S&P Dow Jones Indices

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Use of ETFs by Mutual Insurance Companies – 2018

INTRODUCTION

S&P Dow Jones Indices recently published a comprehensive study on ETF usage in insurance company general accounts,[1] showing Mutual insurance companies used ETFs more than other types of companies. In this report, we analyze the investment trends within the mutual insurance industry and compare them against the remainder of the insurance industry.

The National Association of Insurance Commissioners (NAIC) requires all U.S. insurance companies to file an annual statement with state regulators. This filing includes a detailed holdings list of all securities held by insurance companies. S&P Global Market Intelligence (SPGMI) compiles this data from the NAIC and makes it available in a usable format. We use this database to extract current and historical insurance ETF holdings. In addition, First Bridge, an ETF data and analytics company, provides a list of U.S. ETFs as well as characteristics of each ETF—such as asset class, stock strategy, bond credit quality, etc. We combine First Bridge classification information with the statutory filing data to gain insight into how insurance companies use ETFs.[2]

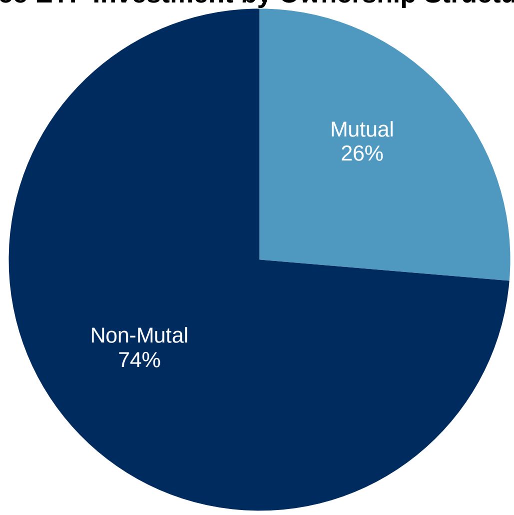
OVERVIEW

As of Dec. 31, 2017, Mutual insurance companies owned USD 7.2 billion of the USD 27.2 billion in ETFs owned by all U.S. insurance companies (see Exhibit 1).

[1] Ramachandran, R., "ETFs in Insurance General Accounts," S&P Dow Jones Indices, May 23, 2018.

[2] See Appendix.

Exhibit 1: Insurance ETF Investment by Ownership Structure

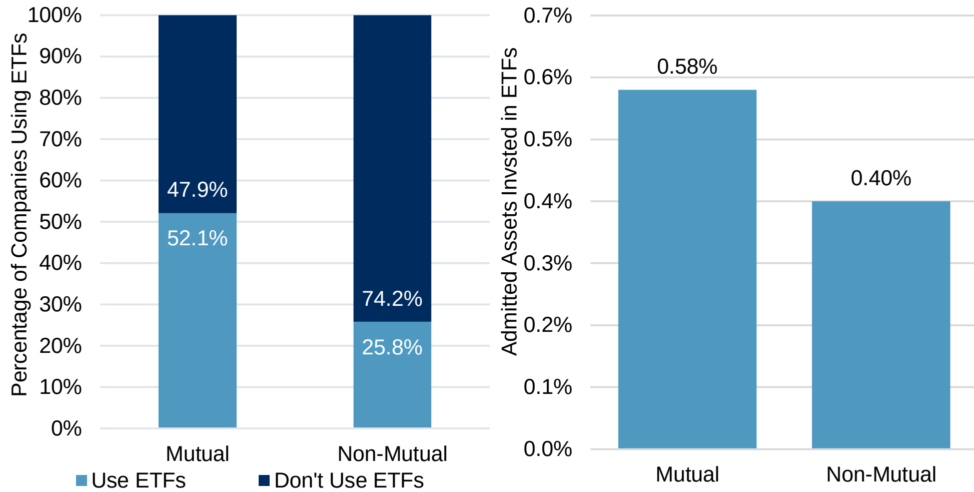


Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

As a proportion of all companies, more Mutual companies have invested in ETFs than non-Mutual companies. Mutuals also invested a higher proportion of their admitted assets in ETFs (see Exhibit 2).

Mutuals have invested a higher proportion of their admitted assets in ETFs than non-Mutuals.

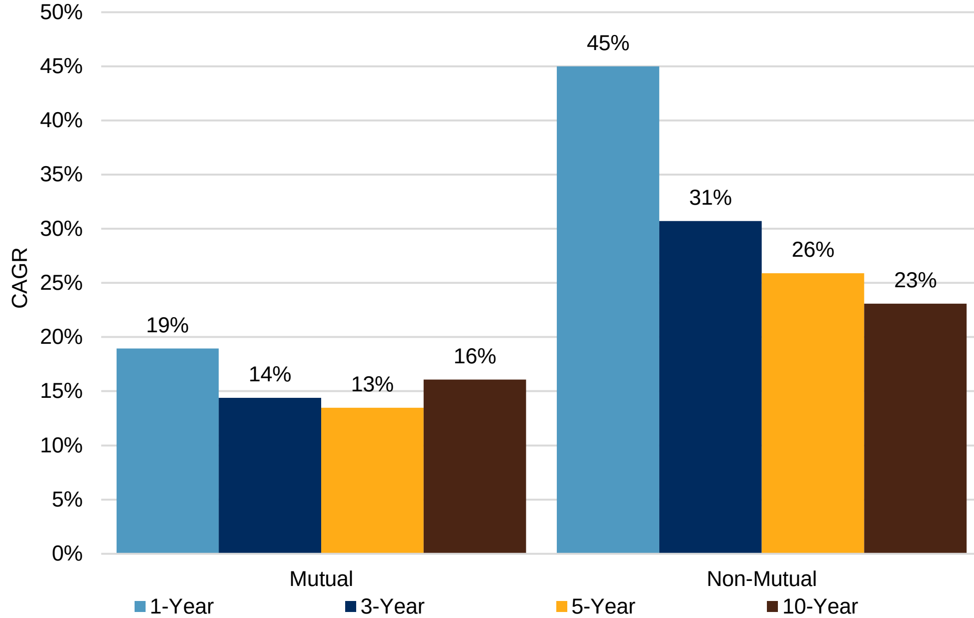
Exhibit 2: Percent of Insurance Companies Using ETFs and Percent of Admitted Assets in ETFs



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

While Mutuals started using ETFs earlier than other insurance companies and have continued to increase their ETF allocation, other companies have begun to invest more significantly in ETFs. In 2017, Mutuals increased their ETF usage by 19% year-over-year, while non-Mutuals increased their usage by 45% year-over-year. Indeed, for all periods—1, 3, 5, and 10 years—non-Mutuals exhibited a higher compound annual growth rate (CAGR) for ETF adoption (see Exhibit 3).

Exhibit 3: CAGR by Ownership Structure

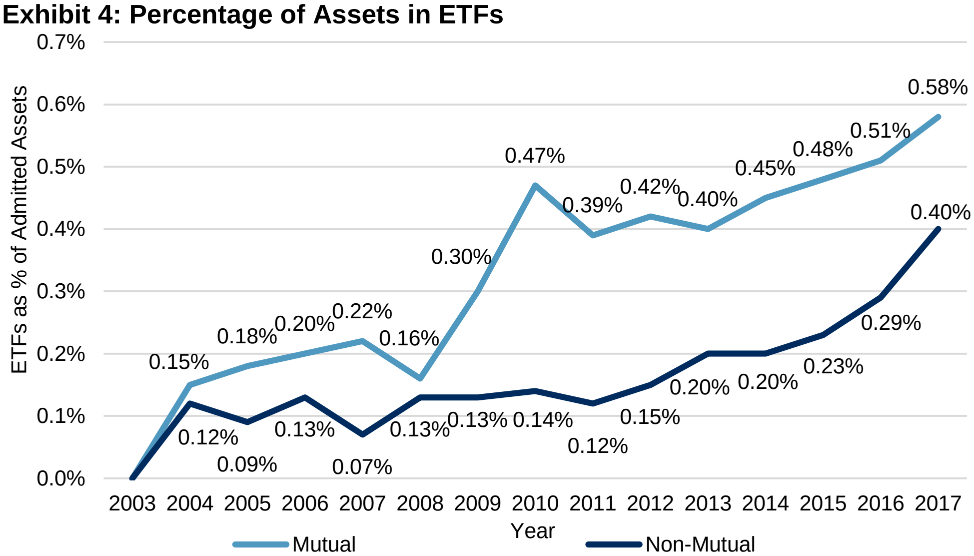


Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

The lead Mutuals had in ETF usage diminished.

As a consequence, the lead Mutuals built in ETF usage diminished (see Exhibit 4).

Exhibit 4: Percentage of Assets in ETFs



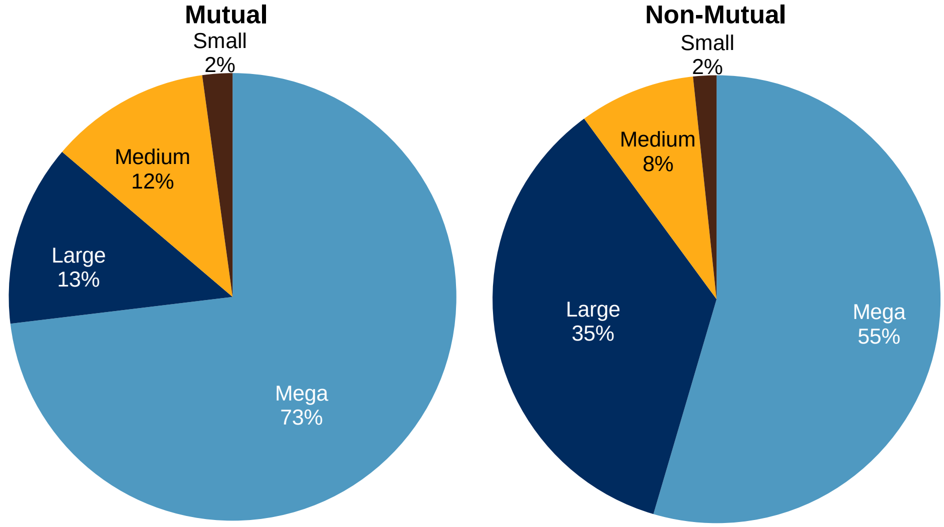
Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

ANALYSIS BY SIZE AND COMPANY TYPE

In terms of company size,[3] Mutual insurance companies had a higher concentration of admitted assets in Mega companies than non-Mutual insurance companies (see Exhibit 5).

[3] See Appendix for definitions of size.

Exhibit 5: Admitted Assets by Company Size

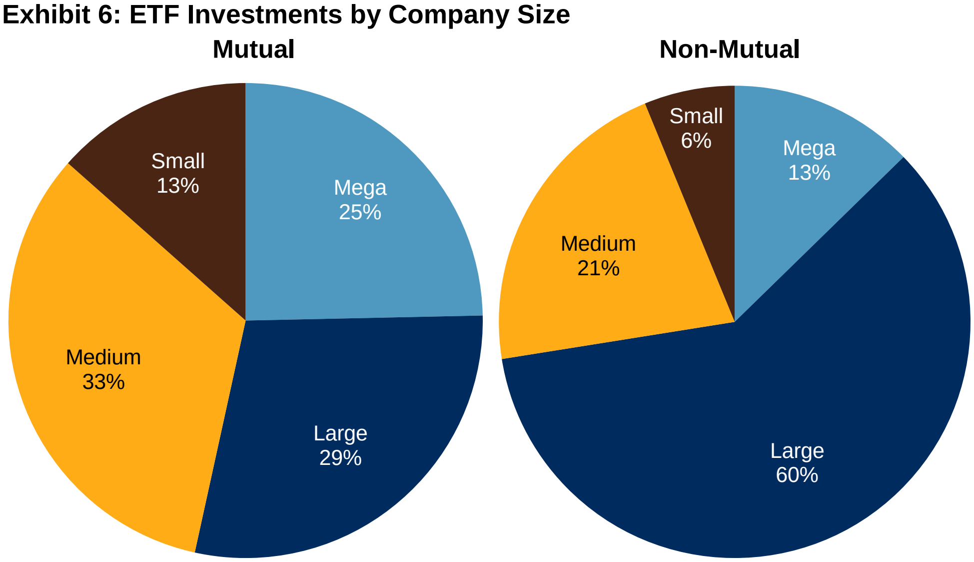


Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

In the non-Mutual space, Large companies dominated insurance company investments in ETFs, but for Mutuals, the use of ETFs was diversified.

In the non-Mutual space, Large companies dominated insurance company investments in ETFs, but for Mutuals, the use of ETFs was widely diversified (see Exhibit 6).

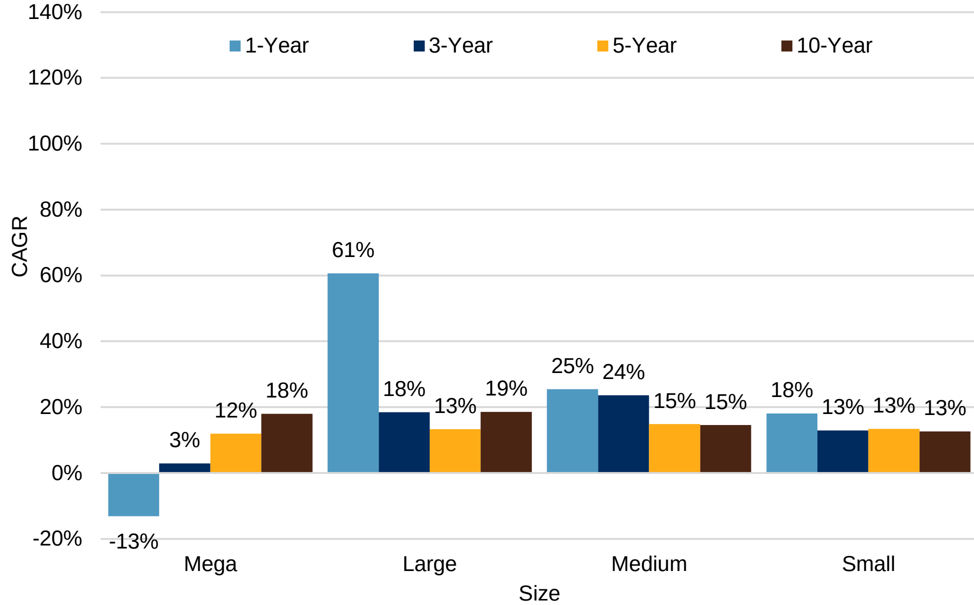
Exhibit 6: ETF Investments by Company Size



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

However, Mega Mutuals have been reducing their ETF investments while Mega non-Mutuals have increased their investments (see Exhibits 7 and 8).

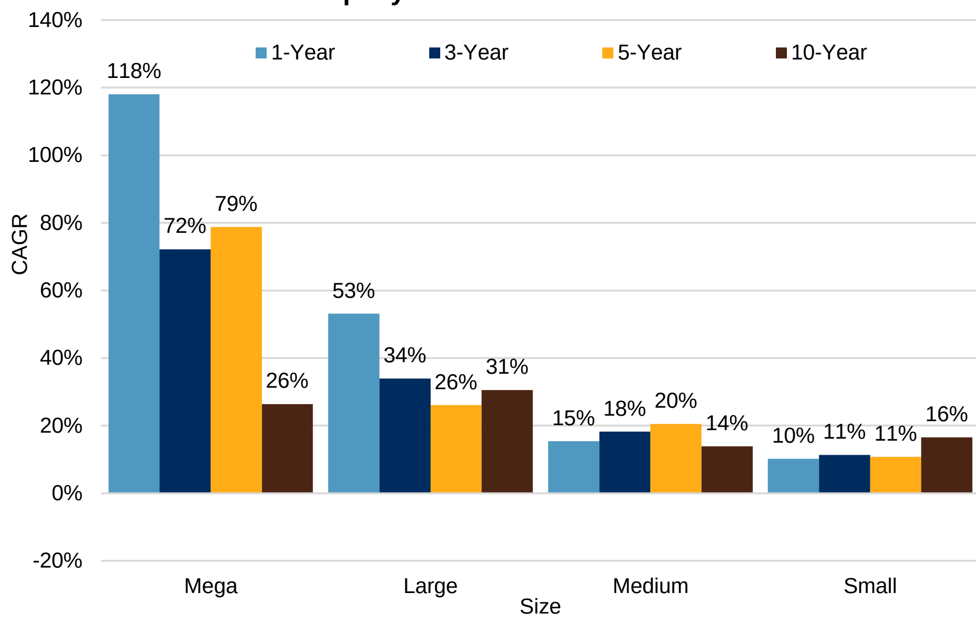
Exhibit 7: Mutual Company CAGR



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

Mega Mutuals have been reducing their ETF investments while Mega non-Mutuals have increased their investments.

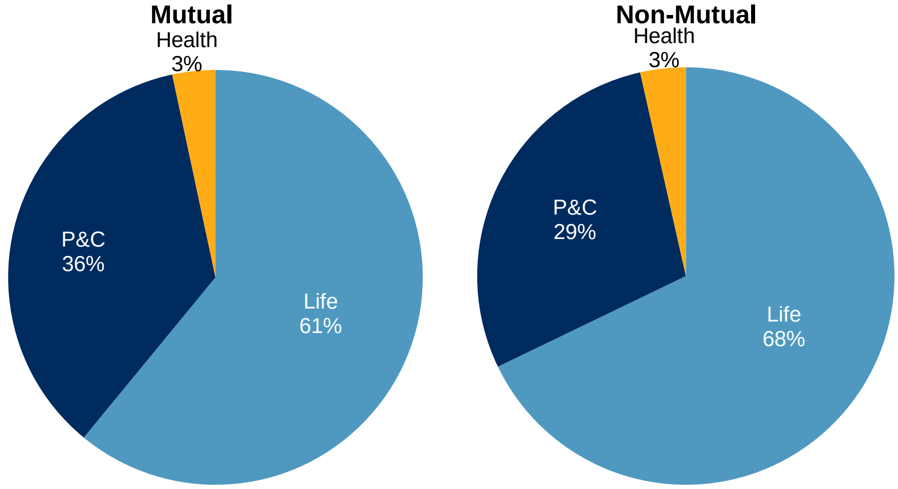
Exhibit 8: Non-Mutual Company CAGR



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

In terms of company type, admitted assets of Mutual and non-Mutual companies had roughly the same distribution between Life, Property & Casualty (P&C), and Health (see Exhibit 9).

Exhibit 9: Admitted Assets by Company Type



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

In terms of ETF investments, Mutual Health companies had a higher allocation and Mutual P&C companies had lower, as compared with their non-Mutual counterparts.

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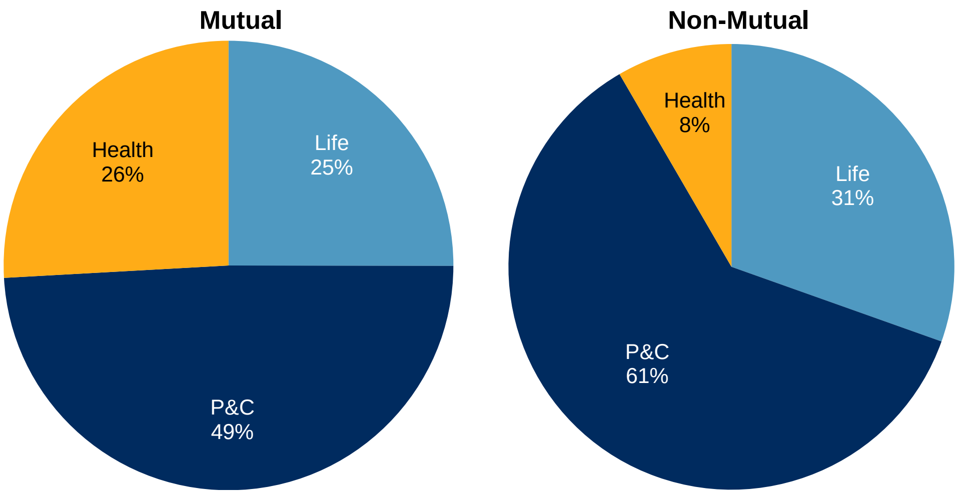
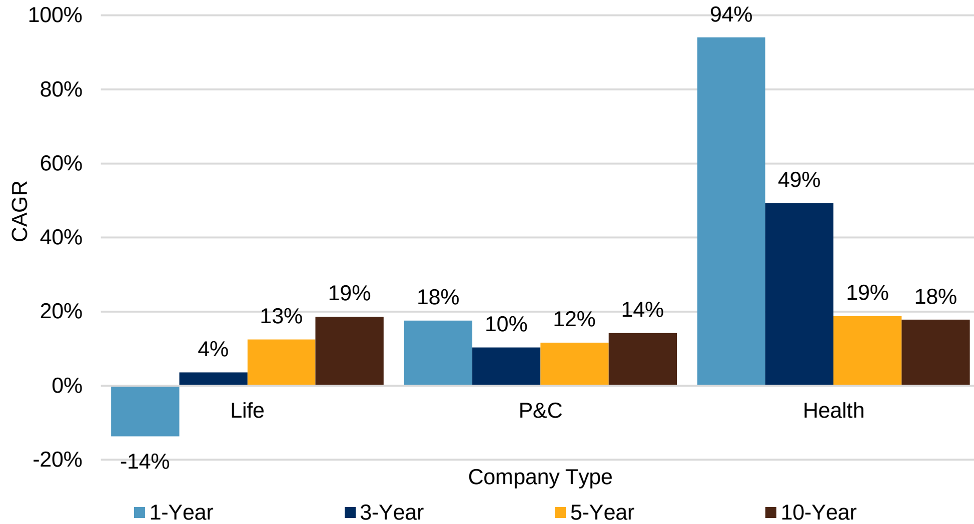
Exhibit 10: ETF AUM by Company Type



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

Non-Mutual companies showed double-digit growth in 2017 across all types of companies, but Mutual insurance companies behaved differently. Life companies actually reduced their ETF investments, while Health companies almost doubled them. The growth rate of ETF usage by P&C Mutuals is roughly half of that of non-Mutual P&C companies (see Exhibits 11 and 12).

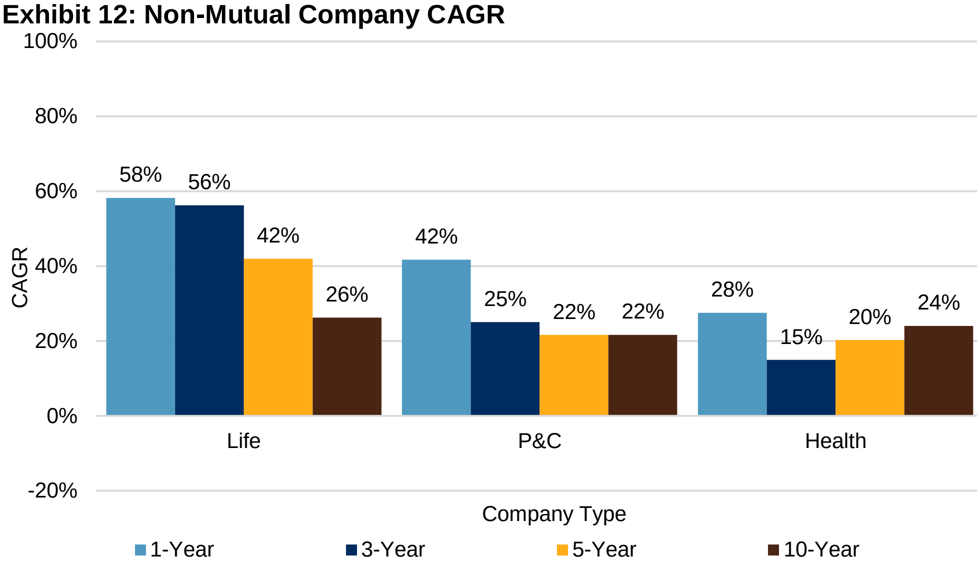
Exhibit 11: Mutual Company CAGR



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

The growth rate of ETF usage by P&C Mutuals is roughly half of that of non-Mutual P&C companies.

Exhibit 12: Non-Mutual Company CAGR



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

ANALYSIS BY BUSINESS FOCUS

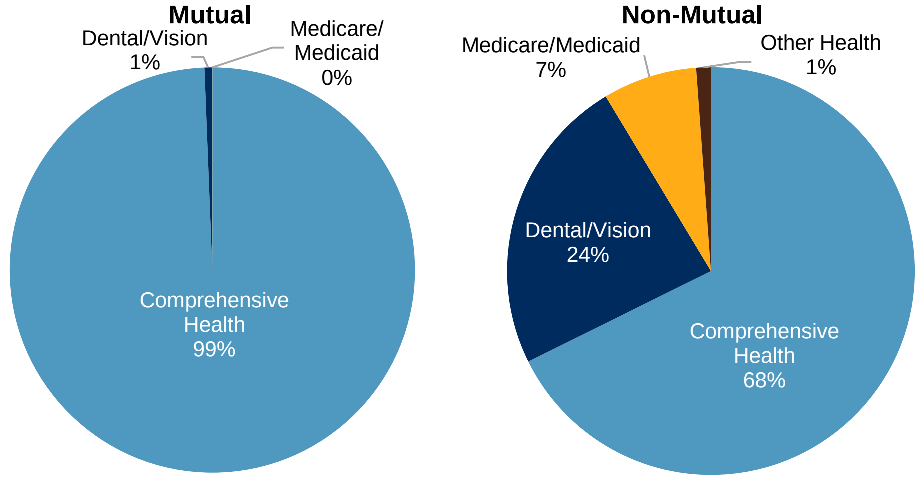
The original total market analysis showed differences in ETF usage based not just on the type of insurance company but also on the business focus of the company.[4] The data show a more pronounced variation when looking at business focus and ownership structure.

The USD 3.5 billion invested in ETFs by Health companies was divided roughly in half between Mutual companies (USD 1.9 billion) and non-Mutual companies (USD 1.6 billion). As an industry, companies writing comprehensive health made up the majority of ETF purchases by Health

[4] See Appendix for definition of business focus.

insurance companies. Comprehensive health writes completely dominated ETF purchases by Mutual companies (see Exhibit 13).

Exhibit 13: Mutual Health Insurer ETF AUM by Business Focus

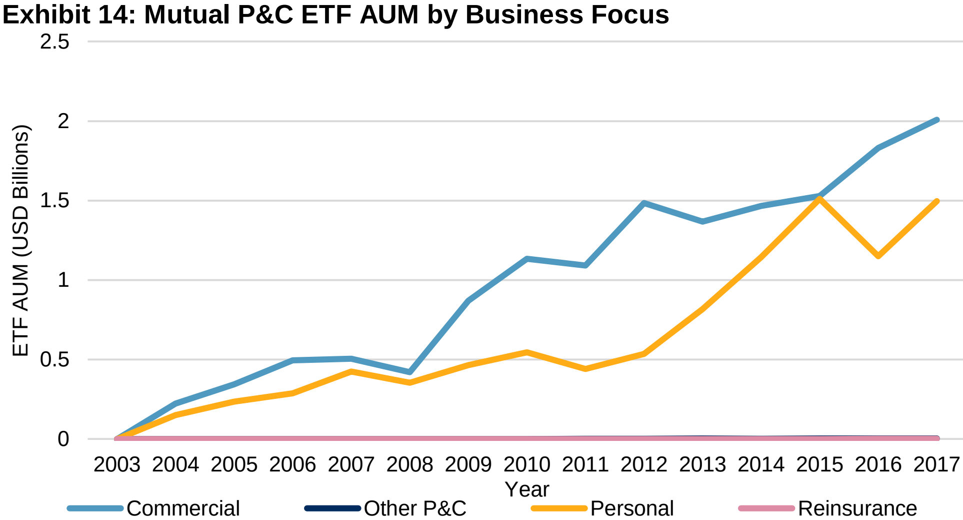


Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

Commercial writers had a slight dominance over Personal writers in the Mutual space.

Only 22% (USD 3.5 billion) of P&C ETF purchases were by Mutual P&C insurers. In the non-Mutual market, most ETFs were purchased by Personal lines companies. However, in Mutual P&C companies, Personal and Commercial writers purchased ETFs (see Exhibit 14). Commercial writers had a slight dominance over Personal writers in the Mutual space.

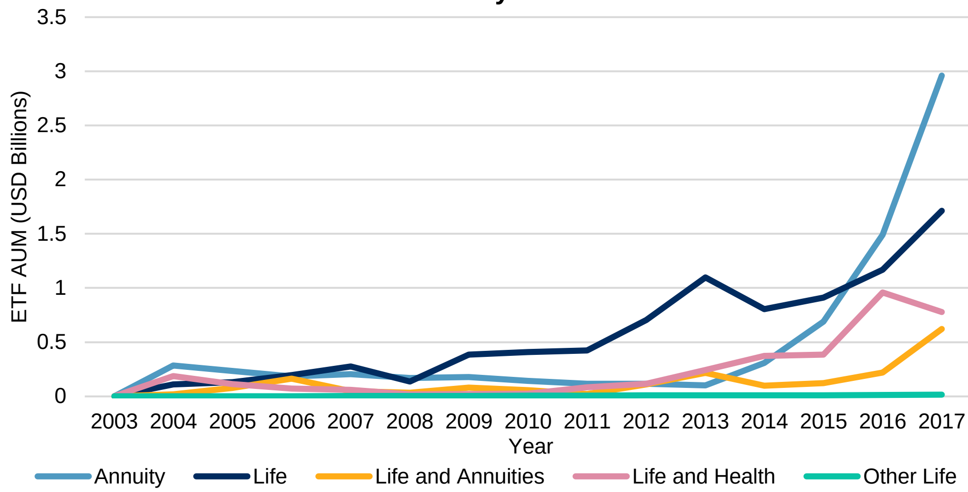
Exhibit 14: Mutual P&C ETF AUM by Business Focus



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

Mutual and non-Mutual Life insurance companies showed a significant difference in how they used ETFs in their general accounts. Non-Mutual companies have increased their ETF allocation over the past several years. Life companies initially invested in ETFs, but in recent years, Annuity companies have increased their usage. In 2017, Life companies increased their usage by 47% while Annuity writers increased it by 98%. Mutual annuity writers have also increased their ETF allocation, but unlike non-Mutuals, Mutual Life insurers drastically reduced their ETF usage in 2017 (see Exhibits 15 and 16).

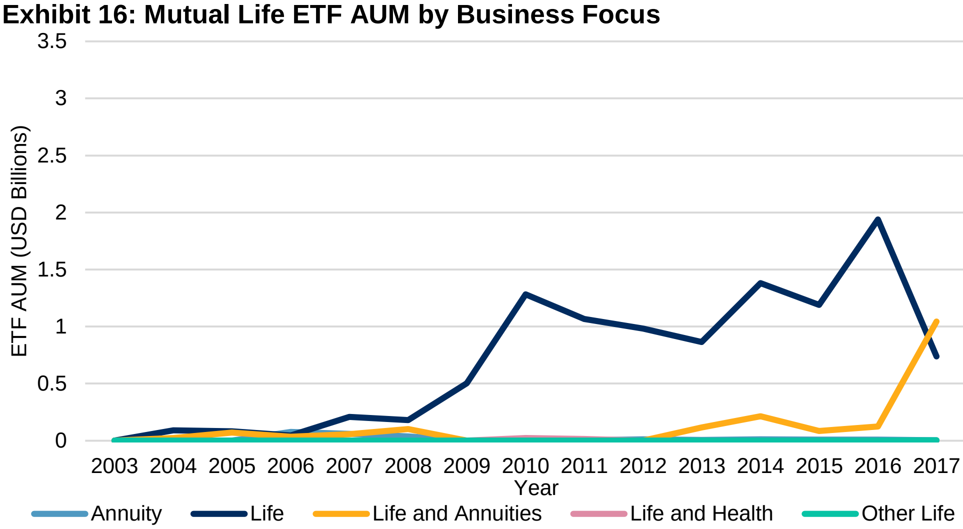
Exhibit 15: Non-Mutual Life ETF AUM by Business Focus



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

Mutual annuity writers have also increased their ETF allocation, but unlike non-Mutuals, Mutual Life insurers drastically reduced their ETF usage in 2017.

Exhibit 16: Mutual Life ETF AUM by Business Focus



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

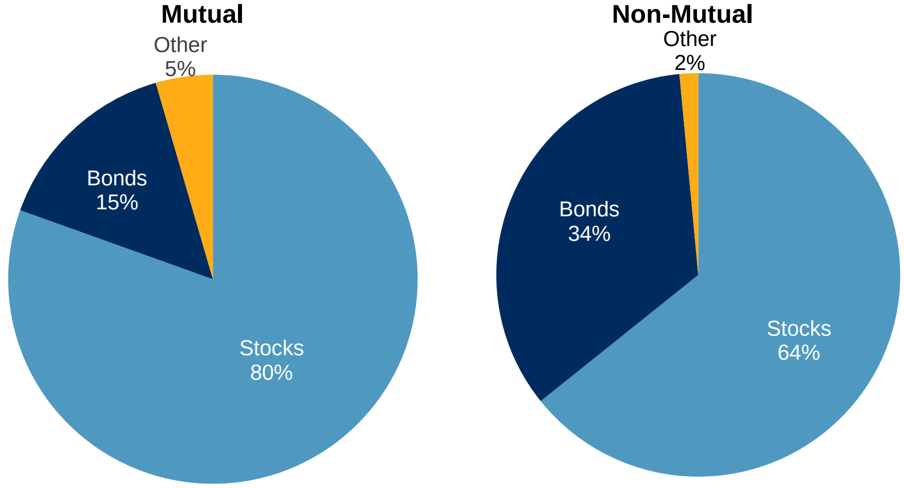
ANALYSIS BY ASSET TYPE

Mutual insurance companies invested in Stock ETFs in roughly the same manner as the rest of the industry. However, Mutuals varied from their non-Mutual brethren in two significant ways—first in how they allocated between different asset types, and second in how they invested in Bond ETFs.

As Exhibit 17 shows, Mutual companies allocated only 15% to Bond ETFs, while non-Mutuals invested 34% in Bond ETFs. Mutuals did show an 89% increase in Bond ETF usage, but coming off a small base, it remained a small portion of their allocation (see Exhibit 18).

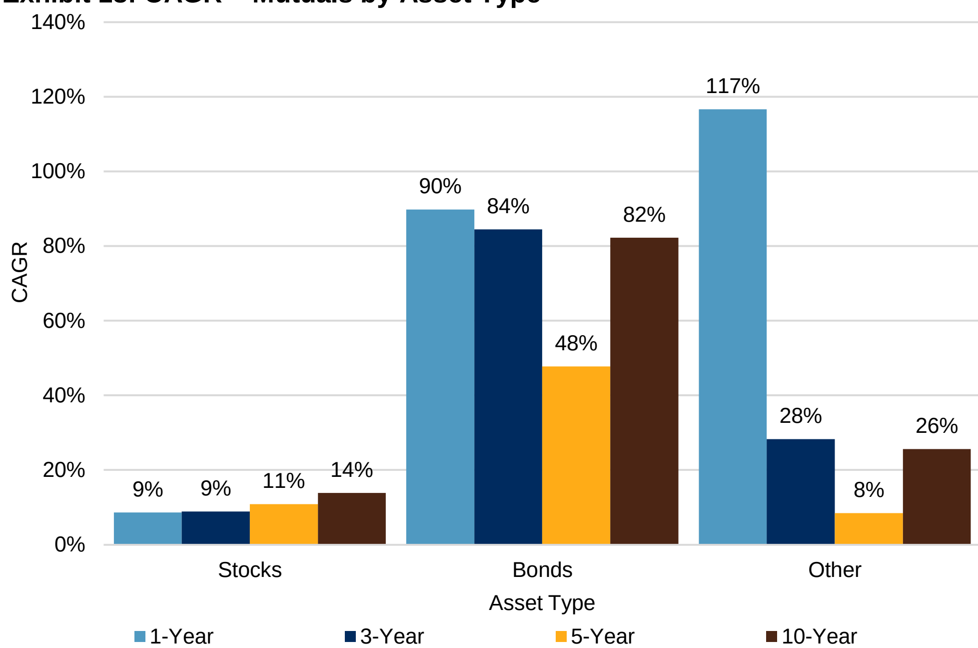
Mutual companies allocated only 15% to Bond ETFs, while non-Mutuals invested 34% in Bond ETFs.

Exhibit 17: ETF AUM by Asset Type



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

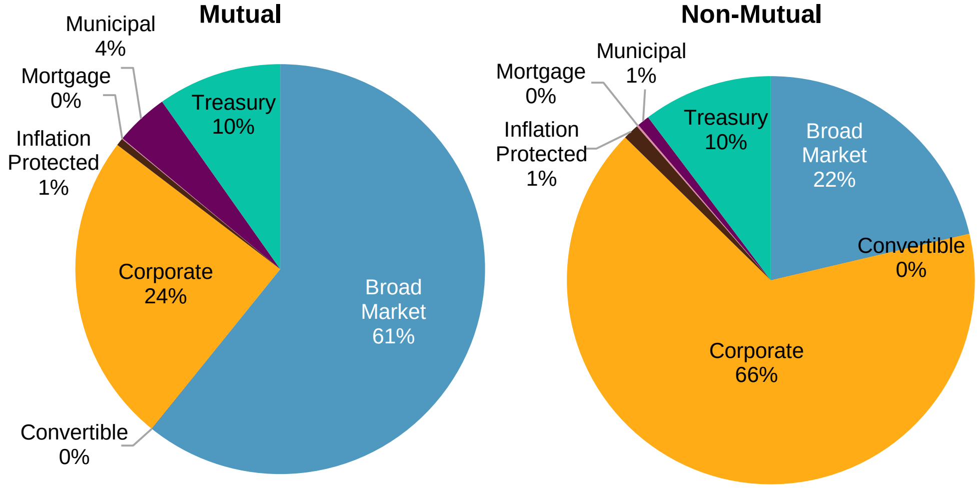
Exhibit 18: CAGR – Mutuals by Asset Type



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

Within Bond ETFs, non-Mutuals allocated roughly two-thirds to Corporate ETFs and one-fifth to Broad Market ETFs. However, Mutuals reversed this allocation (see Exhibit 19).

Exhibit 19: Bond ETF Allocation

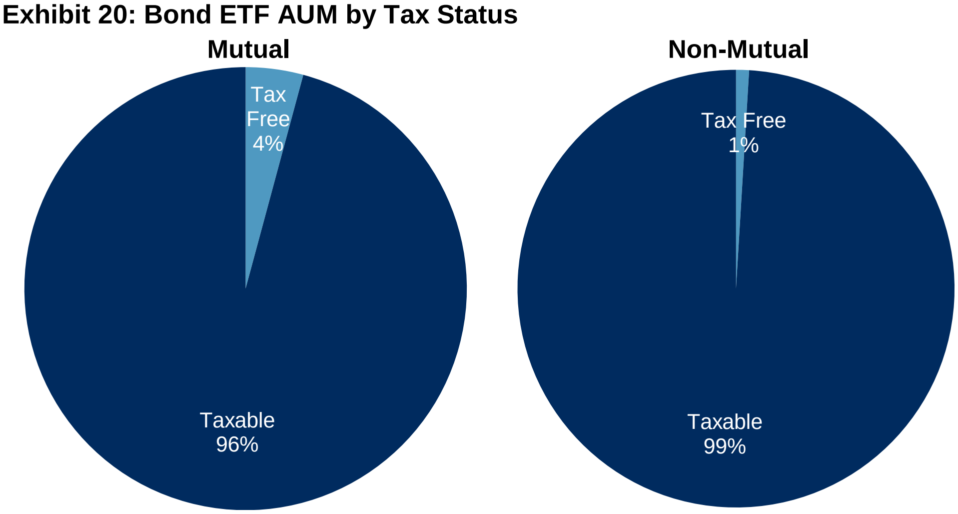


Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

Mutuals also used more Tax-Free Bond ETFs than non-Mutual insurance companies. Interestingly, Mutuals had a higher allocation to Intermediate duration and Cash ETFs (see Exhibits 20 and 21).

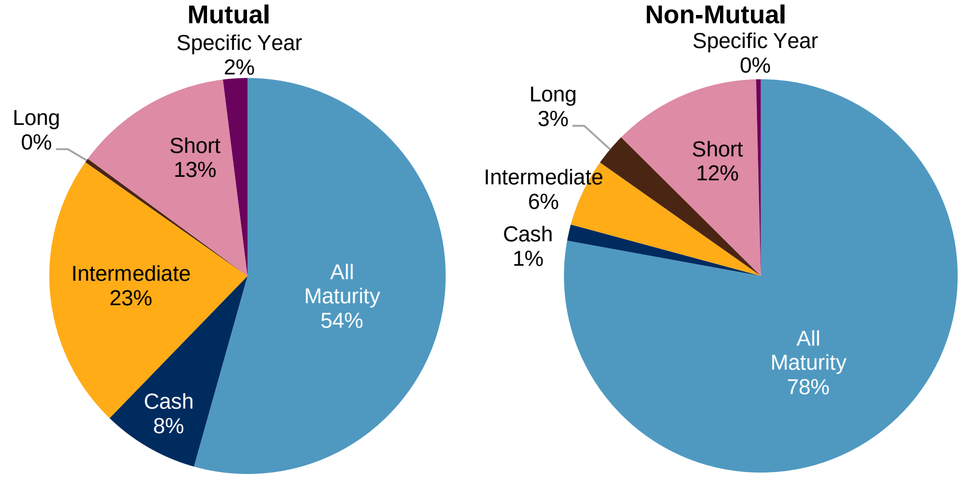
Mutuals used more Tax-Free Bond ETFs than non-Mutual insurance companies.

Exhibit 20: Bond ETF AUM by Tax Status



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

Exhibit 21: Bond ETF AUM by Maturity



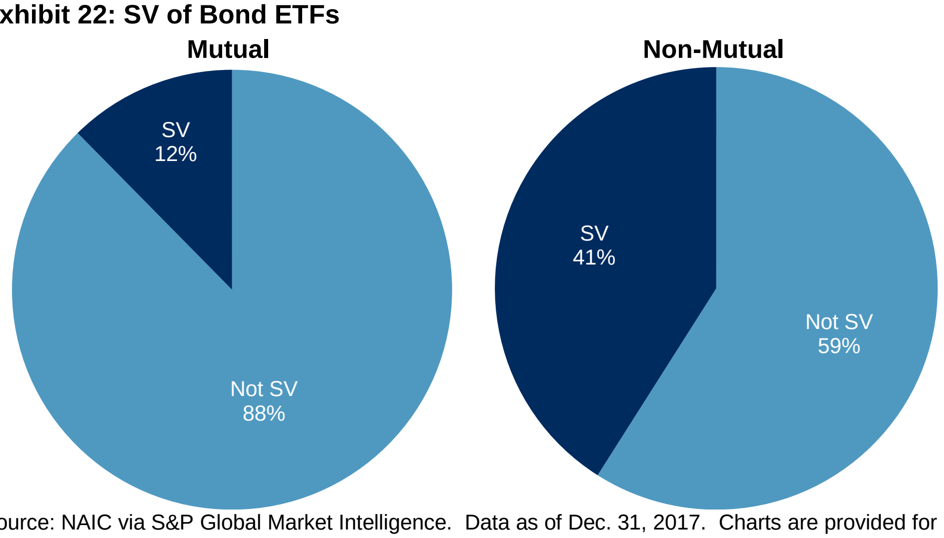
Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

ANALYSIS OF SYSTEMATIC VALUATION

The NAIC recently adopted a new rule—Systematic Valuation (SV)—that gives Bond ETFs a bond-like accounting treatment. GAAP accounting does not have an equivalent accounting standard. One might expect that this would slow the adoption of SV by companies that have to report under both methods. However, we can see that non-Mutuals have adopted SV at a much higher rate than Mutuals (see Exhibit 22).

We can see that non-Mutuals have adopted SV at a much higher rate than Mutuals.

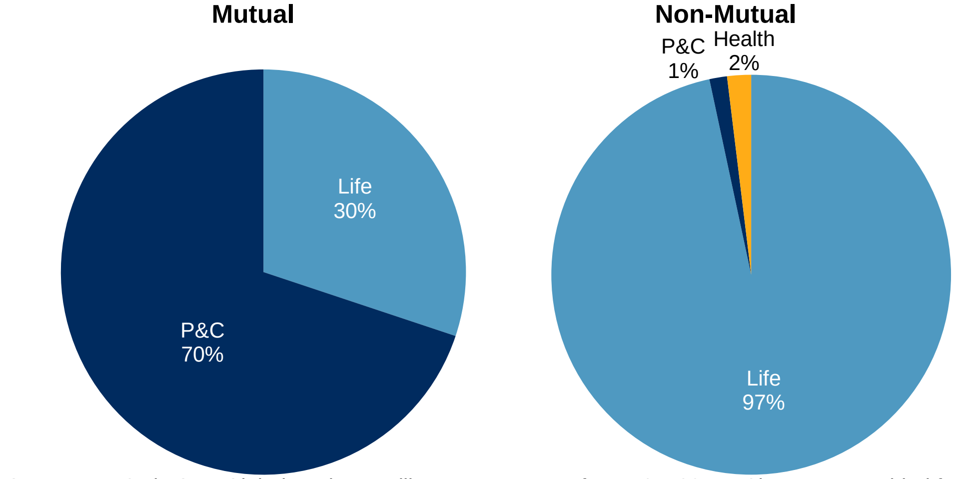
Exhibit 22: SV of Bond ETFs



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

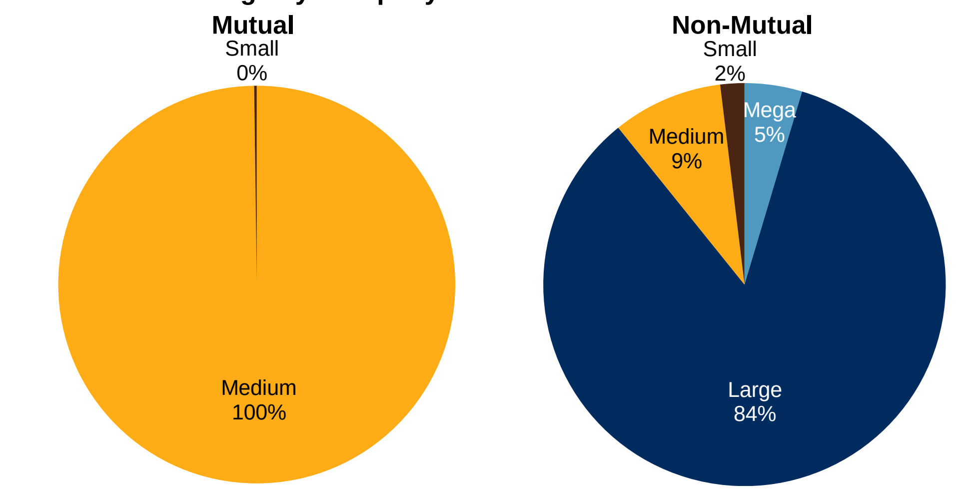
For non-Mutuals, Large and Life companies primarily used the SV designation. In contrast, for Mutuals, P&C companies dominated the use of SV and, unlike non-Mutuals, were almost exclusively Medium size companies.

Exhibit 23: SV Usage by Company Type



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

Exhibit 24: SV Usage by Company Size

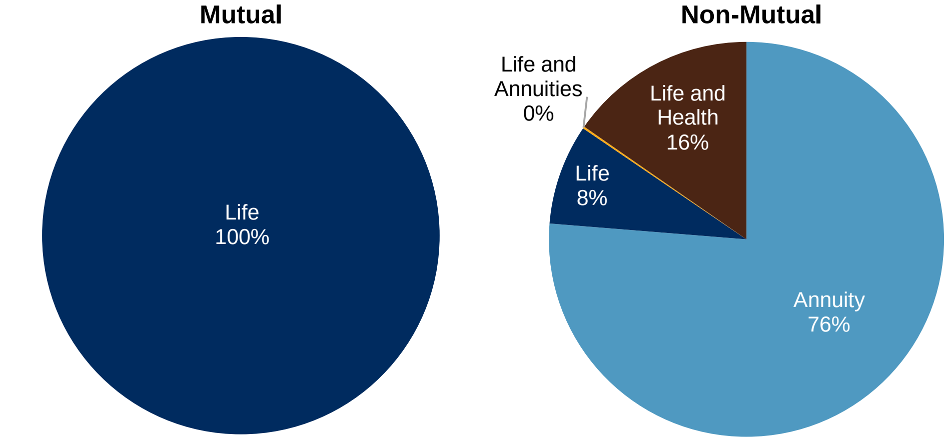


Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

In the non-Mutual space, we saw mostly annuity writers using SV designation, but in Mutuals, companies focusing on life insurance were the primary users of the SV designation.

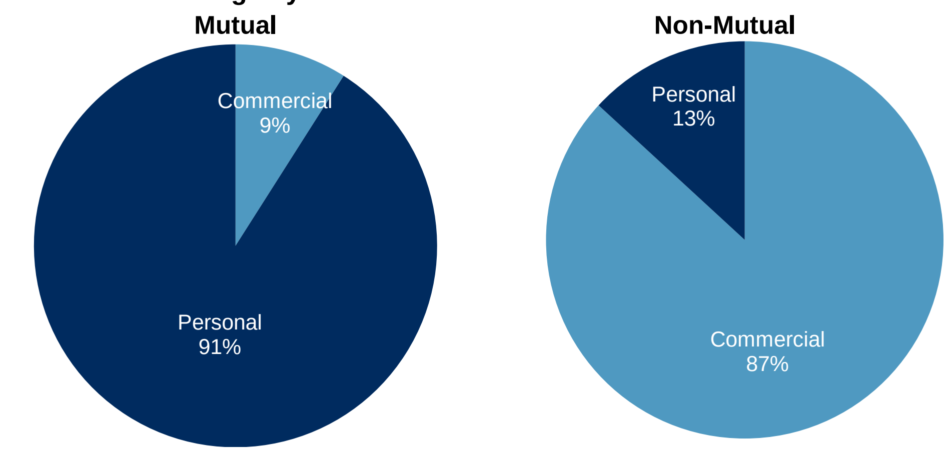
In the non-Mutual space, we saw mostly annuity writers using SV designation, but in Mutuals, companies focusing on life insurance were the primary users of the SV designation. We also saw an inversion in SV usage by P&C business focus when switching between Mutuals and non-Mutuals (see Exhibit 25 and 26).

Exhibit 25: SV Usage by Life Business Focus



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

Exhibit 26: SV Usage by P&C Business Focus

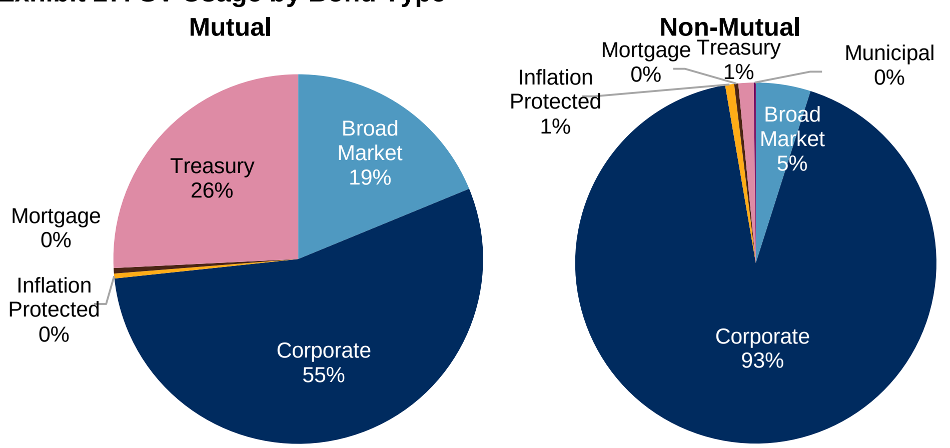


Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Charts are provided for illustrative purposes.

Mutuals designated a greater variety of Bond ETFs as SV than non-Mutuals.

Finally, we note that Mutuals designated a greater variety of Bond ETFs as SV than non-Mutuals (see Exhibit 27).

Exhibit 27: SV Usage by Bond Type



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

APPENDIX: METHODOLOGY

S&P Global Market Intelligence Data

For all U.S. insurance companies holding data, we used NAIC data as compiled by SPGMI. U.S. insurance companies filed the data with the NAIC at the end of February 2018. SPGMI retrieved the data and loaded it into its database. The completeness of the database depended on the timeliness of receiving the data from the NAIC and the amount of data checking involved. To get timely yet complete information, we retrieved the data for this analysis on April 10, 2018.

The SPGMI database contained 4,483 individual companies. Most of these companies were part of a larger group, but 1,365 (or 30%) of these were stand-alone companies. The remaining 3,118 companies belonged to one of 619 groups. On average, there were five individual companies in each group, but the number of companies was as high as 78 in one group. For the purpose of this analysis, we referred to "companies" as the combination of stand-alone companies and the groups. This provided a universe of 1,984 companies (see Exhibit 28).

Exhibit 28: Companies and Groups

TYPE OF COMPANY	INDIVIDUAL COMPANIES	STAND-ALONE COMPANIES	COMPANIES PART OF GROUP	GROUPS OF COMPANIES	AVERAGE COMPANIES PER GROUP
Health	1,119	277	842	147	5.7
Life	716	230	486	145	3.4
P&C	2,648	858	1,790	327	5.5
Total	**4,483**	**1,365**	**3,118**	**619**	**5.0**
Total Stand-Alone Companies Plus Groups					1,984

Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Table is provided for illustrative purposes.

In some cases, companies might not have completed their filing process, or the NAIC might not have sent the data to SPGMI, or SPGMI might not have reviewed and loaded the data by the date of the analysis. Of the 4,483 companies in the database, 77 reported assets in 2016 but did not in 2017. These companies represented only 0.09% of the 2016 admitted assets (see Exhibit 29). Thus, we felt the amount of data used in this analysis covered the insurance industry.

Exhibit 29: Companies Without Filing Data

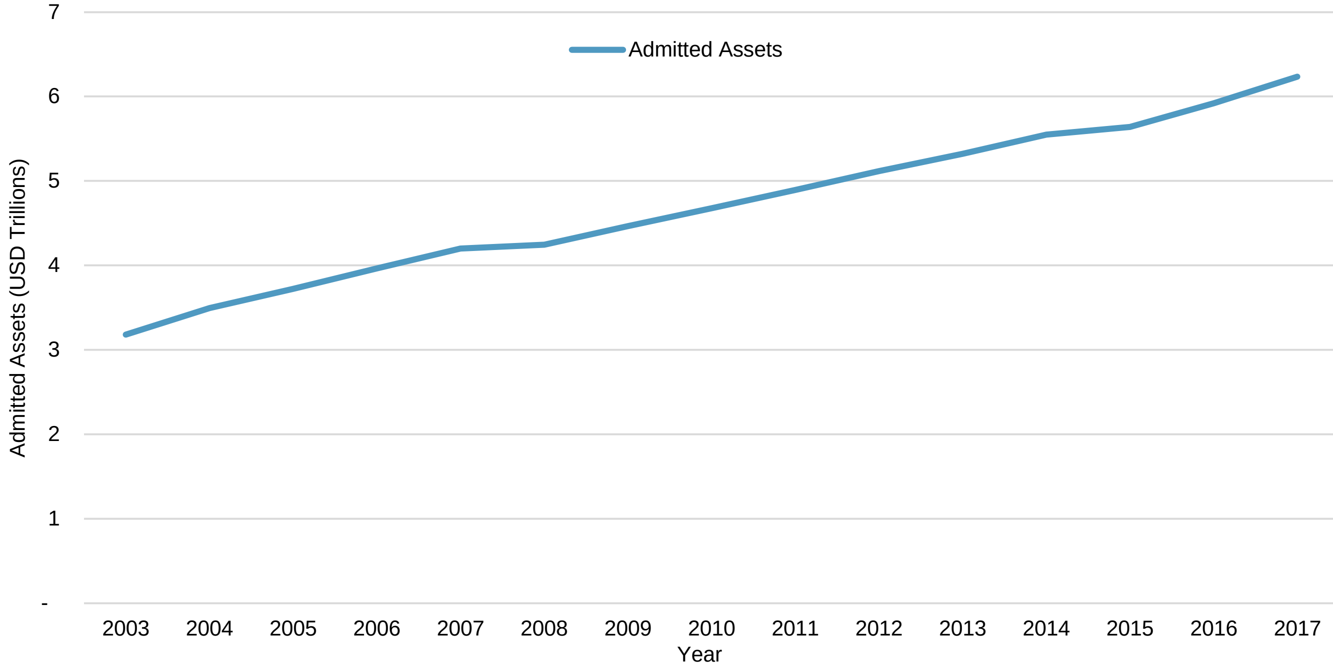
TYPE OF COMPANY	COMPANIES	ADMITTED ASSETS (%)
Health	15	0.18
Life	16	0.04
P&C	46	0.18
Total	**77**	**0.09**

Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Table is provided for illustrative purposes.

Exhibit 30 shows the growth of admitted assets[5] for these companies from 2001 to 2017. At year-end 2017, admitted assets equaled USD 6.233 trillion.

[5] From Page 2, Row 12, Column 3 of the annual filings. Net admitted subtotals, cash, and invested assets is the sum of lines relating to bonds, stocks, mortgage loans on real estate, real estate, cash-related investments, contract loans, invested assets, write-ins, and receivable for securities. This excludes any valuation allowance. Net admitted assets exclude assets for which the state does not allow the company to take credit.

Exhibit 30: Admitted Assets by Year



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

We segregated the 1,984 companies by size, based on the amount of admitted assets.

- Small: Admitted Assets < USD 500 million
- Medium: USD 500 million ≤ Admitted Assets < USD 5 billion
- Large: USD 5 billion ≤ Admitted Assets < USD 50 billion
- Mega: Admitted Assets ≥ USD 50 billion

The SPGMI database classifies the ownership structure of an insurance company in 12 different ways; we condensed this into three types.

- Stock: Stock Companies
- Mutual: Mutual Companies
- Other: Risk Retention Groups, Reciprocal Exchange, Syndicate, Limited Liability Corporation, Non Profit, U.S. Branch of Alien Reinsurers, Partnerships, Proprietorships, Blue Cross/Blue Shield, and Other

Of the 619 groups described above, 265 had individual companies with different ownership structures. We defined the ownership of the group as the same as the ownership structure of the largest individual company in the group. Exhibit 31 gives the breakdown of the ownership and size used in this analysis.

Exhibit 31: Number of Companies by Size, Type, and Ownership

SIZE	COMPANY TYPE				SIZE	OWNERSHIP TYPE			
	LIFE	P&C	HEALTH	TOTAL		STOCK	MUTUAL	OTHER	TOTAL
Mega	23	6	0	**29**	Mega	24	5	0	**29**
Large	54	42	8	**104**	Large	83	12	9	**104**
Medium	86	167	56	**309**	Medium	182	80	47	**309**
Small	212	970	360	**1542**	Small	844	283	415	**1542**
Total	**375**	**1185**	**424**	**1984**	Total	**1133**	**380**	**471**	**1984**

Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Table is provided for illustrative purposes.

The SPGMI data also allowed us to classify companies by business focus. For compactness, we grouped this data differently from SPGMI.

As with company type and ownership, of the 619 groups described above, 426 had individual companies with different business focuses. We defined the business focus of the group as the same as the business focus of the largest individual company in the group. Exhibit 32 shows the breakdown of the business focus used in this analysis.

Exhibit 32: Number of Companies by Business Focus

LIFE BUSINESS FOCUS	COUNT	P&C BUSINESS FOCUS	COUNT	HEALTH BUSINESS FOCUS	COUNT
Individual Life Focus	100	Personal Lines Focus	299	Comprehensive Health	134
Annuity Focus	64	P&C Minimum NPW	249	Dental/Vision	74
Group Accident & Health (A&H) Focus	46	Commercial Property Focus	171	Medicaid Provider	61
Specialty A&H Focus	37	Commercial Medical Malpractice Focus	125	Health Minimum Net Premiums Written	57
Life Minimum Net Premiums Written	33	Commercial Workers Compensation Focus	96	Medicare Provider	52
Life Insurance Focus	26	Commercial General Liability Focus	82	Health-Other Focus	43
Life & Annuities Focus	25	Commercial Lines Focus	79	Other Health	3
Credit Insurance Focus	23	Commercial Financial Lines Focus	41	**Total**	**424**
Individual Life and A&H Focus	11	Large Reinsurance Focus	17		
Life and A&H Focus	5	Reinsurance Focus	12		
Annuity and A&H Focus	3	Accident & Health Lines Focus	7		
Other Life	2	Other P&C	6		
Total	**375**	Personal Property Focus	1		
		Total	**1185**		

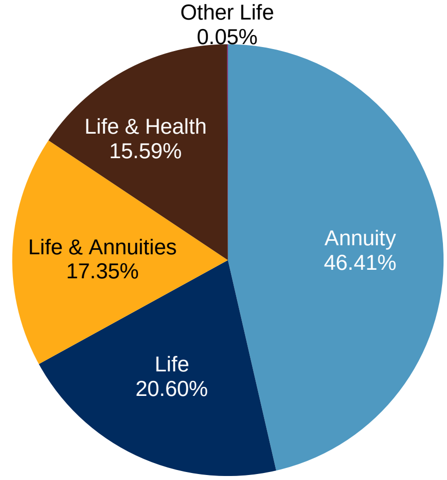
Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Table is provided for illustrative purposes.

As shown in Exhibit 32, SPGMI had 12 classifications for Life insurance. We collapsed these into five groups.

- Annuity: Annuity Focus and Annuity and A&H Focus
- Life: Individual Life and A&H Focus, Individual Life Focus, Life Insurance Focus, and Life Minimum NPW
- Life & Health: Group A&H Focus, Specialty A&H Focus, and Life and A&H Focus
- Life & Annuities: Life & Annuities Focus
- Other: Credit Insurance Focus and Other Life

For the Life insurance companies, Annuity companies had almost one-half of all the admitted assets (see Exhibit 33).

Exhibit 33: Life Insurance Admitted Assets by Business Focus



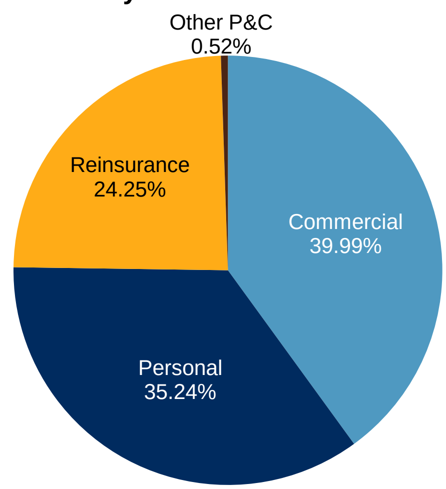
Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

The SPGMI database classified P&C companies in 13 ways (see Exhibit 32), which we compressed into four areas.

- Commercial: Commercial Financial Lines Focus, Commercial General Liability Focus, Commercial Lines Focus, Commercial Medical Malpractice Focus, Commercial Property Focus, and Commercial Workers Compensation Focus
- Personal: Personal Lines Focus and Personal Property Focus
- Reinsurance: Large Reinsurance Focus and Reinsurance Focus
- Other: Accident & Health Lines Focus, P&C Minimum NPW, and Other P&C

Commercial and Personal companies had roughly the same amount of P&C admitted assets (see Exhibit 34).

Exhibit 34: P&C Insurance Admitted Assets by Business Focus



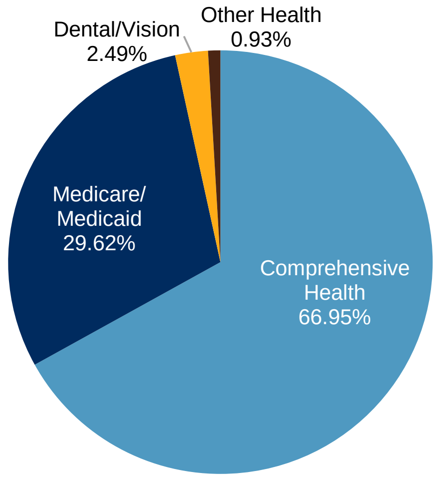
Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

As shown in Exhibit 32, Health companies had seven areas of business focus, which we collapsed into four groups.

- Comprehensive Health: Comprehensive Health
- Dental/Vision: Dental/Vision
- Medicaid/Medicare: Medicaid Provider and Medicare Provider
- Other: Health-Other Focus, Health Minimum NPW, and Other Health

Comprehensive Health companies had a clear majority of the Health admitted assets.

Exhibit 35: Health Insurance Admitted Assets by Business Focus



Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

From the SPGMI database, we extracted a list of all ETFs held by insurance companies. We did this by matching both the tickers and CUSIP numbers of the holdings against a master ETF list. In spite of error-checking, insurance companies did not always file complete or correct information. In as much as the underlying data had errors, this analysis contained errors.

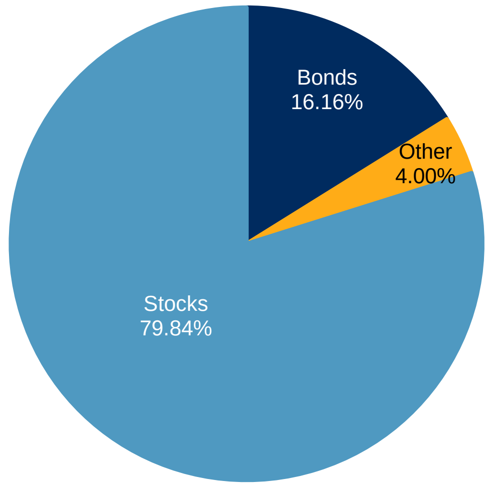
First Bridge Data

To understand the nature of these ETFs, we obtained a master list of U.S. ETFs and the characteristics of these ETFs from First Bridge. We assumed accuracy and completeness of the data from First Bridge. This database, as of year-end 2017, contained 2,112 ETFs, representing USD 3.431 trillion in assets. We noted that U.S. insurance companies did not invest in a majority of these ETFs.

In some cases, we grouped the data differently from First Bridge. First Bridge classified each ETF into six asset classes. We retained separate asset classes for Stocks and Bonds and mapped the remaining four—Commodities & Metals, Currency, Target Date/Multi-Asset, and Other Asset Types—into an “Other” bucket.

Stock ETFs represented the majority of these ETFs, by AUM and by number of funds. The “Other” category consisted mostly of Commodities, Preferred Stocks, and Master Limited Partnerships.

Exhibit 36: ETFs by Asset Class



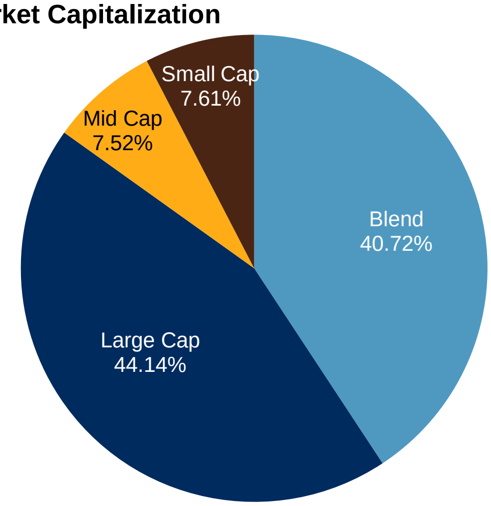
Source: First Bridge. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

First Bridge classifies Stock ETFs into eight capitalization buckets: Broad Market/Multi-Cap, Large & Mid Cap, Large Cap, Mega Cap, Micro Cap, Mid Cap, Small Cap, and Small & Mid Cap (SMID). We compressed these into four buckets.

- Blend: Broad Market/Multi-Cap
- Large Cap: Large Cap and Mega Cap
- Mid Cap: Mid Cap, SMID, and Large & Mid Cap
- Small Cap: Small Cap and Micro Cap

The overall U.S. ETF market split nearly equally between Blend and Large Cap (see Exhibit 37).

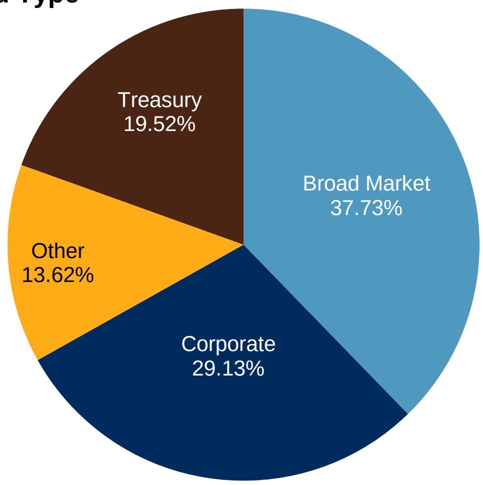
Exhibit 37: Stock ETF AUM by Market Capitalization



Source: First Bridge. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

First Bridge has eight bond types: Broad Market, Corporate, Treasury & Government, Convertible, Inflation Protected, Mortgage, Money Market, and Municipal. We collapsed the last four into the “Other” group.

Exhibit 38: Bond ETF AUM by Bond Type



Source: First Bridge. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

Most ETFs, in number and AUM, have a market-capitalization weighting. Index providers and ETF sponsors have created new indices and ETFs that formulaically model some of the methodology of active managers. The earliest attempt classified stocks by their price to earnings (P/E) ratio. A "Value" bucket contained low P/E stocks, while a "Growth" bucket contained stocks with a high P/E ratio. The industry called these new classifications "Smart Beta." We classified ETFs in three ways.

- Traditional Market Weighted: Standard Market-Capitalization Weighting
- Traditional Smart Beta: Value, Growth, Dividend, and Equal Weighted
- New Smart Beta: All other Smart Beta strategies, such as Momentum and Low Volatility, as well as Single- and Multi-Factor

Unfortunately, First Bridge does not have a built-in Smart Beta classification, so we constructed a Smart Beta tag based on three existing classifications in First Bridge: Growth/Value, Fundamental Weighting Type, and Index Weighting Scheme.

Growth/Value included four factors: Growth, Value, Core/Blend, and Not Applicable.

Fundamental Weighting Type included 11 factors: Dividend Weighted, Earnings Weighted, FTSE RAFI, Growth/Value Factor Weighted, Momentum Weighted, Multi-Factor Weighted, Quality Weighted, Revenue Weighted, Valuation Weighted, Other, and Not Applicable.

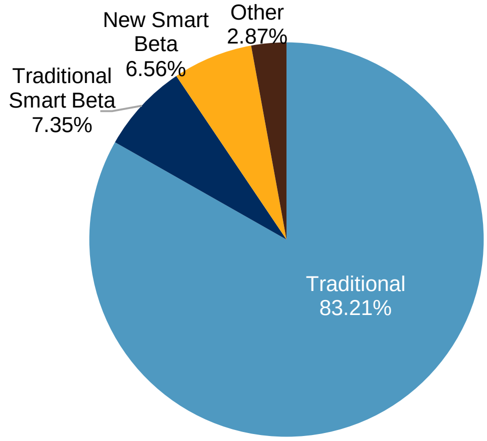
Index Weighting Scheme included seven factors: Equal Weighted, Fundamental Weighted, Market Cap Weighted, Volatility/Beta Weighted, Price Weighted, Other, and Not Applicable.

We constructed our Smart Beta tag with a series of classifications.

- Index Weighting Scheme = Market Cap Weighted → Market Cap
- Growth/Value = Growth or Value → Traditional Smart Beta
- Fundamental Weight Type = Dividend Weighted → Traditional Smart Beta
- Index Weighting Scheme = Equal Weighted → Traditional Smart Beta
- All three classifications are "Not Applicable" → Other
- None of the above classifications apply → New Smart Beta

A majority of U.S. ETFs weight their funds using Market Cap; Traditional Smart Beta accounted for 7.35% of U.S. ETF assets, and New Smart Beta accounted for 6.56% of assets. A residual 2.87% remained unaccounted for—these are mostly Gold and other metal ETFs (see Exhibit 39).

Exhibit 39: ETF AUM by Smart Beta



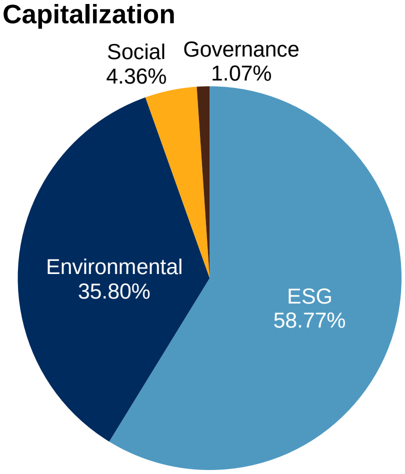
Source: First Bridge. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

First Bridge classified the ESG philosophy of each ETF. Their categories were: Faith Based, Corporate Governance, ESG, Waste Management, Low Carbon Footprint, Clean Energy, and Not Applicable. We grouped these into five classifications.

- Environmental: Clean Energy, Low Carbon Footprint, and Waste Management
- ESG: ESG
- Governance: Corporate Governance
- Social: Faith Based
- Not ESG: Not Applicable

The vast majority of U.S. ETF AUM (99.84%) did not follow any sort of ESG mandate. Of the ETF assets that did have an ESG mandate, most had either a broad ESG mandate or an Environmental mandate. Only 5% of U.S. ETF assets with an ESG mandate had a Social or Governance mandate (see Exhibit 40).

Exhibit 40: ESG ETF AUM by Market Capitalization



Source: First Bridge. Data as of Dec. 31, 2017. Chart is provided for illustrative purposes.

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