ETFs in Insurance General Accounts – 2020

INTRODUCTION

In our first report in 2015, we used historical trends to project that insurance companies would double their use of exchange-traded funds (ETFs) in five years. Now five years later, usage of ETFs in insurance general accounts has indeed doubled since 2015. In the one-year period ending Dec. 31, 2019, insurance companies increased their ETF assets under management (AUM) by 16% to reach USD 31.2 billion. We saw companies increase their use of Equity and Fixed Income ETFs. While the overall use of ETFs increased, we did observe some parts of the industry that had been active in using ETFs pull away. Although the use of Fixed Income ETFs increased, the use of Systematic Valuation (SV) declined.¹

OVERVIEW

As of year-end 2019, U.S. insurance companies had USD 31.2 billion invested in ETFs. This represents a tiny fraction of the USD 4.4 trillion of ETF AUM and an even smaller portion of the USD 6.7 trillion in admitted assets of U.S. insurance companies. Exhibit 1 shows the use of ETFs by U.S. insurance companies over the past 16 years.

¹ This report is presented as of year-end 2019. As the markets have changed dramatically in the Q1 2020, we will publish a report analyzing the Q1 2020 transactions once the data is processed.
After declining slightly in 2018, insurance ETF usage grew by 16% in 2019. Indeed, the growth in usage had consistently remained in the mid-teens for the past decade, as seen by the compound annual growth rate (CAGR) over 1-, 3-, 5-, and 10-year periods (see Exhibit 2). This roughly equates to the doubling of ETF AUM every 4.5 years.

**Exhibit 2: CAGR of ETF AUM**

Unlike ETF AUM, the amount of ETF shares held by insurance companies declined—albeit by only 0.6%—for the first time since 2007. However, as Exhibit 3 shows, the number of ETF shares used by insurance companies has grown substantially over the past 16 years.

**Exhibit 3: ETF Share Growth**
The growth in ETF usage exceeded the growth in admitted assets, even though admitted assets in insurance general accounts grew by 6.8%. Over the past 16 years, ETF usage growth has significantly exceeded admitted asset growth (see Exhibit 4).

**Exhibit 4: Historical Growth of Admitted Assets and ETF AUM**


We used a linear regression to model the growth of ETF AUM and shares in insurance general accounts. These models accurately fit the historical growth of ETFs by insurance companies (see Exhibits 5 and 6).

**Exhibit 5: Linear Regression of ETF AUM**


2 See Appendix 2.
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To model the growth of ETF AUM and shares held by insurance companies, we used linear regressions.

We used these regression models to estimate the trended growth of ETFs. If insurance companies continue to invest according to trend, the use of ETFs by insurance companies could once again almost double in five years—using both AUM and share trends. This is substantially faster than the expected growth of admitted assets (see Exhibit 7).

The number of ETFs used by the insurance industry increased to 479 in 2019. While the number of insurance companies using ETFs declined, the number of insurance companies extant also declined, making the percentage of insurance companies using ETFs increase slightly to 35%.
Overall, ETFs represented only 0.46% of total admitted assets.

**Exhibit 8: ETF Usage**


**ANALYSIS BY SIZE, OWNERSHIP STRUCTURE, AND COMPANY TYPE**

In this section, we analyzed the use of ETFs by different groupings of insurance companies. In particular, we looked at whether size, ownership structure, or types of insurance underwritten affect the use of ETFs.

Mega insurance companies owned most of the assets belonging to insurance companies, but only held about one-third of the insurance ETF holdings (see Exhibit 9).

**Exhibit 9: ETF AUM and Admitted Assets by Company Size**


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3 See Appendix 1.1 for definitions of size and ownership structure.
In 2018, we observed Large companies exit ETFs. While ETF AUM increased for companies of all sizes in 2019 (see Exhibit 10), Large and Small companies continued to sell ETF shares (see Exhibit 11).

ETF AUM increased for companies of all sizes in 2019.

Large and Small companies continued to sell ETF shares.

Interestingly, Small companies sold ETFs broadly in 2019, while Large companies added Fixed Income ETFs (dark blue) and sold Equity ETFs (yellow) (see Exhibit 12).
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Interestingly, Small companies sold broadly in 2019, while Large companies added Fixed Income ETFs and sold Equity ETFs.

While Large companies have historically had the largest number of ETFs in the industry, in 2019, Mega companies surpassed them in terms of AUM. However, as a percentage of admitted assets, the use of ETFs remained inversely proportional to size (see Exhibit 13).

In terms of company type, Life companies had the most admitted assets, but P&C companies had the most ETFs (see Exhibit 14).
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Exhibit 14: ETF AUM and Admitted Assets by Company Type

In terms of company type, Life companies had the most admitted assets, but P&C companies had the most ETFs.

ETF AUM held by P&C and Health companies increased in 2019…

…while AUM for Life companies was relatively flat.

Exhibit 15: ETF AUM by Company Type

ETF AUM held by P&C and Health companies increased in 2019, while AUM for Life companies was relatively flat (see Exhibit 15).

However, Life companies sold a little over 16% of their ETF shares in 2019. Health companies had the greatest increase in their usage of ETFs—both in terms of AUM and shares (see Exhibit 16).
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**Exhibit 16: CAGR for ETF AUM and Shares by Company Type**

Health companies had the greatest increase in their usage of ETFs—both in terms of AUM and shares.

Life companies sold a little over 16% of their ETF shares in 2019.

However, the sales of non-core ETFs accounted for almost all of the sales by Life companies.

But the ETF sales by Life companies were not across the board. Indeed, these companies even added Equity ETFs (dark blue). The sales of non-core ETFs (yellow) accounted for almost all of the sales by Life companies (see Exhibit 17).

**Exhibit 17: Change in ETF Shares held by Life Companies**

Not surprisingly, Life companies had the least amount of ETFs as a percentage of admitted assets (see Exhibit 18).
Exhibit 18: ETF AUM and ETFs as a Percentage of Admitted Assets by Company Size


Stock companies had the most admitted assets and the most ETFs (see Exhibit 19).

Exhibit 19: ETF AUM and Admitted Assets by Ownership Structure


After declining in 2018, ETF AUM held by Stock companies was relatively flat in 2019—while AUM held by Mutual and Other companies increased (see Exhibit 20).
After declining in 2018, ETF AUM held by Stock companies was relatively flat in 2019—while AUM held by Mutual and Other increased.

This is because Stock companies sold ETFs, while Mutual and Other companies added to their holdings (see Exhibit 21).

As a result, Stock companies had the largest share of insurance ETF AUM, but the lowest as a percentage of admitted assets (see Exhibit 22).
Exhibit 22: ETF AUM and ETFs as a Percentage of Admitted Assets by Ownership Structure

As a result, Stock companies had the largest share of insurance ETF AUM, but the lowest as a percentage of admitted assets.


ANALYSIS BY BUSINESS FOCUS

To see if the use of ETFs varied by the type of underwriting done by an insurance company, we analyzed ETF investments by business focus.

For P&C companies, the use of ETFs is roughly in proportion with admitted assets (see Exhibit 23).

Exhibit 23: ETF AUM and Admitted Assets by P&C Business Focus

For P&C companies, the use of ETFs is roughly in proportion with admitted assets.


While Personal and Commercial companies increased their use of ETFs in 2019, Reinsurance companies greatly reduced their holdings, and the amount held by Other P&C types is de minimis (see Exhibit 24).
While Personal and Commercial companies increased their use of ETFs, Reinsurance companies greatly reduced their holdings.

Even though the ETF AUM in Commercial and Personal companies increased by roughly the same percentage (23% and 22%, respectively), the number of ETF shares held by Personal lines writers was relatively flat, while the number of shares held by Commercial writers increased 11% (see Exhibit 25).

Despite this increase, ETF AUM as a percentage of admitted assets was the lowest for Commercial writers (see Exhibit 26).
As shown in Exhibit 18, Life companies held less than half as many ETFs as P&C companies, and the number of companies (both in absolute terms and as a percentage of the total) was smaller for Life insurance. Thus, the average holding per company was almost twice that of P&C companies. While Annuity writers had the bulk of the admitted assets for Life companies, the use of ETFs was more diversified (see Exhibit 27).

**Exhibit 26: ETF AUM and ETFs as a Percentage of Admitted Assets by P&C Business Focus**

Despite this increase, ETF AUM as a percentage of admitted assets was the lowest for Commercial writers.

**Exhibit 27: ETF AUM and Admitted Assets by Life Business Focus**

While Annuity writers had the bulk of the admitted assets for Life companies, the use of ETFs was more diversified.

After increasing the ETF usage by seven times from 2008 to 2016, Life & Health companies have halved it in the past three years. Annuity companies have kept their ETF allocation roughly the same for the past two
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After increasing the ETF usage by seven times from 2008 to 2016, Life & Health companies have halved it in the past three years.

Life companies and, more recently, Life & Annuity companies have increased their ETF allocation.

Exhibit 28: ETF AUM by Life Business Focus


As a percentage of admitted assets, Life companies had the most allocated to ETFs (see Exhibit 29).

Exhibit 29: ETF AUM and ETFs as a Percentage of Admitted Assets by Life Business Focus


In Health, the use of ETFs and the growth in ETF usage was nearly all in Comprehensive Health companies (see Exhibit 30).
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Exhibit 30: ETF AUM by Health Business Focus

In Health, the use of ETFs and the growth in ETF usage was nearly all in Comprehensive Health companies.

Exhibit 31: Change in ETF AUM and Shares for Health Companies

In 2019, the growth in ETF shares was primarily in Fixed Income ETFs (see Exhibit 31).

In 2019, the growth in ETF shares for Health companies was primarily in Fixed Income ETFs.
ANALYSIS BY ASSET CLASS

In 2019, the amount of ETF assets held by insurance companies increased for Equity and Fixed Income ETFs. Equity ETF AUM increased by 20%, while Fixed Income ETF AUM increased by 13% (see Exhibit 32).

Exhibit 32: ETF AUM by Asset Class

In 2019, Equity ETF AUM increased by 20%, while Fixed Income ETFs increased by 13%.

As shown in Exhibit 33, overall ETF shares held by insurance companies only declined because of Other asset classes.

Exhibit 33: Change in ETF Shares by Asset Class

Overall ETF shares held by insurance companies only declined because of Other asset classes.

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4 See Appendix 1.2 for definitions of asset classes.
Over the past 10 years, insurance companies have increased the use of Fixed Income ETFs and, as a percentage of the total, held more Fixed Income ETFs than the overall U.S. ETF market (see Exhibit 34).

**Exhibit 34: Insurance and U.S. Market ETF AUM by Asset Class**


In terms of company type, Health companies held the most Fixed Income ETFs, and P&C companies held the least (see Exhibit 35).

**Exhibit 35: Asset Allocation by Company Type**


After significantly increasing Fixed Income ETF usage in 2016 and 2017, Life companies—especially Large Life companies—have reduced their Fixed Income allocation over the past two years (see Exhibit 36).
After increasing Fixed Income ETF AUM in 2016 and 2017, Life companies reduced it over the past two years.

For P&C companies, Commercial companies held a higher percentage of Fixed Income ETFs, as Personal companies reduced their Fixed Income ETF allocation over the past two years (see Exhibit 37).

Commercial companies held a higher percentage of Fixed Income ETFs than Personal companies.

In Life insurance, even though companies focused on Life insurance and companies focused on Annuity had roughly the same ETF AUM, Annuity writers had a higher allocation to Fixed Income ETFs (see Exhibit 38).
In terms of size, Mega, Large, and Medium companies had about the same allocation, but Small companies had half as much allocated to Fixed Income ETFs (see Exhibit 39).

In terms of ownership structure, Stock companies had higher Fixed Income ETF allocation, as they increased Fixed Income ETFs and sold Equity ETFs. Mutual companies had less Fixed Income, but they increased both Fixed Income and Equity holdings in ETFs. Other companies increased Equity holdings and greatly reduced Fixed Income holdings and thus had the lowest Fixed Income allocation (see Exhibit 40).
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Stock had a higher Fixed Income allocation, as they increased Fixed Income ETFs and sold Equity ETFs.

Exhibit 40: Asset Allocation by Ownership Structure


Analysis of Equity ETFs

Most of the Equity ETF allocation were split between Blend and Large Cap companies, with Mid Cap and Small Cap having similar allocations. The insurance distribution broadly replicated the overall U.S. ETF market (see Exhibit 41).

Exhibit 41: Insurance and U.S. Market Equity ETF AUM by Market Capitalization

Most of the Equity ETF allocation were split between Blend and Large Cap companies.


The allocation varied little in terms of size, company type or ownership structure. However, the allocation varied vastly by business focus (see Exhibits 42 and 43).
The allocation varied little in terms of size, company type or ownership structure.

However, the allocation varied vastly by business focus.

In terms of Growth and Value, most insurance ETF assets were Blend (see Exhibit 44).
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In terms of Growth and Value, most insurance ETF assets were Blend.

The allocation to Sector ETFs by insurance companies was lower than that of the overall U.S. ETF market (see Exhibit 45).

Further, insurance companies have been reducing their holdings in sector-specific ETFs (see Exhibit 46).

Exhibit 44: Insurance ETF AUM by Style


Exhibit 45: Insurance and U.S. Market ETF AUM by Sector Status

Insurance companies have been reducing their holdings in sector-specific ETFs.

Interestingly, the allocation of sector ETFs by insurance companies varied markedly from the U.S. market sector allocation, which in turn varied from the sector allocation of the large-cap market—as represented by the S&P 500® (see Exhibit 47).

Exhibit 47: Sector Allocation of Insurance and U.S. Markets

Insurance sector allocation varied markedly from the U.S. market, which in turn varied from the S&P 500.
Analysis of Fixed Income ETFs

While the U.S. Fixed Income ETF market was broadly diversified, the insurance market focused mainly on Corporate ETFs (see Exhibit 48).

Exhibit 48: Insurance and U.S. Market ETF AUM by Bond Category

While the U.S. Fixed Income ETF market was broadly diversified, the insurance market focused mainly on Corporate ETFs.


Insurance companies moved significantly into Fixed Income ETFs roughly in line with regulatory changes (see Exhibit 49).

Exhibit 49: Fixed Income ETF AUM by Bond Type

Insurance companies moved significantly into Fixed Income ETFs roughly in line with regulatory changes.


While companies added to Corporate ETFs in the past one-year period, they retrenched from Treasury ETFs (see Exhibit 50).
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Exhibit 50: CAGR of ETF AUM and Shares by Fixed Income Credit

While insurance companies added to Corporate ETFs in the past one-year period, they retrenched from Treasury ETFs.

Life companies invested more in Corporate ETFs, while Health companies preferred Broad Market ETFs (see Exhibit 51).

Exhibit 51: Bond Type Allocation by Company Type

Life companies invested more in Corporate ETFs, while Health companies preferred Broad Market ETFs.

Differences in allocation persisted across business lines, with Annuity companies investing almost exclusively in Corporate ETFs. In the P&C sector, Commercial writers had broader Fixed Income ETF allocations relative to Personal carriers (see Exhibit 52).
Differences in allocation persisted across business lines, with Annuity companies investing almost exclusively in Corporate ETFs.

Corporate allocation increased with company size, and Broad Market allocation decreased (see Exhibit 53).

Corporate allocation increased with company size, and Broad Market allocation decreased.

Stock companies had the least allocation to Broad Market ETFs and the highest allocation to Corporate ETFs (see Exhibit 54).
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Stock companies had the least allocation to Broad Market ETFs and the highest allocation to Corporate ETFs.

Although insurance companies invested mostly in Investment Grade ETFs, they had a higher proportion of High Yield ETFs, relative to the U.S. ETF Market (see Exhibit 55).

Although insurance companies invested mostly in Investment Grade ETFs, they had a higher proportion of High Yield ETFs, relative to the U.S. ETF Market.


Insurance companies continued to increase their allocation to High Yield and Investment Grade ETFs, while pulling back from Blend ETFs (see Exhibit 56).
Over the past few years, the growth in High Yield ETFs has been faster than Investment Grade ETFs (see Exhibit 57).

Stock companies had a larger allocation to High Yield ETFs than any other type of insurance company. The allocation to High Yield ETFs also increased with the size of the company (see Exhibit 58).
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Exhibit 58: Credit Quality Allocation by Ownership Structure and Company Size

Stock companies had a larger allocation to High Yield ETFs than any other type of insurance company.

P&C companies had the highest High Yield allocation, with Personal writers having almost 50% of their Fixed Income ETFs in High Yield (see Exhibit 59).

Exhibit 59: Credit Quality Allocation by Company Type and Life and P&C Business Focuses

P&C companies had the highest High Yield allocation.

In terms of maturity, insurance companies mostly invested in Blend ETFs (see Exhibit 60).
In terms of maturity, insurance companies mostly invested in Blend ETFs...

However, in recent years, companies have begun to diversify into more specific maturity buckets (see Exhibit 61).

Mutual companies used more Ultra Short and Short ETFs than any other ownership structure, while Mega companies rarely used anything other than Blend ETFs (see Exhibit 62).
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Exhibit 62: Fixed Income Maturity Allocation by Ownership Structure and Company Size

Life insurance companies tended to stick to Blend ETFs relative to other company types, but Life writers did have significantly higher allocation to Long duration ETFs (see Exhibit 63).

Mutual companies used more Ultra Short and Short ETFs than any other ownership structure…

…while Mega companies rarely used anything other than Blend ETFs.

Life insurance companies tended to stick to Blend ETFs relative to other company types.


Exhibit 63: Fixed Income Maturity Allocation by Company Type and Life and P&C Business Focuses

Systematic Valuation

Systematic valuation (SV) is a book-value-like accounting treatment that has the potential to reduce income volatility in statutory filings. Of the USD 8.5 billion in Fixed Income ETFs, insurance companies designated 19% as SV (see Exhibit 64).

Exhibit 64: SV Designation for Fixed Income ETFs

Of the USD 8.5 billion in Fixed Income ETFs, insurance companies designated 19% as SV.

In 2019, SV designation decreased from 2017 and 2018 (see Exhibit 65).

Exhibit 65: Historical SV Designation for Fixed Income ETFs

In 2019, SV designation decreased from 2017 and 2018.
Life companies used more SV ETFs than Health or P&C companies. Medium and Mega companies were the biggest SV users. Stock companies designated funds as SV more often than other company types (see Exhibit 66).

**Exhibit 66: SV Designation for Fixed Income ETFs by Company Type, Ownership Structure, and Size**

ETFs with a specific year maturity were the only maturity type to have a majority of the holdings designated as SV. Investment Grade ETFs had a higher use of SV than High Yield and Blend ETFs. Finally, Broad Market ETFs had the least SV designation, while Other ETFs had the most (see Exhibit 67).

**Exhibit 67: SV Designation Allocation by Maturity, Credit Quality, and Bond Type**
The majority of ETF investments by U.S. insurance companies were Traditional Beta ETFs. The insurance industry allocated to different beta types in a similar manner to the overall U.S. ETF market. While about 12.4% of the U.S. market invested in Smart Beta ETFs, insurance companies only allocated 10.7% of AUM to Smart Beta strategies (see Exhibit 68).

Exhibit 68: Insurance and U.S. Market ETF AUM by Beta Type


Smart Beta usage varied little by size—with Small and Mega companies being slightly larger users. However, by company type, P&C companies used more Smart Beta ETFs, and by ownership structure, Other companies used more Smart Beta ETFs (see Exhibit 69).

Exhibit 69: Beta Type Allocation by Size, Company Type, and Ownership Structure


By company type and ownership structure, P&C and Other companies used more Smart Beta ETFs, respectively.
In a reversal of 2018, companies added alternate beta types, while selling Traditional Beta ETFs (see Exhibit 70).

Exhibit 70: CAGR of ETF AUM and Shares by Beta Type


Within Smart Beta ETFs, insurance companies favored Dividend ETFs, with AUM almost doubling in 2019. Quality ETFs had a material increase in allocation over the past two years (see Exhibit 71).

Exhibit 71: ETF AUM by Smart Beta Type

MISCELLANEOUS ANALYSIS

Insurance companies invested mostly in Domestic ETFs; this was truer for Fixed Income ETFs than Equity ETFs (see Exhibit 72).

Exhibit 72: Insurance Equity and Fixed Income ETF AUM by Region

Insurance companies invested mostly in Domestic ETFs; this was truer for Fixed Income ETFs than Equity ETFs (see Exhibit 72).

Exhibit 72: Insurance Equity and Fixed Income ETF AUM by Region

While the topic of environmental, social, and governance (ESG) as a controlling factor in investment decisions is widely discussed, neither the U.S. ETF market nor insurance companies using ETFs have greatly...
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While ESG is a widely discussed topic, the U.S. ETF market and insurance companies only allocated 0.45% and 0.32%, respectively, in ESG ETFs. The overall U.S. ETF market only had 0.45% allocated to ESG ETFs. In the insurance space, seven insurance companies had about USD 100 million invested in ESG ETFs—representing 0.32% of all insurance ETF usage and a negligible percentage of admitted assets.

Looking at the geographical distribution of insurance companies using ETFs, companies located in Illinois, New York, and Texas were the leading users of ETFs (see Exhibit 74). However, relative to the amount of admitted assets, companies in New York had a lower allocation to ETFs (see Exhibit 75).

Exhibit 74: Insurance ETF AUM by Domicile

Companies located in Illinois, New York, and Texas were the leading users of ETFs.

Relative to the amount of admitted assets, companies in New York had a lower allocation to ETFs.

However, companies in New York increased their ETF allocation by nearly 5.5 times in the past five years (see Exhibit 76).

The geographic distribution of companies using ETFs varied by both type of insurance company (see Exhibit 77) and by asset class (see Exhibit 78).
Exhibit 77: Geographic Distribution of ETFs by Company Type

<table>
<thead>
<tr>
<th>COMPANY TYPE</th>
<th>GEOGRAPHIC DISTRIBUTION OF ETFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>P&amp;C</td>
<td>Fewer ETFs</td>
</tr>
<tr>
<td>Life</td>
<td>Fewer ETFs</td>
</tr>
<tr>
<td>Health</td>
<td>Fewer ETFs</td>
</tr>
</tbody>
</table>

Geographic distribution of ETF investments varied by company type.

Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2019. Table is provided for illustrative purposes.
Exhibit 74: Geographic Distribution of ETFs by Asset Class

<table>
<thead>
<tr>
<th>ASSET CLASS</th>
<th>GEOGRAPHIC DISTRIBUTION OF ETFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td></td>
</tr>
<tr>
<td>Fixed Income</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

Geographic distribution varied by asset class.

Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2019. Table is provided for illustrative purposes.
APPENDIX 1: METHODOLOGY

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 all insurance ETF holdings, both current and historical. In addition, Frist Bridge, a CFRA company, which is 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 ETF classifications with SPGMI statutory filing data to gain insight into how insurance companies use ETFs.

Appendix 1.1: S&P Global Market Intelligence Data

For all U.S. insurance companies, we used NAIC data as compiled by SPGMI. U.S. insurance companies filed the data with the NAIC at the end of February 2020. SPGMI retrieved the data and loaded it into its database. The completeness of the database depended on the timeliness of SPGMI receiving the data from the NAIC and the amount of quality control SPGMI performs. To get timely yet complete information, we retrieved the data for this analysis on April 13, 2020.

SPGMI classifies companies in various ways. For companies that are members of a group, we classified all companies the same way as a group. For example, if a group contained individual companies of various ownership structures (Stock, Reciprocal Exchange, Lloyd’s Syndicate, etc.), the group would be classified as a Stock company. For this analysis, we assigned the ownership structure of the parent organization to all the subsidiaries. We did a similar assignment across all the features in this report.

In 2019, the SPGMI database contained 7,568 individual entities. Of these, 1,530 had no reported assets for the period from 2004 to 2019; therefore, we removed these companies from the analysis, leaving us with 6,038 entities. Most of these (3,849 or 64%) belonged to one of 625 insurance groups, which left 2,189 stand-alone insurance entities. For this analysis, we referred to “companies” as the combination of the 625 groups and 2,189 individual entities, giving us 2,814 companies in our analysis (see Exhibit 79).

<table>
<thead>
<tr>
<th>TYPE OF COMPANY</th>
<th>INDIVIDUAL COMPANIES</th>
<th>STAND-ALONE COMPANIES</th>
<th>COMPANIES PART OF A GROUP</th>
<th>NUMBER OF GROUPS</th>
<th>GROUPS PLUS STAND-ALONE COMPANIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>P&amp;C</td>
<td>3,432</td>
<td>1,329</td>
<td>2,103</td>
<td>327</td>
<td>1,656</td>
</tr>
<tr>
<td>Life</td>
<td>1,069</td>
<td>403</td>
<td>666</td>
<td>145</td>
<td>548</td>
</tr>
<tr>
<td>Health</td>
<td>1,537</td>
<td>457</td>
<td>1,080</td>
<td>153</td>
<td>610</td>
</tr>
<tr>
<td>Total</td>
<td>6,038</td>
<td>2,189</td>
<td>3,849</td>
<td>625</td>
<td>2,814</td>
</tr>
</tbody>
</table>

Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2019. Table is provided for illustrative purposes.

It is possible that some companies have not filed their financials, or that the NAIC has not reported these to SPGMI, or that data had not made it into the SPGMI database by April 13, 2020. To test for completeness of the data, we compared the reported assets for the 6,038 companies in 2018 versus 2019. Of the 6,038 entities, 163 had assets in 2018 but not in 2019. However, these only represented 0.33% of total 2018 admitted assets (see Exhibit 80). A further breakdown by company type revealed that the largest number of late filers as a percentage of admitted assets were Health companies.
As of December 2019, the U.S. insurance industry had USD 6.7 trillion in admitted assets (see Exhibit 81).

For the insurance industry as a whole, admitted assets grew by 6.8% in 2019. This was well above the long-term average of 3.57% (see Exhibit 82).
We segregated the companies by size, based on their admitted assets, as of Dec. 31, 2019.

- **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

Over the past 16 years, admitted assets have been concentrated in Mega companies. As of 2019, Mega companies represented 63% of all the industry’s admitted assets (see Exhibit 83).

**Exhibit 83: Admitted Assets by Company Size**


Life companies represented approximately 66% of all the admitted assets in the insurance industry (see Exhibit 84). This value has remained consistent for the last 16 years.

**Exhibit 84: Admitted Assets by Company Type**

SPGMI classifies the ownership of each company in 14 different ways, which we condensed this into three ownership structures.

- **Stock:** Stock Companies
- **Mutual:** Mutual Companies
- **Other:** BC/BS Not for Profit BC/BS Stock, Limited Liability Corporation, Lloyd’s Organization, Non-Profit, Partnership (All Types), Proprietorship, Reciprocal Exchange, Risk Retention Group, Syndicate, U.S. Branch of Alien Insurer, Other

Stock companies held the vast majority of admitted assets, with Mutual companies holding just 22% of admitted assets (see Exhibit 85).

**Exhibit 85: Admitted Assets by Ownership Structure**


SPGMI data also allowed us to classify companies by business focus. For compactness, we grouped the data differently from SPGMI.
<table>
<thead>
<tr>
<th>LIFE COMPANIES</th>
<th>NUMBER OF COMPANIES</th>
<th>P&amp;C COMPANIES</th>
<th>NUMBER OF COMPANIES</th>
<th>HEALTH COMPANIES</th>
<th>NUMBER OF COMPANIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Life Focus</td>
<td>134</td>
<td>P&amp;C Minimum NPW</td>
<td>539</td>
<td>Comprehensive Health</td>
<td>169</td>
</tr>
<tr>
<td>Life Minimum NPW</td>
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<td>Personal Lines Focus</td>
<td>315</td>
<td>Health Minimum NPW</td>
<td>148</td>
</tr>
<tr>
<td>Annuity Focus</td>
<td>63</td>
<td>Commercial Property Focus</td>
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<td>Dental/Vision</td>
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<td>Group A&amp;H Focus</td>
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<td>Specialty A&amp;H Focus</td>
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<td>Commercial Workers Compensation Focus</td>
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<td>Medicaid Provider</td>
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<tr>
<td>Other Life</td>
<td>39</td>
<td>Commercial Lines Focus</td>
<td>102</td>
<td>Other Health</td>
<td>48</td>
</tr>
<tr>
<td>Credit Insurance Focus</td>
<td>38</td>
<td>Other P&amp;C</td>
<td>88</td>
<td>Health-Other Focus</td>
<td>27</td>
</tr>
<tr>
<td>Life Insurance Focus</td>
<td>29</td>
<td>Commercial General Liability Focus</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life &amp; Annuities Focus</td>
<td>26</td>
<td>Commercial Financial Lines Focus</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Life and A&amp;H Focus</td>
<td>13</td>
<td>Reinsurance Focus</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life and A&amp;H Focus</td>
<td>8</td>
<td>Large Reinsurance Focus</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annuity and A&amp;H Focus</td>
<td>6</td>
<td>Accident &amp; Health Lines Focus</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal Property Focus</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>548</strong></td>
<td><strong>Total</strong></td>
<td><strong>1,656</strong></td>
<td><strong>Total</strong></td>
<td><strong>610</strong></td>
</tr>
</tbody>
</table>

Source: NAIC via S&P Global Market Intelligence. Data as of Dec. 31, 2019. Table is provided for illustrative purposes.

SPGMI had 13 classifications for P&C companies (see Exhibit 86). We collapsed these into the following four groups.

- **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 approximately the same amount of assets (see Exhibit 87).

**Exhibit 87: Admitted Assets by P&C Business Focus**

![Chart showing the distribution of admitted assets by P&C business focus]

As Exhibit 86 shows, SPGMI had 12 classifications for Life companies; we collapsed these into the following five groups.

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

For Life insurance companies, Annuity companies had approximately one-half of the admitted assets (see Exhibit 88).

**Exhibit 88: Admitted Assets by Life Business Focus**


As shown in Exhibit 86, 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 Comprehensive Health admitted assets (see Exhibit 89).
Exhibit 89: Admitted Assets by Health Business Focus


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. Where the CUSIP and ticker numbers did not both match exactly, we employed a manual method to identify the correct ETF. 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 contains errors.

Appendix 1.2: First Bridge Data

From 2015 to 2017, we used First Bridge as the source of ETF data in this analysis, in 2018, we used Morningstar, and now the data from 2019 is from First Bridge again. To the extent that some of the classifications are different between these sources, this analysis will vary from prior reports. We used the categorization labels developed by First Bridge rather than developing separate definitions. For example, we used First Bridge’s definition of Smart Beta. As before, we assumed the consistency and completeness of the data provided by First Bridge.

For year-end 2019, First Bridge provided us with a list of 2,344 funds. We note that insurance companies did not invest in a vast majority of these funds. While we referred to these as ETFs, the funds having legal structures. The vast majority of the funds in the list were open-ended ETFs. However, a few large funds have a Unit Investment Trust structure. The list had 168 Exchange Traded Notes, which we excluded from the analysis. The remaining legal structures did not represent a material amount of assets (see Exhibit 90). For this reason, we did not further analyze usage by legal structure and referred to all these funds as ETFs.
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Exhibit 90: ETF AUM by Legal Structure

Source: First Bridge. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes.

Similarly, the CFRA data also differentiates between active funds and passive funds. While there has been an increase in the use of Active ETFs, the amount invested was small (see Exhibit 91). Thus, we did not perform any analysis on active versus passive funds.

Exhibit 91: ETF AUM by Active versus Passive

Source: First Bridge. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes.

First Bridge provides the AUM and price for each fund. By dividing the AUM by price, we can approximate the number of shares outstanding at any period. We analyzed share growth as a proxy to identify how much of the AUM growth was due to price appreciation in the securities and how much was due to an actual increase in investments. This analysis was not perfect. Unlike AUM analysis, share splits would affect these values. Also, ETFs trading at a discount or premium would affect the share calculation. However, at an aggregate level, share analysis was directionally useful.
For the first time in 2019, ETF AUM exceeded USD 4 trillion (see Exhibit 92). Over the past 10 years, ETF AUM increased at an annualized rate of 19%. This increase was not just because of the extended rally in equity markets, as the number of shares outstanding also increased over the period on an annual basis of 12% (see Exhibit 93).

Exhibit 92: ETF AUM and Shares Growth

Source: First Bridge. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes.

Exhibit 93: CAGR of ETF AUM and Shares Growth

Source: First Bridge. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes.

Often, First Bridge classified ETFs in more granular detail was needed for this analysis. In these instances, we combined fields to make our analysis more meaningful.
For example, the First Bridge field of Asset Class contained six different categories. We collapsed these into three.

- **Equity:** Equities
- **Fixed Income:** Bonds
- **Other:** Commodities & Metals, Currency, Target Date/Multi Asset, and Other Asset Types.

The vast majority of U.S. ETFs were Equity ETFs. Fixed Income ETFs have grown considerably in recent years and comprised 18% of the ETF market as of year-end 2019 (see Exhibit 94).

**Exhibit 94: ETF AUM by Asset Class**

![Pie chart showing ETF AUM by Asset Class]

Source: First Bridge. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes.

First Bridge segregated Equity ETFs into eight buckets by Market Capitalization. We consolidated these into four buckets.

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

The majority of the Equity ETF AUM were split roughly between Large Cap and Blend ETFs with Mid Cap and Small Cap evenly sharing the remainder. In terms of style, Blend ETFs had the highest allocation (see Exhibit 95).
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Exhibit 95: ETF AUM by Market Capitalization and Style

Source: First Bridge. Data as of Dec. 31/2019. Charts are provided for illustrative purposes.

First Bridge classified individual sector fields for Equity ETFs, identifying the sector of the ETF investments. It also had a field for if the fund was not sector specific or rotated through different sectors. Using this, we created two categories to identify whether the ETF was a sector ETF.

- Not Sector: Not Applicable, Sector Rotation/Combination
- Sector: All other

Although investments in Sector ETFs grew 25% in 2019, the number of shares in these ETFs decreased by 2.5%—indicating the market was not actively growing its investment in Sector ETFs. Sector ETFs only represented 13% of the equity allocation (see Exhibit 96)

Exhibit 96: Equity Sector ETF AUM and Shares and CAGR Growth

Source: First Bridge. Data as of Dec. 31, 2019. Charts are provided for illustrative purposes.
We compared the ETF market allocation to various sectors relative to the sector allocation within the S&P 500 and noted that ETF investors did not replicate the sector weights of the broader market (see Exhibit 97).

Exhibit 97: ETF Sector Allocation versus S&P 500 Sector Allocation

First Bridge classified Bond ETFs into eight types. We narrowed this to the six Bond types.

- **Broad Market:** Broad Market
- **Corporate:** Corporate
- **Treasury:** Treasury & Government
- **Municipal:** Municipal
- **Inflation Protected:** Inflation Protected
- **Other:** Convertible, Mortgages, and Not Applicable

The largest allocation was to Broad Market ETFs. Investors pulled back from Corporate ETFs in 2018; while they increased the allocation by 40% in 2019, the allocation did not return to prior levels (see Exhibit 98).
Exhibit 98: Fixed Income ETF AUM by Bond Type

Source: First Bridge. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes.

In terms of credit quality, First Bridge classified Bond ETFs as Investment Grade, High Yield, Blend, or Not Applicable. Investment Grade ETFs comprised the majority of Bond ETFs. In terms of maturity, First Bridge classified Bond ETFs into six buckets: < 1 Year, 1-3 Years, 3-10 Years, 10+ Years, Blend, and Specific Year. We labeled these duration buckets Ultra Short, Short, Intermediate, and Long, respectively. The majority of Bond ETFs had a Blend maturity (see Exhibit 99).

Exhibit 99: Fixed Income ETF AUM by Credit Quality and Maturity

Source: First Bridge. Data as of Dec. 31, 2019. Charts are provided for illustrative purposes only.

Most ETF AUM and shares had market-capitalization weights. 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. First Bridge classified
portfolio weighting in six ways: Traditional Beta, Smart Beta, Active Beta, Leveraged/Inverse, and Proprietary Model. The vast majority of U.S. ETF used Traditional Beta, or market-capitalization weighting. Investors have allocated a little over 12% to Smart Beta ETFs (see Exhibit 100).

**Exhibit 100: ETF AUM by Beta Type**

Of those ETFs using Smart Beta, 98% were Equity ETFs. For these ETFs, First Bridge had 15 classifications of Smart Beta. We condensed these into the following five types.

- **Dividend:** Dividend
- **Low Volatility:** Low Volatility
- **Multi-Factor:** Multi-Factor
- **Thematic:** Thematic
- **Other:** Factor Weighted Growth/Value, Cap Weighted Growth/Value, Hedge Fund Replication, High/Low Beta, Options Overlay, Revenue Weighted, Strategy, VIX/Risk Control, Quality, Momentum, and Equal Weighted

Dividend ETFs were the most prevalent. However, since its introduction in 2011, allocation to Low Volatility ETFs has increased substantially (see Exhibit 101).

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5 See detailed descriptions of Smart Beta at First Bridge: [https://www.firstbridgedata.com/smartbetadefinitions/Smart%20Beta%20Definition%20Framework.pdf](https://www.firstbridgedata.com/smartbetadefinitions/Smart%20Beta%20Definition%20Framework.pdf)
Most insurance companies (72%) invested in the domestic ETF market, with 19% investing in international markets and 9% investing global markets (see Exhibit 102).

Geographically, investors allocated Equity ETFs in a similar fashion to the overall ETF market, but Fixed Income ETFs had a larger domestic focus (see Exhibit 103).
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Exhibit 103: Equity and Fixed Income ETF AUM by Region

- **Equity ETF AUM**
  - Global
  - International
  - Domestic

- **Fixed Income ETF AUM**
  - International
  - Global
  - Domestic

Source: First Bridge. Data as of Dec. 31, 2019. Charts are provided for illustrative purposes.

Insurance companies did not invest much in ESG ETFs, but the investments in these funds have grown rapidly. In 2019, investors increased the use of ESG ETFs by 155%. When investors did invest in ESG ETFs, they invested mostly in broadly diversified ESG ETFs—as opposed to specific ESG types (see Exhibit 104).

Exhibit 104: ESG ETFs

Source: First Bridge. Data as of Dec. 31, 2019. Charts are provided for illustrative purposes.
APPENDIX 2: LINEAR REGRESSION

To model the growth of ETF AUM, we applied a linear regression to the data (see Exhibit 105).

**Exhibit 105: Linear Regression of ln(ETF AUM)**

Based on the data, the following equation shows the trend of ETF AUM as a function of year.

\[
\ln(\text{ETF AUM}) = 0.1420 \times \text{Year} - 262.5194
\]

This model had a coefficient of determination of 96.33%. The coefficient of determination explains how well the model explains the actual results. This value can range from 0% to 100%. A value of 0% implies that the independent variable (year) cannot explain the dependent variable (AUM). A value of 100% implies that the model explains the dependent variable exactly. Using this model, we can estimate future AUM, assuming the growth continues according to the historical trend.

We performed a similar exercise with the number of shares held by insurance companies (see Exhibit 106).

**Exhibit 106: Linear Regression of ln(ETF Shares)**

Based on the data, the following equation shows the trend of ETF shares as a function of year.

\[
\ln(\text{ETF Shares}) = 0.1167 \times \text{Year} - 215.5730
\]

This model has a coefficient of determination of 94.48%. We can use this model to estimate future share growth, assuming growth continues according to its historical trend.
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