

The investing landscape has gotten considerably more complicated and notably more uncertain since we wrote our January letter. Inflation has continued to surge to levels not seen since the early 1980s, prompting a more aggressive monetary policy response by the Fed, which finds itself behind the curve, scrambling to catch up with markets, and facing a “Volker moment” reminiscent of the early Reagan years. Financial markets are now pricing in at least eight interest rate hikes this year, and the Fed has signaled intentions to accelerate its planned balance sheet reduction (i.e. Quantitative Tightening), which will drain liquidity, tighten financial conditions, and slow economic growth globally. In addition, the war in Ukraine, in addition to being a tragic humanitarian crisis, has further destabilized economic conditions and exacerbated already challenging supply chain issues, contributing to surging energy prices and much higher food inflation across the globe. While it would have seemed unimaginable just three months ago, recession risks are rising quickly as recently evidenced by the inversion of the yield curve in early April, and markets are grappling with the growing prospects of a 1970s-style stagflationary environment.

Not surprisingly against this backdrop, financial markets have experienced a challenging start to the new year, and investors have felt the pinch of falling equity valuations as the rosy economic forecasts and corporate earnings projections of three months ago are being revised downward. There were very few places for investors to hide in the face of steep peak-to-trough declines of 14% for global stocks and 11% for global bonds, while several key areas of the market experienced 20%+ bear market declines, including the NASDAQ and small cap indices. Meanwhile, those investors who were savvy enough to hide in cash were rewarded with a near 8.5% erosion in the purchasing power of their nest egg at the hands of inflation. While a March rally helped to pare losses for the quarter, U.S. and international stock indices still slid more than 5% each, blue chip bonds lost 6% to log their worst quarterly return in more than 40 years, and more than \$3 trillion in value was erased from global financial markets.

Our trading activity during the first quarter was a little higher than usual, as we took proactive steps to i)reduce risk in our equity holdings, ii)reduce the interest rate sensitivity of our bond investments, iii)add additional exposure to inflation hedging assets, and iv)raise around 3% cash in our portfolios that own fixed income. We remain overweight to equities (bias to U.S. large caps and value), underweight to bonds (bias to credit, floating rate, and short duration), and neutral weight to liquid alternatives (bias to inflation hedges).

While we are still positioned as moderately pro-risk, we are less bullish than we were to start the year. It seems pretty clear to us that, given runaway price inflation and uncomfortably tight labor market, the Federal Reserve made a policy mistake by not beginning to tighten financial conditions 6-12 months ago. Central bankers do have the tools to get prices back under control, but the remedy will likely carry side effects that dent global economic growth, increase financial market volatility, constrain equity market valuations, and increase the risk of recession. Hence, it feels likely we are entering the later stages of this market cycle and that a more proactive risk management mindset is appropriate at this time.

Sector	Recent Change	BEC Sentiment			Rationale
		Negative	Neutral	Positive	
Primary Asset Classes	Equities	↓		●	Ukraine, Inflation, & Fed policy weighing on growth outlook
	Fixed Income		● ●		Rate hike cycle underway, likely to be faster than anticipated
	Liquid Alternatives	↑		●	Inflation hedging assets in vogue on supply-demand imbalances
	Cash	↑		●	Raised 3% cash in our portfolios that own fixed income
Equities	Growth vs. Value	↑		●	Portfolios tilted in favor of value stocks for the first time in years
	Defensives vs. Cyclical			● ●	Prefer cyclical over defensives as global growth remains solid
	U.S. Large Caps	↑		● ● ●	Remains our largest overweight across BEC portfolios
	U.S. Small/Mid Caps	↓	●		With recession risk rising, pared exposure to sensitive SC & MC
	Developed Europe	↓	● ●		Ukraine conflict and soaring energy prices dampening prospects
	Developed Asia		● ●		China slowdown, restrictive Covid policies weigh on region
	Emerging Markets	↓	●		China slowdown, strong dollar, and de-globalization are headwinds
Fixed Income	Duration/Rate Risk	↓	● ● ●		Portfolio duration well below the Bloomberg AGG Index
	Credit Risk			● ●	Favor credit risk to rate risk on normalization of monetary policy
	U.S. Treasuries/TIPS		●		Eliminated fixed Treasuries in favor of floating rate Treasuries
	Mortgage Backed		● ●		Remain underweight
	IG Credit/Preferred			● ●	Credit spreads widen to long term average, prefer short duration
	High Yield		●		Neutral to policy weight, with a bias to quality and fallen angels
	Developed Market		● ● ●		No current exposure
	Emerging Market		●		EM bond indices outperform despite writeoff of Russian bonds
Alternatives	U.S. REITs		●		REIT shares cooled off in Q1 on surging interest rates
	International REITs		● ● ●		No current exposure
	Commodity/Resources	↑		● ●	Exposure split between commodities and commodity equities
	MLPs / Infrastructure	↑		●	Global energy markets in turmoil, particularly in Europe
FX	U.S. Dollar	↑		●	Fed policy, geopolitical risk fueling near-term dollar rally

After a strong three-year run, global equity markets turned decidedly choppy during the first quarter, as the toxic combination of soaring inflation, rising interest rates, a hawkish Fed, surging Covid, and Russia's invasion of Ukraine severely dented the investor optimism from early this year. After peaking on January 4<sup>th</sup>, global equity markets suffered a near 14% correction over the next two months before a modest March rebound helped to mitigate the damage. When the dust settled, the MSCI All Country World Index posted a relatively modest loss of 5.4% for the quarter, but for most investors the damage felt much worse.

- The S&P 500 Index suffered a peak-to-trough decline of 13% before a March recovery pared the Q1 loss to 4.6%, the first down quarter for blue chip stocks since Q1 2020.
- Meanwhile, the tech heavy NASDAQ and the Russell 2000 small cap indices each experienced 20%+ bear-market declines during the quarter before finishing well off of intra-quarter lows.
- U.S. mid caps (-4.9%) and small caps (-5.6%) trailed large caps modestly, while value stocks significantly outperformed growth stocks across all size segments.
- Only two of eleven S&P 500 sectors posted positive returns for Q1, including energy (+39.0%) and utilities (+4.4%). Notable laggards included technology (-8.4%), consumer discretionary (-9.0%), and communications services (-11.9%).

### International Equity Market Highlights (MSCI indices, all returns in US\$):

- Returns for international stocks were largely in line with U.S. stocks, as the MSCI All Country World Index (ex U.S.) posted a negative total return of 5.4% during Q1.
- Among regional indices, MSCI Pacific (-3.1%) outpaced both MSCI Europe (-7.4%) and MSCI EM (-7.0%) for the quarter.
- Among developed market countries, top Q1 performers included Norway (+10%), Australia (+7%), Canada (+5%), and United Kingdom (+2%), while Ireland (-20%), Austria (-20%), the Netherlands (-17%), Sweden (-15%), and Germany (-13%) were laggards.
- Among EM countries, top Q1 performers were Brazil (+36%), Peru (+35%), Colombia (+34%), U.A.E. (+21%), and Saudi Arabia (+17%), while Hungary (-19%), China (-14%), Poland (-10%), and South Korea (-9%) led decliners.

### Liquid Alternatives:

- The Bloomberg Commodity Index surged 25.6% during Q1, the best quarter for commodities since 1990, fueled by strong, and broad-based price gains in natural gas (+43%), crude oil (+33%), nickel (+54%), aluminum (+24%), iron ore (+34%), wheat (+31%), corn (+26%), soybeans (+21%).
- Fueled by strong demand and higher energy prices, master limited partnerships assets continued to rebound after a terrible decade, posting Q1 returns of nearly 19% to build on their 40% gains from last year.

### Global Equity & Liquid Alternatives Market Recap

Region/Asset Class	Index	Total Return (in U.S. Dollars)				
		Q1	1-Year	3-Year	5-Year	10-Year
<b>Domestic Equity</b>						
U.S. Large Cap Core	S&P 500	(4.6%)	15.6%	18.9%	16.0%	14.6%
U.S. Mid Cap Core	S&P 400	(4.9%)	4.6%	14.1%	11.1%	12.2%
U.S. Small Cap Core	S&P 600	(5.6%)	1.2%	13.6%	10.9%	12.6%
U.S. Total Stock Market	S&P 1500	(4.6%)	14.6%	18.5%	15.5%	14.4%
<b>Domestic Equity - Size &amp; Style</b>						
Large Cap Growth	S&P 500 Growth	(8.6%)	18.2%	22.5%	19.9%	16.8%
Large Cap Value	S&P 500 Value	(0.2%)	12.6%	14.1%	11.1%	11.9%
Mid Cap Growth	S&P 400 Growth	(9.0%)	(0.4%)	13.4%	11.4%	12.0%
Mid Cap Value	S&P 400 Value	(0.6%)	9.7%	14.2%	10.4%	12.1%
Small Cap Growth	S&P 600 Growth	(9.5%)	(1.2%)	13.2%	11.6%	13.0%
Small Cap Value	S&P 600 Value	(1.6%)	3.7%	13.5%	10.0%	12.0%
<b>Domestic Equity - Sector</b>						
Information Technology	S&P 500 Technology	(8.4%)	20.9%	30.5%	26.8%	20.6%
Real Estate	S&P 500 Real Estate	(6.2%)	25.8%	13.8%	12.6%	11.3%
Industrials	S&P 500 Industrials	(2.4%)	6.1%	13.2%	11.3%	12.7%
Energy	S&P 500 Energy	39.0%	64.3%	11.0%	6.7%	4.2%
Consumer Discretionary	S&P 500 Cons. Discr.	(9.0%)	9.8%	18.6%	17.2%	16.7%
Communication Services	S&P 500 Telecom	(11.9%)	(0.9%)	15.5%	9.6%	9.9%
Consumer Staples	S&P 500 Cons. Staples	(1.0%)	16.1%	14.0%	10.2%	11.5%
Utilities	S&P 500 Utilities	4.8%	19.9%	12.2%	11.4%	11.8%
Materials	S&P 500 Materials	(2.4%)	13.9%	19.2%	13.3%	11.4%
Financials	S&P 500 Financials	(1.5%)	14.7%	16.8%	12.4%	13.9%
Healthcare	S&P 500 Healthcare	(2.6%)	19.1%	16.5%	15.1%	15.9%
<b>International Equity</b>						
Developed Market	MSCI EAFE	(5.9%)	1.2%	7.8%	6.7%	6.3%
Emerging Market	MSCI Emerging Market	(7.0%)	(11.4%)	4.9%	6.0%	3.4%
Frontier Markets	MSCI Frontier Market	(7.9%)	9.4%	7.3%	6.0%	5.9%
International Total Market	MSCI ACWI (ex. U.S.)	(5.4%)	(1.5%)	7.5%	6.8%	5.6%
International Small Cap	MSCI EAFE Small Cap	(8.5%)	(3.6%)	8.5%	7.4%	8.3%
Europe	MSCI Europe	(7.4%)	3.5%	8.2%	6.9%	6.3%
Pacific	MSCI Pacific	(3.1%)	(3.0%)	6.9%	6.4%	6.3%
<b>Liquid Alternatives</b>						
U.S. Real Estate	DJ U.S. Select REIT	(3.7%)	27.7%	9.9%	8.9%	9.2%
International Real Estate	S&P Global X-U.S. REIT	(2.8%)	7.8%	3.7%	5.6%	6.7%
TIPS	Barcap U.S. TIPS	(3.0%)	4.3%	6.2%	4.4%	2.7%
Master Limited Partnerships	Alerian Energy MLP	18.8%	36.6%	2.7%	(0.1%)	1.3%
Commodities (Broad)	Bloomberg Commodity	25.6%	49.3%	16.1%	9.0%	(0.7%)
Gold	Spot Price	6.8%	21.7%	51.3%	9.3%	1.6%
Crude Oil (WTI)	Spot Price	33.3%	69.5%	66.6%	14.7%	(0.3%)
Copper	Spot Price	6.5%	18.8%	61.6%	12.4%	2.2%

After a rare negative return year for bonds in 2021, fixed income investors have fared even worse in early 2022, as all major fixed income categories suffered declines and bond indices logged their worst quarterly loss since the early 1980s. In March the Federal Reserve announced its first interest rate hike since 2018, joining central bankers in Canada, the U.K., Norway, New Zealand, and many emerging market countries in their coordinated effort to reign in runaway global inflation. While the rate hike was expected, the Fed spooked bond investors by ratcheting up its timetable for policy normalization, including both rate hikes and quantitative tightening (i.e. balance sheet reduction). The shift in tone was akin to similar efforts by former Fed Chair Paul Volker in the early 1980s, when the Fed intentionally drove the U.S. into recession in an effort to tame soaring prices.

Against this backdrop, the U.S. yield curve shifted higher and flattened dramatically during Q1, as markets priced in expectations for more than 8 rate hikes this year and a dramatic tightening of financial conditions. Meanwhile, corporate credit spreads widened across the credit spectrum. A widely watched harbinger of recession risk, the yield spread between 2-year and 10-year Treasuries narrowed from 70 bps at year end to 4 bps at quarter's end and inverted in early April, prompting additional selling pressure and market volatility to start Q2.

### Domestic Fixed Income Market Highlights:

- The Bloomberg U.S. Aggregate Bond Index posted a negative total return of 5.9% during Q1, the worst quarterly loss for the broad investment grade bond index in 40 years.
- The yield on the 10-year Treasury spiked 80 bps to end the quarter at 2.32%, resulting in a quarterly negative return of 6.9%. The 2-year Treasury yield fared even worse, soaring 155 bps from 0.73% at year end to 2.28% as the Fed accelerated rate hike plans.
- Credit spreads on investment grade corporate bond indices ended Q1 at 116 bps, up 24 bps during Q1 but still well below the long-term average of 151 bps.
- Credit spreads on HY bond indices finished Q1 at 325 bps, an increase of 42 bps for the quarter but also still well below the long-term average of 519 bps.
- Q1 corporate credit issuance of \$521 billion is down 15% versus last year, with investment grade issuance up 4% and high yield issuance down 68% versus Q1 last year.
- The 12-month default rate on high yield bonds fell to 0.3% as of quarter's end, well below the 30-year average default rate of 3.6%.
- Our best performing U.S. bond investments for Q1 were short duration TIPS (-0.4%), floating rate corporate bonds (-0.3%), and floating rate Treasuries (0.0%).

### International Fixed Income Market Highlights (all returns in USD, unless noted):

- Foreign bond markets, as measured by the Bloomberg Barclays Global Aggregate (ex. U.S.) Bond Index, posted a negative total return of 6.2% for the quarter.
- EM local currency bonds, our sole foreign fixed income investment, posted negative returns of 4.8% for the quarter, due to both spread widening and write downs of Russian bonds.

### Global Bond Market Recap

Region/Sector	Index	Total Return				
		Q1	Period 1-Year	3-Year	5-Year	Annualized 10-Year
<b>Domestic Fixed Income</b>						
Treasuries-Short	Bloomberg Treasury 1-3	(2.5%)	(3.1%)	0.8%	1.0%	0.8%
Treasuries-Interm.	Bloomberg Treasury 7-10	(6.6%)	(4.0%)	1.6%	2.1%	2.2%
Treasuries-Long	Bloomberg Treasury 20+	(11.0%)	(1.2%)	3.4%	4.0%	4.1%
U.S. Broad	Bloomberg U.S. Aggr.	(5.9%)	(4.2%)	1.7%	2.1%	2.2%
MBS	Bloomberg MBS	(5.0%)	(4.9%)	0.6%	1.4%	1.7%
IG Credit	Bloomberg Credit	(7.4%)	(4.2%)	2.8%	3.2%	3.4%
High Yield	Bloomberg Corp HY	(4.8%)	(0.7%)	4.6%	4.7%	5.8%
Leveraged Loans	S&P US Lvgd. Loans	(0.1%)	3.3%	4.2%	4.0%	4.3%
Preferred Stock	S&P Preferred Stock	(8.1%)	(2.7%)	4.9%	4.3%	5.5%
TIPS	Bloomberg U.S. TIPS	(3.0%)	4.3%	6.2%	4.4%	2.7%

### International Fixed Income

Global Broad	Bloomberg Global Aggr.	(6.2%)	(6.4%)	0.7%	1.7%	1.0%
Int'l. Broad	Bloom. Gbl. Aggr. xUS	(6.2%)	(7.9%)	(0.2%)	1.3%	0.1%
Global Treasuries	Bloomberg Global Tsy.	(6.2%)	(7.3%)	(0.1%)	1.2%	0.3%
Global Credit	Bloomberg Global Credit	(7.3%)	(6.3%)	1.8%	2.6%	2.8%
Global High Yield	Bloomberg Global HY	(5.7%)	(3.8%)	2.6%	3.3%	4.9%
Emerging Market	Bloomberg EM	(9.2%)	(7.5%)	0.7%	1.9%	3.6%

### Current Yields & Duration

Bond/Index	Yield			Current Modified Duration
	3/31/22	12/31/21	12/31/20	
2-Year Treasury	2.28%	0.73%	0.13%	--
5-Year Treasury	2.42%	1.26%	0.36%	--
10-Year Treasury	2.32%	1.52%	0.93%	--
30-Year Treasury	2.44%	1.90%	1.65%	--
Bloomberg U.S. Aggregate Bond	2.92%	1.75%	1.12%	6.6
Bloomberg Investment Grade Credit	3.60%	2.33%	1.74%	8.2
Bloomberg Corporate High Yield	6.01%	4.21%	4.18%	3.8
Bloomberg Global Aggregate (xUS)	1.71%	1.07%	0.68%	7.7
JPM EMBI Global Diversified (local currency)	6.23%	5.72%	5.22%	5.1
JPM EM Diversified (US\$ denominated)	6.42%	5.27%	4.91%	6.9

Global currency markets were strangely quiet until February 24<sup>th</sup>, the date that Russia invaded Ukraine, as investors seemed to shrug off expected rate hikes by central bankers and a notable uptick in volatility across stock and bond markets. The outbreak of the largest war in Europe since World War II triggered a flight to safety, security, and liquidity for currency investors, fueling strength in the U.S. dollar for the balance of the quarter. The ICE U.S. Dollar Index gained 2.8% for the quarter, while the broader Bloomberg Dollar Spot Index gained 1.6% for the period.

Meanwhile, there was an unusual decoupling of the typical U.S. dollar/commodity relationship during the quarter. Commodity prices tend to rise during periods of U.S. dollar weakness, but they have risen in tandem so far this year. Global supply demand dynamics were already tight in many commodity markets entering 2022, including energy, industrial metals, and agricultural commodities, due to surging global demand, global supply chain issues, and underinvestment in recent years in many markets, and the war in Ukraine has only exacerbated matters. Commodity-oriented currencies have significantly outperformed the U.S. dollar so far in 2022, including the Canadian dollar, the Australian dollar, the Norwegian krone, and the Brazilian real.

Our BEC portfolios experienced a negative impact from foreign currency during the quarter. Our primary benchmark for international equities, the MSCI All-Country World Index (ex. U.S.), posted a negative total return of 3.9% in local currency terms, but the loss was a more significant 5.4% in U.S. dollar terms.

On a regional basis, our returns were negatively impacted by currency across all geographies, as developed Asia, Europe, and emerging markets have experienced performance drags from currency of 2.6%, 2.0%, and 0.9% respectively so far this year.

We remain unhedged to currency within our BEC portfolios, but given our overweight allocations to U.S. investments across all of our BEC portfolios, we have significantly less foreign currency risk than our benchmarks. We believe this is the prudent approach given rising market uncertainty and the likelihood for slower global growth over the next 18 months.

### Global Currency Market Recap

U.S. Dollar Appreciation/(Depreciation)	Q1	YTD	2021	2020	2019
vs. Euro	2.5%	2.5%	7.5%	(8.2%)	2.0%
vs. British Pound	2.2%	2.2%	1.6%	(2.9%)	(3.8%)
vs. Japanese Yen	5.4%	5.4%	11.6%	(5.0%)	(0.9%)
vs. Canadian Dollar	(1.4%)	(1.4%)	(0.8%)	(1.6%)	(5.0%)
vs. Australian Dollar	(3.1%)	(3.1%)	6.1%	(8.8%)	0.2%
vs. Brazilian Real	(15.1%)	(15.1%)	7.3%	29.2%	3.6%
vs. Indian Rupee	1.9%	1.9%	2.0%	2.4%	2.4%
vs. Chinese Yuan Renminbi	(0.2%)	(0.2%)	(2.7%)	(6.2%)	1.2%

### Currency Indices

U.S. Dollar Index	2.8%	2.8%	6.4%	(6.6%)	0.1%
Bloomberg Dollar Spot Index	1.6%	1.6%	4.7%	(5.4%)	(0.9%)
Fed Nominal Broad U.S. Dollar Index	0.0%	0.0%	3.4%	(2.7%)	(0.8%)
MSCI Emerging Market Currency Index	0.6%	0.6%	0.9%	3.3%	3.1%

### Impact of Currency on International Equity Returns

Regional Indices	Total Return					
	First Quarter		Year to Date		One Year	
	Local Currency	U.S. Dollar	Local Currency	U.S. Dollar	Local Currency	U.S. Dollar
S&P 500	--	(4.6%)	--	(4.6%)	--	15.6%
S&P 1500	--	(4.6%)	--	(4.6%)	--	14.6%
MSCI EAFE	(3.7%)	(5.9%)	(3.7%)	(5.9%)	6.2%	1.2%
MSCI ACWI	(4.8%)	(5.4%)	(4.8%)	(5.4%)	8.8%	7.3%
MSCI ACWI (ex. U.S.)	(3.9%)	(5.4%)	(3.9%)	(5.4%)	2.0%	(1.5%)
MSCI Europe	(5.4%)	(7.4%)	(5.4%)	(7.4%)	7.9%	3.5%
MSCI Pacific	(0.5%)	(3.1%)	(0.5%)	(3.1%)	3.4%	(3.0%)
MSCI EAFE Small Cap	(6.4%)	(8.5%)	(6.4%)	(8.5%)	1.3%	(3.6%)
MSCI Emerging Market	(6.1%)	(7.0%)	(6.1%)	(7.0%)	(9.9%)	(11.4%)

ETF market highlights for the first quarter included:

- U.S. listed ETFs attracted inflows of \$198 billion during Q1, while mutual funds posted outflows of \$83 billion.
- With total AUM of \$7.1 trillion, ETFs now account for 27% of the U.S. listed fund market.
- Index funds (including mutual funds and ETFs) account for \$12.1 trillion (or 46%) of the \$26 trillion U.S. listed fund market. 96% of all ETF assets are passively rather than actively managed compared to just 28% of mutual fund assets.
- Including both mutual funds and ETFs, passive index funds generated \$231 billion of net inflows this quarter, while actively-managed funds experienced \$116 billion of outflows.
- Including both ETFs and mutual funds, inflows into equity funds (\$118 billion), commodity funds (\$21 billion), and alternatives funds (\$31 billion) far surpassed those into taxable bond funds (-\$23 billion), a notable reversal of investor appetite for bonds in recent years.
- ETF categories with the strongest net inflows for Q1 included large cap blend (\$40 billion), large cap value (\$36 billion), foreign large blend (\$15 billion), individual commodities (\$13 billion), ultrashort bonds (\$12 billion), and diversified emerging market stocks (\$11 billion).
- ETF categories with highest outflows in Q1 included high yield bond (-\$12 billion), consumer cyclical (-\$4 billion), ST bond (-\$3 billion), and foreign large growth (-\$2 billion).

### % of Active Mutual Fund Managers Outperforming Their S&P or Barclays Index

For the periods ending 12/31/2021

Equity Fund Category	Relevant Index	1-year	3-Year	5-Year	10-Year	20-Year
<b>Domestic Equity:</b>						
Large Cap	S&P 500	15%	32%	26%	17%	6%
Mid Cap	S&P 400	38%	47%	41%	28%	8%
Small Cap	S&P 600	29%	49%	37%	21%	7%
Real Estate	S&P U.S. REITs	30%	66%	49%	29%	16%
<b>International Equity:</b>						
Intl. Equity	S&P 700	50%	40%	31%	22%	10%
Intl. Small Cap	S&P Developed Small Cap	69%	45%	42%	40%	12%
Emerging Market	S&P/IFCI Composite	35%	44%	25%	20%	7%
<b>Fixed Income Fund Category</b>						
Gov't Long	Barclays Long Gov't	82%	4%	4%	1%	2%
Gov't Intermediate	Barclays Intern. Gov't	52%	31%	21%	16%	18%
Investment Grade Long	Barclays Long Govt/Credit	91%	5%	3%	2%	3%
High Yield	Barclays High Yield	36%	15%	9%	6%	1%
Global Income	Barclays Global Aggregate	58%	55%	34%	45%	35%
Emerging Market	Barclays Emerging Market	20%	29%	16%	2%	5%

Source: Standard & Poors Index Versus Active (SPIVA) Report, March 2022.

### Growth of the U.S. Listed Exchange Traded Fund (ETF) Market

	2016	2017	2018	2019	2020	2021	YTD 2022	CAGR
<b># of U.S. Listed ETFs</b>	<b>1,975</b>	<b>2,120</b>	<b>2,272</b>	<b>2,393</b>	<b>2,425</b>	<b>2,832</b>	<b>2,914</b>	<b>8%</b>
<b>U.S. Listed ETF AUM by Asset Class (\$B)</b>								
U.S. Stock	\$1,191	\$1,569	\$1,575	\$2,143	\$2,641	\$3,717	\$3,602	23%
Sector Stock	346	433	386	481	618	844	829	18%
International Stock	457	731	666	808	895	1,104	1,071	18%
Allocation/Balanced	10	12	12	14	20	27	24	18%
Taxable Bond	423	548	616	794	1,021	1,170	1,130	21%
Municipal Bond	24	30	36	48	64	82	82	26%
Alternatives	43	51	44	56	92	165	168	30%
Commodity/Other	61	67	64	83	144	137	163	21%
<b>ETF AUM</b>	<b>\$2,555</b>	<b>\$3,440</b>	<b>\$3,400</b>	<b>\$4,427</b>	<b>\$5,495</b>	<b>\$7,246</b>	<b>\$7,069</b>	<b>21%</b>

### U.S. Listed ETF Net Fund Flows by Asset Class, Year to Date (\$B)

U.S. Stock	\$140	\$143	\$147	\$135	\$126	\$385	\$87
Sector Stock	30	39	6	(2)	71	105	11
International Stock	11	149	60	28	28	169	40
Allocation/Balanced	1	2	1	0	2	5	(1)
Taxable Bond	86	121	91	145	195	188	17
Municipal Bond	6	6	7	10	14	21	5
Alternatives	3	4	5	3	14	33	19
Commodity	10	2	1	7	40	(5)	19
<b>ETF Net Fund Flows</b>	<b>\$289</b>	<b>\$466</b>	<b>\$318</b>	<b>\$326</b>	<b>\$492</b>	<b>\$900</b>	<b>\$198</b>

### U.S. Listed Fund AUM by Type (\$B)

US Listed ETFs	\$2,555	\$3,440	\$3,400	\$4,427	\$5,495	\$7,246	\$7,069	21%
US Listed Mutual Funds	12,396	14,654	13,571	16,325	18,137	20,818	19,343	9%
<b>Total Fund Assets</b>	<b>\$14,951</b>	<b>\$18,094</b>	<b>\$16,971</b>	<b>\$20,752</b>	<b>\$23,632</b>	<b>\$28,064</b>	<b>\$26,412</b>	<b>11%</b>
<b>ETF Market Share</b>	<b>17.1%</b>	<b>19.0%</b>	<b>20.0%</b>	<b>21.3%</b>	<b>23.3%</b>	<b>25.8%</b>	<b>26.8%</b>	

### Top U.S. Listed ETF Sponsors by AUM (\$B)

Blackrock/iShares	\$983	\$1,351	\$1,345	\$1,718	\$2,025	\$2,471	\$2,370	18%
Vanguard	612	855	856	1,148	1,509	2,069	2,033	26%
State Street/SPDRs	502	622	572	718	845	1,109	1,088	16%
Invesco/PowerShares	110	139	169	226	296	408	394	28%
Schwab	60	99	115	164	199	272	269	33%

Source: Morningstar Direct and Blue Edge Capital. ETF data includes ETFs and ETNs.