segment</th>
<th>Issuer</th>
<th>AUM ($B)</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITOT</td>
<td>iShares Core S&amp;P Total U.S. Stock Market ETF</td>
<td>Equity: U.S. - Total Market</td>
<td>Blackrock</td>
<td>42.5</td>
<td>0.03%</td>
</tr>
<tr>
<td>VYM</td>
<td>Vanguard High Dividend Yield ETF</td>
<td>Equity: U.S. - High Dividend Yield</td>
<td>Vanguard</td>
<td>39.1</td>
<td>0.06%</td>
</tr>
<tr>
<td>IVW</td>
<td>iShares S&amp;P 500 Growth ETF</td>
<td>Equity: U.S. - Large Cap Growth</td>
<td>Blackrock</td>
<td>36.4</td>
<td>0.18%</td>
</tr>
<tr>
<td>VEU</td>
<td>Vanguard FTSE All-World ex-US ETF</td>
<td>Equity: Global Ex-U.S. - Total Market</td>
<td>Vanguard</td>
<td>35.4</td>
<td>0.08%</td>
</tr>
<tr>
<td>SCHX</td>
<td>Schwab U.S. Large-Cap ETF</td>
<td>Equity: U.S. - Large Cap</td>
<td>Charles Schwab</td>
<td>32.5</td>
<td>0.03%</td>
</tr>
<tr>
<td>XLV</td>
<td>Health Care Select Sector SPDR Fund</td>
<td>Equity: U.S. Health Care</td>
<td>State Street Global Advisors</td>
<td>32.4</td>
<td>0.12%</td>
</tr>
<tr>
<td>IWB</td>
<td>iShares Russell 1000 ETF</td>
<td>Equity: U.S. - Large Cap</td>
<td>Blackrock</td>
<td>31.1</td>
<td>0.15%</td>
</tr>
<tr>
<td>DIA</td>
<td>SPDR Dow Jones Industrial Average ETF Trust</td>
<td>Equity: U.S. - Large Cap</td>
<td>State Street Global Advisors</td>
<td>31.0</td>
<td>0.16%</td>
</tr>
<tr>
<td>IXUS</td>
<td>iShares Core MSCI Total International Stock ETF</td>
<td>Equity: Global Ex-U.S. - Total Market</td>
<td>Blackrock</td>
<td>30.7</td>
<td>0.09%</td>
</tr>
<tr>
<td>EEM</td>
<td>iShares MSCI Emerging Markets ETF</td>
<td>Equity: Emerging Markets - Total Market</td>
<td>Blackrock</td>
<td>30.4</td>
<td>0.70%</td>
</tr>
<tr>
<td>IWR</td>
<td>iShares Russell Mid-Cap ETF</td>
<td>Equity: U.S. - Mid Cap</td>
<td>Blackrock</td>
<td>30.1</td>
<td>0.19%</td>
</tr>
<tr>
<td>RSP</td>
<td>Invesco S&amp;P 500 Equal Weight ETF</td>
<td>Equity: U.S. - Large Cap</td>
<td>Invesco</td>
<td>29.4</td>
<td>0.20%</td>
</tr>
<tr>
<td>USMV</td>
<td>iShares MSCI USA Min Vol Factor ETF</td>
<td>Equity: U.S. - Total Market</td>
<td>Blackrock</td>
<td>28.7</td>
<td>0.15%</td>
</tr>
<tr>
<td>SCHF</td>
<td>Schwab International Equity ETF</td>
<td>Equity: Developed Markets Ex-U.S. - Total Market</td>
<td>Charles Schwab</td>
<td>28.2</td>
<td>0.06%</td>
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<td>SCHD</td>
<td>Schwab U.S. Dividend Equity ETF</td>
<td>Equity: U.S. - High Dividend Yield</td>
<td>Charles Schwab</td>
<td>27.6</td>
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<td>Vanguard</td>
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<td>Equity: U.S. - Total Market</td>
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<td>VT</td>
<td>Vanguard Total World Stock ETF</td>
<td>Equity: Global - Total Market</td>
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<td>IVE</td>
<td>iShares S&amp;P 500 Value ETF</td>
<td>Equity: U.S. - Large Cap Value</td>
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<td>ARKK</td>
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<td>XLE</td>
<td>Energy Select Sector SPDR Fund</td>
<td>Equity: U.S. Energy</td>
<td>State Street Global Advisors</td>
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<td>SCHB</td>
<td>Schwab U.S. Broad Market ETF</td>
<td>Equity: U.S. - Total Market</td>
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<td>ESGU</td>
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<tr>
<td>VGK</td>
<td>Vanguard FTSE Europe ETF</td>
<td>Equity: Developed Europe - Total Market</td>
<td>Vanguard</td>
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<td>0.08%</td>
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</table>

Source: etf.com, SIFMA estimates (as of August)
ETFs can be used to gain country (or industry) diversification for an investor's portfolio. Looking at country diversification, we list the regional breakout for the non-U.S. only ETFs in the top 50, versus the SPY which is U.S. only and the most popular ETF (based on AUM). As shown, an investor can search the makeup of an ETF to gain exposure to emerging markets, China, the U.K., Russia, Hong Kong, France, etc.

<table>
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<th>Country Breakout</th>
<th>SPY</th>
<th>VEA</th>
<th>IEFA</th>
<th>VWO</th>
<th>IEMG</th>
<th>EFA</th>
<th>VXUS</th>
<th>VEU</th>
<th>IXUS</th>
<th>EEM</th>
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</table>

Source: etf.com, SIFMA estimates (as of August)
The regional breakouts in this report are essentially based on the MSCI index classifications, with variations made to match data provider constraints.
Regional Breakout: Trade Costs

- APAC = Asia Pacific; APAC ex-Japan includes Australia, Hong Kong, New Zealand, Singapore
- Europe ex-U.K. includes Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland
- LatAm = Latin America; includes Argentina, Brazil, Chile, Colombia, Mexico, Peru
- Mid E & Africa = Middle East & Africa; includes Bahrain, Egypt, Israel, Jordan, Kenya, Kuwait, Morocco, Nigeria, Oman, Qatar, Saudi Arabia, South Africa, Tunisia, UAE
- EM = emerging markets
  - EM: Asia includes Bangladesh, China, India, Indonesia, Kazakhstan, Malaysia, Pakistan, Philippines, South Korea, Sri Lanka, Taiwan, Thailand, Vietnam
  - EM: EU includes Bulgaria, Croatia, Czech, Estonia, Hungary, Lithuania, Poland, Romania, Russia, Slovenia, Turkey
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- Capital Markets Primer Part II: Primary, Secondary & Post-Trade Markets
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- US ETF
- US Fixed Income
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