Deutsche Bank
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Europe
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Diversified Financials
Asset Managers

dbSustainability

ESG - Asset Managers

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Special Report

Recommendation Change

Sustainable Investing Poised to Become Powerful Trend in Asset Management

Asset managers poised to benefit from the rise in sustainable investing

In our inaugural report on ESG for the asset management industry, we find that investor demand for sustainable investing is rising rapidly, and asset managers have an opportunity to substantially enhance organic growth by leveraging well-developed capabilities into products focused more directly on positive ESG impact. In this report, we outline some defining characteristics of ESG investing and measure ESG AuM, organic growth & performance (mostly in retail products) along with ESG profiles of traditional asset managers in our coverage.

Organic growth is dramatically shifting toward ESG-focused products

While asset managers have been embedding ESG considerations in their investment process for some time, we find that strategies focused more intently on ESG and branded as such, are generating vastly superior organic growth compared to other products broadly. We expect demand for ESG-dedicated products to remain strong, especially given rising awareness of ESG issues globally and the greater importance younger generations place on investing for ESG impact. Demand may be especially strong in the US given its investors lag behind global peers in allocations to ESG. We also find a positive correlation between organic growth and degrees of sustainable investing within less ESG-centric products.

There does not appear to be a performance sacrifice for ESG investing

One hurdle in the past for ESG investing was a perception that ESG investments underperform, or that investing with a social purpose would violate fiduciary duty. Our analysis shows ESG-dedicated funds have generally outperformed recently, and there is a modest positive correlation between performance and degrees of sustainable investing. We also see a stronger case for active management in ESG, though passive products are likely to retain strong appeal for investors.

Asset managers should benefit from ESG; upgrading BLK and EV

With most asset managers in our coverage integrating ESG into their investment processes in various ways, we think asset managers are generally well positioned to leverage ESG capabilities into ESG-focused products that can contribute positively to organic growth over the long term. We are upgrading the two managers that we see as best positioned to leverage these capabilities now – BlackRock (BLK) and Eaton Vance (EV) – to Buy from Hold.

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Key Changes

Company	Target Price	Rating
BEN.N	24.00 to 22.00	-
BLK.N	576.00 to 654.00	Hold to Buy
EV.N	38.00 to 45.00	Hold to Buy
FHI.N	24.00 to 23.00	-
TROW.OQ	145.00 to 142.00	-

Source: Deutsche Bank

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Key Conclusions

The rise of sustainable investing; a new era dawning?

We see 2020 as an inflection point for the rise in sustainable investing. While interest in the area of environmental, social & governance (ESG) has been growing for decades, we are seeing a very sharp rise this year in public awareness, investor demand and supply of investment products & services that we view as driving permanently higher levels of assets invested with a sustainable purpose. This should benefit firms in the asset & wealth management industry, as well as companies that are managing themselves for improvement in long-term sustainability as investment capital migrates toward those issuers over time.

As part of #dbSustainability research, we intend to cover this topic more substantially going forward as it pertains to our broker, asset manager & exchange coverage. Please also see #dbSustainability's website (click here) which includes reports throughout DB's research pertaining to ESG. Below, we highlight our top ten conclusions from this report.

Investor demand for ESG products should accelerate, especially in retail

As outlined in DB's ESG Primer: Volume 1 from July, key structural drivers of ESG are 1) the response to climate change awareness, 2) the impact of social media and the internet, 3) the rise of artificial intelligence (AI) programs to manage data and sentiment, 4) the impact of European regulation and US response and 5) Green financing opportunities and access to cheaper capital.

In addition, investor focus on ESG has mushroomed this year, especially with global climate concerns becoming more prevalent and the Covid-19 pandemic shedding light on the importance of social issues. We highlight one recent survey from Federated Hermes Investors (see page 54) which cites that nearly 2/3 of respondents now consider social factors as part of their investment process.

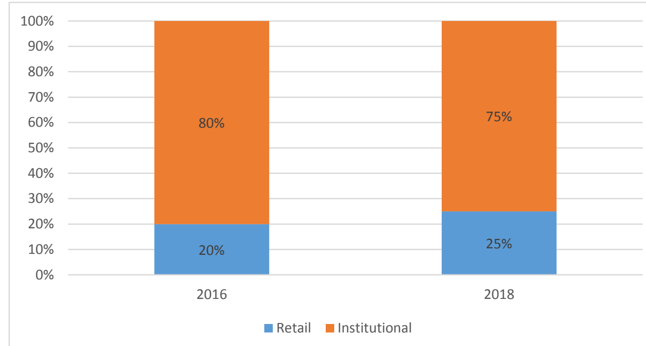
While investment managers have been integrating ESG into their investment process for many years, if not decades, the growth trend for retail investors is more nascent, and growing more rapidly. For example, Figure 1 shows a vast $30+ trillion in global AuM is managed with ESG considerations (as reported by the Global Sustainable Investment Alliance), while Figure 2 shows the estimated retail portion has grown from 20% AuM at the start of 2016 to 25% at the start of 2018.

Figure 1: Snapshot of Global Sustainable Investing Assets ($bn)

Region:	2016	2018
Europe	$12,040	$14,075
United States	$8,723	$11,995
Japan	$474	$2,180
Canada	$1,086	$1,699
Australia/New Zealand	$516	$734
Total	**$22,839**	**$30,683**

Source : 2018 GSIA report
Notes: All 2016 assets are converted to USD at the exchange rates as of year-end 2015. All 2018 assets are converted to USD at the exchange rates at the time of reporting

Figure 2: Global Shares of Institutional and Retail Sustainable Investing Assets



Source : 2018 GSIA Report
Note: institutional and retail data were not collected in Australia/New Zealand

While this is seemingly a large portion of global AuM (Figure 3), we believe retail usage of ESG-dedicated products within mutual funds and ETFs is much lower (Figure 4). We focus the analysis in this report primarily on this narrower retail definition, given the wider data availability from Morningstar Direct and our more rapid growth expectations for retail mutual funds and ETFs as individual investors increasingly demand these products.

Figure 3: Proportion of Sustainable Investing Relative to Total Managed Assets

Region	2014	2016	2018
Europe	58.8%	52.6%	48.8%
United States	17.9%	21.6%	25.7%
Canada	31.3%	37.8%	50.6%
Australia/New Zealand	16.6%	50.6%	63.2%
Japan		3.4%	18.3%

Source : GSIA 2018 report
Note: In 2014, data for Japan was combined with the rest of Asia, so this information is not available

Figure 4: Morningstar ESG AuM as a % of Total Long-Term AuM by Domicile ($bn)

	US	Global (ex-US)
Morningstar ESG AuM	346	2,051
ICI Total Long-Term AuM	17,679	30,321
ESG % of Total	2.0%	6.8%

Source : ICI Factbook, Morningstar Direct, Deutsche Bank
Note: AuM as of 12/31/2019

We focus on two different styles of ESG investing as defined by Morningstar with "sustainable" funds focusing on positive ESG incorporation and "exclusionary" funds utilizing negative screens. Together, these two universes comprise the total ESG-dedicated fund universe, and we label any fund that does not employ sustainable or exclusionary investing styles as "non-ESG."

In Figure 5, we show that sustainable active equity mutual funds in the US have outperformed both exclusionary and non-ESG funds, on average, when looking at quarterly returns from 4Q18-2Q20 (the period for which portfolio company Sustainalytics ratings are available and aggregated for the mutual funds in the Morningstar Direct database). While this active equity ESG fund universe is just 4% of active equity mutual fund AuM, we see the runway for growth and industry share gain as compelling over the long term. Importantly, in addition to outperforming, sustainable active equity mutual funds have also seen much better organic asset growth, on average, over this same time frame.

Figure 5: ESG-Related Definitions of Terms Used in this Report

	Actively Managed ESG US Equity Mutual Funds: Sustainable	Actively Managed ESG US Equity Mutual Funds: Exclusionary	Non ESG
Fund Category Definition	A fund "focusing on sustainability; impact; or environmental, social, and governance, or ESG; factors in its prospectus or other regulatory filings."	A fund defined by Morningstar Direct as "employs exclusions" which exclude certain sectors, companies, or practices.	All other fundsnot classified as sustainable or exclusionary irrespective of their Sustainability Rating are classified as Non ESG.
AuM (as of 2Q20, $bn)	89.5	150.6	6,391.8
Average Quarterly Performance from 4Q18 to 2Q20			
Quarterly Average	2.3%	1.4%	1.7%
S&P 500	1.8%	1.8%	1.8%
Organic AuM Growth	6.2%	-0.7%	-5.0%

Source : Morningstar Direct, Deutsche Bank

Europe has led ESG development but the US is finally catching up

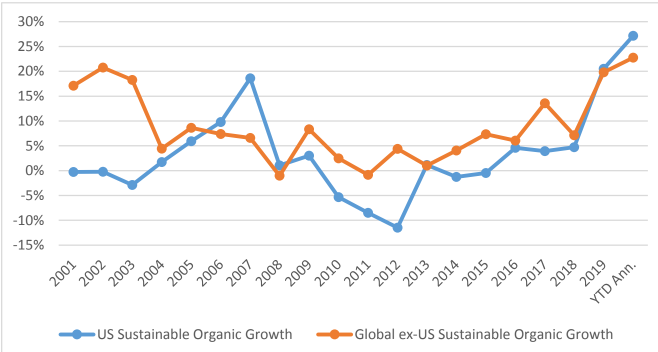
European investors (both institutional & retail) have typically been more focused on ESG issues than US investors, and this notion is supported by the higher portions of AuM managed with ESG considerations shown in Figure 3. But with ESG becoming increasingly important in the US combined with much lower allocations to ESG investments, we see the trend of more rapid growth in ESG products in the US continuing & potentially even accelerating, as it has in recent years (see Figure 6). Indeed we are seeing this in the strengthening of the organic AuM growth rates of sustainable mutual funds & ETFs (the purer of the two main types of ESG funds) in the past year vs. generally superior growth rates outside the US for much of the past decade (Figure 7).

Figure 6: Growth of Sustainable Investing Assets by Region in Local Currency (2014-2018)

Region	2014	2016	2018	Growth per Period: Growth 2014-2016	Growth per Period: Growth 2016-2018	CAGR (2014-2018)
Europe	€ 9,885	€ 11,045	€ 12,306	12%	11%	6%
United States	$6,572	$8,723	$11,995	33%	38%	16%
Canada (in CAD)	$1,011	$1,505	$2,132	49%	42%	21%
Australia/New Zealand (in AUD)	$203	$707	$1,033	248%	46%	50%
Japan	¥840	¥57,056	¥231,952	6692%	307%	308%

Source : GSIA 2018 report
Note: asset values are expressed in billions. All 2018 assets in this report are as of 12/31/17, except for Japan, whose assets are as of 3/31/18

Figure 7: US vs. Global ex-US Annual Sustainable Organic Growth Rates



Source : Morningstar Direct, Deutsche Bank
YTD thru Aug 2020

Performance no longer seems to be a hurdle to sustainable investing

Contrary to some perceptions about sacrificing returns when investing for sustainable purposes, we find that actively-managed sustainable equity funds have been outperforming non-ESG funds recently (as cited above), as well as exclusionary funds (see Figure 8). The Figure also shows a positive correlation between performance and sustainability ratings for funds that are not ESG (for which Morningstar can provide sustainability ratings on based on the Sustainalytics ratings of the companies in the portfolio, only since 4Q18). The debate around performance of ESG vs. non-ESG will probably never end, but we sense the argument around inferior performance of ESG strategies is diminishing.

Figure 8: Asset-Weighted Active Equity Mutual Fund Quarterly Returns by Various Classifications

	Total Active Equity Mutual Fund AW Returns								2Q20 AuM
	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	($mn)
Sustainable Funds	-12.9%	14.9%	4.2%	0.3%	8.3%	-20.1%	21.5%	**2.3%**	89,482
Exclusionary Funds	-10.4%	11.0%	4.1%	1.3%	7.8%	-21.6%	17.5%	**1.4%**	150,553
Non-ESG Funds	-14.0%	13.3%	3.6%	-0.5%	9.2%	-21.8%	22.4%	**1.7%**	6,391,770
Total	**-14.0%**	**13.3%**	**3.7%**	**-0.5%**	**9.1%**	**-21.8%**	**22.3%**	**1.7%**	**6,631,806**

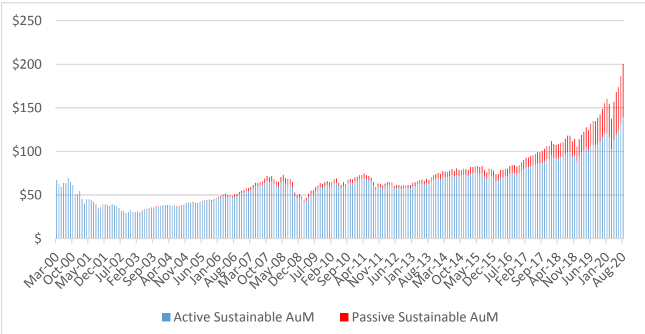
Morningstar	Non-ESG - Active Equity Mutual Fund AW Returns								2Q20 AuM
Sustainability Rating	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	($mn)
High	-13.6%	12.7%	3.7%	0.0%	8.9%	-20.8%	22.8%	**2.0%**	446,966
Above Average	-13.2%	12.4%	3.6%	-0.2%	8.9%	-20.6%	21.9%	**1.8%**	1,274,140
Average	-14.1%	13.6%	3.8%	-0.4%	9.1%	-21.7%	22.3%	**1.8%**	2,089,518
Below Average	-14.8%	13.9%	3.6%	-1.1%	9.5%	-22.0%	23.1%	**1.7%**	2,039,485
Low	-15.3%	15.1%	3.4%	-1.1%	9.1%	-24.2%	21.2%	**1.2%**	541,663
Total	**-14.0%**	**13.3%**	**3.6%**	**-0.5%**	**9.2%**	**-21.8%**	**22.4%**	**1.7%**	**6,391,770**

Source : Morningstar Direct, Deutsche Bank
Note: AuM as of 6/30/20

There is room for both active and passive in ESG

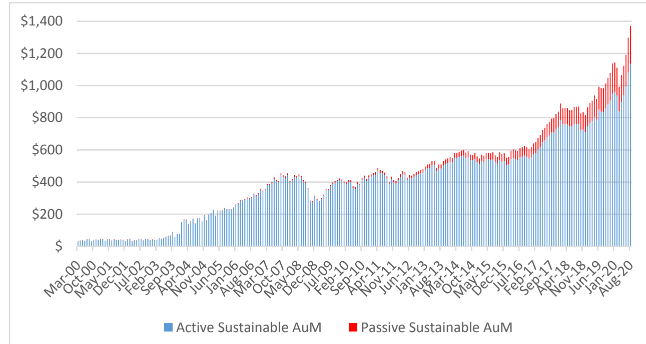
Traditionally, ESG investing required an active management component, in many cases at least, thus driving growth in the retail industry into primarily active strategies. This said, institutional strategies have used passive indices with specific customized exclusions for some time, and even retail investors have used passive separately managed accounts with ESG tilts. But as Figures 9-10 show, passive strategies (especially ETFs) have grown rapidly recently, particularly as investors can increasingly get more targeted ESG exposures to their liking via ETFs. And Figures 11-12 show passive retail flows pacing ahead of active in the US, though active flows are still predominant outside the US. Overall, we believe both active and passive strategies can thrive within ESG dedicated investment product, which we discuss in more detail in the competitive landscape section starting on page 31.

Figure 9: US Sustainable AuM ($bn) - Active vs. Passively Managed



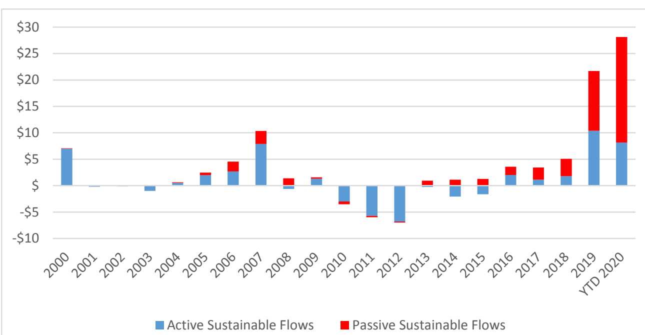
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 10: Global ex-US Sustainable AuM ($bn) - Active vs. Passively Managed



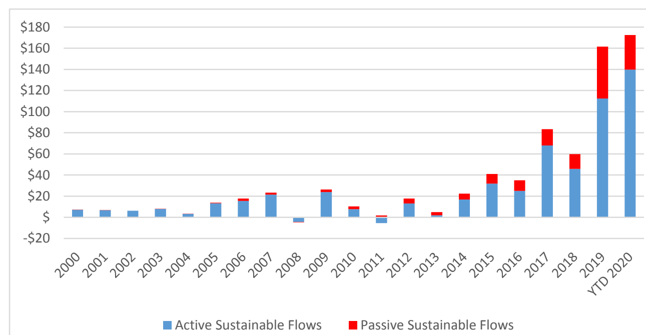
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 11: US Sustainable Flows ($bn) - Active vs. Passive



Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 12: Global ex-US Sustainable Flows ($bn) - Active vs. Passive



Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

ESG managed/branded product seems a prerequisite for organic growth

Figure 13 shows that ESG-oriented funds, especially those in the sustainable category, are generating substantially superior organic growth rates vs. both exclusionary type funds and non-ESG funds, showing evidence that investors are increasingly dedicating capital to funds that are focused on ESG investment strategies and branded as such. The data also suggests, to a lesser extent, sustainability ratings are less important to retail clients (than ESG designations) when making investment decisions. Overall, we see stronger organic asset growth in both active equity mutual funds and passive equity ETFs with higher degrees of ESG integration.

Figure 13: Active Equity MF Annualized Organic Growth by Degrees of ESG Integration

ESG Category	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	2Q20 AuM ($mn)
Sustainable	-6.6%	7.8%	1.0%	4.3%	15.4%	6.3%	15.1%	**6.2%**	89,803
Exclusionary	2.8%	3.1%	-1.8%	-0.8%	-5.9%	0.3%	-2.8%	**-0.7%**	150,649
Non ESG - High	-9.4%	-3.4%	-2.9%	2.1%	0.2%	0.0%	-2.0%	**-2.2%**	425,617
Non ESG - Above Average	-7.1%	-1.8%	-5.4%	-4.0%	-4.3%	-4.4%	0.1%	**-3.8%**	1,289,716
Non ESG - Average	-8.3%	-3.7%	-5.7%	-6.2%	-6.0%	-7.4%	-3.6%	**-5.8%**	2,043,001
Non ESG - Below Average	-5.2%	-1.4%	-4.9%	-6.0%	-7.0%	-7.1%	-4.9%	**-5.2%**	2,131,068
Non ESG - Low	-8.5%	0.4%	-2.8%	-7.0%	-10.3%	-9.6%	-18.4%	**-8.0%**	527,244
Non ESG - NR	54.3%	-2.6%	53.3%	1.9%	10.0%	15.1%	-16.0%	**16.6%**	37,100
Total	**-6.5%**	**-2.1%**	**-4.2%**	**-5.0%**	**-5.6%**	**-5.9%**	**-4.2%**	**-4.8%**	**6,694,199**

Source : Morningstar Direct, Deutsche Bank

ESG capabilities are generally well developed for many asset managers

In discussions with management teams of our traditional asset managers under coverage and based on disclosed information, we find that most asset managers have well-developed ESG capabilities that are integrated with the investment processes, to varying degrees. However, in addition to the wide range of adoption into the investment processes, there is also variation on how ESG factors are used in the analysis and investment process, which we outline in detail for each asset manager in our coverage starting on page 35.

A major opportunity for asset managers able to launch ESG products

Despite well-developed ESG investment processes, we find that relatively few firms have a large array of ESG-dedicated and branded retail product in the marketplace currently (see Figures 14 and 15 which show active & passive retail AuM in sustainable and exclusionary strategies, based on Morningstar classifications).

Figure 14: Coverage Sustainable AuM ($mn)

Ticker	MF AuM	ETF AuM	Total AuM
BLK	$33,022	$50,493	$83,515
NTRS	$39,858	$0	$39,858
EV	$24,146	$0	$24,146
STT	$6,534	$1,357	$7,890
IVZ	$2,675	$4,888	$7,563
JHG	$3,670	$0	$3,670
FHI	$3,025	$0	$3,025
BEN	$2,840	$183	$3,022
BK	$2,473	$0	$2,473
TROW	$656	$0	$656
AMG	$258	$0	$258
WETF	$0	$137	$137
Total Coverage AuM	**$119,156**	**$57,058**	**$176,214**
Total Industry AuM	**$1,459,520**	**$111,052**	**$1,570,572**
Coverage as a % of Industry	**8%**	**51%**	**11%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM as of 8/31/20, includes all domiciled funds

Figure 15: Coverage Exclusionary AuM ($mn)

Ticker	MF AuM	ETF AuM	Total AuM
IVZ	$66,280	$3,228	$69,508
BEN	$5,396	$18	$5,414
TROW	$2,598	$0	$2,598
BLK	$231	$265	$496
FHI	$218	$0	$218
NTRS	$97	$0	$97
EV	$0	$0	$0
STT	$0	$0	$0
JHG	$0	$0	$0
BK	$0	$0	$0
AMG	$0	$0	$0
WETF	$0	$0	$0
Total Coverage AuM	**74,820**	**3,511**	**78,332**
Total Industry AuM	**1,112,196**	**11,260**	**1,123,455**
Coverage as a % of Industry	**7%**	**31%**	**7%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM as of 8/31/20, includes all domiciled funds

We see this as an underutilized opportunity for asset managers given ESG investment capabilities are generally quite strong across most of our coverage. However, we see the greatest industry growth potential in ESG-dedicated retail products that are really focused on investing in what are regarded as highly-rated sustainable companies or factors that indicate companies are advancing rapidly in sustainability characteristics.

But few managers likely to leverage ESG into organic growth near term

In this regard, we see BlackRock and Eaton Vance as the most advanced within our coverage in terms of dedicated ESG product in the marketplace now that it is generally strong in its ESG investment capabilities and/or well-branded so as to appeal most directly to investors looking to invest in sustainable products. This is not to say that other firms are not also strong in capabilities and in possession of some well-branded product, but we see BLK and EV likely generating the strongest ESG-related inflows within our coverage over the next 6-12 months, which should help to solidify their already strong organic growth profiles vs. the industry, which we think can be positive catalysts for their stocks.

This said, we also see several managers leveraging their well-developed ESG capabilities in the intermediate term (i.e. 9-18 months) by creating more ESG-focused product that we think can generate substantial inflows longer term. We see Federated Hermes being especially well positioned given Hermes' specialization as an ESG manager, though inflows are building at a moderate pace, while T. Rowe Price has a robust internal ESG process and a solid brand as a growth manager that we think will benefit from ESG-focused fund launches over the next 12 months. We also see Invesco as capable of creating more ESG-focused product across their very-widely diversified product range over the next 12-18 months, even if ESG processes are not fully integrated across the entire firm for another 2 -3 years.

Longer term, we think Franklin Resources, Janus Henderson, WisdomTree, and AMG's affiliates will also leverage strengths in their ESG processes into material organic growth that could help reduce their current sizeable outflow profiles or even help inflect to positive organic growth. However, we don't see ESG-related products at these firms changing that dynamic within the next 12 months.

Figure 16: Coverage Long-Term Organic Asset Growth Rates

Ticker	2017	2018	2019	2020E	2021E	2022E
AMG	0.7%	-2.6%	-7.8%	-9.4%	-7.3%	-2.2%
BEN	-3.7%	-5.7%	-5.7%	-11.8%	-7.0%	0.2%
BLK	7.0%	2.1%	6.1%	4.1%	5.5%	5.0%
EV	10.2%	2.6%	6.4%	1.5%	5.8%	6.4%
FHI	5.4%	-9.3%	-2.1%	3.0%	5.3%	5.5%
IVZ	1.7%	-5.0%	-3.7%	-3.7%	1.2%	1.9%
JHG	-3.5%	-4.9%	-8.3%	-10.7%	-3.7%	0.7%
TROW	1.7%	1.3%	1.4%	0.0%	1.7%	3.2%
WETF	2.4%	-9.1%	1.1%	-1.5%	2.7%	3.8%
Median	**1.7%**	**-4.9%**	**-2.1%**	**-1.5%**	**1.7%**	**3.2%**

Source : Company Reports, Deutsche Bank estimates

ESG funds can command higher pricing

We also find that fund using ESG strategies are generally higher priced both in active and passive ETFs (Figure 17). This said, as the industry matures, we think management fee rates on ESG products may migrate down toward conventional strategies, at least within actively-managed retail products (see Figure 18 that shows pricing as the top hurdle for embracing ESG, per the FHI survey). We think the pricing differentials may actually hold up better within the ETF industry, should sustainable ETFs be in high demand and if ETF providers increasingly compete on price within the retail-oriented ETF segments.

Figure 17: Asset-Weighted Management Fee Rates by Fund Classifications (bps)

Sustainable Funds' AW Mgmt. Fee

	Mutual Funds				ETFs	
	Active		Passive		Passive	
	US	Non-US	US	Non-US	US	Non-US
Equity	62.5	85.7	19.8	15.9	24.5	27.5
Fixed Income	37.2	43.1	10.0	13.1	16.9	26.8

Exclusionary Funds' AW Mgmt. Fee

	Mutual Funds				ETFs	
	Active		Passive		Passive	
	US	Non-US	US	Non-US	US	Non-US
Equity	32.6	98.0	41.5	41.1	38.1	24.6
Fixed Income	38.4	52.8	-	25.1	28.0	16.8

Non-ESG Funds' AW Mgmt. Fee

	Mutual Funds				ETFs	
	Active		Passive		Passive	
	US	Non-US	US	Non-US	US	Non-US
Equity	54.4	82.8	10.8	12.6	14.1	11.9
Fixed Income	36.3	54.8	8.6	8.8	13.6	23.9

Source : Morningstar Direct, Deutsche Bank

Figure 18: Barriers to Greater ESG Adoption (%)

Source : 2020 Federated Hermes ESG Investing Survey
Note: 50 institutional respondents. Other responses included "lack of uniform definition of ESG and how to monitor asset managers."

We are upgrading BLK and EV in conjunction with this report

We are upgrading both BlackRock and Eaton Vance to Buy Ratings, as we see stronger organic asset growth for both versus peers over our investment horizon. We believe BLK and EV will benefit from their leadership positions in ESG both near term and long term, especially as we expect retail demand for ESG-dedicated products to accelerate. For example, we believe ESG funds will contribute to approximately 20% to BLK's long-term net inflows in 3Q, while ESG flows account for nearly 30% of our FY4Q net inflow forecast for EV (excluding volatile exposure management flows). Additionally, we see less fundamental downside risk (especially to net outflows and lower interest rates) as compared with some peers. We also reiterate our Buy rating on Invesco, although we don't expect a commensurate near-term flow tailwind from ESG-dedicated funds like we do for BLK and EV; we do continue to expect an inflection to positive long-term flows overall to be a positive catalyst for the stock. We go into more detail on our asset manager coverage positioning and organic growth forecasts starting on page 51.

The rise in sustainable investing

Drivers of growth

ESG has clearly become a more popular topic among company management and investors. In July, Deutsche Bank published an ESG Primer: Volume I which outlines why we believe sustainable investing is accelerating and why it is here to stay. We list the key growth drivers discussed in the primer note below.

- Response to climate change awareness.
- The impact of social media and the internet.
- The rise of artificial intelligence (AI) programs.
- Impact of European regulation and US response.
- Green financing opportunities and access to cheaper capital.

Defining sustainable investing

Many investors use the terms ESG and sustainable investing interchangeably. To the purist, however, ESG investing is a subset of a much broader array of sustainable investing strategies. For example,The Global Sustainable Investment Alliance (GSIA) lists seven specific types of investment strategies with "sustainability" as the overarching umbrella (see Figure 19). We believe that the two most used strategies of the seven noted below are negative/exclusionary and ESG integration.

Figure 19: Types of Sustainable Investing

Seven types of sustainable investing						
Negative & exclusionary screening	**Positive/best-in-class screening:**	**Norms-based screening**	**ESG integration:**	**Sustainability-themed investing**	**Impact & community investing**	**Corporate engagement and shareholder action**
Based on specific ESG criteria	Stocks selected from a defined universe for positive ESG performance	Screening for compliance with international norms or standards	Consideration of environment, social and governance factors into financial analysis	Typically themes that address climate change, water, renewable energy, clean tech, diversity, and agriculture	Targeted at solving social or environment problems	Shareholder power to influence corporate behavior

Source : The Global Sustainable Investment Alliance (GSIA, Deutsche Bank)

Third party ESG ratings and data providers

There are over 150 third party ratings and data providers focused on ESG. From our discussions with clients, the two most widely used platforms are Sustainalytics and MSCI. Their respective ratings for securities may be tied to a bond issuance, influence ETF positions or (in aggregate) influence a fund's overall sustainability score. For example, scores from Sustainalytics feed into a fund's sustainability score on Morningstar's platform. Note that Morningstar acquired a controlling stake Sustainalytics earlier this year.

For reference, we highlight a few of the more widely used providers in the table below.

Figure 20: Commonly used third party ESG ratings and data providers

MSCI	MSCI rates ~8,500 companies based on exposure to 37 key ESG issues and their ability to manage those risks relative to peers. Their process involves taking key issues specific for an industry and then normalizing relative to peers to derive a rating from CCC (laggard) to AAA (leader). MSCI uses public data and company disclosure along with alternative data sets (e.g. NGO and government data). Artificial intelligence can be used to ensure timeliness and validate data. MSCI ESG ratings are the foundation for many of the 1,000 MSCI ESG Indexes. A number of company scores can be found at www.msci.com/esg-ratings.
Sustainalytics	Sustainalytics has ESG risk ratings for ~12,500 companies. These ratings currently feed into Morningstar's relative sustainability score for funds. The asset weighted score goes from high risk (1 globe) to low risk (5 globes). Note that the company is to be fully acquired by Morningstar in Q3'20. Sustainalytics' ESG risk ratings methodology involves taking its materiality framework and measuring (1) company exposure to and (2) management of identified material risks. Central "building blocks" of the framework include corporate governance, material ESG issues and idiosyncratic issues (black swans). The absolute ratings represents a company's unmanageable risk and the management gap for perceived manageable risk. The absolute score is expected to allow for comparability across other industries and companies. Companies achieve a score from 0-100 which translates into five different bands indicating negligible (sub 14) to severe (above 70).
CDP (Climate, Forest, Water)	CDP (formerly the Carbon Disclosure Project) ratings can be found at www.cdp.net. The CDP is an international non profit that supports environmental disclosure standards for climate, water and forest data with over 175 indicators. Companies that obtain higher scores (shown as a letter grade A-F) are considered to be more aware of their impact and to be taking action to reduce the negative impacts on the environment and natural resources. In addition, companies that respond to the full CDP climate change request evaluation are eligible to receive a supplier engagement rating. Customers, such as large CPG companies, may have a preference that their suppliers participate. In 2019, over 8,400 companies disclosed through the CDP, a 20% increase in participation from the prior year.
ISS (Known for governance)	Institutional Shareholder Services (ISS) group provides a number of ESG services. We highlight the ISS QualityScore as a respected rating for corporate governance. Companies are ranked from the 1st to 10th decile, with the first representing higher quality practices. The ISS methodology has a different criteria that corresponds to the company's listing region. The rating incorporates factors such as compensation, policies, committee representation, shareholder rights, takeover defenses, audit oversight and controversy risk.
Bloomberg	Bloomberg currently provides ESG data on more than 11,500 companies. Per Bloomberg its proprietary scoring is based on the extent of a company's Environmental, Social, and Governance (ESG) disclosure: The score ranges from 0.1 for companies that disclose a minimum amount of ESG data to 100 for those that disclose every data point collected by Bloomberg. Each data point is weighted in terms of importance, with data such as greenhouse gas emissions carrying greater weight than other disclosures. The score is also tailored to different industry sectors. In this way, each company is only evaluated in terms of the data that is relevant to its industry sector. This score measures the amount of ESG data a company reports publicly, and does not measure the company's performance on any data point. Note that Bloomberg's product is evolving and there may be additional scores/offerings available.
RobecoSAM (Owned by S&P Global)	SAM Corporate Sustainability Assessment (CSA) scores companies from 0-100 and percentile rankings for ~20 financially relevant sustainability criteria across economic, environmental and social dimensions. Companies are assessed via questionnaires assessing a mix of 80-100 cross industry specific questions. Also referred to as RobecoSam (now owned by S&P Global).

Source : Deutsche Bank, MSCI, Sustainalytics, CDP, ISS, Bloomberg, RobecoSam

Using Morningstar to define sustainability

For our analysis, we utilize Morningstar Direct's rich database of mutual fund and ETF AuM, flows, and performance data to analyze the retail ESG universe.

Morningstar broadly distinguishes between sustainable investment strategies by looking at intentionality indicators provided in regulatory filings. **Funds that use positive screens and specific impact goals are defined as "sustainable investments" and funds that use negative screens fall under "employs exclusions." In this report, we call "ESG" the combination of the sustainable investment and exclusionary universes. Though there can be overlap (funds that are both sustainable and employ exclusions), we classify a fund as "sustainable" if Morningstar classifies it as such, and "exclusionary" if it employs exclusions but is not classified as sustainable.**

A fund is a "sustainable investment" if its prospectus or other regulatory filings show an investment objective focused on impact investing or ESG investing. This sustainable investment universe can then be broken down into three subsets:

- **ESG Fund**: These are sustainable strategies that incorporate ESG criteria throughout the investment process or through engagement activities. The vast majority of AuM in US-domiciled sustainable investment funds are classified as ESG funds.
- **Impact Fund:** These are strategies that attempt to make a measurable

impact alongside financial return on specific themes or issues through their investments.

- **Environmental Sector Fund:** These are strategies that invest in environmentally-oriented industries, such as renewable energy or water.

A fund's strategy is defined as "employs exclusions" if certain companies, sectors, or practices are negatively screened out of the portfolio. Many sustainable investment funds are also categorized as employs exclusions. In our report, we define the "exclusionary" funds as those funds which employ exclusions but are not categorized as sustainable investments as to not double count funds in the broader ESG universe.

Measuring sustainable investing and fund flows

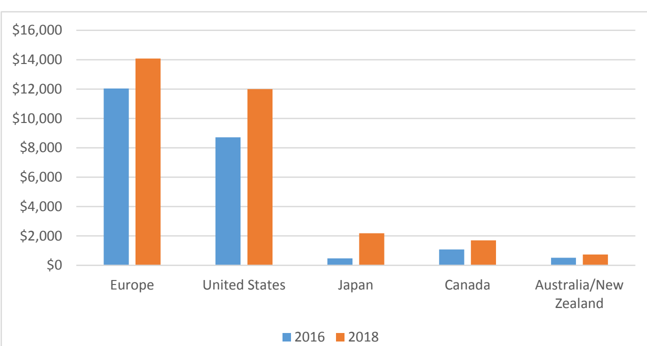
Sizing the market

In this section, we attempt to size the global ESG industry as well as the US market. We then dissect the ESG retail investment fund industry, using data from Morningstar Direct by investment vehicle (mutual fund vs. ETF), investment strategy (equity, fixed income, etc.) and ESG objective.

First, we show the estimated sustainable investing universe based on a 2018 survey from the Global Sustainable Investment Alliance (GSIA). Given that asset data is self reported by individual investment managers, we believe total sustainable AuM may be overstated, especially given a lack of standardization across continents. Additionally, some asset managers may not employ sustainable strategies across all their funds.

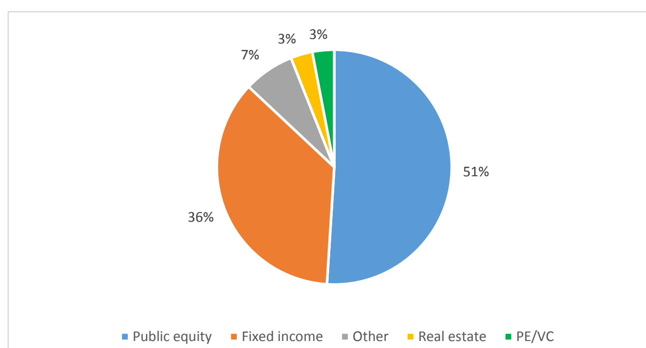
That said, the GSIA survey shows global sustainable AuM grew to $30.7tr in 2018 from $22.8tr in 2016 with Europe accounting for 46% of total sustainable AuM in 2018, followed by 39% in the US (as shown in Figure 21). As shown in Figure 22, just over 50% of sustainable AuM is invested in public equity strategies, followed by 36% in fixed income, with smaller portions in real estate, private equity/VC, and other asset classes. Interestingly, the portion of sustainable AuM held by retail investors increased to 25% in 2018 from 20% in 2016, as noted earlier.

Figure 21: Global Sustainable AuM (USD, bn)



Source : Global Sustainable Investment Alliance, Deutsche Bank

Figure 22: Global Sustainable AuM by Asset Class

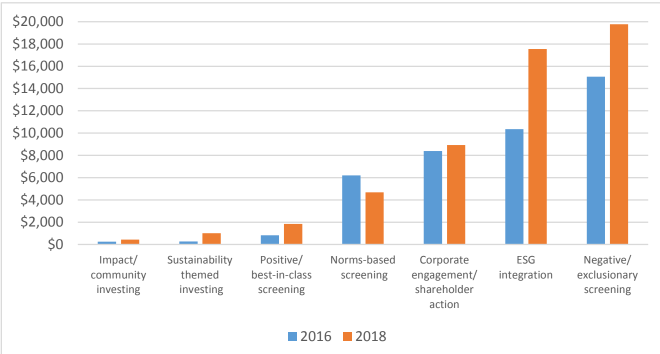


Source : Global Sustainable Investment Alliance, Deutsche Bank
Note: data as of 2018, only includes asset allocation data for Europe, US, Canada, Japan

In the US only, sustainable AuM grew to $12tr in 2018 from $8.7tr in 2016, which represented about ~26% of US total managed assets at the end of 2018. In 2018, about $8.6tr of sustainable AuM was managed for institutional investors with $3.0tr managed for retail investors. Approximately 22%, or $2.6tr of sustainable AuM, was managed in mutual funds, ETFs, variable annuities, and closed-end funds, while just 5% was managed in alternative vehicles (such as private equity and hedge funds). Figure 23 shows global sustainable AuM by various investment strategies. We can easily see that negative/exclusionary strategies are the largest on a global scale with almost $20tr of AuM by the start of 2018, followed closely by

ESG integration strategies with almost $18tr of AuM.

Figure 23: Global Sustainable AuM by Strategy (USD, bn)



Source : Global Sustainable Investment Alliance, Deutsche Bank

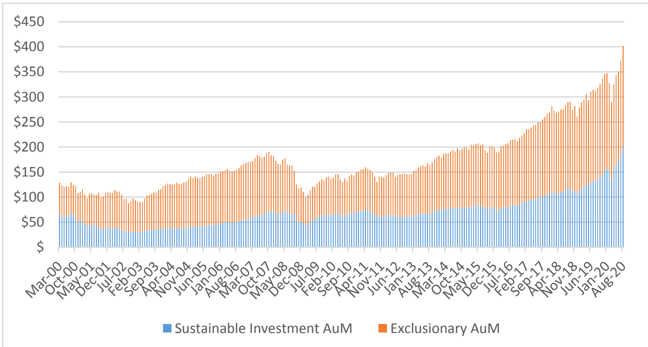
ESG growth in the US retail market has lagged the rest of the world

In this section, we take a closer look at the ESG market in the retail space (i.e. open-end funds and ETFs) in the US and on a global level. We use data from Morningstar Direct to perform this analysis. We believe this data is relatively complete for the US retail market but only partially representative of the global ex-US universe (we think Morningstar captures nearly two thirds of non-US domiciled open-end fund assets). Thus, while not complete internationally, we believe Morningstar does give some valuable insight into the global retail ESG industry.

Very importantly, we use a much narrower definition of ESG strategies compared with the Global Sustainable Investment Alliance. What we call "ESG" in this section refers to the "sustainable investment" classification plus the "exclusionary" classification in the Morningstar methodology. Please see page 13 for a more detailed explanation of each and page 17 below for detail on the wide difference between the AuM disclosed to the GSIA and that calculated by Morningstar.

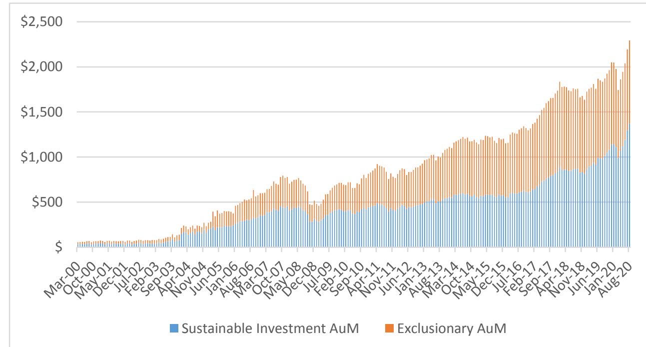
Figure 24 below shows "ESG" AuM in the US as calculated in Morningstar Direct totaled $401bn at the end of August with approximately half in sustainable investments and half in exclusionary funds. And Figure 25 shows that in the global ex-US market, ESG AuM has reached $2.3tr with sustainable investment funds accounting for closer to ~60% of total ESG AuM.

Figure 24: Total US ESG AuM ($bn).



Source : Morningstar Direct, Deutsche Bank

Figure 25: Total Global ex-US ESG AuM ($bn)

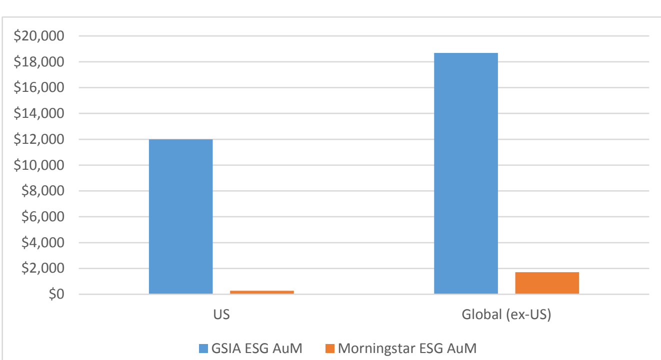


Source : Morningstar Direct, Deutsche Bank

The reported ESG AuM by GSIA in its 2018 survey (data is as of the end of 2017) vs. Morningstar, respectively, was $12tn vs. $269bn in the US and $19tn vs. $2tn globally (ex-US). There are several reasons for this significant discrepancy in AuM. One driver is GSIA's broader definition of ESG which includes funds that have ESG considerations integrated into its investment process, while Morningstar requires funds to have ESG included in its investment objective. Additionally, as mentioned earlier, GSIA uses AuM data that is self-reported by investment managers, which may overstate AuM given the lack of standardized definitions across continents, while Morningstar uses algorithms to search for key words and phrases in fund documents. Lastly, Morningstar data only takes into consideration mutual fund and ETF vehicles while GSIA also incorporates institutional AuM, which accounts for about 75% of the total AuM (including customized ESG strategies for institutional investors). As such, ESG AuM as tabulated by the GSIA is substantially larger than that calculated by Morningstar (see Figure 26).

However, to put the Morningstar ESG AuM into perspective as a portion of the retail industry, as of year-end 2019, US ESG AuM of nearly $350bn accounted for just ~2% of the total US long-term mutual fund & ETF market, using total industry data from the Investment Company Institute (ICI), while just over $2tn of global (ex-US) ESG AuM calculated by Morningstar represented ~7% of total mutual fund & ETFs outside the US. Clearly from the perspective of dedicated ESG investment strategies, we view ESG investing as still relatively nascent in the retail markets, especially in the US.

Figure 26: GSIA vs. Morningstar ESG AuM Data (USD, bn, 2018)



Source : Global Sustainable Investment Alliance, Morningstar Direct, Deutsche Bank

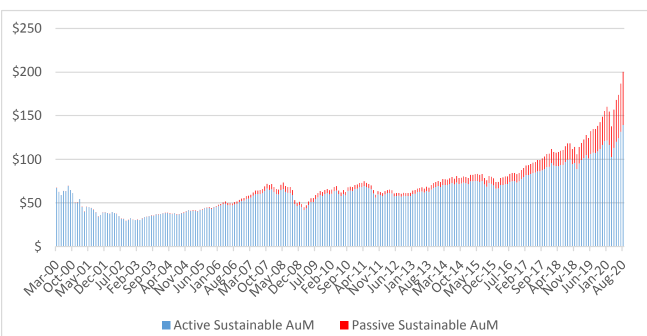
Organic asset growth in sustainable funds is accelerating

Sustainable mutual fund and ETF AuM domiciled in the US has grown to just over $200bn of AuM as of August 2020 (see Figure 27). Approximately 70% of this total AuM is managed in active strategies, but passive sustainable AuM has been growing more rapidly over the past year.

In Figure 28, we can see that the global ex-US sustainable universe is almost 7x larger than the US market. Over 80% of global ex-US sustainable AuM is actively managed, although we believe there is a much larger institutional passively-managed sustainable universe outside of the US, especially in Europe.

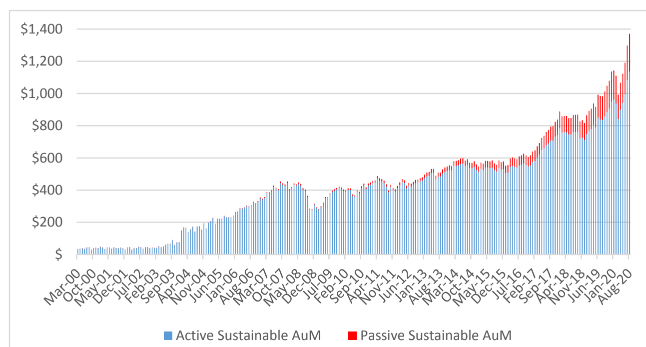
Interestingly, while over 80% of sustainable AuM in the US is managed through equity strategies, as shown in Figure 31, the global ex-US sustainable industry has a more diverse asset class segmentation, with approximately half in equity strategies followed by roughly equal portions in fixed income, allocation, and money market funds (Figure 32). We show total active and passive AuM in US-domiciled sustainable funds versus global ex-US sustainable funds in Figures 29 & 30, respectively, to more easily show the size differential of the two universes.

Figure 27: US Sustainable AuM ($bn) - Active vs. Passively Managed



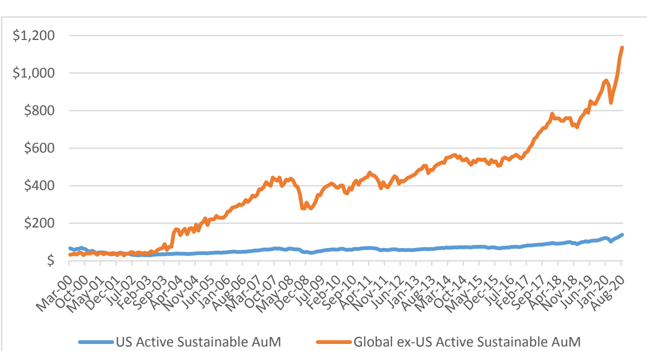
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 28: Global ex-US Sustainable AuM ($bn) - Active vs. Passively Managed



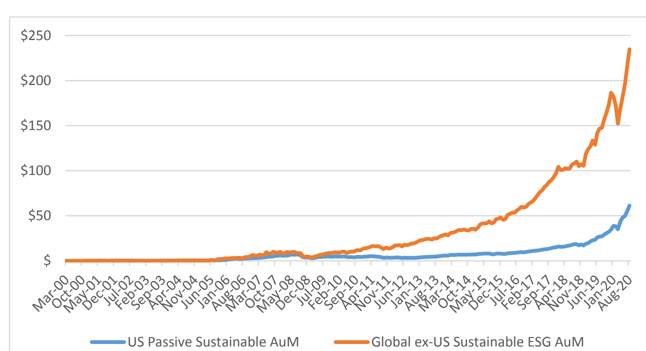
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 29: US vs. Global ex-US Active Sustainable AuM ($bn)



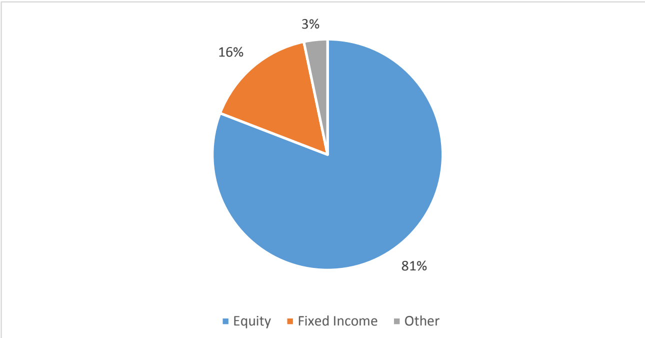
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets

Figure 30: US vs. Global ex-US Passive Sustainable AuM ($bn)



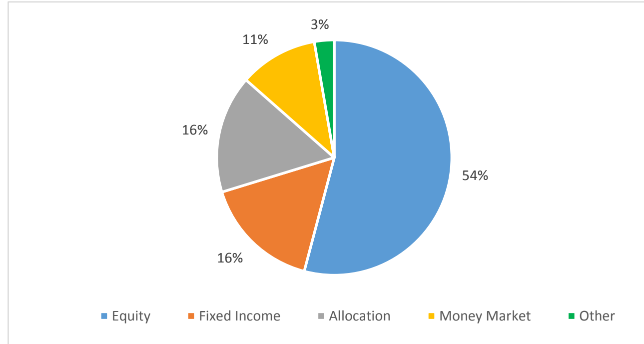
Source : Morningstar Direct, Deutsche Bank
Note: passive includes both index MF + passive ETF assets

Figure 31: US Sustainable AuM By Asset Class



Source : Morningstar Direct, Deutsche Bank
Note: data as of Aug 2020

Figure 32: Global ex-US Sustainable AuM by Asset Class

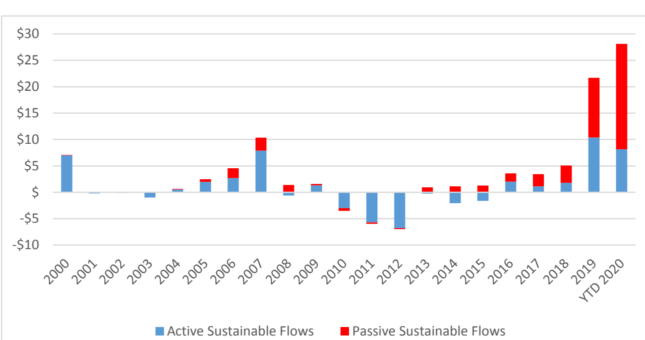


Source : Morningstar Direct, Deutsche Bank
Note: data as of Aug 2020

We show net flow trends on an annual basis since 2000 and YTD through August 2020 for both US-domiciled and global ex-US sustainable funds, respectively, in Figures 33 & 34. In the US, sustainable flows accelerated in 2019 driven by both active and passive sustainable flows. So far this year, sustainable net flows have already surpassed full year 2019 levels due to very strong flows into passive equity sustainable ETFs. Flows in the US seem to be concentrated in a few select products with >70% of active sustainable flows from 5 funds and >60% of passive sustainable flows from 5 funds in 2019.

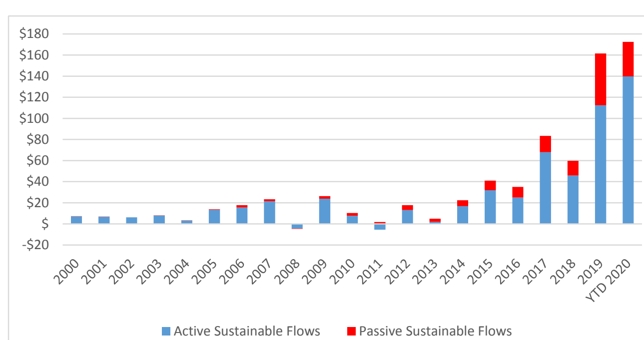
So far this year, we've seen a bit more diversification of active sustainable inflows with the top 5 funds gathering ~55% of total YTD net inflows, although concentration into passive sustainable funds remains similar to 2019 levels. In the global ex-US market, net flows into sustainable strategies have been steadily growing over the past several years and surpassed $160bn in 2019. So far in 2020, active sustainable net inflows have already reached record levels, exceeding full year 2019 flows for the total global ex-US market. Figure 35 shows that the vast majority of net inflows in the US sustainable universe are from equity funds, while global ex-US sustainable flows are more diversified across equity, fixed income, and other asset classes, as shown in Figure 36.

Figure 33: US Sustainable Flows ($bn) - Active vs. Passive



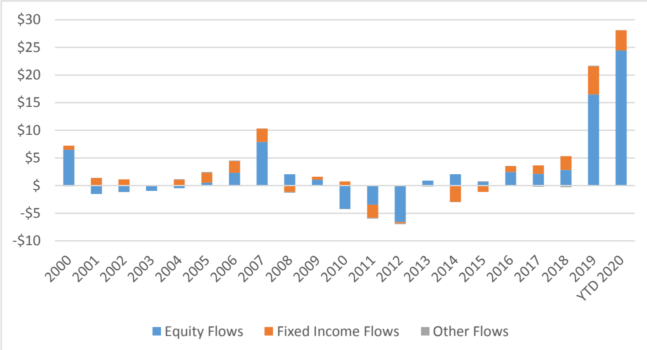
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 34: Global ex-US Sustainable Flows ($bn) - Active vs. Passive



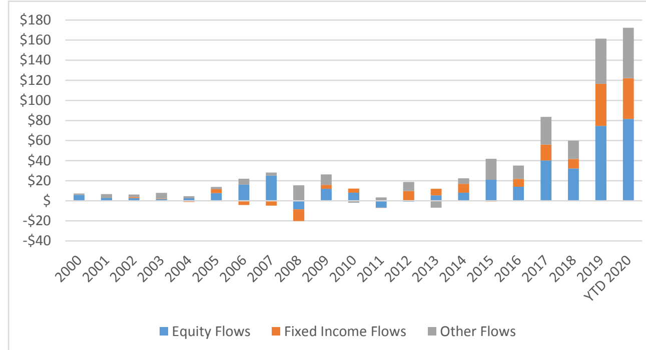
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 35: US Sustainable Flows ($bn) - By Asset Class



Source : Morningstar Direct, Deutsche Bank
Note: YTD thru Aug 2020

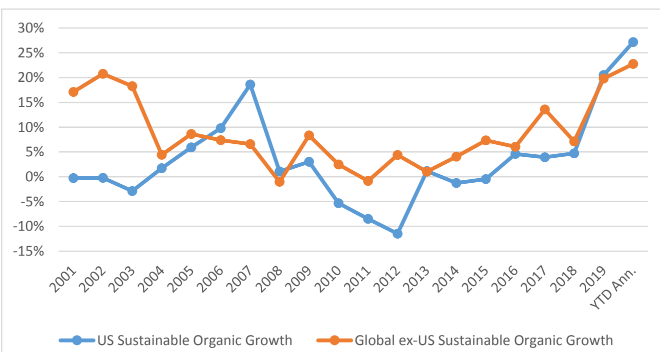
Figure 36: Global ex-US Sustainable Flows ($bn) - By Asset Class



Source : Morningstar Direct, Deutsche Bank
Note: YTD thru Aug 2020

Over the past decade, organic asset growth outside the US in mutual fund and ETF sustainable products has outpaced US-domiciled sustainable funds, as shown in Figure 37. With that said, sustainable organic growth rates in the US are actually higher on an annualized basis so far this year driven by the surge of net inflows into sustainable ETFs, particularly iShares funds.

Figure 37: US vs. Global ex-US Annual Sustainable Organic Growth Rates



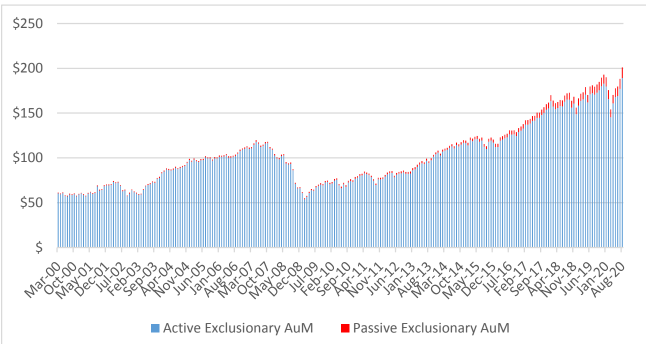
Source : Morningstar Direct, Deutsche Bank
YTD thru Aug 2020

Exclusionary strategies are not growing significantly

In this next set of charts, we take a closer look at the exclusionary fund universe in both the US and globally ex-US. Figure 38 shows exclusionary mutual fund and ETF AuM domiciled in the US since 2000, which has grown to almost $201bn of AuM as of August 2020.

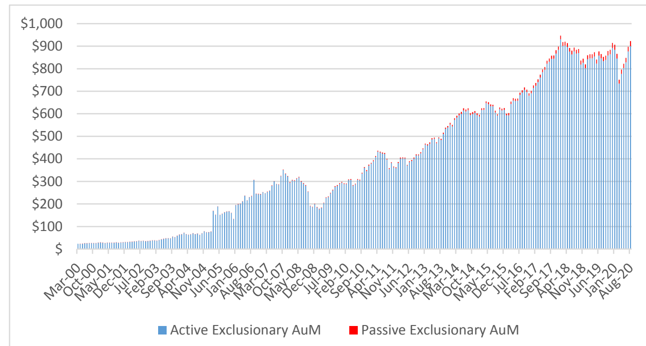
Exclusionary AuM in the US is highly concentrated in active strategies with passive exclusionary AuM accounting for less than 10% of total AuM. In Figure 39, we can see that the global ex-US exclusionary universe is much larger than the US market but has been relatively the same size since 2017. We show total active and passive AuM in US-domiciled exclusionary funds versus global ex-US exclusionary funds in Figures 40 & 41, respectively, to more easily show the size differential of the two universes. Exclusionary AuM is heavily concentrated in equity strategies in US domiciled funds, as shown in Figure 42, but has a much broader asset class mix amongst global ex-US funds (Figure 43), which is a similar dynamic we see in the sustainable fund universe.

Figure 38: US Exclusionary AuM ($bn) - Active vs. Passively Managed



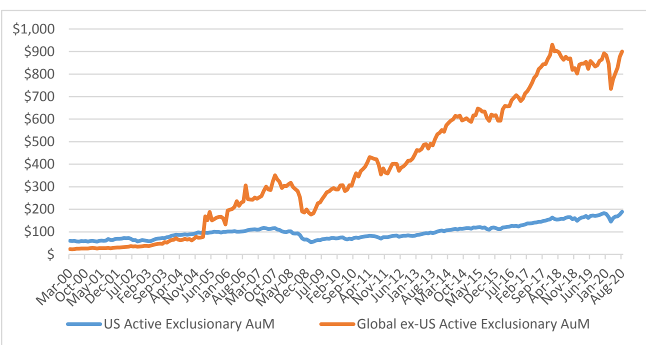
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 39: Global ex-US Exclusionary AuM ($bn) - Active vs. Passively Managed



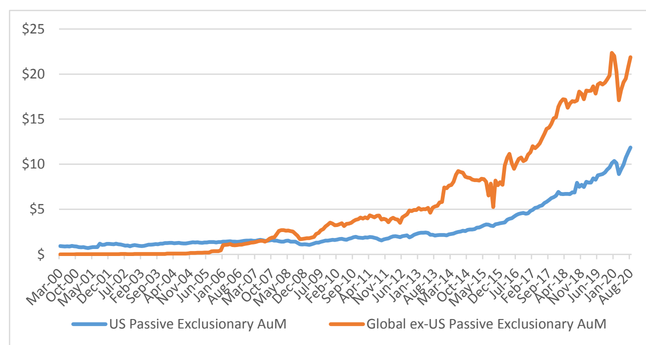
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 40: US vs. Global ex-US Active Exclusionary AuM ($bn)



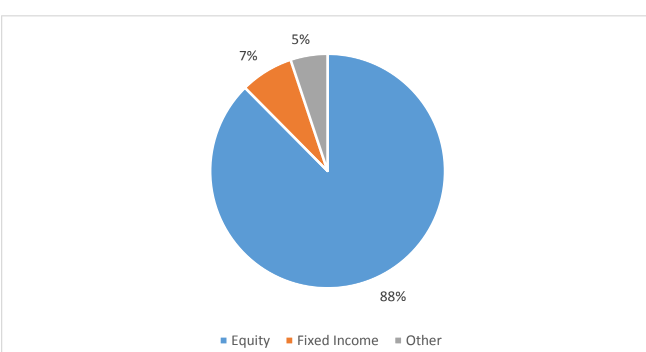
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets

Figure 41:US vs. Global ex-US Passive Exclusionary AuM ($bn)



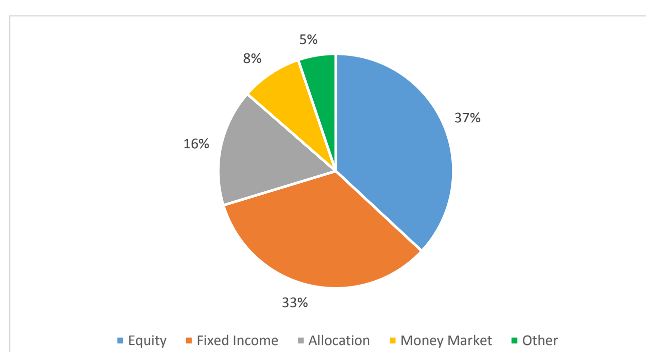
Source : Morningstar Direct, Deutsche Bank
Note: passive includes both index MF + passive ETF assets

Figure 42:US Exclusionary AuM by Asset Class



Source : Morningstar Direct, Deutsche Bank
Note: data as of Aug 2020

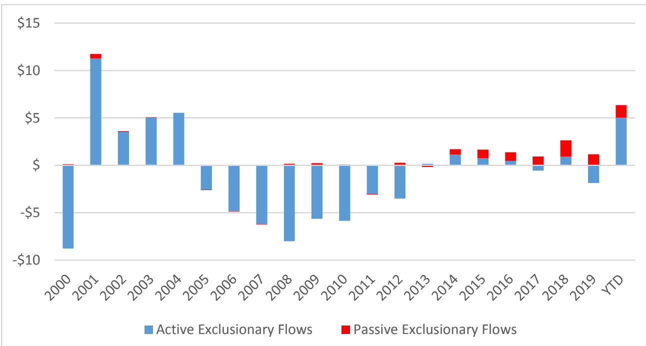
Figure 43: Global ex-US Exclusionary AuM by Asset Class



Source : Morningstar Direct, Deutsche Bank
Note: data as of Aug 2020

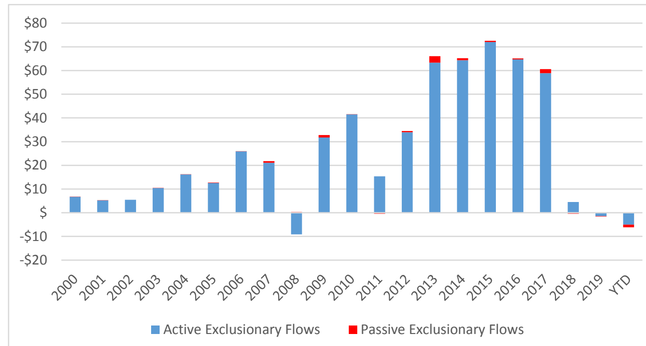
In contrast to the sustainable fund universe, flows into exclusionary funds in the US have been very modest recently, as shown in Figure 44, but have accelerated YTD (especially in August). In the global ex-US universe, net flows into exclusionary funds have actually been negative since 2019 (Figure 45), although global ex-US exclusionary fixed income flows have been positive (Figure 47).

Figure 44: US Exclusionary Flows ($bn) - Active vs. Passive



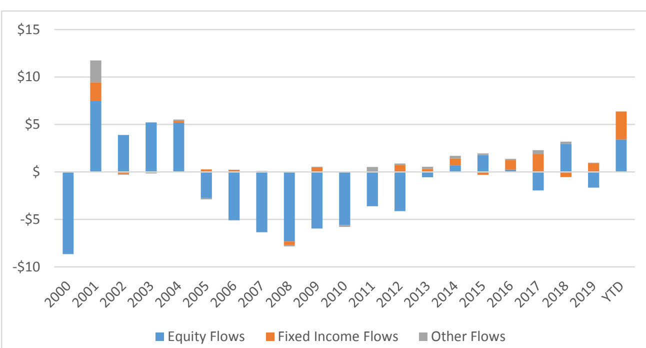
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 45: Global ex-US Exclusionary Flows ($bn) - Active vs. Passive



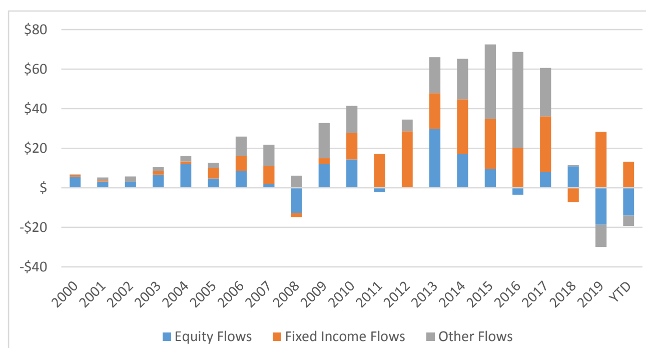
Source : Morningstar Direct, Deutsche Bank
Note: active includes both active MF + active ETF assets; passive includes both index MF + passive ETF assets

Figure 46: US Exclusionary Flows ($bn) - By Asset Class



Source : Morningstar Direct, Deutsche Bank
Note: YTD thru Aug 2020

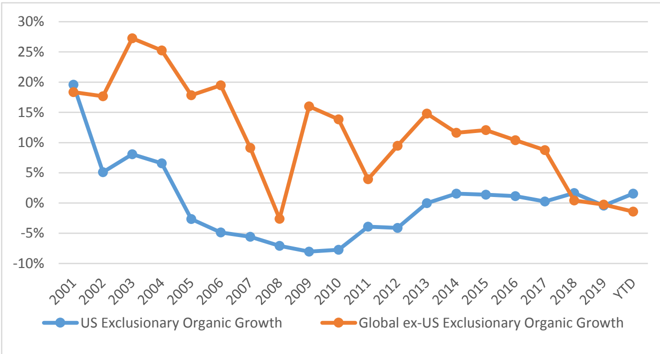
Figure 47: Global ex-US Exclusionary Flows ($bn) - By Asset Class



Source : Morningstar Direct, Deutsche Bank
Note: YTD thru Aug 2020

Figure 48 shows annual organic asset growth rates for exclusionary funds in the US versus globally ex-US. While organic growth rates have been near zero for the past couple of years, exclusionary fund growth in the US has been exceeding that of global ex-US exclusionary funds so far this year.

Figure 48: US vs. Global ex-US Annual Exclusionary Organic Growth Rates



Source : Morningstar Direct, Deutsche Bank
YTD thru Aug 2020

Do ESG Funds Outperform?

In this section, we explore whether or not sustainable and exclusionary funds outperform non-ESG funds across several different classifications. Once again, what we classify as a "sustainable" is what Morningstar Direct calls a "sustainable investment" which it defines as a fund "focusing on sustainability; impact; or environmental, social, and governance, or ESG; factors in its prospectus or other regulatory filings." The funds we are calling "exclusionary" are those defined by Morningstar Direct as "employs exclusions" which exclude certain sectors, companies, or practices. Our fund universe for this particular analysis includes US-domiciled open-ended actively managed equity mutual funds. Not included is ~ $18bn (as of 8/31/20) of passively managed equity mutual funds.

Figure 49: Summary of US-Domiciled Active Equity ESG vs. Non-ESG Fund Performance

Fund Sustainability Rating (Morningstar)	Actively Managed US Equity Retail Funds - Performance From 4Q'18 to 2Q'20		
	ESG Funds		Non ESG
	Sustainable	Exclusionary	
High (highest 10%, low ESG risk)	2.30%	3.00%	2.00%
Above Average (next 22.5%)	2.30%	2.30%	1.80%
Average (next 35%)	1.90%	0.60%	1.80%
Below Average (next 22.5%)	1.90%	1.20%	1.70%
Low (worst 10%, highest ESG risk)	4.30%	1.40%	1.20%
Average	**2.30%**	**1.40%**	**1.70%**
S&P 500	**1.80%**	**1.80%**	**1.80%**
Organic growth	**6.20%**	**-0.70%**	**-5.00%**

Sustainability Rating Definition	Fund Category Definition		
	Sustainable	Exclusionary	Non ESG
A fund's Morningstar Sustainability Rating is its normally distributed ordinal score and descriptive rank relative to the portfolio's global category (e.g. Large Cap Value). It is based on the aggregated Sustainalytics scores for underlying holdings over 12 months.	A fund "focusing on sustainability; impact; or environmental, social, and governance, or ESG; factors in its prospectus or other regulatory filings."	A fund defined by Morningstar Direct as "employs exclusions" which exclude certain sectors, companies, or practices.	All other funds not classified as sustainable or exclusionary irrespective of their Sustainability Rating are classified as Non ESG.

Source : Deutsche Bank, Morningstar Direct

One of the classifications we assess for open end funds in the US is the Morningstar Sustainability Rating, which has data for ~97% of active equity mutual funds. Morningstar Direct places funds into one of five sustainability categories: Low, Below Average, Average, Above Average, and High. The rating is based on their historical aggregate Sustainalytics' score for underlying holdings. Sustainalytics' score for each security issuer within a fund attempts to measure the degree to which a company's economic value could be at risk related to ESG factors. The portfolio's sustainability rating is an asset-weighted average of these company-level Sustainalytics scores. Once a fund's score is determined, the fund is placed into a rating category based on a normal distribution across the portfolio's investment category. The higher the rating within the category, the less at-risk a fund is to ESG issues.

Through our analysis of the Morningstar Sustainability Rating categories (data for which only goes back 7 complete quarters), it is clear that on average, sustainable funds have outperformed non-ESG funds in the same rating category on a quarterly basis (Figure 50). Interestingly, the largest outperformance however, comes from the Low sustainability ratings group followed by the Above Average and then High ratings groups. On the other hand, exclusionary fund alpha was mixed vs. non-ESG but funds in the High rating group outperformed the most on average with 100bps of alpha.

Figure 50: Asset-Weighted Active Equity Mutual Fund Returns for Sustainable, Exclusionary and Non-ESG Funds by Sustainability Rating Category

Morningstar	Sustainable - Active Equity Mutual Fund AW Returns								2Q20 AuM
Sustainability Rating	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	($mn)
High	-12.3%	15.5%	4.4%	1.3%	7.2%	-19.8%	19.6%	**2.3%**	48,445
Above Average	-13.2%	13.2%	4.2%	0.0%	8.7%	-19.0%	22.5%	**2.3%**	25,360
Average	-15.0%	16.1%	2.9%	-4.4%	9.8%	-23.6%	27.3%	**1.9%**	10,498
Below Average	-15.8%	13.9%	4.6%	0.9%	10.0%	-22.5%	22.5%	**1.9%**	1,763
Low	-23.8%	33.0%	-0.2%	-3.4%	20.1%	-22.8%	27.3%	**4.3%**	3,417
Total	**-12.9%**	**14.9%**	**4.2%**	**0.3%**	**8.3%**	**-20.1%**	**21.5%**	**2.3%**	**89,482**

Morningstar	Exclusionary - Active Equity Mutual Fund AW Returns								2Q20 AuM
Sustainability Rating	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	($mn)
High	-14.3%	12.6%	5.5%	1.7%	7.6%	-19.3%	27.0%	**3.0%**	1,373
Above Average	-9.7%	10.5%	4.1%	1.5%	8.0%	-19.6%	20.9%	**2.3%**	8,742
Average	-14.6%	12.9%	3.0%	-0.4%	8.1%	-21.6%	16.8%	**0.6%**	129,565
Below Average	-16.9%	15.4%	5.0%	-0.1%	7.8%	-24.1%	21.6%	**1.2%**	10,623
Low	-17.7%	14.0%	6.3%	0.6%	9.5%	-22.4%	19.3%	**1.4%**	251
Total	**-10.4%**	**11.0%**	**4.1%**	**1.3%**	**7.8%**	**-21.6%**	**17.5%**	**1.4%**	**150,553**

Morningstar	Non-ESG - Active Equity Mutual Fund AW Returns								2Q20 AuM
Sustainability Rating	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	($mn)
High	-13.6%	12.7%	3.7%	0.0%	8.9%	-20.8%	22.8%	**2.0%**	446,966
Above Average	-13.2%	12.4%	3.6%	-0.2%	8.9%	-20.6%	21.9%	**1.8%**	1,274,140
Average	-14.1%	13.6%	3.8%	-0.4%	9.1%	-21.7%	22.3%	**1.8%**	2,089,518
Below Average	-14.8%	13.9%	3.6%	-1.1%	9.5%	-22.0%	23.1%	**1.7%**	2,039,485
Low	-15.3%	15.1%	3.4%	-1.1%	9.1%	-24.2%	21.2%	**1.2%**	541,663
Total	**-14.0%**	**13.3%**	**3.6%**	**-0.5%**	**9.2%**	**-21.8%**	**22.4%**	**1.7%**	**6,391,770**

	Total Active Equity Mutual Fund AW Returns								2Q20 AuM
	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	($mn)
ESG Funds	-12.9%	14.9%	4.2%	0.3%	8.3%	-20.1%	21.5%	**2.3%**	89,482
Employs Exclusions Funds	-10.4%	11.0%	4.1%	1.3%	7.8%	-21.6%	17.5%	**1.4%**	150,553
Non-ESG Funds	-14.0%	13.3%	3.6%	-0.5%	9.2%	-21.8%	22.4%	**1.7%**	6,391,770
Total	**-14.0%**	**13.3%**	**3.7%**	**-0.5%**	**9.1%**	**-21.8%**	**22.3%**	**1.7%**	**6,631,806**

Morningstar	Sustainable Quarterly Alpha vs. Non-ESG Funds							
Sustainability Rating	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average
High	1.3%	2.8%	0.7%	1.3%	-1.7%	1.0%	-3.2%	**0.3%**
Above Average	0.0%	0.9%	0.6%	0.2%	-0.2%	1.6%	0.6%	**0.5%**
Average	-0.9%	2.5%	-0.9%	-3.9%	0.7%	-1.9%	5.0%	**0.1%**
Below Average	-1.0%	0.1%	1.0%	2.0%	0.4%	-0.5%	-0.6%	**0.2%**
Low	-8.4%	17.9%	-3.6%	-2.4%	10.9%	1.3%	6.0%	**3.1%**
Average	**-1.8%**	**4.8%**	**-0.4%**	**-0.5%**	**2.0%**	**0.3%**	**1.6%**	**0.8%**

Morningstar	Exclusionary Quarterly Alpha vs. Non-ESG Funds							
Sustainability Rating	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average
High	-0.8%	-0.1%	1.8%	1.7%	-1.3%	1.6%	4.2%	**1.0%**
Above Average	3.5%	-1.8%	0.5%	1.8%	-0.8%	1.1%	-1.0%	**0.5%**
Average	-0.5%	-0.7%	-0.7%	0.0%	-1.0%	0.2%	-5.5%	**-1.2%**
Below Average	-2.2%	1.6%	1.4%	1.0%	-1.8%	-2.1%	-1.5%	**-0.5%**
Low	-2.3%	-1.1%	2.9%	1.7%	0.4%	1.8%	-2.0%	**0.2%**
Average	**-0.4%**	**-0.4%**	**1.2%**	**1.2%**	**-0.9%**	**0.5%**	**-1.2%**	**0.0%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM as of 6/30/20

Figure 51 shows the percentage of sustainable and exclusionary funds vs. non-ESG funds in the various Morningstar Sustainability Rating categories. Sustainable funds tend to primarily be either Above Average or High on the Sustainability Rating spectrum (based on Sustainalytics data), while exclusionary and non-ESG funds are more likely to be Above Average, Average or Below Average on the Sustainability Rating categories.

Figure 51: % of Equity Sustainable, Exclusionary and Non-ESG Funds by Morningstar Sustainability Rating Category

Morningstar Sustainability Rating	Sustainable - % of Active Equity Mutual Funds by Rating Category						
	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
High	44%	46%	48%	49%	40%	38%	37%
Above Average	28%	26%	23%	25%	26%	27%	28%
Average	19%	21%	22%	18%	14%	14%	16%
Below Average	5%	4%	3%	4%	13%	14%	12%
Low	4%	3%	4%	4%	7%	7%	7%
Total # of Funds	**130**	**136**	**137**	**138**	**141**	**150**	**153**

Morningstar Sustainability Rating	Exclusionary - % of Active Equity Mutual Funds by Rating Category						
	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
High	10%	13%	12%	6%	8%	5%	5%
Above Average	43%	33%	35%	32%	21%	20%	20%
Average	35%	40%	44%	49%	42%	46%	50%
Below Average	8%	10%	6%	6%	28%	25%	20%
Low	4%	4%	4%	8%	2%	4%	5%
Total # of Funds	**51**	**52**	**52**	**53**	**53**	**56**	**56**

Morningstar Sustainability Rating	Non-ESG - % of Active Equity Mutual Funds by Rating Category						
	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
High	8%	8%	9%	9%	9%	8%	8%
Above Average	24%	25%	24%	24%	22%	22%	22%
Average	38%	35%	36%	36%	36%	36%	36%
Below Average	21%	22%	21%	21%	24%	25%	25%
Low	10%	10%	10%	10%	9%	9%	9%
Total # of Funds	**2736**	**2827**	**2856**	**2885**	**2931**	**2959**	**2979**

Source : Morningstar Direct, Deutsche Bank

Perhaps most importantly, it appears that sustainable funds are generating substantially superior organic growth rates vs. non-ESG funds, showing evidence that investors may increasingly be dedicating capital to ESG-oriented funds, and also to a lesser extent, paying attention to sustainability ratings when making their investment decisions. However, exclusionary funds saw modest outflows on average albeit still better than non-ESG funds. Figure 52 shows the annualized organic growth rates segmented by Morningstar Sustainability Rating categories for sustainable, exclusionary and non-ESG funds. While only ~150 funds are classified as sustainable (~1% of active equity fund AuM, compared with 3,000 non-ESG funds), all sustainable fund categories have positive organic growth on average since 4Q18, and each rating category showed substantially superior growth to the respective categories in non-ESG funds albeit there is a better relationship between organic growth and sustainability rating within the non-ESG funds.

To us, this supplies further evidence that investors are focusing more on the presence of an ESG dedicated strategy of funds, rather than solely the sustainability ratings. This said, at least within non-ESG funds, the High Sustainability Rating category has experienced better organic growth over the past several quarters on average vs. funds in lower categories with the gap widening as the rating lowers.

Figure 52: Active Equity Mutual Fund Quarterly Annualized Organic Growth by Sustainability Rating

Morningstar Sustainability Rating	Sustainable - Active Equity Mutual Fund Organic Growth 4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	2Q20 AuM ($mn)
High	-8.3%	7.0%	-3.1%	2.0%	21.6%	-0.6%	8.4%	**3.9%**	48,445
Above Average	-6.5%	0.4%	0.3%	8.4%	5.0%	10.7%	20.4%	**5.5%**	25,360
Average	-4.5%	32.0%	21.8%	12.9%	19.7%	63.4%	29.8%	**25.0%**	10,498
Below Average	19.4%	19.6%	-12.6%	13.9%	-4.3%	-3.8%	-21.0%	**1.6%**	1,763
Low	-10.9%	34.2%	43.1%	5.9%	-6.7%	6.3%	30.6%	**14.7%**	3,417
Total	**-6.6%**	**7.8%**	**1.0%**	**4.3%**	**15.4%**	**6.3%**	**15.1%**	**6.2%**	**89,482**

Morningstar Sustainability Rating	Exclusionary - Active Equity Mutual Fund Organic Growth 4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	2Q20 AuM ($mn)
High	4.1%	-7.2%	-8.9%	-60.5%	-13.0%	-13.6%	-53.5%	**-21.8%**	1,373
Above Average	2.9%	5.1%	0.6%	0.7%	-41.9%	-14.7%	-6.7%	**-7.7%**	8,742
Average	7.7%	-2.8%	-14.8%	-5.0%	-20.7%	1.4%	-1.7%	**-5.1%**	129,565
Below Average	-1.0%	-8.2%	-8.0%	-4.7%	-2.2%	3.7%	-7.3%	**-4.0%**	10,623
Low	-7.5%	7.7%	0.4%	2.9%	2.5%	-9.2%	15.5%	**1.8%**	251
Total	**2.8%**	**3.1%**	**-1.8%**	**-0.8%**	**-5.9%**	**0.3%**	**-2.8%**	**-0.7%**	**150,553**

Morningstar Sustainability Rating	Non-ESG - Active Equity Mutual Fund Organic Growth 4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	2Q20 AuM ($mn)
High	-11.1%	-4.5%	-5.0%	-1.7%	-0.2%	-1.3%	-2.3%	**-3.7%**	446,966
Above Average	-8.0%	-1.0%	-5.2%	-4.5%	-5.5%	-3.9%	-0.7%	**-4.1%**	1,274,140
Average	-8.5%	-4.1%	-5.6%	-6.5%	-5.1%	-7.0%	-3.0%	**-5.7%**	2,089,518
Below Average	-5.5%	-2.1%	-4.3%	-6.8%	-7.4%	-7.8%	-5.4%	**-5.6%**	2,039,485
Low	-9.9%	0.2%	-4.1%	-7.2%	-9.9%	-8.8%	-16.3%	**-8.0%**	541,663
Total	**-6.7%**	**-2.3%**	**-4.4%**	**-5.2%**	**-5.8%**	**-6.2%**	**-4.5%**	**-5.0%**	**6,391,770**

Morningstar Sustainability Rating	Total - Active Equity Mutual Fund Organic Growth 4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	2Q20 AuM ($mn)
High	-10.8%	-4.0%	-4.9%	-1.5%	1.9%	-1.2%	-1.4%	**-3.1%**	496,784
Above Average	-7.2%	-0.6%	-4.8%	-4.1%	-5.7%	-3.7%	-0.4%	**-3.8%**	1,308,241
Average	-8.4%	-3.9%	-5.6%	-6.4%	-5.1%	-6.4%	-2.8%	**-5.5%**	2,229,581
Below Average	-5.5%	-2.1%	-4.3%	-6.7%	-7.1%	-7.8%	-5.5%	**-5.6%**	2,051,870
Low	-9.9%	0.3%	-4.0%	-7.2%	-9.9%	-8.7%	-16.0%	**-7.9%**	545,330
Total	**-1.7%**	**-4.8%**	**-5.1%**	**-5.5%**	**-6.3%**	**-3.3%**	**0.0%**	**-3.8%**	**6,631,806**

Source : Morningstar Direct, Deutsche Bank, AuM as of 6/30/20

We also see stronger organic asset growth in both active equity mutual funds (in Figure 53) and passive equity ETFs (in Figure 54) with higher degrees of ESG integration. In this analysis, we assess organic growth rates by levels of ESG investment integration, or ESG "quality". For instance, we rank a sustainable fund as having the highest degree of ESG quality, followed by exclusionary funds. We then segment the non-sustainable investment and non-exclusionary universe (i.e. non-ESG) by Morningstar Sustainability Ratings. We can clearly see that active equity funds with more of an ESG tilt, or of higher ESG "quality" have had stronger annualized organic asset growth, especially more recently. The relationship also holds mostly true for passive ESG ETFs, especially those classified as sustainable funds.

Figure 53: Active Equity MF Annualized Organic Growth by Degrees of ESG

ESG Category	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	2Q20 AuM ($mn)
Sustainable	-6.6%	7.8%	1.0%	4.3%	15.4%	6.3%	15.1%	**6.2%**	89,803
Exclusionary	2.8%	3.1%	-1.8%	-0.8%	-5.9%	0.3%	-2.8%	**-0.7%**	150,649
Non ESG - High	-9.4%	-3.4%	-2.9%	2.1%	0.2%	0.0%	-2.0%	**-2.2%**	425,617
Non ESG - Above Average	-7.1%	-1.8%	-5.4%	-4.0%	-4.3%	-4.4%	0.1%	**-3.8%**	1,289,716
Non ESG - Average	-8.3%	-3.7%	-5.7%	-6.2%	-6.0%	-7.4%	-3.6%	**-5.8%**	2,043,001
Non ESG - Below Average	-5.2%	-1.4%	-4.9%	-6.0%	-7.0%	-7.1%	-4.9%	**-5.2%**	2,131,068
Non ESG - Low	-8.5%	0.4%	-2.8%	-7.0%	-10.3%	-9.6%	-18.4%	**-8.0%**	527,244
Non ESG - NR	54.3%	-2.6%	53.3%	1.9%	10.0%	15.1%	-16.0%	**16.6%**	37,100
Total	**-6.5%**	**-2.1%**	**-4.2%**	**-5.0%**	**-5.6%**	**-5.9%**	**-4.2%**	**-4.8%**	**6,694,199**

Source : Morningstar Direct, Deutsche Bank

Figure 54: Passive Equity ETF Annualized Organic Growth by Degrees of ESG

ESG Category	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	Average	2Q20 AuM ($mn)
Sustainable	31.1%	66.4%	105.1%	65.1%	43.7%	154.4%	117.2%	**83.3%**	33,139
Exclusionary	12.9%	148.8%	95.0%	34.5%	48.9%	37.7%	10.2%	**55.4%**	1,148
Non ESG - High	-9.0%	2.1%	3.6%	-2.6%	18.0%	9.8%	18.7%	**5.8%**	77,675
Non ESG - Above Average	14.7%	0.0%	5.3%	3.7%	11.2%	9.3%	18.8%	**9.0%**	593,685
Non ESG - Average	9.0%	2.8%	4.6%	2.5%	10.8%	-0.2%	-2.0%	**3.9%**	1,529,870
Non ESG - Below Average	8.8%	5.3%	6.4%	2.9%	11.8%	5.4%	-4.4%	**5.2%**	871,018
Non ESG - Low	-4.1%	-8.6%	-6.7%	0.6%	14.3%	-12.0%	-12.5%	**-4.1%**	83,582
Non ESG - NR	15.5%	42.8%	11.7%	-80.0%	-10.9%	0.7%	-232.4%	**-36.1%**	6,095
Total	**9.2%**	**2.8%**	**5.3%**	**2.4%**	**11.6%**	**3.8%**	**1.3%**	**5.2%**	**3,196,213**

Source : Morningstar Direct, Deutsche Bank

Of course among the most critical investor debate is to what extent ESG funds can outperform non-ESG funds. Thus, we analyzed active equity sustainable and exclusionary funds vs. non-ESG performance based on Morningstar Categories (Figure 55). In 2019, sustainable funds in the major style boxes slightly outperformed the non-ESG funds by 40bps, on average. Sustainable funds have also outperformed over the past 3 years on average by 130bps with alpha coming from most of the large categories. On the other hand, exclusionary funds performed in line with non-ESG funds in 2019 and actually underperformed by 30bps over the past 3 years on average. To the extent sustainable funds can broadly sustain outperformance of non-ESG funds within their investment categories, this could further fuel ESG's stronger organic growth profile.

Figure 55: Sustainable and Exclusionary vs. Non-ESG Fund Returns by Morningstar Categories

	Sustainable Funds			Exclusionary Funds			Non-ESG Funds			Sustainable vs. Non-ESG		Exclusionary vs. Non ESG	
		Asset-Weighted Return			Asset-Weighted Return			Asset-Weighted Return					
Morningstar Category	AuM ($mn)	2019	3yr Annu.	AuM ($mn)	2019	3yr Annu.	AuM ($mn)	2019	3yr Annu.	2019 Alph	3yr Alpha	2019 Alph	3yr Alpha
US Fund Large Blend	44,274	30.7%	13.6%	138,075	25.9%	10.1%	876,369	28.8%	11.1%	1.9%	2.4%	-2.9%	-1.0%
US Fund Large Growth	19,086	34.7%	20.6%	8,838	36.2%	22.0%	1,880,933	31.3%	20.6%	3.5%	-0.1%	5.0%	1.4%
US Fund Foreign International ex-US	6,939	22.5%	2.7%	7,742	21.5%	2.0%	1,444,965	24.5%	3.4%	-2.0%	-0.7%	-3.0%	-1.3%
US Fund Mid-Cap Blend	6,684	28.8%	8.8%	426	23.5%	5.9%	62,233	27.6%	5.6%	1.2%	3.2%	-4.1%	0.3%
US Fund World Large Stock	5,786	27.1%	11.4%	1,409	26.4%	7.5%	418,650	26.5%	8.0%	0.6%	3.4%	-0.1%	-0.6%
US Fund Mid-Cap Growth	4,599	32.7%	18.3%	1,138	35.7%	18.1%	376,456	34.3%	16.8%	-1.7%	1.5%	1.4%	1.4%
US Fund Diversified Emerging Mkts	3,864	21.9%	4.4%	3,155	18.3%	0.8%	366,580	21.9%	2.8%	0.0%	1.6%	-3.6%	-2.1%
US Fund Mid-Cap Value	2,905	24.6%	1.4%	1,412	30.2%	3.9%	178,907	26.2%	2.1%	-1.6%	-0.7%	4.1%	1.8%
US Fund Small Blend	2,734	25.6%	3.7%	911	24.8%	4.3%	127,232	24.5%	2.7%	1.1%	1.0%	0.3%	1.6%
US Fund Large Value	175	27.1%	4.4%	3,560	28.1%	5.3%	791,953	25.7%	5.1%	1.4%	-0.6%	2.4%	0.2%
US Fund Small Value	105	24.4%	-4.7%	73	22.6%	-7.6%	85,408	22.5%	-2.1%	2.0%	-2.7%	0.1%	-5.6%
US Fund Small Growth	82	28.5%	20.7%	-	-	-	220,221	30.5%	14.0%	-2.0%	6.6%	-	-
Total AuM/Average Returns	**97,232**	**27.4%**	**8.8%**	**166,737**	**26.7%**	**6.6%**	**6,829,906**	**27.0%**	**7.5%**	**0.4%**	**1.3%**	**0.0%**	**-0.3%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and 3yr returns as of 8/31/20

Another performance argument centers around whether an ESG focus can enhance an active manager's ability to outperform broad passive substitutes. While certainly showing some ability to counter the fairly persistent underperformance challenges for active management, we still notice difficulty in broadly beating passive comparable ETFs. When comparing sustainable funds by Morningstar category to the general category's ETF equivalent, we discovered a wide range of relative performance on a quarterly basis (Figure 56). We also ran this same analysis for exclusionary and non-ESG funds which you can find tables of in Appendix B (Figures 86 & 87).

Figure 56: Performance of Sustainable Equity Mutual Funds by Category vs. Passive ETFs

ACTIVE

Style	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
U.S. LC Blend	4.8%	3.0%	3.6%	5.7%	-0.7%	2.4%	7.0%	-12.2%	13.8%	4.3%	2.2%	7.8%	-19.1%	19.8%
U.S. LC Growth	8.5%	4.9%	5.2%	6.3%	2.7%	3.7%	8.4%	-12.6%	17.1%	5.8%	0.7%	7.8%	-14.3%	23.8%
U.S. LC Value	4.9%	1.0%	3.1%	6.2%	-1.0%	1.8%	6.0%	-16.0%	12.7%	3.6%	0.5%	8.2%	-29.2%	18.7%
U.S. MC Blend	4.9%	3.1%	2.3%	4.3%	-1.6%	3.5%	3.8%	-11.5%	15.8%	5.0%	2.1%	3.7%	-23.6%	19.7%
U.S. MC Growth	7.2%	5.9%	4.2%	6.2%	-0.2%	5.2%	6.2%	-15.6%	23.7%	3.5%	-5.4%	9.3%	-19.1%	37.3%
U.S. MC Value	6.8%	0.3%	0.5%	7.1%	0.2%	1.7%	3.1%	-18.0%	16.6%	1.0%	-2.5%	8.4%	-33.4%	21.6%
U.S. SC Blend	1.3%	0.9%	3.0%	5.4%	-1.7%	5.5%	2.0%	-16.2%	14.0%	4.9%	-0.7%	5.5%	-26.6%	17.9%
U.S. SC Growth	10.7%	4.6%	6.2%	2.4%	5.7%	10.3%	7.3%	-17.5%	17.8%	4.2%	-2.9%	7.8%	-18.6%	32.8%
U.S. SC Value	-2.1%	0.0%	1.2%	0.4%	-1.1%	6.2%	1.1%	-18.1%	11.6%	1.5%	-0.6%	4.1%	-38.6%	18.6%
Intl ex-U.S.	8.0%	6.6%	5.4%	3.9%	-0.4%	-2.4%	0.7%	-13.7%	10.6%	3.1%	-1.8%	9.5%	-23.8%	18.0%
Emerging Mkts.	9.3%	7.1%	4.8%	5.5%	-1.3%	-0.1%	4.3%	-12.7%	12.5%	5.1%	-0.9%	8.8%	-19.3%	21.9%
Global Equity	12.0%	8.6%	8.2%	6.7%	2.1%	-10.8%	-1.5%	-5.5%	10.9%	1.4%	-2.3%	11.0%	-23.9%	20.4%

PASSIVE

Style	ETF	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
U.S. LC Blend	SPY	5.1%	3.1%	4.4%	6.3%	-1.7%	5.8%	7.4%	-13.8%	13.5%	4.2%	1.8%	9.0%	-19.4%	20.2%
U.S. LC Growth	IWF	8.0%	4.6%	5.8%	7.6%	0.4%	8.3%	8.5%	-16.0%	16.0%	4.2%	1.7%	10.5%	-14.1%	27.7%
U.S. LC Value	IWD	2.4%	1.3%	3.0%	4.8%	-3.4%	3.5%	5.6%	-11.9%	11.8%	3.6%	1.5%	7.3%	-26.7%	14.2%
U.S. MC Blend	IWR	4.2%	2.6%	3.5%	5.5%	-1.2%	5.2%	4.8%	-15.0%	16.5%	3.9%	0.5%	7.0%	-27.1%	24.5%
U.S. MC Growth	IWP	6.1%	4.2%	5.2%	6.2%	1.3%	5.7%	7.1%	-15.5%	19.5%	5.3%	-0.7%	8.1%	-20.2%	30.2%
U.S. MC Value	IWS	2.8%	1.3%	2.1%	5.1%	-3.2%	4.6%	3.3%	-14.7%	14.3%	3.1%	1.2%	6.3%	-31.7%	20.0%
U.S. SC Blend	IWM	1.7%	2.5%	5.9%	2.0%	-1.1%	10.6%	2.9%	-19.2%	14.6%	1.9%	-2.3%	9.9%	-30.6%	25.5%
U.S. SC Growth	IWO	4.8%	4.4%	6.4%	3.2%	1.2%	10.1%	4.6%	-20.5%	17.2%	2.3%	-3.9%	11.4%	-26.0%	31.0%
U.S. SC Value	IWN	-0.9%	0.6%	5.3%	0.8%	-3.6%	10.5%	1.1%	-17.7%	12.0%	1.0%	-0.4%	8.4%	-35.8%	19.3%
Intl ex-U.S.	EFA	7.2%	6.4%	5.0%	3.9%	-1.6%	-0.6%	2.5%	-12.7%	10.3%	3.5%	-0.8%	7.7%	-23.0%	15.5%
Emerging Mkts.	EEM	11.2%	5.6%	8.3%	6.7%	0.6%	-8.0%	0.0%	-7.7%	9.9%	0.7%	-4.8%	12.1%	-23.9%	17.9%
Global Equity	ACWI	6.1%	4.7%	5.1%	5.6%	-1.5%	2.4%	4.7%	-13.0%	12.5%	3.4%	0.1%	8.7%	-21.0%	18.8%

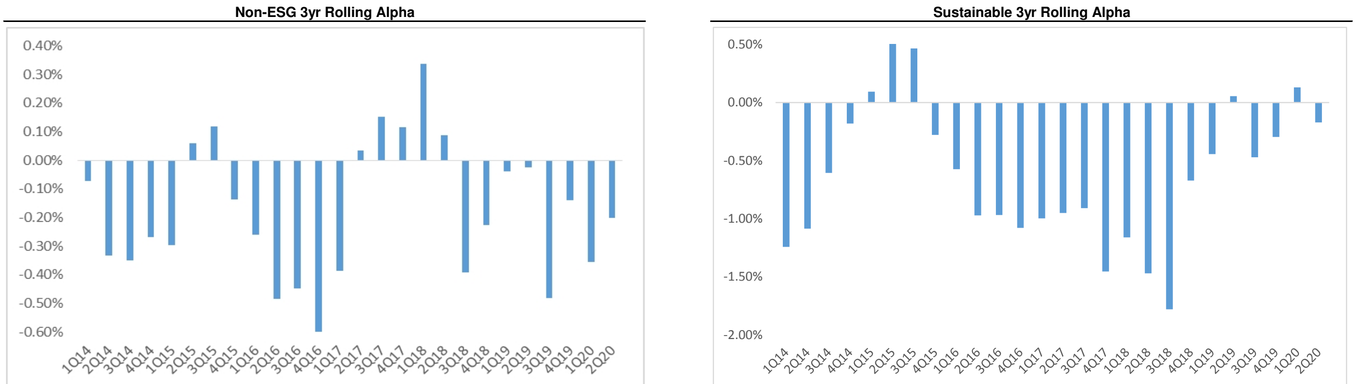
QUARTERLY ALPHA

Style vs.	ETF	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
U.S. LC Blend	SPY	-0.3%	-0.1%	-0.8%	-0.6%	1.0%	-3.5%	-0.4%	1.6%	0.3%	0.0%	0.4%	-1.2%	0.3%	-0.4%
U.S. LC Growth	IWF	0.5%	0.3%	-0.6%	-1.3%	2.3%	-4.6%	-0.1%	3.4%	1.2%	1.6%	-1.1%	-2.6%	-0.2%	-3.9%
U.S. LC Value	IWD	2.5%	-0.3%	0.1%	1.5%	2.4%	-1.7%	0.4%	-4.1%	0.9%	0.0%	-0.9%	0.8%	-2.4%	4.5%
U.S. MC Blend	IWR	0.7%	0.5%	-1.2%	-1.2%	-0.4%	-1.7%	-1.0%	3.6%	-0.7%	1.0%	1.6%	-3.3%	3.5%	-4.9%
U.S. MC Growth	IWP	1.2%	1.8%	-1.0%	0.0%	-1.4%	-0.6%	-0.9%	-0.1%	4.1%	-1.7%	-4.7%	1.1%	1.1%	7.1%
U.S. MC Value	IWS	4.0%	-1.0%	-1.6%	2.0%	3.3%	-2.9%	-0.2%	-3.2%	2.3%	-2.1%	-3.6%	2.1%	-1.6%	1.6%
U.S. SC Blend	IWM	-0.4%	-1.6%	-2.9%	3.3%	-0.6%	-5.1%	-0.9%	3.1%	-0.6%	3.0%	1.6%	-4.4%	4.1%	-7.6%
U.S. SC Growth	IWO	6.0%	0.2%	-0.3%	-0.9%	4.5%	0.1%	2.7%	3.0%	0.6%	1.9%	1.0%	-3.6%	7.4%	1.8%
U.S. SC Value	IWN	-1.2%	-0.6%	-4.1%	-0.3%	2.5%	-4.3%	0.0%	-0.4%	-0.3%	0.5%	-0.2%	-4.2%	-2.7%	-0.8%
Intl ex-U.S.	EFA	0.7%	0.3%	0.4%	0.0%	1.2%	-1.8%	-1.7%	-1.0%	0.3%	-0.5%	-1.0%	1.8%	-0.8%	2.5%
Emerging Mkts.	EEM	-1.9%	1.6%	-3.5%	-1.3%	-1.8%	7.9%	4.3%	-5.0%	2.6%	4.3%	3.8%	-3.3%	4.6%	4.1%
Global Equity	ACWI	5.9%	3.9%	3.2%	1.1%	3.6%	-13.2%	-6.3%	7.4%	-1.6%	-2.1%	-2.4%	2.3%	-2.9%	1.6%
Asset-Weighted		**0.3%**	**0.1%**	**-1.0%**	**-0.4%**	**1.0%**	**-2.9%**	**-0.3%**	**1.2%**	**0.7%**	**0.4%**	**-0.2%**	**-1.2%**	**0.5%**	**-0.5%**

Source : Morningstar Direct, Deutsche Bank

On a 3-year rolling basis, ESG funds underperformed their general ETF benchmarks relatively consistently. Underperformance has improved slightly since 2018, led by better performance in Large-Cap Blend, Large-Cap Growth and Mid-Cap Blend categories. Figure 57 shows the difference in 3-year rolling alpha of non-ESG vs. sustainable funds. While sustainable funds did not experience the outperformance that non-ESG funds saw in mid 2017 - mid 2018, ESG funds have had better performance trends in recent quarters.

Figure 57: Non-ESG vs. Sustainable Active Equity Mutual Fund Performance vs. Benchmark ETFs (3YR Rolling Basis, Quarterly)



Source : Morningstar Direct, Deutsche Bank

Competitive Landscape

Different ESG approaches but dedicated strategies are winning for now

In this section, we assess the different strategic approaches that companies in our traditional asset manager coverage are taking in ESG and show AuM & flows in ESG-dedicated strategies for mutual funds and ETFs, for which we have more complete data compared with institutional investment strategies, which we believe are much further along in ESG adoption. Once again, we are defining ESG retail products by the Morningstar sustainable investment and employs exclusion classifications, which is a very small portion of what are considered ESG AuM as self-reported by asset managers within the Global Sustainable Alliance tabulations.

Figures 58 & 59 show total global sustainable mutual fund AuM and US sustainable mutual fund AuM, respectively, by branding name for the largest 20 firms as well as net flows on an annual basis since 2017. On a global scale, the largest 20 sustainable mutual fund brand names account for almost half of total global sustainable MF AuM. With that said, the top 20 providers have captured only 40% of total net flows YTD versus 60% of total flows in 2017, suggesting that smaller players are gaining some market share more recently. In the US market, there is much more concentration with the top 20 sustainable MF providers accounting for just over 80% of AuM and nearly 90% of net inflows YTD.

Figure 58: Top 20 Global Sustainable MF Providers

Top 20 Global Sustainable MF Brands	Sustainable MF AuM ($mn)	Sustainable MF Net Flows ($mn) 2017	2018	2019	YTD
DWS	88,983	1,677	-2,419	-2,040	-56
Amundi	86,677	4,131	1,546	15,242	2,528
BNP Paribas	69,015	10,326	3,955	8,364	9,664
Handelsbanken	44,486	1,331	1,075	-435	-36
Natixis	43,043	-315	564	269	7,824
Northern Trust	37,663	6,053	4,610	8,326	1,336
La Banque Postale	33,007	1,729	1,238	-340	4,406
Parnassus	29,253	1,433	-2,212	-253	-249
SPP	28,047	1,224	1,188	2,171	1,273
Royal London	28,036	4,732	3,048	4,488	2,815
BlackRock	27,861	491	2,276	11,623	11,325
Swedbank	27,138	447	1,721	86	-899
NN IP	26,998	3,135	1,770	3,669	2,793
Pictet	23,635	2,122	978	2,052	3,755
Eaton Vance	22,868	-24	1,814	3,988	2,790
Nordea	21,422	918	-414	5,661	3,978
Vontobel	19,981	1,796	3,369	2,251	3,308
KBC	19,672	3,778	1,646	5,944	3,954
Allianz Global Investors	18,807	3,666	356	1,696	3,387
KLP	18,069	1,338	238	248	800
Total Top 20 Sustainable MF Brands	**714,661**	**49,987**	**26,347**	**73,009**	**64,697**
Total Sustainable MF Industry	**1,459,865**	**82,923**	**58,446**	**153,677**	**159,218**
Top 20 Brands as a % of Industry	**49%**	**60%**	**45%**	**48%**	**41%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and YTD flows as of 8/31/20

Figure 59: Top 20 US Sustainable MF Providers

Top 20 US Sustainable MF Brands	Sustainable MF AuM ($mn)	Sustainable MF Net Flows ($mn) 2017	2018	2019	YTD
Parnassus	29,253	1,433	-2,212	-253	-249
Eaton Vance	22,868	-24	1,814	3,988	2,790
TIAA	11,574	874	1,776	2,414	1,133
Vanguard	8,640	742	602	1,574	747
Pax World	6,877	-50	-556	40	153
Dimensional	6,236	338	1,115	828	1,648
Putnam	5,719	-377	-471	-352	-269
Eventide	5,266	-46	556	479	567
Amana	3,726	-364	-79	-180	-196
Brown Advisory	3,637	64	305	945	1,079
American Century	2,743	-27	20	1,663	559
Ariel Investments	2,674	-538	-408	-306	-358
Community Capital	2,638	207	-182	322	202
Segall Bryant & Hamill	2,550	316	23	-205	232
Neuberger Berman	2,225	-288	-367	-501	-285
Domini	2,120	292	-18	-175	-26
AllianceBernstein	2,089	43	89	128	291
PIMCO	2,084	-26	149	295	220
Boston Trust & Walden	2,036	-34	-82	58	143
MMA Praxis	1,883	94	57	55	96
Total Top 20 Sustainable MF Brands	**126,838**	**2,627**	**2,131**	**10,816**	**8,478**
Total Sustainable MF Industry	**155,938**	**2,253**	**3,200**	**12,974**	**9,581**
Top 20 Brands as a % of Industry	**81%**	**117%**	**67%**	**83%**	**88%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and YTD flows as of 8/31/20

Figures 60 & 61 show a similar analysis but for top 10 ETF sustainable brand names. The sustainable ETF market is even more concentrated than the sustainable mutual fund industry, both on a global and US-only scale, with the top 10 providers representing 78% and 85% of total sustainable ETF AuM, respectively. iShares has the largest sustainable ETF presence on both a global basis and in the US with 41% of total global sustainable ETF AuM and 54% of total US sustainable ETF AuM. Additionally, iShares' market share may continue to rise with iShares sustainable ETFs attracting 55%/73% of total net inflows YTD on a global and US-only basis, respectively.

Figure 60: Top 10 Global Sustainable ETF Providers

Top 10 Global Sustainable ETF Brands	Sustainable ETF AuM ($mn)	Sustainable ETF Net Flows ($mn) 2017	2018	2019	YTD
iShares	45,117	1,010	2,566	11,912	22,536
UBS	14,684	1,143	1,824	5,466	4,342
Xtrackers	5,520	31	141	2,425	2,839
Amundi	4,836	12	53	1,433	2,369
Invesco	4,067	150	-158	390	916
BNP Paribas	3,532	244	861	1,223	1,037
Lyxor	3,039	210	-1	962	1,107
Vanguard	2,967		167	1,213	1,405
Nuveen	1,699	211	137	283	849
Credit Suisse	1,400				148
Total Top 10 Sustainable ETF Brands	**86,863**	**3,012**	**5,590**	**25,306**	**37,549**
Total Sustainable ETF Industry	**111,052**	**4,020**	**6,501**	**29,574**	**41,326**
Top 10 Brands as a % of Industry	**78%**	**75%**	**86%**	**86%**	**91%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and YTD flows as of 8/31/20

Figure 61: Top 10 US Sustainable ETF Providers

Top 10 US Sustainable ETF Brands	Sustainable ETF AuM ($mn)	Sustainable ETF Net Flows ($mn) 2017	2018	2019	YTD
iShares	23,991	474	1,464	5,012	13,454
Invesco	3,617	150	-168	260	635
Vanguard	2,864		164	1,160	1,362
Xtrackers	2,710	6	-2	1,576	872
Nuveen	1,699	211	137	283	849
State Street	1,064	166	111	-105	131
First Trust	1,023	71	5	162	284
Ark Financial	347			32	379
Global X Management	274	7	4	24	131
ALPS	266		15	82	149
Total Top 10 Sustainable ETF Brands	**37,856**	**1,086**	**1,729**	**8,485**	**18,246**
Total Sustainable ETF Industry	**44,401**	**1,185**	**1,853**	**8,713**	**18,532**
Top 10 Brands as a % of Industry	**85%**	**92%**	**93%**	**97%**	**98%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and YTD flows as of 8/31/20

Figures 62 & 63 show total global exclusionary mutual fund AuM and US exclusionary mutual fund AuM, respectively, by branding name for the largest 20 firms as well as net flows on an annual basis since 2017. There is more concentration in the exclusionary MF universe as compared with the sustainable MF universe with the top 20 brands accounting for over 80% of total exclusionary AuM on a global scale and all AuM in the US.

Figure 62: Top 20 Global Exclusionary MF Providers

Top 20 Global Exclusionary MF Brands	Exclusionary MF AuM ($mn)	Exclusionary MF Net Flows ($mn) 2017	2018	2019	YTD
Fidelity	128,762	1,672	898	6,318	5,244
American Funds	126,972	-1,498	3,479	1,921	-212
Nordea	82,933	79	-6,118	4,374	-140
BNP Paribas	73,362	-1,850	799	-1,146	-2
Robeco	69,469	4,517	648	239	-609
Invesco	66,280	14,381	-3,642	-10,339	-6,409
Aviva	54,215	2,759	475	1,314	2,293
NN IP	42,599	3,284	-717	751	3,273
AMP	35,381	723	113	649	-86
Candriam	31,408	2,634	472	482	-2,983
AllianceBernstein	31,252	5,018	4,536	2,776	-55
Dimensional	28,069	3,872	3,921	2,850	57
Neuberger Berman	26,394	5,413	-361	3,925	869
GuideStone	22,949	860	400	17	-132
Carmignac	21,780	-233	-7,231	-6,944	-1,331
SEI	21,166	3,367	1,003	-489	-860
Handelsbanken	20,739	1,524	2,786	1,345	-79
American Century	17,167	-258	-2,296	-2,892	5,348
Credit Suisse	13,816	1,976	3,014	-187	1,596
ABN AMRO	12,343	-831	-108	-2,195	-1,319
Total Top 20 Exclusionary MF Brands	**927,056**	**47,409**	**2,071**	**2,770**	**4,465**
Total Exclusionary MF Industry	**1,112,196**	**59,695**	**7,459**	**-3,220**	**-406**
Top 20 Brands as a % of Industry	**83%**	**79%**	**28%**	**NM**	**1100%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and YTD flows as of 8/31/20

Figure 63: Top 20 US Exclusionary MF Providers

Top 20 US Exclusionary MF Brands	Exclusionary MF AuM ($mn)	Exclusionary MF Net Flows ($mn) 2017	2018	2019	YTD
American Funds	126,972	-1,498	3,479	1,921	-212
GuideStone	22,949	860	400	17	-132
American Century	17,167	-258	-2,296	-2,892	5,348
Amundi	6,079	-563	-467	-380	-119
Dimensional	4,568	373	826	-42	135
TIAA	3,435	228	366	-8	417
Invesco	3,310	-119	-130	-131	-51
Ave Maria	2,463	85	-24	67	-103
Hartford Investments	1,941	896	544	222	12
Crossmark	1,295	44	53	-53	-50
New Covenant	1,260	-28	-19	-28	-8
Timothy Plan	956	16	-19	-52	-3
Bridgeway	525	-94	-32	-108	-53
Wells Fargo	500	-107	30	-320	-203
SEI	449	43	35	-24	-2
City National Rochdale	346	1	-6	-14	-12
Azzad	261	6	20	24	-1
Morgan Stanley	224	-80	-305	-158	-50
New York Life	202	25	23	-44	6
Amana	129	23	12	39	17
Total Top 20 Exclusionary MF Brands	**195,030**	**-147**	**2,491**	**-1,962**	**4,936**
Total Exclusionary MF Industry	**195,753**	**-261**	**2,490**	**-1,877**	**5,077**
Top 20 Brands as a % of Industry	**100%**	**57%**	**100%**	**105%**	**97%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and YTD flows as of 8/31/20

We see a similarly higher level of concentration for exclusionary ETFs on both a global scale and in the US in Figures 64 & 65, respectively. Invesco has the largest exclusionary ETF presence by far with 31% market share of the global market and over 60% market share of the US market.

Figure 64: Top 10 Global Exclusionary ETF Providers

Top 10 Global Exclusionary ETF Brands	Exclusionary ETF AuM ($mn)	Exclusionary ETF Net Flows ($mn) 2017	2018	2019	YTD
Invesco	3,228	372	13	540	661
Lyxor	2,173	35	-122	-518	-349
ABSA Capital	2,112	-90	-730	335	-106
BNP Paribas	549	551	-113	-234	-34
Inspire	523	98	139	193	47
Kraneshares	499			83	402
Global X Management	401	48	23	100	57
Timothy Plan	337			242	48
Legal & General	291		29	125	51
iShares	265	5	9	9	-6
Total Top 10 Exclusionary ETF Brands	**10,377**	**1,019**	**-752**	**876**	**771**
Total Exclusionary ETF Industry	**11,260**	**1,299**	**-649**	**888**	**616**
Top 20 Brands as a % of Industry	**92%**	**78%**	**116%**	**99%**	**125%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and YTD flows as of 8/31/20

Figure 65: Top 10 US Exclusionary ETF Providers

Top 10 US Exclusionary ETF Brands	Exclusionary ETF AuM ($mn)	Exclusionary ETF Net Flows ($mn) 2017	2018	2019	YTD
Invesco	3,228	372	13	540	22,254
Inspire	523	98	139	193	3,638
Kraneshares	499			83	1,599
Global X Management	401	48	23	100	57
Timothy Plan	337			242	2,390
Xtrackers	105	-4	-1	14	756
Nationwide	101	107	-16	-4	795
Wahed	49			18	268
Toroso	31			4	181
SP Funds	27				159
Total Top 10 Exclusionary ETF Brands	**5,300**	**621**	**157**	**1,190**	**32,096**
Total Exclusionary ETF Industry	**5,300**	**621**	**157**	**1,190**	**32,096**
Top 20 Brands as a % of Industry	**100%**	**100%**	**100%**	**100%**	**100%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM and YTD flows as of 8/31/20

ESG league tables & sustainability ratings in our coverage universe

In this section, we take a closer look at how each of our traditional asset manager companies under coverage define ESG and incorporate ESG into their investment process. We incorporate public information from company websites & documents along with conversations with company management, as well as data from Morningstar Direct. In addition, we assess which firms are best positioned to capitalize on this investing trend in at least the near-to-intermediate term given their ESG product lineups and marketing presence. Figure 66 shows sustainable AuM in mutual funds and ETFs globally for all of our asset manager companies under coverage, including the asset management divisions of the trust banks we cover. BLK, NTRS, and EV have the most sustainable AuM in retail products with over $50bn of BLK iShares sustainable ETF AuM, $40bn of NTRS mutual fund sustainable AuM (mostly index), and $24bn of Eaton Vance mutual fund sustainable AuM from its affiliate Calvert. With that said, our coverage only represents about 11% of the total global sustainable retail universe. In the exclusionary universe, as shown in Figure 67, IVZ has by far the largest market share amongst peers, especially in their mutual fund business.

Figure 66: Coverage Sustainable AuM ($mn)

Ticker	MF AuM	ETF AuM	Total AuM
BLK	$33,022	$50,493	$83,515
NTRS	$39,858	$0	$39,858
EV	$24,146	$0	$24,146
STT	$6,534	$1,357	$7,890
IVZ	$2,675	$4,888	$7,563
JHG	$3,670	$0	$3,670
FHI	$3,025	$0	$3,025
BEN	$2,840	$183	$3,022
BK	$2,473	$0	$2,473
TROW	$656	$0	$656
AMG	$258	$0	$258
WETF	$0	$137	$137
Total Coverage AuM	**$119,156**	**$57,058**	**$176,214**
Total Industry AuM	**$1,459,520**	**$111,052**	**$1,570,572**
Coverage as a % of Industry	**8%**	**51%**	**11%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM as of 8/31/20, includes all domiciled funds

Figure 67: Coverage Exclusionary AuM ($mn)

Ticker	MF AuM	ETF AuM	Total AuM
IVZ	$66,280	$3,228	$69,508
BEN	$5,396	$18	$5,414
TROW	$2,598	$0	$2,598
BLK	$231	$265	$496
FHI	$218	$0	$218
NTRS	$97	$0	$97
EV	$0	$0	$0
STT	$0	$0	$0
JHG	$0	$0	$0
BK	$0	$0	$0
AMG	$0	$0	$0
WETF	$0	$0	$0
Total Coverage AuM	**74,820**	**3,511**	**78,332**
Total Industry AuM	**1,112,196**	**11,260**	**1,123,455**
Coverage as a % of Industry	**7%**	**31%**	**7%**

Source : Morningstar Direct, Deutsche Bank
Note: AuM as of 8/31/20, includes all domiciled funds

We also show YTD net flows for sustainable mutual funds and ETFs across our coverage in Figure 68. BLK has gained the most sustainable net inflows so far this year with over $22bn of iShares sustainable ETF flows and over $11bn of sustainable mutual fund net inflows. Both EV and NTRS have over $1bn of sustainable mutual fund YTD net inflows, while AMG and WETF each have slight net outflows from their sustainable funds YTD. Similarly, IVZ, TROW, and BEN have seen net outflows from exclusionary funds YTD, as shown in Figure 69.

Figure 68: Coverage Sustainable Flows (YTD, $mn)

Ticker	MF Flows	ETF Flows	Total Flows
BLK	$11,325	$22,536	$33,860
EV	$2,790	$0	$2,790
NTRS	$1,336	$0	$1,336
IVZ	-$148	$916	$768
FHI	$722	$0	$722
JHG	$561	$0	$561
BK	$530	$0	$530
BEN	$495	-$76	$419
TROW	$158	$0	$158
STT	-$251	$269	$18
AMG	-$6	$0	-$6
WETF	$0	-$38	-$38
Total Coverage Flows	**$17,512**	**$23,607**	**$41,119**
Total Industry Flows	**$159,213**	**$41,326**	**$200,539**
Coverage as a % of Industry	**11%**	**57%**	**21%**

Source : Morningstar Direct, Deutsche Bank
Note: YTD net flows thru 8/31/20, includes all domiciled funds

Figure 69: Coverage Exclusionary Flows (YTD, $mn)

Ticker	MF Flows	ETF Flows	Total Flows
BLK	$71	-$6	$65
FHI	$31	$0	$31
NTRS	$7	$0	$7
EV	$0	$0	$0
STT	$0	$0	$0
JHG	$0	$0	$0
BK	$0	$0	$0
AMG	$0	$0	$0
WETF	$0	$0	$0
TROW	-$375	$0	-$375
BEN	-$1,133	-$7	-$1,140
IVZ	-$6,409	$661	-$5,749
Total Coverage Flows	**-7,808**	**647**	**-7,160**
Total Industry Flows	**-406**	**616**	**210**
Coverage as a % of Industry	**1923%**	**105%**	**-3403%**

Source : Morningstar Direct, Deutsche Bank
Note: YTD net flows thru 8/31/20, includes all domiciled funds

In Figures 70 & 71, we show the segmentation of active and passive equity AuM by Morningstar Sustainability Ratings for each of our covered companies, across all equity strategies (including both ESG and non-ESG). For active retail strategies, firms with the highest portion of retail AuM with above average Sustainability Ratings were EV, AMG & BK (also NTRS but with less then $1bn in AuM). In passive retail strategies, EV and IVZ had the highest portion of AuM with above average Sustainability Ratings. In Figures 72 & 73, we show how annualized organic asset growth in 2Q20 differed by Sustainability Rating for each manager. Overall, the correlations appear mixed though several managers appear to show noticeably better organic growth rates in their higher Sustainability-rated funds.

Figure 70: Active Equity AuM by Sustainability Rating

	Total AuM	% of Active Equity AuM by Sustainability Rating					
Ticker	**($mn)**	**Low**	**< Avg.**	**Avg.**	**> Avg.**	**High**	**NR**
AMG	$84,280	6%	18%	16%	41%	18%	1%
BEN	$297,199	16%	34%	28%	17%	4%	1%
BK	$53,760	4%	17%	18%	51%	7%	3%
BLK	$157,722	1%	17%	46%	22%	11%	3%
EV	$35,986	5%	14%	14%	52%	15%	0%
FHI	$44,832	22%	35%	26%	15%	2%	0%
IVZ	$235,938	7%	18%	32%	34%	8%	1%
JHG	$144,435	3%	15%	44%	32%	7%	0%
NTRS	$725	0%	0%	19%	49%	32%	0%
STT	$18,426	3%	3%	51%	38%	2%	4%
TROW	$519,967	4%	53%	36%	3%	3%	1%
WETF	$591	0%	14%	39%	0%	3%	44%
Total	**$1,593,861**	**7%**	**32%**	**33%**	**20%**	**6%**	**1%**

Source : Morningstar Direct, Deutsche Bank
Data as of 8/31/20

Figure 71: Passive Equity AuM by Sustainability Rating

	Total AuM	% of Passive Equity AuM by Sustainability Rating					
Ticker	**($mn)**	**Low**	**< Avg.**	**Avg.**	**> Avg.**	**High**	**NR**
AMG	-	-	-	-	-	-	-
BEN	$328	0%	0%	87%	13%	0%	0%
BK	$9,177	0%	23%	77%	0%	0%	0%
BLK	$1,733,031	3%	20%	59%	14%	3%	1%
EV	$4,351	0%	0%	5%	95%	0%	0%
FHI	$670	0%	60%	40%	0%	0%	0%
IVZ	$230,946	2%	6%	24%	66%	1%	1%
JHG	$83	0%	0%	100%	0%	0%	0%
NTRS	$40,651	0%	0%	90%	6%	4%	0%
STT	$47,291	1%	4%	85%	5%	4%	2%
TROW	$34,479	0%	9%	91%	0%	0%	0%
WETF	$28,739	8%	29%	52%	10%	1%	0%
Total	**$2,129,746**	**2%**	**18%**	**57%**	**19%**	**3%**	**1%**

Source : Morningstar Direct, Deutsche Bank
Data as of 8/31/20

Figure 72: Active Equity Organic Growth by Sustainability Rating

	Ann. Organic Growth by Sustainability Rating (2Q20)					
Ticker	**Low**	**< Avg.**	**Avg.**	**> Avg.**	**High**	**NR**
AMG	-57.9%	-14.8%	-14.0%	-14.8%	-9.6%	0.9%
BK	-41.9%	6.7%	-15.2%	-25.1%	-5.2%	-42.2%
BEN	-17.4%	-6.1%	20.7%	-7.5%	27.7%	10.5%
BLK	0.1%	6.2%	38.0%	46.8%	7.2%	-16.1%
EV	-82.9%	-11.7%	-12.2%	3.7%	36.2%	NM
FHI	-20.3%	-23.6%	29.6%	-27.1%	-26.5%	NM
IVZ	-51.2%	-24.3%	-21.6%	-13.0%	-62.8%	11.6%
JHG	-40.6%	-2.7%	-6.6%	-12.9%	-8.3%	-72.6%
NTRS	NM	0.0%	-33.9%	-6.4%	NM	NM
STT	-33.1%	-6.9%	-78.3%	-12.0%	-82.3%	1743.9%
TROW	-49.3%	5.3%	2.0%	-11.0%	-28.8%	39.2%
WETF	NM	-12.2%	-48.4%	NM	-160.6%	372.5%
Average	**-33.0%**	**-1.3%**	**3.9%**	**-6.2%**	**-13.8%**	**77.1%**

Source : Morningstar Direct, Deutsche Bank

Figure 73: Passive Equity Organic Growth by Sustainability Rating

	Ann. Organic Growth by Sustainability Rating (2Q20)					
Ticker	**Low**	**< Avg.**	**Avg.**	**> Avg.**	**High**	**NR**
AMG	-	-	-	-	-	-
BK	NM	-8.3%	-2.6%	NM	NM	NM
BEN	NM	NM	-1.8%	5.1%	NM	NM
BLK	-4.1%	-3.6%	-1.6%	5.8%	7.9%	2.4%
EV	NM	NM	8.4%	8.3%	NM	NM
FHI	NM	-9.0%	-3.4%	NM	NM	NM
IVZ	-4.4%	-8.2%	-1.7%	4.7%	-6.7%	-19.6%
JHG	NM	NM	0.1%	NM	NM	NM
NTRS	NM	NM	1.3%	20.8%	154.6%	-4.2%
STT	2.4%	0.3%	3.1%	8.7%	0.0%	1.2%
TROW	NM	-2.2%	-10.4%	NM	NM	0.0%
WETF	-14.4%	-5.0%	-7.6%	21.5%	34.8%	0.0%
Average	**-4.6%**	**-3.8%**	**-1.7%**	**5.7%**	**10.9%**	**-1.2%**

Source : Morningstar Direct, Deutsche Bank

A closer look at ESG strategies in our coverage universe

In this section, we assess ESG integration for each of the traditional asset managers in our coverage, as well as the asset management divisions of the trust banks we cover. Our views are based on company documents, information from Morningstar, and in most cases, conversations with management. We organize this by a summarized viewpoint for each, along with a brief history of adoption, how we view ESG integrated into the investment process and a brief profile of ESG products currently being managed.

Overall, while we see varying degrees of adoption, ESG factors have generally been considered within the investment process for most of the managers in our coverage for many years, if not decades. However, there is not only a wide range of adoption into the investment processes across our coverage but also in how ESG factors are used in the analysis and investment process, which we outline below with varying levels of detail. We also see a fairly wide disparity in availability of ESG-focused product by firm.

Overall, one of the main conclusions from our analysis is that we think ESG investment capabilities are generally quite strong across most of our coverage. However, we see the greatest industry growth potential in ESG-dedicated products that are really focused on investing in what are regarded as highly rated sustainable companies or factors that indicate companies are advancing rapidly in sustainability characteristics.

In this regard, we see BlackRock and Eaton Vance as the most advanced within our coverage in terms of dedicated ESG product in the marketplace now that is generally strong in its ESG investment capabilities and/or well-branded so as to appeal most directly to investors looking to invest in sustainable products. This is not to say that other firms are not also strong in capabilities and possession of some well-branded product, but we see BLK and EV likely generating the strongest ESG-related inflows within our coverage over the next 6-12 months, which should help to solidify their already strong organic growth profiles vs. the industry, which we think can be positive catalysts for their stocks.

This said, we also see several managers leveraging their well-developed ESG capabilities in the intermediate term (i.e. 9-18 months) by creating more ESG-focused product that we think can generate substantial inflows longer term. We think Federated Hermes is especially well positioned given Hermes' specialization as an ESG manager, though inflows are building at a moderate pace, while T. Rowe Price has a robust internal ESG process and a solid brand as a growth manager that we think will benefit from ESG-focused fund launches over the next 12-18 months. We also see Invesco as capable of creating more ESG-focused product across their very widely diversified product range over the next 12-18 months, even if ESG processes are not fully integrated across the entire firm for another 2 -3 years.

Longer term, we think Franklin Resources, Janus Henderson, WisdomTree, and AMG's affiliates will also leverage strengths in their ESG processes into material organic growth that could help reduce their current sizeable outflow profiles or even help inflect to positive organic growth. However, we don't see ESG-related products at these firms changing that dynamic within the next 12 months.

We also briefly highlight ESG capabilities for the asset management divisions of the trust banks we cover, BNY Mellon (BK), Northern Trust (NTRS), and State Street (STT). Overall, we see ESG considerations as generally quite advanced at the trust banks, certainly in the asset management divisions (including some of BK's investment management affiliates), but also across other entities of the firms, including asset servicing and wealth management. For the purpose of this report, we are focusing only on the asset management units. Overall, despite strong ESG capabilities and potential to leverage these into significant product inflows, we do not see ESG-related inflows as material drivers or catalysts for the trust bank stocks, at least for now.

Affiliated Managers Group (AMG)

With about 30 investment management firms in AMG's affiliate ownership model, ESG considerations reside entirely with each investment affiliate's investment process & product strategy, with AMG providing support in a variety of ways. Although there is a wide range of intensity of ESG focus across AMG's affiliates, we believe several of AMG's managers will increasingly create dedicated ESG product, potentially helping to improve the overall firm's organic growth dynamic over the long term.

History of ESG adoption: AMG does not have a centralized ESG integration policy across its investment affiliates given the nature of its relationship with each individual investment manager. With that said, many of AMG's affiliates have incorporated ESG considerations into their investment process in a variety of ways over time, particulary in response to institutional demand for ESG, which is further along in its development compared with retail. In fact, nearly half of AMG's affiliates have signed the United Nations-sponsored Principles for Responsible Investment.

In addition, AMG considers ESG capabilities in its process for making new investments in affiliates, especially in considering how ESG factors into each affiliate's investment process. We think this focus will likely increase and may drive new investments at least incrementally toward ESG-focused firms in the future. For example, most recently, AMG facilitated the spin out of Inclusive Capital from Value Act, which will be dedicated to responsible capitalism and improving societal and environmental performance through its portfolio companies. In addition to AMG's role in selecting new investment affiliates, management is also focused on providing ESG support to affiliates in a variety of ways. This includes providing insight on demand for ESG products to affiliates and helping to drive sales of these products for affiliates via AMG's distribution team & broader industry relationships, as well as providing assistance in product creation and design, to some extent.

ESG integration into investment process: Each of AMG's affiliates has investment autonomy and therefore approaches ESG investing and integration in different ways. That said, AMG management believes roughly 80% of total AuM incorporates some element of ESG consideration into the investment process. For example, AQR actively trades around governance signals in the majority of its equity and fixed income portfolios and also offers dedicated ESG strategies, such as impact investing and low-carbon strategies, and including customized ESG portfolios. EIG has been investing in renewable energy and infrastructure for many years. Pantheon applies a very comprehensive ESG policy across all of its investment strategies. And Artemis just hired a global sustainable equity investment team that expects to launch new strategies in 2021. Other affiliates with specific integrated ESG processes include Harding Loevner, Veritas, Montrusco Bolton & GW&K.

ESG product suite: While AMG and most of its affiliates can market ESG as an important consideration in the investment process, likely an increasingly positive factor for sales, a minority of strategies are focused principally on ESG investments at this time, such as impact investing or dedicated focus on clean energy. This currently consists of numerous strategies at several affiliates, which we believe likely amounts to less than 10% of AMG's total AuM (e.g., we think well under $65bn, though the firm does not disclose this). This includes any ESG customized institutional strategies across the affiliates, such as at AQR, and also renewable energy & infrastructure funds at EIG. In addition to upcoming ESG fund launches at Inclusive Capital and Artemis, we expect other affiliates to create ESG-dedicated products over time.

BlackRock (BLK)

We view BlackRock as being broadly the most advanced in ESG within our coverage, with the greatest amount of dedicated ESG product, a major focus on corporate engagement, and development of strong data analytics. We are optimistic on BLK's comprehensive approach to ESG integration into its investment process as the company's vast resources will continue to support the growth of this initiative. Overall, we believe BLK's goal of reaching $1 trillion in sustainable AuM by 2030, from about $125bn today, will place the company on a path for continued leadership in the ESG arena as well as overall organic AuM growth.

History of ESG adoption: ESG has been an important consideration for BLK for quite some time, and BLK became a signatory of the United Nations-sponsored Principles for Responsible Investment in 2008, earlier than most other investment managers we cover. A significant part of the ESG focus began with the acquisition of BGI in 2009 with its sizeable passive index presence which more than doubled BLK's AuM to over $3tr (and $300bn in iShares). This made BLK a large shareholder in many companies and over time, management raised its focus on using its shareholder position to engage with companies on ESG issues. With the BGI deal, BLK also acquired some passive ESG product, nearly $1bn in ESG iShares for example.

Over the past decade, and especially in the past 2-3 years, BLK raised its focus on ESG both externally with corporate engagement and internally with integration of ESG into the investment process and enhanced data analytical capabilities. Coming into 2019, dedicated ESG product was still fairly limited aside from customized institutional strategies, before ESG iShares growth accelerated (from $6bn in 2018 to $23bn in 2019 & over $50bn today).

In early 2020, BLK instituted a firm-wide rule requiring all active investment teams and advisory strategies to fully integrate ESG into their investment process. This mandate includes a description of how ESG fits into each individual investment process, identifies portfolio managers as responsible for monitoring material ESG risks, and requires all investment teams to provide evidence of how ESG considerations help shape the portfolio. As of April, about 70% of 5,600 active equity and fixed income investment portfolios were considered fully ESG integrated.

ESG integration into investment process: BLK incorporates ESG factors into investment decisions to improve financial returns across all types of investment styles, including in both public and private markets as well as in active and passive strategies. While each investment team is allowed to utilize its own ESG integration approach, BLK's global investment committee also partners with a sustainable investment team to shape a relatively consistent ESG approach globally. ESG risks that are material will vary by sector, client objectives, investment style and market trends. In addition to the investment teams' ESG analysis, BLK's Risk and Quantitative Analysis team, a centralized team, performs regular portfolio reviews taking into consideration ESG factors, along with more traditional financial risks.

To aid in this ESG integration, BLK investment professionals have access to ESG insights through both proprietary data sets as well as over 10 unique ESG data providers. Data from third party vendors is incorporated into Aladdin along with proprietary measurement tools and data analytics. BLK has also developed unique capabilities to gain ESG insight, such as web scraping social media and third party research. On the passive side of the business, BLK's investment stewardship process works with companies to provide transparency for material ESG risks.

ESG product suite: BLK currently classifies over $125bn of AuM as dedicated sustainable assets, which can be broken up into three categories; Broad, Thematic and Impact. BLK manages around $82bn of "broad" ESG strategies, which are defined as products with high ESG performance measures. There is also an additional $16bn in BLK baseline screens that employ exclusionary strategies. We think the majority of these assets are in mutual funds and ETFs (we can see over $80bn of sustainable MF/ETF AuM in Morningstar). BLK also manages $22bn of thematic ESG AuM, which focuses on a particular environment, social, or governance topic. Impact investing can be defined as strategies focusing on positively influencing specific ESG factors, which we think are managed primarily through illiquid alternative funds (including $8bn global renewable power fund & $5bn global power and infrastructure fund). BLK management has a stated goal of growing ESG AuM from $125bn today to $1tr by 2030. While the $125bn is only ~2% of long-term AuM, we think ESG-focused products are currently driving over 20% of long-term product organic growth.

BLK's ETF ESG AuM has seen particularly strong growth this year. Global iShares ESG AuM (what we consider both sustainable and exclusionary) reached $53bn at the end of August, up from $27bn at the end of 2019, with $22.5bn of YTD net inflows. The firm now has 77 ESG ETFs, with a plan to reach ~150 by 2023, although the AuM is fairly concentrated with only 12 iShares ESG funds with AuM over $1bn at this point.

Franklin Templeton (BEN)

Like most large asset managers, Franklin/Templeton has also embedded ESG considerations into investment process for many years. In addition, some affiliates at the recently acquired Legg Mason entity have also integrated ESG factors into their investment process, particularly at Clearbridge and Western Asset Management. However, aside from some customized ESG institutional mandates, we view BEN's dedicated ESG product range as somewhat limited for now, though we belive the firm will increasingly launch ESG-focused products over time, although we believe management's primary near- to intermediate-term focus is on the Legg Mason integration.

History of ESG adoption: Franklin Templeton has long been an advocate of ESG issues, and signed the United Nations-sponsored Principles for Responsible Investment in 2013 (with some Legg Mason affiliates signing as early as 2008). Franklin management has embedded ESG considerations into its investment process for quite some time, having also established a dedicated ESG team led from London, which is a resource for investment teams in regards to ESG factors and risks. We believe culturally this has been led from the Templeton side of the franchise given the historical focus on ESG investing of global investors, but is also now well embedded into legacy Franklin strategies. In addition, several affiliates at the recently acquired Legg Mason entity have also integrated ESG factors into their investment process many years ago, particularly at Clearbridge and Western Asset Management (each for over 30 years) and also Brandywine Global, Clarion Partners, Martin Currie, Royce Investors, and QS Investors.

ESG integration into investment process: BEN takes a somewhat standardized approach to ESG investing across the firm, which includes an ESG committee and working groups by asset class, though portfolio managers have discretion in terms of incorporating ESG factors into their investment process and many look to identify companies that may soon improve ESG ratings that could positively benefit their securities prices. Investment teams essentially utilize proprietary ESG research as well as external data to help incorporate ESG considerations and risks into their investment decisions. With that said, there are no firm-wide restrictions or mandates related to ESG, except the banning of investing in controversial weapons, as BEN values the independence of each investment group. The risk management group also considers ESG risks at the portfolio level alongside more traditional financial risks. Both the investment professionals and risk management committee have access to a dedicated team of ESG specialists who track global sustainable themes and provide guidance on best practices.

Most of Legg Mason's affiliates have also integrated ESG into their investment processes, particularly at ClearBridge and Western Asset Management. ClearBridge takes a comprehensive approach to ESG integration and considers ESG explicitly included in the financial analysts' research process. All companies in ClearBridge's coverage universe are given a proprietary ESG rating that is updated at least annually. The ratings are determined by the investment teams and taken into consideration in the investment process alongside traditional fundamental factors. Investment teams also actively engage with companies to encourage improvement in ESG issues.

Western Asset Management takes a top-down macroeconomic approach to its credit analysis and believes that ESG considerations are an essential component of this process. Investment teams take into account an array of factors at the macroeconomic level. For example, an investment team looks at a company’s or sovereign’s impact on climate change, natural resource consumption, and use of fossil fuels or renewable energy and how it could affect income, wealth and growth in the future. This analysis is used to help shape sector allocation decisions.

Additionally, ESG analysis is performed at the subsector and issuer levels in order to help form a well-rounded view on creditworthiness. A Global ESG Advisory Committee works with the Global Head of ESG investments to form the firm's overall ESG framework and help integrate it throughout the firm.

Within other Legg Mason affiliates, Brandywine has integrated ESG into its research process on the equity and fixed income sides and has a 25-year track record of managing custom ESG portfolios for institutional clients. Clarion has embedded ESG considerations into its real estate acquisition process using green building certifications and energy rating programs throughout the life cycle of its investments. Martin Currie has ESG analysis factored into its investment process, with a head of stewardship leading the ESG & company engagement effort. Royce also embeds ESG into its research & investment process with a senior analyst on each investment team responsible for ESG factors. QS investors aggregates data from third party vendors and allows clients to create ESG-screened portfolios.

ESG product suite: While BEN and the newly acquired Legg Mason affiliates incorporate ESG risk factors into investment decisions, we believe the ESG dedicated product offering across the entirety of the franchise is still somewhat limited, especially in the US, with only ~$8bn of ESG AuM in mutual funds and ETFs. However, BEN is gaining substantial ESG resources with its recent acquisition of Legg Mason, albeit the product offerings that are trackable in Morningstar Direct remains low at just over $1bn in AuM, from ClearBridge, Martin Currie, and Western. This said, we believe institutional offerings are more robust with ClearBridge having ESG dedicated vehicles including institutional and retail separate accounts in some 20+ different ESG products, and both Brandywine & Western also offering customized ESG strategies for institutional clients. While the firm does not disclose AuM in dedicated ESG product, we believe it is likely less than ~5% of AuM, or less than ~$75bn.

Eaton Vance (EV)

We see EV as having one of the deepest and differentiated ESG capabilities within our coverage via their acquisition of Calvert Research and Management in late 2016 and ESG customization capability within their Parametric affiliate. We are also optimistic on EV's recent efforts in cross-selling Calvert's ESG research capabilities to institutional clients and adopting more rigorous ESG investment acumen across the entirety of EV's franchise. Thus, with significant product available in the ESG marketplace currently, we believe EV will continue to generate significant ESG product flows for at least the near to intermediate term.

History of ESG adoption: EV's focus on ESG essentially began in earnest with its acquisition of Calvert in December 2016, a firm that traces its responsible investing platform back to 1982. EV became a signatory of the United Nations-sponsored Principles for Responsible Investment in 2015, though Calvert signed in 2006. Over the past two years, all of EV's investment affiliates (Eaton Vance Management, Atlanta Capital, Parametric) have gained access to Calvert's proprietary ESG research to help aid in their own investment processes and fundamental analysis. EV management is currently going through a documentation process to see if investment strategies at EVM and Atlanta Capital qualify as "ESG integrated" under UNPRI and CFA Institute standards. We have also begun to see more cross-selling across EV's investment affiliates utilizing Calvert's ESG capabilities. For example, EV launched Calvert Leaders in June 2020, which allows Parametric clients to invest in Calvert's list of highest-scoring ESG stocks in a separately managed account (SMA) format.

ESG integration into investment process: EV offers three types of responsible investing strategies. The smallest category includes impact investing, such as water preservation and green initiatives. The second-largest category focuses on screening, which is done in both active and passive strategies mostly at Parametric, and allows clients to either build a portfolio around an ESG index (created by Calvert, for example) or add an ESG tilt to a non-ESG portfolio. The largest category is ESG integration, which is primarily run by Calvert Research and Management, with nearly $24bn in ESG-managed AuM. EV employs roughly 40 ESG-dedicated professionals across research, portfolio management, sales and distribution, as well as 12 empoyees who work on ESG-related projects on a part-time basis.

Calvert conducts in-depth, proprietary ESG research to help generate competitive long-term investment returns in contrast to many other asset managers that rely more heavily on third party data. Their process compiles information from 12 external vendors as well as decades of internal research to generate ESG scores that emphasize financial materiality. Calvert has a team of 27 ESG specialists, including 12 ESG research analysts, 6 quantitative ESG analysts, 6 engagement professionals, and 3 ESG operations analysts. The ESG investment team covers ~3,000 companies divided into 11 sectors based on common ESG risks. In addition, Calvert takes a very active approach to engagement with company management about various ESG issues. The form of engagement can include public policy initiatives, proxy voting, written campaigns, and of course, direct dialogue.

ESG product suite: EV currently manages about ~$50bn of ESG AuM (as of 7/31) though management believes that could expand to roughly $75bn if at least half of EVM's $47bn of fixed income AuM becomes classified as ESG-integrated by year-end (per documentation of usage of ESG factors in the investment process). If successful, EV could classify ~10% of its firmwide AuM as responsible investing. Calvert currently manages $23.5bn of ESG AuM, including 28 mutual funds (10 active fixed income funds, 7 active equity funds, 5 passive equity funds, 4 asset allocation funds, and 2 thematic funds). Calvert's AuM has more than doubled since the time of acquisition with a fiscal YTD annualized organic asset growth rate of ~23%, well above industry averages. The remaining ESG AuM is managed by Parametric with roughly $19bn in custom core strategies (both active and passively managed) as well as smaller ESG strategies in corporate bond ladders and CPM tilts.

Federated Hermes (FHI)

We view FHI's ESG capabilities as one of the strongest in our coverage via Federated's 2018 acquisition of Hermes Investment Management, which has a primary focus on ESG. Through Hermes, the firm has a very comprehensive proprietary database of ESG along with a seasoned ESG team that also focuses heavily on ESG engagement with companies. We think FHI has strong potential to leverage Hermes' capabilities into significant organic growth of ESG products, though we view the legacy Federated as being in relatively early stages of integrating ESG across the entire firm and creating ESG dedicated products for US investors, so organic growth in ESG product appears to be progressing slowly, at least for now.

History of ESG adoption: In July 2018, Federated completed its acquisition of a 60% stake in Hermes Investment Management with ~$47bn of AuM. Hermes is a London-based active investment manager with a specialization in ESG strategies. Hermes became a signatory of the United Nations-sponsored Principles for Responsible Investment in 2006, followed by legacy Federated Investors in 2017 (ahead of the Hermes acquisition). Over the past 15 years, Hermes has established one of the leading engagement businesses, called EOS, which employs ESG subject matter experts who actively engage with company management on a range of pertinent ESG risks. These ESG engagers have specialized knowledge by industry, which can become an invaluable part of the investment process for FHI's sector analysts and portfolio managers. Through documenting company engagements over time, FHI is also able to track momentum from EOS engagements, such as which ESG risk objectives are being met, how long it takes for change to take place, and improvements in disclosure/transparency. FHI currently has 60 employees (as of 6/30) in their EOS division and responsibility office with 15 global team members dedicated to overarching ESG integration between EOS engagers and global investment teams, ESG thought leadership, and internal corporate responsibility.

Starting in 2018, the two firms worked on integrating Hermes' vast database of ESG subject matter into the broader Federated investment platform, which was an important educational stage for the investment teams in learning how to think about the financial materiality of ESG risks and incorporating ESG data and analytics into their fundamental investment analysis process. In 2019, the team focused on customizing ESG data sets for each individual investment team across all asset classes and geographies. At the beginning of 2020, Federated Investors changed its name to Federated Hermes to better reflect the integration of the two firms. At this point, almost every US-based investment team from the legacy Federated side has been at least fully integrated with the firm's ESG Dashboard.

ESG integration into investment process: FHI management believes that ESG integration has become an essential part of their fundamental investment process to improve both long-term financial returns and help clients meet their own fiduciary requirements. The firm combines the usage of third party ESG data sets with ongoing corporate engagement, which they believe is an essential part of evaluating ESG risks and developing a more forward-looking perspective at the individual stock level. FHI thinks that solely using ESG data providers creates a number of problems given a lack of consistency across many existing data sets and a lack of transparency around methodology and process. Additionally, many data providers rely on a company's sustainability report as a source of information, which means it only takes into consideration voluntarily disclosed information and utilizes a more backward-looking approach.

Thus, FHI created its own ESG database, called ESG Dashboard, that combines proprietary information, data from third party providers, and engagement information from its in-house investment stewardship consultants (EOS). The database helps generate a "QESG" score based on this combined source of information, which tries to capture how well a company manages ESG risk and a forward-looking trend of ESG scores relative to industry peers. FHI views this approach as a competitive advantage in their active investment process, as many other investment managers using only these third-party ESG data providers have a more commoditized product, in their view.

ESG product suite: Even though FHI has integrated ESG investing into the fundamental investment process across most of the legacy Federated products at this point, they have not repurposed or rebranded the funds into "ESG," classifications, although they have incorporated disclosure language in the prospectuses around the firm's ESG investment process. Instead, FHI only explicitly brands funds as "ESG" that have an impact or thematic investing objective. FHI is beginning to launch Hermes ESG-focused funds in the US but only has $88mn of AuM as of the end of 2Q20. However, as of 6/30, Hermes had ~$44bn of AuM and $1.1tr in AuA in the EOS business, thus, we view FHI's ESG-dedicated AuM as being ~25% of FHI's long-term AuM.

Invesco (IVZ)

IVZ is making a substantial push to further integrate ESG factors into the investing process across its platform, although there are currently different levels of adoption across IVZ's various investment teams given the somewhat decentralized investment management approach by the firm resulting from numerous acquisitions over time. This said, we see IVZ as having among the broadest array of product capabilities in our coverage which presents opportunities to launch ESG-dedicated strategies across several different asset classes and product structures, including passive & factor-based ETFs, active mutual funds & institutional mandates.

History of ESG adoption: IVZ's ESG efforts began in 1987 when they launched a real estate strategy excluding military-related investments and began offering an equities product that excluded alcohol, tobacco and gambling two years later. The growth in products that employed exclusionary strategies expanded significantly since then, especially over the past decade, growing from over $10bn in 2010 to over $65bn currently, mostly in active strategies. In 2013, IVZ signed the United Nations-sponsored Principles for Responsible Investment where they have since been named to several Advisory Committees. IVZ has also launched numerous strategies with a variety of thematic ESG guidelines across different regions and asset classes, though this growth has come more in customized solutions for institutional clients than in retail mutual funds or ETFs. By 2023, IVZ management has committed to integrating ESG investment principles across all of its investment strategies, and we expect additional ESG-dedicated product launches to accelerate over the next 1-2 years.

ESG integration into investment process: IVZ has a global ESG team with 14 dedicated members located in the US, Asia and EMEA that support the investment teams with analytics, ESG research and proprietary ratings, proxy support, and client strategy. Across the firm, ESG integration into the investment process is at different stages depending on geography and asset class. For example, while the European investment teams have been incorporating ESG factors into their investment process for quite a long time, management has only seen accelerated adoption amongst APAC teams more recently. Although IVZ management has targeted integrating ESG into all investment strategies by 2023, the extent of ESG integration remains at the discretion of the individual investment team, as long as the fund does not have an explicit ESG or sustainability mandate.

IVZ's ESG philosophy is centered around three core aspects: materiality, ESG momentum, and engagement. Materiality focuses on the idea that ESG factors are taken into consideration on a risk-adjusted basis and not viewed as exclusionary. ESG momentum refers to the ability of a company to improve its ESG performance over time. Lastly, IVZ uses its influence to engage with companies and seek improvements in key ESG risks and shares its advice with shareholders regarding views on management, corporate strategy, transparency, and capital allocation. While IVZ utilizes a wide array of third party ESG rating and data services, the global ESG team generates a proprietary "IVZ ESG Intel Rating" that focuses on ESG insights, metrics, and directional changes in KPIs. IVZ is currently in the process of modifying prospectuses for certain funds that have recently adopted a more ESG-integrated investment approach though if ESG investing is not central to the fund's primary investment objective, the fund may not be classified as a "sustainable investment."

ESG product suite: We expect IVZ to continue launching new ESG dedicated funds as well as converting some existing funds into ESG-dedicated strategies, both in active strategies and through the Invesco ETF franchise. IVZ has the largest exclusionary mutual fund business amongst peers totaling over $65bn of AuM with several equity and fixed income products managed out of Luxembourg. IVZ also manages around $8bn of total ESG ETF AuM (with $5bn in sustainable strategies and $3bn in exclusionary strategies) with YTD net inflows into these ETFs totaling around ~$1bn. While the firm does not disclose total ESG-dedicated AuM at this time, we belive that inclusive of customized ESG institutional mandates,total ESG-dedicated AuM (including exclusionary) may exceed $90bn and be near the middle of a 5-10% range of long-term AuM.

Janus Henderson (JHG)

While JHG's ESG-dedicated product lineup is lighter than most other companies' in our asset manager coverage, use of ESG criteria has been an important part of the fundamental investment process across the firm for a long time. This has been the case at both legacy Henderson (with European & APAC investors generally embracing ESG concepts earlier than US investors) and at legacy Janus, with a focus on growth companies that in many cases have above-average ESG scores. This said, for now we do not see a substantial level of ESG-dedicated product being launched in the near term at least, thus leveraging ESG capabilities into stronger organic growth may be further down the road than peers.

History of ESG adoption: Both legacy Janus Capital and Henderson Groups have a long history of incorporating ESG risk factors into their fundamental investment process. JHG was a relatively early signatory of the United Nations-sponsored Principles for Responsible Investment, with legacy Henderson signing in 2006 and legacy Janus signing in 2014. However, aside from a couple ESG dedicated mutual funds and customized exclusionary strategies for institutional clients, mostly at Intech, both firms have centered their efforts to date mostly around consideration of ESG risk factors in their investment strategies. While we think management can leverage their ESG capabilities into dedicated product (which could be quite powerful across a globally distributed product base), this could take some time given near-term priorities on stabilizing flows post the integration of Janus & Henderson merger in 2017.

ESG integration into investment process: At JHG, the active investment teams have long taken into consideration ESG factors in their decision making process, both on the equity and fixed income side. Unlike other asset managers that may apply more systematic approaches for all investment teams, JHG allows each team to choose the ESG factors they believe are material to their own investment process and long-term success of the fund. While there are general guidelines that JHG has laid out for investment teams to follow, the portfolio managers are in charge of implementing their team's ESG frameworks. Analysts utilize the work of the in-house Governance and Responsible Investment Team which specializes in ESG analysis, company engagement and voting and helps implement and improve each investment team's ESG framework. JHG also utilizes third party ESG data providers which is also made available to the investment teams but does not have its own proprietary ESG database, unlike many other investment managers. Together, the internal and external ESG research is shared and leveraged through the company's centralized research platform.

At Intech specifically, investment teams integrate ESG considerations into the investment process by relying on third party ESG data and internal statistical analysis of ESG factors. Intech also has the capability to exclude certain stocks/ sectors from institutional separate accounts depending on specific client preferences. Intech management hopes to eventually integrate ESG into the construction of all its portfolios.

ESG product suite: JHG has less dedicated ESG products compared to other companies in our coverage, with ~$3-4bn of ESG mutual fund AuM, mainly from the Global Sustainable Equity Fund and UK Responsible Income & Growth Fund (which are legacy Henderson funds). Management also cites a significant portion of Intech's $37bn in AuM as being managed with ESG factors (mostly exclusionary) for institutional clients in a customized fashion. While the firm does not disclose total ESG-dedicated AuM, we believe it is near ~$10bn, inclusive of customized Intech strategies, or roughly ~3% of total AuM.

T. Rowe Price (TROW)

We believe TROW has well-developed ESG capabilities in terms of data, analysis tools and integration, with the focus intensifying over the past few years, especially in response to institutional client queries but also as an increasingly important driver of investment performance. However, its dedicated ESG product offerings remains limited so far, at least for retail, although the firm has the ability to customize ESG strategies for institutional clients. This said, we see strong potential for TROW to launch at least several ESG retail products over the next 1-2 years, leveraging its capabilities and solid brand recognition in growth equity investing.

History of ESG adoption: In 2010, TROW joined the list of signatories of the United Nations-supported Principles for Responsible Investment (PRI) and began raising its internal focus on ESG criteria soon thereafter. Management generally follows PRI's definition of ESG integration which considers environmental, social and governance factors as components of the investment process in order to enhance investment performance. In 2014, TROW began including Sustainalytics ESG ratings in company notes. In 2018, TROW completed development of a proprietary ESG rating system, called RIIM (Responsible Investing Indicator Model) and incorporated the analytics into the equity and credit investment process, and rolled it out in 2019 for sovereign investments.

ESG integration into investment process: At TROW, investment decisions are believed to be well-rounded when ESG factors are considered together with more conventional financial, industry-related, macroeconomic and other qualitative indictors. Due to this belief, TROW has developed proprietary ESG research tools and expertise that its investment teams can use to either exclude riskier ESG investments from portfolios or invest in companies with either better current or prospective ESG profiles. However, some institutional clients prioritize ESG goals ahead of financial performance which TROW classifies as a "socially responsible investment" and is typically managed through a separate account with an explicit customized approach.

Oversight of ESG integration overall is held at the senior management level and directors of research for equity and fixed income at TROW have oversight of how ESG factors are incorporated into the investment process, which is a component of each analyst's annual performance review. Additionally, each new analyst at TROW must go through training which includes responsible investing and corporate governance topics. The responsibility for incorporating ESG into investment decisions at TROW falls on the portfolio managers and analysts. Portfolio managers balance the ESG exposure at the portfolio level while research analysts implement ESG factors into company ratings. There are also ESG specialists who work with the investment teams through every step of the investment process. The ESG specialists are divided into two teams: Responsible Investing, which is comprised of 13 investment professionals focused on environmental and social factors, and the Governance team. These teams help analyze ESG factors, on both a historical and forward-looking basis, that could have a significant impact on the long-term performance of any potential investment.

The Responsible Investing team at TROW helps analysts and portfolio managers conduct analysis on individual securities as well as the portfolio as a whole. TROW built a proprietary model called the Responsible Investing Indicator Model (RIIM) that helps quantify a company's ESG profile. This model is used for flagging any likely RI risks with an investment, identifying positive RI characteristics and managing RI factor exposures at the portfolio level. RIIM conducts its analysis using data from third party vendors, TROW databases and company reports which in total cover ~7,900 companies. If a company falls outside of that company universe, the RI team uses a third party vendor to search for environmental, social and ethical controversies.

The Governance team at TROW works alongside the analysts and portfolio managers to analyze governance issues related to potential and current investments, engage with companies and facilitate proxy voting. The governance analysis process starts with the proxy voting guidelines which lays out the proxy voting process and helps outline the company's perspective on the appropriate governance standards in each region. At this stage, companies can be flagged as "divergent" and will undergo further analysis by the governance team which can include engagement with the company and proxy voting recommendations.

ESG product suite: TROW manages several institutional separate accounts that utilize ESG exclusionary strategies. We can also see $2.6bn of exclusionary mutual fund AuM from global equity strategies domiciled in Australia. Additionally, a sustainable fund series was launched in 1Q20 in Europe that has <$1bn in AuM. Overall, while the firm does not disclose total ESG-dedicated AuM, we think inclusive of customized ESG institutional separate accounts, ESG may account for about ~1% of total AuM, or between ~$10-15bn. While we think TROW is well positioned to launch ESG-dedicated product, including plans to launch its first series of impact investing funds next year, more substantial ESG-related organic growth may be at least 1-2 years away.

WisdomTree (WETF)

WETF has a few ESG dedicated funds but we think management is beginning to look at the space more closely. With that said, we don't think WETF is as bullish on the ESG ETF market in the near term as some of its other ETF competitors.

History of ESG adoption: Earlier this year, WETF converted three of its existing multi-factor ETFs into ESG branded funds. We believe WETF's product development team is continuing to consider additional ESG fund options and will likely continue to focus on equity ETFs in the near term.

ESG integration into investment process: WETF incorporates ESG risk factors from several third party ESG data providers as well as insights from its internal research team to generate composite sustainability scores. The relative weighting of a security in an ESG fund will take into consideration the strength of the investment's sustainability factor. We do not believe that WETF is interested in licensing third party ESG indices for product development at this point.

ESG product suite: WETF currently offers 3 ESG ETFs (WisdomTree US ESG Fund, WisdomTree Emerging Markets ESG Fund and WisdomTree International ESG Fund) with only $130mn of AuM as of 2Q20.

BNY Mellon (BK)

History of ESG adoption: Across its total AuM of $2.0 trillion (at 2Q20) several of BK's affiliates have integrated ESG into their investment process and offer some ESG-focused product solutions. In addition, six affiliates have signed the United Nations-supported Principles for Responsible Investment (PRI).

ESG integration into investment process: BK’s ESG Analytics tools allows investors to gain insight into their portfolio’s ESG exposure. Equity and corporate fixed income investments within a portfolio are scored through proprietary research based on key sustainability metrics. The score is based on ESG factors as well as United Nations Global Compact metrics. The ESG score comes from comparing financially material information at the company level to industry peers. The United Nations Global Compact score is based on a framework defined by the United Nation’s Global Compact. These two scores are then combined for each company, creating an overall score which investors can use to understand the ESG exposure at the company and portfolio level.

BK's largest affiliate, Insight Investment, believes that taking ESG factors into consideration in its investment analysis and decision-making process is necessary to properly identify risks to client’s portfolios. Potential investments must meet the minimum standards set within its Corporate Conduct Statement which has 5 baseline expectations including protecting the welfare of staff, suppliers and customers, ensuring robust management of biodiversity, water and climate impacts and meeting appropriate corporate governance norms. Additionally, Insight applies its proprietary data in order to develop an ESG framework that considers 29 key ESG issues. Starting in 2016, Insight began generating internal ESG ratings for issuers using this framework which follows a risk-centric approach and now covers ~99% of companies in global investment grade indices.

Mellon Capital considers ESG risk factors as integrated throughout its investment process. Research analysts and portfolio managers are responsible for identifying and managing ESG risks at an individual portfolio level. To help in the process, Mellon generates proprietary ESG company and sovereign scores with the help of multiple third party data vendors. Mellon also customizes ESG portfolios for certain clients and provides some ESG dedicated products (such as a carbon efficiency strategy and ESG muni bond strategy).

For Newton Investment Management, ESG research is integrated in its security selection process across all strategies. The responsible investment team at Newton is tasked with exercising voting rights and conducting proprietary ESG reviews of individual companies that are being considered for investment. ESG risks are analyzed in order to ensure they are well managed and taken into consideration in the company’s strategy. The responsible investment team also researches ESG challenges and undertakes engagement at the company level. Newton offers 6 dedicated sustainable strategies.

At Walter Scott Investment Management, the analysis of ESG risk factors are an integral part of the investment process. The responsibility of ESG incorporation and analysis falls on the research teams, not a dedicated ESG team. The investment process is structured to exclude companies where ethical, governance, environmental or social standards are considered a risk to achieving the long-term portfolio return targets. Current investments are also monitored with the same scrutiny.

ESG product suite: BK offers several ESG dedicated strategies across multiple asset classes. In total, BK manages ~$2.5bn of sustainable mutual fund AuM in 11 different mutual fund products. Some of its most notable ESG funds includes the Insight Sustainable Euro Corporate Bond Fund ($709mn in AuM), Newton Sustainable Real Return Fund ($407mn in AuM) and BNY Mellon Sustainable US Equity Fund ($386mn in AuM), all of which are 5-star rated by Morningstar. BK does not disclose total AuM across its affiliates that are managed for ESG considerations, though inclusive of institutional strategies, we think ESG-focused strategies may easily exceed 1-2% of total AuM.

Northern Trust (NTRS)

History of ESG adoption: Across some $1.3tr in AuM, ESG has long been considered within the investment process within Northern Trust's corporate asset management business, as well as assets managed for its wealth management business, and Northern Trust joined the United Nations Principles for Responsible Investing in late 2009. The focus on ESG has intensified in recent years, with now some $94bn being managed in ESG-focused investment strategies.

ESG integration into investment process: Northern Trust follows the philosophy that ESG factors play an important role in portfolio company's long-term financial returns. As a result, NTRS has a dedicated Sustainable Investing team that is responsible for ESG research, innovation and product development and management. This team works alongside clients and investment teams to help develop and implement sustainable investing strategies including positive and negative screens and thematic strategies. Additionally, at Northern Trust Asset Management, a Sustainable Investing Council was created to develop strategies that address sustainable investment issues and incorporating them at the corporate level. NTRS offers ESG options in various asset classes including quantitative and fundamental equity, fixed income and index investments.

Quantitative Equity: NTRS uses ESG criteria in addition to its quantitative equity analysis to help account for information that financial analysis may ignore. Providing ESG analysis to clients alongside the quantitative analysis gives the clients an opportunity to tailor their investment decisions based on their own risk, return and ESG requirements.

Fundamental Equity: For fundamental equity, NTRS uses ESG factors to help complement their financial analysis in order to discover any risks that may not be quantifiable. Examples of this ESG analysis includes speaking to management teams to understand any potential governance risks or analyzing environmental trends that may impact a company’s operations.

Fixed Income: For fixed income securities, ESG factors are incorporated in a holistic view of company’s risk profile. NTRS has always incorporated governance considerations in the credit evaluation process. Now, environmental and social considerations are increasingly being taken into consideration during the fundamental credit evaluation process as well as during engagement.

Sustainable Index Investments: Sustainable index investing is also offered to clients. These indices often exclude companies using screens for breach of standards and norms, regulations or certain ethical factors. Also, ESG considerations can be incorporated into an index using positive screens where companies demonstrating superior ESG risk mitigation would be favored.

ESG product suite: NTRS overall manages $94bn of sustainable strategies as of 2Q20, which accounts for ~7% of total AuM. We can see ~40% of this sustainable AuM in Morningstar, which is managed mainly in index mutual funds. Some of these funds include: US Quality ESG Fund (NUESX), Global Sustainability Index (NSRIX), FlexShares STOXX US ESG Impact Index Fund (ESG), FlexShares STOXX Global ESG Impact Index Fund (ESGG).

State Street (STT)

History of ESG adoption: STT launched its first ESG mandate in 1985 and considers itself a pioneer in low-carbon investing. The firm became a signatory of the United Nations' sponsored Principles for Responsible Investing in 2013. With $306bn in ESG-focused AuM, the firm now has ESG team members in Boston, London, Krakow, Bangalore and Tokyo dedicated to ESG research, investment strategy, asset stewardship and data analytics. While STT believes that integrating ESG factors into traditional investment analysis is critical to generating alpha, each investment team takes a different approach to ESG investing depending on the investment area.

ESG integration into investment process: STT believes ESG factors are key considerations when looking at the quality of a company and its long-term growth prospects. The firm takes a multi-faceted approach to integrating ESG into their investment process, which does differ by asset class. Investment teams rely on ESG data analytics to evaluate ESG risk factors on the individual security level using STT's proprietary ESG scoring methodology called R-Factor. These scores are developed by utilizing third party data from four ESG data providers, a transparent materiality framework, and corporate governance codes to generate a proprietary ESG score for more than 6,600 issuers. STT also heavily relies on its asset stewardship program to help enact change at the corporate level through thought leadership, corporate engagement, and proxy voting. In addition, STT has also begun to incorporate ESG sections into monthly client performance reports for equity investments and plans to expand this reporting to fixed income products as well. We summarize STT's ESG investment philosophy by product area below:

Equity index and smart beta: STT can incorporate ESG into equity index investing through multiple ways, such as based off of a third party ESG index or through portfolio tilts and/or screens. In smart beta products, STT offers ESG-dedicated funds focused on predetermined ESG improvement as well as funds with no explicit ESG focus that aim to achieve benchmark-neutral ESG and carbon exposure.

Active quantitative equity: The quantitative investing team believes that companies with higher ESG scores should deliver better risk-adjusted returns over the long term. The team has embedded ESG considerations into its investment process to enhance outcomes through the measurement of ESG risks, asset stewardship, and by integrating ESG metrics into the assessment of stock returns.

Active fundamental equity: The active equity investment team evaluates ESG risk factors in its bottom-up, fundamental analysis at the individual stock level, and analysts track material ESG observations in their research notes over the course of evaluating a company. The team incorporates STT's proprietary R-Factor metric along with other ESG data metrics to help it form an idea of individual ESG risks. With that said, the investment teams can invest in companies that have a lack of data around ESG risks or poor ESG scores.

Fixed income: STT's fixed-income teams have integrated ESG considerations into portfolios in multiple ways, including direct integration, portfolio tilts and direct investment in green bonds. STT believes evaluating corporate governance is particularly helpful in the fixed income universe, especially as a way to assess the impact of any events potentially affecting credit or valuation. Most recently, it has developed specific low-carbon and climate investment strategies.

ESG product suite: Although most of STT's $306bn in dedicated ESG AuM (10% of total AuM) is in institutional mandates, STT also offers ~20 dedicated sustainable mutual funds and ETFs in various geographies that combine for ~$7.9bn in AuM. Some of its most popular products include: Multi-Factor Global ESG Index Equity Fund, Emerging Markets SRI Enhanced Equity Fund, Euro Sustainable Corporate Bond Index Fund, SPDR SSGA Gender Diversity Index ETF, and S&P 500 Fossil Fuel Reserves Free ETF.

Asset Manager Valuation

We are upgrading BLK & EV with this report

Although the trend in growth in sustainable investing is only one of many factors in considering fundamental performance and valuation, we see the growth potential in ESG products as a worthy positive catalyst in at least the near and intermediate term for both BlackRock (BLK) and Eaton Vance (EV), and we think organic growth in ESG products for both of these firms can support fairly persistent AuM organic growth rates at ~5% or better, which would be leading peers in our coverage. Given our view that these stocks will trade at slightly higher premium valuations as a result, we are upgrading both BLK and EV to Buy from Hold. We also reiterate our Buy rating on Invesco (IVZ) as we expect an infection to positive flows in the coming 3Q and also 4Q and into 2021 to be a positive catalyst for this stock. ESG products are also factoring into this positive flow outlook near term though we see IVZ's ESG integration and product launch efforts as being more in the intermediate- to longer-term time frame.

From a subsector perspective across our coverage, we view the asset managers more positively with this report, driven by the upgrades of BLK & EV and our view that growth in sustainable investing could be a positive catalyst for organic growth for the traditional asset managers over at least the longer term for most managers, along with our view of generally improving organic growth over time from other factors, such as creation of active ETFs, and lower levels of AuM in strategies that have been outflowing heavily (hence implying lower outflows from troubled products over the next 1-2 years). Thus overall, our 12-month subsector rankings are now (from most favored to least), 1) exchanges, 2) traditional asset managers, 3) alternative asset managers, 4) trust banks, & 5) online brokers.

Figure 74 shows our long-term organic asset growth forecasts, as well as historical growth rates, across our traditional asset manager coverage universe. We expect BLK and EV to continue to garner the strongest organic growth rates over our investment horizon, helped by flows into ESG products. For example, we estimate ESG funds (both iShares and sustainable mutual funds) will contribute ~$15bn of net inflows for BLK in 3Q, which represents roughly 20% of our total long-term net inflows forecast. For EV, we think dedicated ESG products from Calvert and Parametric have been inflowing at a ~$1.4bn quarterly run rate, which represents nearly 30% of our total flow forecast for FY4Q (excluding exposure management flows). For IVZ, we think sustainable fund inflows are tracking around +$700mn for 3Q (or ~12% of our total long-term flow estimate for 3Q) but exclusionary funds have almost ~$1bn of net outflows QTD. Additionally, we do recognize that our long-term organic growth forecasts for FHI are similar to that of BLK and EV, although we think retail ESG products will be a smaller contributor to these inflows, and despite improved organic growth across several FHI products, especially in fixed income, we remain concerned about the risk of fee waivers in money market funds rising materially if short-term market interest rates continue edging lower.

Figure 74: Coverage Long-Term Organic Asset Growth Forecasts

Ticker	2017	2018	2019	2020E	2021E	2022E
AMG	0.7%	-2.6%	-7.8%	-9.4%	-7.3%	-2.2%
BEN	-3.7%	-5.7%	-5.7%	-11.8%	-7.0%	0.2%
BLK	7.0%	2.1%	6.1%	4.1%	5.5%	5.0%
EV	10.2%	2.6%	6.4%	1.5%	5.8%	6.4%
FHI	5.4%	-9.3%	-2.1%	3.0%	5.3%	5.5%
IVZ	1.7%	-5.0%	-3.7%	-3.7%	1.2%	1.9%
JHG	-3.5%	-4.9%	-8.3%	-10.7%	-3.7%	0.7%
TROW	1.7%	1.3%	1.4%	0.0%	1.7%	3.2%
WETF	2.4%	-9.1%	1.1%	-1.5%	2.7%	3.8%
Median	**1.7%**	**-4.9%**	**-2.1%**	**-1.5%**	**1.7%**	**3.2%**

Source : Company Reports, Deutsche Bank estimates

We are upgrading both BLK and EV to Buy Ratings with this report. As described above, we see stronger organic asset growth versus peers for both BLK and EV over our investment horizon. Additionally, we see less fundamental downside risk (especially to net outflows and lower interest rates) as compared with some peers. Very importantly, we believe BLK and EV will benefit from their leadership positions in ESG both the near term and long term, especially as we expect retail demand for ESG-dedicated products to accelerate. We see at least 17% price upside to both stocks, based on yesterday's closing prices, as shown in Figure 75.

We also reiterate our Buy Rating on IVZ on our view that flows will begin to inflect positively (with positive long-term flows in both July & August a good start) and be a positive catalyst for the stock amid an especially depressed valuation. We also view IVZ as capable of creating more ESG-focused product across their diversified product range over the next 12-18 months, even if ESG processes are not fully integrated across the entire firm for another 2 -3 years. With that said, we do not see ESG-dedicated fund flows as being a near-term net inflow driver for the firm, as compared with BLK and EV.

Figure 75: DB Asset Manager Valuation Derivation

Historical Avg P/Es	Absolute Net Cash P/E on NTM: LTM	Last 2 Yrs	Last 3 Yrs	Rel Net Cash P/E vs. S&P 500: LTM	Last 2 Yrs	Last 3 Yrs	Net Cash Rel P/E L 3Yrs	Target Prem/Disct	Target Rel P/E	Ex Net Cash Per Share: Relative PE on 2019	Relative PE on 2020E
AMG	5.8x	6.2x	7.4x	31%	36%	43%	43%	**-9%**	**35%**	0.24x	0.23x
BLK	16.9x	16.4x	16.9x	90%	96%	98%	98%	**2%**	**100%**	0.96x	0.72x
BEN	10.0x	10.4x	10.8x	53%	61%	63%	63%	**-23%**	**40%**	0.33x	0.27x
EV	13.0x	12.8x	13.3x	69%	74%	77%	77%	**-8%**	**70%**	0.52x	0.46x
FHI	11.1x	11.5x	11.7x	59%	67%	68%	68%	**-24%**	**45%**	0.36x	0.28x
IVZ	6.4x	6.8x	8.2x	34%	40%	48%	48%	**-9%**	**40%**	0.22x	0.28x
JHG	9.7x	9.0x	NA	52%	52%	NA	52%	**-7%**	**45%**	0.41x	0.31x
TROW	14.7x	14.2x	14.6x	79%	83%	85%	85%	**-1%**	**85%**	0.75x	0.56x
WETF	19.9x	22.0x	23.0x	106%	128%	134%	134%	**-54%**	**80%**	0.74x	0.58x
Median Asset Mgrs	**11.1x**	**11.5x**	**12.5x**	**59%**	**67%**	**73%**	**68%**	**-9%**	**45%**	**0.41x**	**0.31x**
S&P 500 P/E	**18.8x**	**17.2x**	**17.2x**								

Asset Mgrs	Forecast EPS: 2019	2020E	2021E	Target Relative PE on 2021E	AM's Target PE in 12 Mths on 2021E	Net Cash Per Share 2020	12-Month Fair Value Estimate	Current Price	Fair Value vs. Current	Dividend Yield	Potential ROI to PT
AMG	$14.27	$11.91	$11.26	35%	6.7x	$0.00	$74.97	$68.01	10.2%	0.5%	10.7%
BLK	$28.52	$30.52	$33.89	100%	19.3x	$0.00	$653.95	$554.80	17.9%	2.6%	20.5%
BEN	$2.62	$2.62	$2.46	40%	7.7x	$2.53	$21.60	$20.04	7.8%	5.4%	13.2%
EV	$3.60	$3.30	$3.33	70%	13.4x	$0.00	$44.77	$38.10	17.5%	4.0%	21.5%
FHI	$2.70	$2.83	$2.52	45%	8.6x	$1.48	$23.23	$21.32	9.0%	5.1%	14.0%
IVZ	$2.54	$1.64	$1.79	40%	7.6x	$0.00	$13.66	$11.43	19.5%	6.8%	26.3%
JHG	$2.46	$2.57	$2.40	45%	8.7x	$1.49	$22.27	$21.79	2.2%	6.6%	8.8%
TROW	$8.05	$8.76	$8.39	85%	16.3x	$5.05	$141.86	$127.49	11.3%	2.8%	14.1%
WETF	$0.22	$0.22	$0.21	80%	15.4x	$0.00	$3.29	$3.24	1.7%	3.7%	5.4%
Median	**$2.70**	**$2.83**	**$2.52**	**45%**	**8.7x**				**10.2%**	**4.0%**	**14.0%**
S&P 500 EPS est	$165	$133	$173								
P/E (current SPX)	20.2x	25.1x									

	Current	In 12 Mths	SPX PE
Target S&P 500 PE (on 2020E in 12mths)	3,335	3,333	19.3

Source : Deutsche Bank estimates, Company Reports, Bloomberg Finance LP
Note: pricing data as of 9/29/20

BLK Outlook, Valuation & Risks

We rate BlackRock (BLK) a Buy as we view it as one of the best-positioned traditional asset managers in the space, as reflected in its superior organic asset growth versus peers, helped by robust iShares ETF inflows in particular. Additionally, we believe this company has developed a leadership position in ESG in terms of integration into its investment process as well as the breadth of its product offering. We view BLK as well positioned to capture the accelerating demand for ESG products in both the retail and institutional space. We also believe BLK's broad presence across multiple growth areas outside of ETFs, including illiquid alternatives and technology solutions, will preserve the firm's market-leading position among traditional asset managers despite challenging industry fundamentals.

We value the traditional asset manager stocks by assigning a P/E on our 2021 EPS estimates a year from now, based on assigning a premium or discount to the stock's historical relative P/E (vs. the S&P 500 and ex net excess cash on the balance sheet). We're more optimistic on near-term and long-term organic growth from retail ESG flows, and we think investors will put a higher valuation premium relative to peers as demand for ESG product becomes evident. Our new PT of $654, up from $576, is driven by our view for BLK to trade in line with the S&P 500 a year from now (vs a 10% discount previously), near its average relative P/E over the past three years. Downside risks are: 1) a substantial equity market downturn, 2) slowing organic growth on higher AuM base, 3) much less substantial acceleration of demand in the marketplace for ESG products than expected, 4) future cannibalization of higher-fee active & ETF products by lower-fee ETF products, and 5) prolonged poor relative investment performance across several strategies.

EV Outlook, Valuation & Risks

We rate Eaton Vance (EV) a Buy as we view it as one of the most innovative asset managers, targeting niches less traveled by competitors and obtaining leadership positions, which has led to its above-average organic growth both on an AUM basis and revenue basis. Additionally, we believe EV has developed a leadership position in ESG, primarily through Calvert, in terms of integration into its investment process as well as the breadth of its product offering. We view EV as well positioned to capture the accelerating demand for ESG products from both retail and institutional investors.

We value the traditional asset manager stocks by assigning a P/E on our 2021 EPS estimates a year from now, based on assigning a premium or discount to the stock's historical relative P/E (vs. the S&P 500 and ex net excess cash on the balance sheet). We're more optimistic on near-term and long-term organic growth from retail ESG flows, and we think investors will put a higher valuation premium relative to peers as demand for ESG product becomes evident. Our new PT of $45, up from $38, is driven by our view for EV to trade at a 30% discount (down from 35%) relative to the S&P 500, which is about 1 standard deviation above its 12-month average, as we think an improving organic growth profile will be a positive valuation catalyst for the stock. Downside risks are: 1) slowdown in above-average organic growth rate trends, 2) sharp market downturn that materially reduces AuM, 3) a much less substantial acceleration of demand in the marketplace for ESG products than expected, 4) greater industry competition in solutions-oriented products or adverse tax reform that would reduce Parametric's organic growth, 5) rising market credit spreads that could drive bank loan fund outflows, and 6) any deterioration of performance of active products.

BEN Valuation & Risks

We value BEN by assigning a P/E on our pro-forma BEN/LM FY2021 EPS estimate a year from now. Our new PT of $22, down from $24, is based on our view for BEN to trade at an overall 60% P/E discount (larger than our previous 55% discount due to uncertainty around integration and near-term organic growth outlook) vs. the S&P 500 on our pro-forma EPS estimate for 2021, in line with its current valuation, and adding net cash per share. Upside risks are: 1) a stronger-than-expected turnaround in performance of most of its largest products, 2) sharper-than-expected improvement in organic growth, and 3) more EPS accretion associated with the LM acquisition than mgmt. is estimating. Downside risks are: 1) a return to much weaker relative investment performance in key products, 2) a more aggressive industry shift toward passive products than expected, and 3) a worsening of organic growth at either BEN and/or LM.

Also changing PTs on FHI and TROW

We also made minor adjustments to our EPS forecasts that ended up reducing FHI's PT from $24 to $23 and TROW's from $145 to $142. We remain Hold rated on both of these stocks. The estimate revisions were driven by incorporating slightly higher money market fee waivers into our forecasts and slightly greater outflows in TROW mutual funds in 3Q and 4Q given market turbulence in technology stocks.

Appendix A

2020 Federated Hermes' ESG Investing Survey

We think there are several surveys across the industry around investors' appetite for ESG investing. We profile one of the most recent ESG surveys published by Federated Hermes with insights across high-net-worth, financial advisors, and institutional investors. FHI published the survey on 9.22.20 with some interesting insights around recent investor perceptions of ESG investing. Overall, FHI's survey results seem to indicate that ESG investing considerations are becoming increasingly important for all types of US-based investors. It seems as though the global pandemic has shed light on the importance of social issues for many investors with 2/3 of respondents now considering social factors as part of their investment process. Additionally, ESG has become a more relevant topic with retail investors as 90% of financial advisors reported clients asking about ESG. And as we outline in our own report, investors seem to be shifting towards positive ESG screening strategies (64% of high-net-worth investors and 74% of institutional investors) and away from exclusionary/negative screening strategies. Please see the full survey reprint below:

The first Federated Hermes ESG survey of U.S. financial advisors, high-net-worth individuals and families and institutional investors finds a significant majority of all three segments incorporating environmental, social and governance (ESG) considerations into their investment decisions. Conducted during the global coronavirus pandemic and downturn, the U.S. study also shows that social factors —the "S" in ESG—are playing an increasing role in balancing risk and reward in the investment equation. More broadly, the report reinforces a reliance, chiefly among institutional asset owners, on active management to appropriately reflect ESG considerations in portfolios, in part because inefficiencies that come with ESG's qualitative nature are difficult to address with passive strategies. Put simply: there isn't and, given the dynamic nature of ESG factors, may never be an all-encompassing set of criteria that can appropriately quantify and adapt to ever-changing responsible investing characteristics.

Key findings

- 88% of institutional investors, 77% of financial advisors and 59% of high-net-worth individuals surveyed indicated they utilize ESG considerations when making investment recommendations.
- 62% of all survey respondents agree the Covid-19 pandemic and accompanying economic downturn have made social considerations central to risk mitigation in investment strategies.
- Responsible-investing credentials have taken on elevated importance as a secondary consideration to overall performance history in asset-manager selection.
- A greater knowledge of responsible investing factors and investment sophistication directly correlates to the use of active strategies to access ESG - nearly half of institutional respondents implement ESG investments primarily through active strategies.

ESG becomes mainstream

After toiling on the fringes for decades, the integration of environmental, social and governance (ESG) factors moved at warp speed over the past 10 years to become a mainstream component of the investment world. Even early research on how ESG risks relate to investing dates from the late 1980s or early 1990s.

At Federated Hermes, we endeavor to track the rapid evolution of this discipline among investors and advisors with our first ESG investing survey. The launch of this survey of financial advisors, high-net-worth investors and families, as well as different types of institutional investors was timely. It commenced during the global coronavirus pandemic that resulted in financial market volatility and in a deep, but potentially brief, global recession.

This inaugural study seeks to analyze how the pandemic may be influencing the decisions of U.S. investors and advisors. We unpack the idea that U.S. investors may be further along in their knowledge, interest and use of ESG when it comes to investments than conventional wisdom suggests. Finally, we look at the information sought by and the expectations of investors and advisors with a goal of determining how that may translate into the flow of dollars into ESG-integrated investment strategies.

A growing chorus from clients

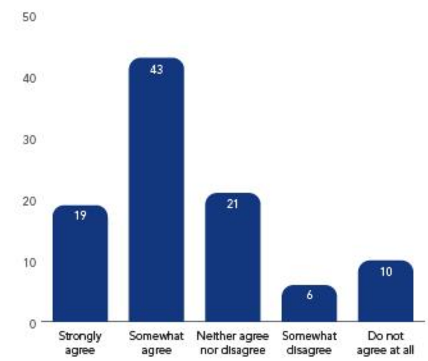
Often the first step in responsible investing for any type of investor is an acknowledgement that ESG considerations should be included in the portfolio construction process. A majority of the surveyed U.S. investment allocators said they consider ESG factors when making investment decisions. Eighty-eight percent of institutional investors, 77% of advisors and 59% of high-net-worth individuals who responded to the survey indicated they utilize responsible investing considerations when making investment recommendations for client or institutional portfolios.

According to survey respondents, consideration of ESG investing often is spurred by clients (in the case of a financial advisor) or other stakeholders (such as a board or investment committee). For example, nine out of 10 (90%) advisor respondents had a client ask about ESG or responsible investing, while 85% of affluent investors and 74% of institutions reported that a stakeholder asked about taking ESG factors into account.

The rise of the "S" factor

A majority (62%) of all those surveyed believe the Covid-19 pandemic and economic downturn has made the social or “S” factors in ESG considerations more important when analyzing investment risks. Prior to the pandemic, “S” risks were considered the newest and often hardest to quantify for U.S. investors relative to “E” (environmental) and “G” (governance) risks. Several recent examples, globally, have demonstrated the potential long-term effects to the financial performance of companies from such “S” factors as public health concerns, supplier issues, working conditions and pay equity.

Figure 76: Importance of "S" or social factors of ESG in evaluating investment risk (%)



Note: 252 survey respondents.

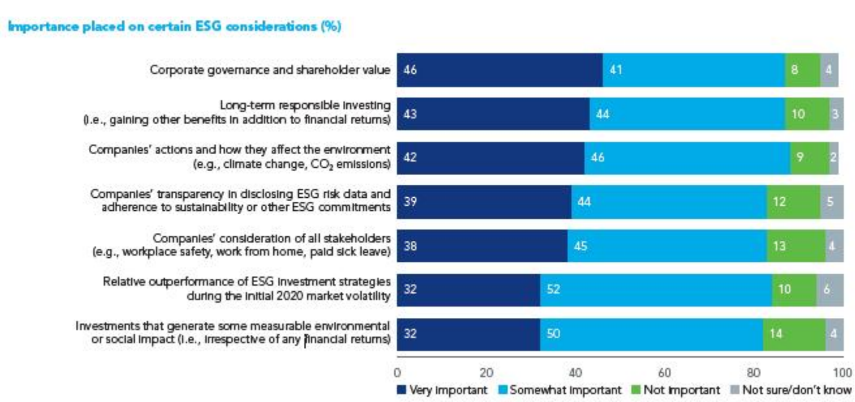
Source : 2020 Federated Hermes ESG Investing Survey

"G" and "E" become part of fiduciary role

The longer the pandemic goes on, the more focused advisors, high-net-worth individuals/families and institutional investors (i.e., investment allocators) are on fundamental ESG risks and opportunities. During the breakneck decline in the equity markets in February and March, ESG-branded strategies and funds outperformed and, subsequently, experienced record inflows through June.* Our survey picked up recognition among investors and advisors of this outperformance, even though these groups were surveyed in June and early July.

As the accompanying exhibit shows, after months of the pandemic, these investment allocators were beginning to look for more long-term implications and placed the highest importance (46% indicating “very important”) on governance and shareholder value when asked to choose among different types of ESG variables that could affect investments. Additionally, looking at overall importance, 88% (including “very important” and “somewhat important”) honed in on the risks of possible environmental actions of companies in their investment portfolios. This focus is indicative of more allocators viewing the evaluation of ESG risks and opportunities as part of their fiduciary roles.

Figure 77: Importance placed on certain ESG considerations (%)



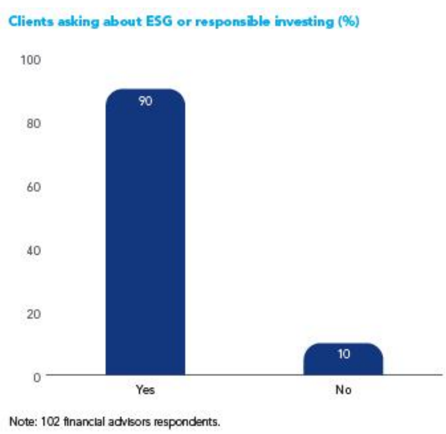
Note: 252 survey respondents.

Source : 2020 Federated Hermes ESG Investing Survey

Progress along the ESG "curve"

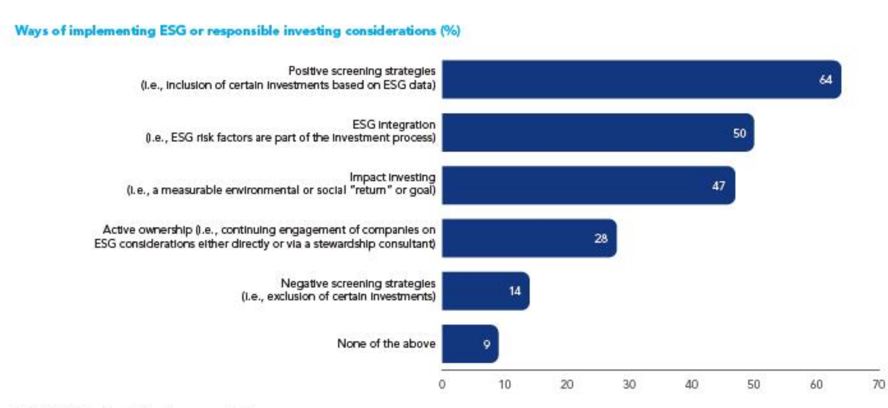
There are various ways of implementing responsible investing, from exclusionary approaches such as negative screening to positive or inclusion strategies (e.g., ranking screens), to strategies that aim for tangible social or environmental impact. Traditionally, and mainly at religious-based organizations, negative screening of so-called sin stocks (e.g., tobacco, alcohol, gaming, etc.) was a first step in any responsible investing strategy. Our survey shows, however, that many U.S. allocators are moving closer to the integrated approaches of their international counterparts. For example, relatively few survey respondents noted their use of negative screening, as indicated by high-net-worth investors and families in the accompanying exhibit. This trend was confirmed by a recent survey of 500 institutional investors, globally, by the third party research firm CoreData Research as of June 30, 2020. That data showed a decided uptick since year-end 2019 in integrating ESG factors (versus negative screens) through active ownership and corporate engagement.

Figure 78: Clients asking about ESG or responsible investing (%)



Source : 2020 Federated Hermes ESG Investing Survey

Figure 79: Ways of implementing ESG or responsible investing considerations (%)



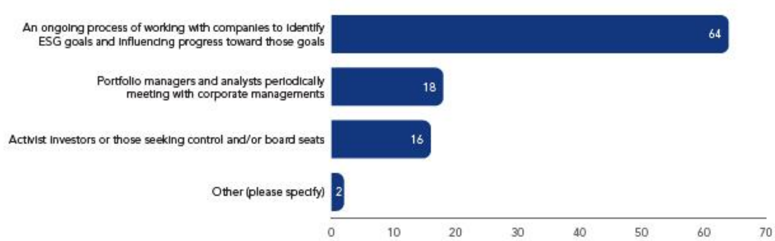
Source : 2020 Federated Hermes ESG Investing Survey

A more engaged investor

A more advanced form of responsible investing practiced mainly by institutional investors is active ownership or engagement, which is characterized by a continuing process of interacting with portfolio companies on ESG risks and business practices. Engagement is at the heart of many Federated Hermes strategies through the use of EOS, Federated Hermes' engagement and stewardship division. We use our own engagers to help companies improve their ESG performance to the ultimate benefit of long-term shareholders and other stakeholders.

An understanding of the purpose and value of long-term engagement is reflected in the survey: When given a set of statements describing different notions of what engagement is and asked to choose one statement that best describes engagement, a majority of institutional investors (64%) chose "an ongoing process of working with companies to identify ESG goals and influencing progress towards those goals." The range of desired outcomes are vast: reduced carbon footprint, improved working conditions, workforce diversity, equitable pay, etc. Notably, no institutional respondent selected traditional shareholder proxy voting, which is significant because so many investors historically have tended to conflate proxy voting and active ownership.

Figure 80: Understanding of ESG engagement in investments (%)



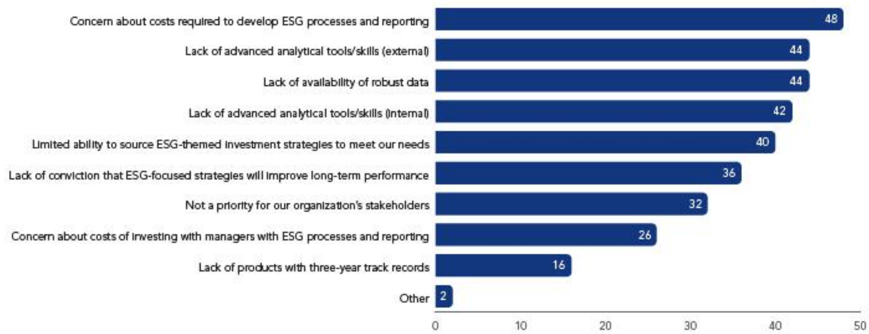
Note: 50 institutional investors respondents. No respondent noted "voting shareholder proxies, evaluating shareholder resolutions at annual meetings." Other included "all of the above."

Source : 2020 Federated Hermes ESG Investing Survey

What's holding up further ESG adoption?

While each group of survey respondents is different, in choosing among a series of "barriers" to greater ESG adoption, allocators' responses generally skewed toward ESG data quality concerns, the costs of acquiring data, and ESG reporting/attribution (see accompanying institutional chart). That being said, among advisors and high-net-worth individuals, there are remaining concerns about sacrificing long-term return potential as well as the costs (i.e., management fees) of investing with ESG-focused asset managers. This demonstrates that responsible investing managers still have work to do in conveying the benefits of ESG to advisors and affluent investors.

Figure 81: Barriers to greater ESG adoption (%)



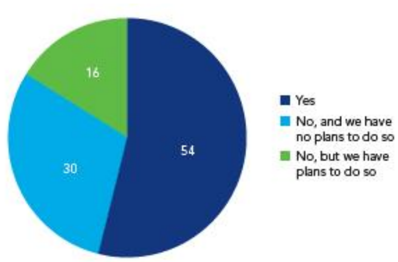
Note: 50 institutional respondents. Other responses included "lack of uniform definition of ESG and how to monitor asset managers."

Source : 2020 Federated Hermes ESG Investing Survey

Information is key

What's driving the growing interest in ESG integrated funds and strategies? It starts, of course, with growing concerns among end clients and investors about global climate change, social justice, workplace conditions and other issues impacting society's well-being. Additionally, one can observe the cumulative impact of negative headlines over the years chronicling examples of corporate governance failures, accounting fraud and other issues. This, in turn, is leading advisors and other investment allocators to seek more information about ESG risks (and opportunities) from the asset managers they engage. Fifty-four percent of advisors responding to the survey indicated they sought more information on a manager's responsible-investing credentials when recommending a manager for investment to a client. An additional 16% indicated they had plans to do so.

Figure 82: Sought information on asset managers' responsible investing credentials (%)



Note: 102 financial advisors respondents.

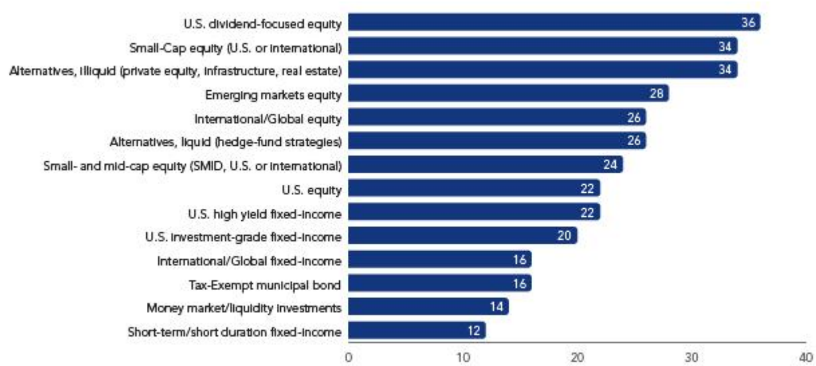
Source : 2020 Federated Hermes ESG Investing Survey

To underscore this, it is instructive to look at the specific type of responsible investing information institutional investors sought from managers in request for proposals (RFPs) and due diligence questionnaires (DDQs). Three-quarters of those institutions wanted to know if a manager is integrating ESG considerations across their investment process. Interestingly, the fewest (39%) noted a manager's status as a United Nations Principles for Responsible Investment (U.N. PRI) signatory as being "most meaningful." This shows a manager's credibility in responsible investing is being more defined by demonstrating ESG integration, risk analysis, engagement and the resources to bring it all together rather than the traditional "table stakes" of being a PRI signatory. Additionally, the survey confirms that, a manager’s responsible investing credentials are growing in importance in the decision to award a mandate.

Know where the ESG 'puck' is going

Considering what investors and advisors know about ESG investing, where are allocators likely to allocate? The survey reveals that institutional asset owners plan to add to mainstream U.S. dividend equity (36%), small-cap equity (34%) and illiquid alternative (34%) strategies with ESG considerations in the next year. Advisors and high-net-worth investors voiced similar goals in addition to their specific focus on international, emerging markets and U.S. (large-cap) equity. All groups said they place a higher importance on mainstream equity strategies being ESG-integrated compared to fixed-income.

Figure 83: Mainstream strategies with ESG considerations: plans to add in the next 12 months (%)



Note: 50 institutional investors respondents.

Source : 2020 Federated Hermes ESG Investing Survey

In sum, ESG and active management are kindred spirits

As this inaugural survey shows, ESG’s role across the investment landscape continues to grow, with majorities of financial advisors, high-net-worth individuals/ families and institutional investors placing a priority on responsible investing. It’s also becoming clear that, for the most sophisticated investors (institutions), ESG integration and engagement dovetails with the active management of portfolio assets.

Institutional investors globally have taken the lead in this regard, incorporating ESG considerations into their investment policy statements and seamlessly integrating ESG risks and opportunities into fundamental securities analysis. This is based on a belief that financial markets largely fail to price in ESG risks into company or sector valuations. The use of active management to potentially manage these risks and seize opportunities was confirmed in the survey with nearly half (48%) of institutional asset owners saying they primarily access ESG or responsible investments through actively managed strategies. To be sure, the survey found a tendency among affluent investors, as well as advisors, to also use passive active strategies, particularly through positive screening (i.e., inclusion or the use of ESG data or quantitative screens) seeking to find companies embracing policies friendly to the environment, workers and society at large. But the bias toward active is undeniable—and understandable.

Figure 84: Primary vehicle for ESG investing (%)

Source : 2020 Federated Hermes ESG Investing Survey

About the survey

The 2020 Federated Hermes ESG Investing Survey is a survey of U.S. investment professionals (institutions, financial advisors and high-net-worth individuals) with input on investment portfolios regarding their views on responsible investing and consideration of environmental, social, governance (ESG) factors. An anonymous, online survey of a respondent panel provided by Phronesis Partners was fielded between June 1, 2020, and July 9, 2020, to 50 institutional asset owners with more than $500 million in assets under management, including foundations, endowments, public defined benefit plans, corporate defined benefit plans and insurance general accounts; 102 financial advisors and wealth managers with client assets under management (advisement) of more than $25 million, including registered investment advisors (RIAs), broker-dealer, bank and insurance-affiliated advisors, as well as consultants; and 100 high-net-worth individuals and families with investable assets (excluding primary residence) of more than $1 million, including family offices, private client advisors and multifamily offices.

Appendix B

Performance Grids

As mentioned in the Do ESG Funds Outperform? section above, we analyzed the performance of sustainable, exclusionary and non-ESG funds by category vs. their passive ETF equivalents. Figure 85 is the same as Figure 56 above while Figures 86 & 87 provide further insight into the performance of specific funds categories.

Figure 85: Performance of Sustainable Equity Mutual Funds by Category vs. Passive ETFs

							ACTIVE								
Style		**1Q17**	**2Q17**	**3Q17**	**4Q17**	**1Q18**	**2Q18**	**3Q18**	**4Q18**	**1Q19**	**2Q19**	**3Q19**	**4Q19**	**1Q20**	**2Q20**
U.S. LC Blend		4.8%	3.0%	3.6%	5.7%	-0.7%	2.4%	7.0%	-12.2%	13.8%	4.3%	2.2%	7.8%	-19.1%	19.8%
U.S. LC Growth		8.5%	4.9%	5.2%	6.3%	2.7%	3.7%	8.4%	-12.6%	17.1%	5.8%	0.7%	7.8%	-14.3%	23.8%
U.S. LC Value		4.9%	1.0%	3.1%	6.2%	-1.0%	1.8%	6.0%	-16.0%	12.7%	3.6%	0.5%	8.2%	-29.2%	18.7%
U.S. MC Blend		4.9%	3.1%	2.3%	4.3%	-1.6%	3.5%	3.8%	-11.5%	15.8%	5.0%	2.1%	3.7%	-23.6%	19.7%
U.S. MC Growth		7.2%	5.9%	4.2%	6.2%	-0.2%	5.2%	6.2%	-15.6%	23.7%	3.5%	-5.4%	9.3%	-19.1%	37.3%
U.S. MC Value		6.8%	0.3%	0.5%	7.1%	0.2%	1.7%	3.1%	-18.0%	16.6%	1.0%	-2.5%	8.4%	-33.4%	21.6%
U.S. SC Blend		1.3%	0.9%	3.0%	5.4%	-1.7%	5.5%	2.0%	-16.2%	14.0%	4.9%	-0.7%	5.5%	-26.6%	17.9%
U.S. SC Growth		10.7%	4.6%	6.2%	2.4%	5.7%	10.3%	7.3%	-17.5%	17.8%	4.2%	-2.9%	7.8%	-18.6%	32.8%
U.S. SC Value		-2.1%	0.0%	1.2%	0.4%	-1.1%	6.2%	1.1%	-18.1%	11.6%	1.5%	-0.6%	4.1%	-38.6%	18.6%
Intl ex-U.S.		8.0%	6.6%	5.4%	3.9%	-0.4%	-2.4%	0.7%	-13.7%	10.6%	3.1%	-1.8%	9.5%	-23.8%	18.0%
Emerging Mkts.		9.3%	7.1%	4.8%	5.5%	-1.3%	-0.1%	4.3%	-12.7%	12.5%	5.1%	-0.9%	8.8%	-19.3%	21.9%
Global Equity		12.0%	8.6%	8.2%	6.7%	2.1%	-10.8%	-1.5%	-5.5%	10.9%	1.4%	-2.3%	11.0%	-23.9%	20.4%

							PASSIVE								
Style	**ETF**	**1Q17**	**2Q17**	**3Q17**	**4Q17**	**1Q18**	**2Q18**	**3Q18**	**4Q18**	**1Q19**	**2Q19**	**3Q19**	**4Q19**	**1Q20**	**2Q20**
U.S. LC Blend	SPY	5.1%	3.1%	4.4%	6.3%	-1.7%	5.8%	7.4%	-13.8%	13.5%	4.2%	1.8%	9.0%	-19.4%	20.2%
U.S. LC Growth	IWF	8.0%	4.6%	5.8%	7.6%	0.4%	8.3%	8.5%	-16.0%	16.0%	4.2%	1.7%	10.5%	-14.1%	27.7%
U.S. LC Value	IWD	2.4%	1.3%	3.0%	4.8%	-3.4%	3.5%	5.6%	-11.9%	11.8%	3.6%	1.5%	7.3%	-26.7%	14.2%
U.S. MC Blend	IWR	4.2%	2.6%	3.5%	5.5%	-1.2%	5.2%	4.8%	-15.0%	16.5%	3.9%	0.5%	7.0%	-27.1%	24.5%
U.S. MC Growth	IWP	6.1%	4.2%	5.2%	6.2%	1.3%	5.7%	7.1%	-15.5%	19.5%	5.3%	-0.7%	8.1%	-20.2%	30.2%
U.S. MC Value	IWS	2.8%	1.3%	2.1%	5.1%	-3.2%	4.6%	3.3%	-14.7%	14.3%	3.1%	1.2%	6.3%	-31.7%	20.0%
U.S. SC Blend	IWM	1.7%	2.5%	5.9%	2.0%	-1.1%	10.6%	2.9%	-19.2%	14.6%	1.9%	-2.3%	9.9%	-30.6%	25.5%
U.S. SC Growth	IWO	4.8%	4.4%	6.4%	3.2%	1.2%	10.1%	4.6%	-20.5%	17.2%	2.3%	-3.9%	11.4%	-26.0%	31.0%
U.S. SC Value	IWN	-0.9%	0.6%	5.3%	0.8%	-3.6%	10.5%	1.1%	-17.7%	12.0%	1.0%	-0.4%	8.4%	-35.8%	19.3%
Intl ex-U.S.	EFA	7.2%	6.4%	5.0%	3.9%	-1.6%	-0.6%	2.5%	-12.7%	10.3%	3.5%	-0.8%	7.7%	-23.0%	15.5%
Emerging Mkts.	EEM	11.2%	5.6%	8.3%	6.7%	0.6%	-8.0%	0.0%	-7.7%	9.9%	0.7%	-4.8%	12.1%	-23.9%	17.9%
Global Equity	ACWI	6.1%	4.7%	5.1%	5.6%	-1.5%	2.4%	4.7%	-13.0%	12.5%	3.4%	0.1%	8.7%	-21.0%	18.8%

							QUARTERLY ALPHA								
Style vs.	**ETF**	**1Q17**	**2Q17**	**3Q17**	**4Q17**	**1Q18**	**2Q18**	**3Q18**	**4Q18**	**1Q19**	**2Q19**	**3Q19**	**4Q19**	**1Q20**	**2Q20**
U.S. LC Blend	SPY	-0.3%	-0.1%	-0.8%	-0.6%	1.0%	-3.5%	-0.4%	1.6%	0.3%	0.0%	0.4%	-1.2%	0.3%	-0.4%
U.S. LC Growth	IWF	0.5%	0.3%	-0.6%	-1.3%	2.3%	-4.6%	-0.1%	3.4%	1.2%	1.6%	-1.1%	-2.6%	-0.2%	-3.9%
U.S. LC Value	IWD	2.5%	-0.3%	0.1%	1.5%	2.4%	-1.7%	0.4%	-4.1%	0.9%	0.0%	-0.9%	0.8%	-2.4%	4.5%
U.S. MC Blend	IWR	0.7%	0.5%	-1.2%	-1.2%	-0.4%	-1.7%	-1.0%	3.6%	-0.7%	1.0%	1.6%	-3.3%	3.5%	-4.9%
U.S. MC Growth	IWP	1.2%	1.8%	-1.0%	0.0%	-1.4%	-0.6%	-0.9%	-0.1%	4.1%	-1.7%	-4.7%	1.1%	1.1%	7.1%
U.S. MC Value	IWS	4.0%	-1.0%	-1.6%	2.0%	3.3%	-2.9%	-0.2%	-3.2%	2.3%	-2.1%	-3.6%	2.1%	-1.6%	1.6%
U.S. SC Blend	IWM	-0.4%	-1.6%	-2.9%	3.3%	-0.6%	-5.1%	-0.9%	3.1%	-0.6%	3.0%	1.6%	-4.4%	4.1%	-7.6%
U.S. SC Growth	IWO	6.0%	0.2%	-0.3%	-0.9%	4.5%	0.1%	2.7%	3.0%	0.6%	1.9%	1.0%	-3.6%	7.4%	1.8%
U.S. SC Value	IWN	-1.2%	-0.6%	-4.1%	-0.3%	2.5%	-4.3%	0.0%	-0.4%	-0.3%	0.5%	-0.2%	-4.2%	-2.7%	-0.8%
Intl ex-U.S.	EFA	0.7%	0.3%	0.4%	0.0%	1.2%	-1.8%	-1.7%	-1.0%	0.3%	-0.5%	-1.0%	1.8%	-0.8%	2.5%
Emerging Mkts.	EEM	-1.9%	1.6%	-3.5%	-1.3%	-1.8%	7.9%	4.3%	-5.0%	2.6%	4.3%	3.8%	-3.3%	4.6%	4.1%
Global Equity	ACWI	5.9%	3.9%	3.2%	1.1%	3.6%	-13.2%	-6.3%	7.4%	-1.6%	-2.1%	-2.4%	2.3%	-2.9%	1.6%
Asset-Weighted		**0.3%**	**0.1%**	**-1.0%**	**-0.4%**	**1.0%**	**-2.9%**	**-0.3%**	**1.2%**	**0.7%**	**0.4%**	**-0.2%**	**-1.2%**	**0.5%**	**-0.5%**

Source : Morningstar Direct, Deutsche Bank

Figure 86 shows the quarterly performance by Morningstar category of active exclusionary equity mutual funds vs. their passive ETF equivalent. Due to the Large-Cap Blend category's weighting of over 80% of the AuM each quarter, the asset-weighted alpha is distorted by this category's fairly consistent underperformance. Removing the Large-Cap Blend category from the calculation improve the average quarterly alpha from -70bps to -10bps which is more in line with the sustainable fund's average alpha. Additionally, it is important to note that several categories only have 1-3 funds included in the performance calculation.

Figure 86: Performance of Exclusionary Equity Mutual Funds by Category vs. Passive ETFs

ACTIVE

Style		1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
U.S. LC Blend		4.4%	2.5%	5.5%	6.5%	-1.4%	2.6%	5.8%	-9.5%	10.5%	4.1%	1.6%	7.6%	-21.6%	16.6%
U.S. LC Growth		9.9%	5.5%	5.7%	6.1%	2.8%	5.7%	8.2%	-16.2%	17.1%	5.5%	0.5%	9.8%	-15.3%	27.9%
U.S. LC Value		3.4%	1.3%	3.1%	4.9%	-2.7%	1.7%	5.7%	-12.8%	11.8%	4.4%	2.8%	6.6%	-25.7%	14.8%
U.S. MC Blend		4.1%	2.0%	3.6%	6.9%	1.4%	1.0%	5.4%	-15.5%	13.1%	4.9%	-0.2%	4.3%	-25.9%	17.0%
U.S. MC Growth		7.4%	3.6%	4.1%	5.7%	2.7%	2.4%	8.0%	-16.0%	19.7%	6.7%	-1.0%	7.3%	-19.9%	31.6%
U.S. MC Value		3.3%	0.7%	2.7%	4.9%	-2.0%	1.7%	3.4%	-14.8%	13.6%	3.7%	3.3%	7.0%	-27.2%	15.5%
U.S. SC Blend		0.9%	1.8%	5.3%	4.6%	-0.1%	6.0%	3.6%	-20.4%	15.3%	3.0%	-2.5%	7.8%	-31.0%	25.3%
U.S. SC Growth		-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S. SC Value		4.2%	-6.5%	12.5%	4.8%	-9.3%	4.6%	2.6%	-30.1%	12.6%	-2.9%	1.8%	10.1%	-49.2%	39.7%
Intl ex-U.S.		8.1%	6.4%	7.0%	3.7%	0.4%	-2.5%	0.4%	-13.9%	10.5%	2.7%	-2.1%	9.4%	-25.4%	18.2%
Emerging Mkts.		6.7%	5.0%	5.4%	5.5%	0.1%	0.9%	3.7%	-13.6%	12.7%	3.8%	0.3%	7.8%	-23.1%	18.3%
Global Equity		11.3%	6.1%	6.8%	6.3%	2.8%	-11.4%	-3.1%	-7.1%	9.2%	2.0%	-3.6%	10.4%	-26.5%	21.2%

PASSIVE

Style	ETF	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
U.S. LC Blend	SPY	5.1%	3.1%	4.4%	6.3%	-1.7%	5.8%	7.4%	-13.8%	13.5%	4.2%	1.8%	9.0%	-19.4%	20.2%
U.S. LC Growth	IWF	8.0%	4.6%	5.8%	7.6%	0.4%	8.3%	8.5%	-16.0%	16.0%	4.2%	1.7%	10.5%	-14.1%	27.7%
U.S. LC Value	IWD	2.4%	1.3%	3.0%	4.8%	-3.4%	3.5%	5.6%	-11.9%	11.8%	3.6%	1.5%	7.3%	-26.7%	14.2%
U.S. MC Blend	IWR	4.2%	2.6%	3.5%	5.5%	-1.2%	5.2%	4.8%	-15.0%	16.5%	3.9%	0.5%	7.0%	-27.1%	24.5%
U.S. MC Growth	IWP	6.1%	4.2%	5.2%	6.2%	1.3%	5.7%	7.1%	-15.5%	19.5%	5.3%	-0.7%	8.1%	-20.2%	30.2%
U.S. MC Value	IWS	2.8%	1.3%	2.1%	5.1%	-3.2%	4.6%	3.3%	-14.7%	14.3%	3.1%	1.2%	6.3%	-31.7%	20.0%
U.S. SC Blend	IWM	1.7%	2.5%	5.9%	2.0%	-1.1%	10.6%	2.9%	-19.2%	14.6%	1.9%	-2.3%	9.9%	-30.6%	25.5%
U.S. SC Growth	IWO	4.8%	4.4%	6.4%	3.2%	1.2%	10.1%	4.6%	-20.5%	17.2%	2.3%	-3.9%	11.4%	-26.0%	31.0%
U.S. SC Value	IWN	-0.9%	0.6%	5.3%	0.8%	-3.6%	10.5%	1.1%	-17.7%	12.0%	1.0%	-0.4%	8.4%	-35.8%	19.3%
Intl ex-U.S.	EFA	7.2%	6.4%	5.0%	3.9%	-1.6%	-0.6%	2.5%	-12.7%	10.3%	3.5%	-0.8%	7.7%	-23.0%	15.5%
Emerging Mkts.	EEM	11.2%	5.6%	8.3%	6.7%	0.6%	-8.0%	0.0%	-7.7%	9.9%	0.7%	-4.8%	12.1%	-23.9%	17.9%
Global Equity	ACWI	6.1%	4.7%	5.1%	5.6%	-1.5%	2.4%	4.7%	-13.0%	12.5%	3.4%	0.1%	8.7%	-21.0%	18.8%

QUARTERLY ALPHA

Style vs.	ETF	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20
U.S. LC Blend	SPY	-0.7%	-0.6%	1.1%	0.2%	0.3%	-3.2%	-1.6%	4.3%	-3.0%	-0.2%	-0.1%	-1.4%	-2.2%	-3.6%
U.S. LC Growth	IWF	1.9%	0.9%	0.0%	-1.5%	2.4%	-2.6%	-0.3%	-0.2%	1.1%	1.3%	-1.2%	-0.7%	-1.2%	0.3%
U.S. LC Value	IWD	1.1%	0.0%	0.1%	0.1%	0.7%	-1.7%	0.1%	-0.8%	0.0%	0.8%	1.3%	-0.7%	1.1%	0.5%
U.S. MC Blend	IWR	-0.1%	-0.7%	0.2%	1.4%	2.6%	-4.1%	0.6%	-0.5%	-3.4%	0.9%	-0.8%	-2.7%	1.2%	-7.5%
U.S. MC Growth	IWP	1.3%	-0.5%	-1.1%	-0.5%	1.5%	-3.3%	0.9%	-0.5%	0.2%	1.5%	-0.3%	-0.9%	0.3%	1.4%
U.S. MC Value	IWS	0.5%	-0.6%	0.6%	-0.2%	1.1%	-2.9%	0.1%	-0.1%	-0.6%	0.6%	2.1%	0.7%	4.6%	-4.5%
U.S. SC Blend	IWM	-0.8%	-0.7%	-0.6%	2.6%	1.0%	-4.5%	0.8%	-1.2%	0.7%	1.0%	-0.2%	-2.1%	-0.3%	-0.2%
U.S. SC Growth	IWO	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S. SC Value	IWN	5.1%	-7.1%	7.2%	4.1%	-5.7%	-5.9%	1.5%	-12.4%	0.7%	-3.9%	2.2%	1.7%	-13.3%	20.4%
Intl ex-U.S.	EFA	0.9%	0.0%	2.0%	-0.1%	2.0%	-1.9%	-2.1%	-1.2%	0.1%	-0.8%	-1.3%	1.7%	-2.4%	2.7%
Emerging Mkts.	EEM	-4.5%	-0.5%	-2.9%	-1.2%	-0.4%	8.9%	3.6%	-5.9%	2.8%	3.1%	5.0%	-4.4%	0.9%	0.5%
Global Equity	ACWI	5.2%	1.4%	1.8%	0.6%	4.2%	-13.7%	-7.8%	5.9%	-3.3%	-1.5%	-3.6%	1.7%	-5.4%	2.4%
Asset-Weighted		**-0.3%**	**-0.4%**	**1.0%**	**0.1%**	**0.7%**	**-3.2%**	**-1.5%**	**3.5%**	**-2.5%**	**-0.1%**	**-0.2%**	**-1.2%**	**-2.1%**	**-2.9%**

Source : Morningstar Direct, Deutsche Bank

We also looked at the performance by Morningstar category of non-ESG funds which was mixed on a quarterly basis. The average quarterly alpha was 0bps vs. -20bps for sustainable funds and -70bps for exclusionary funds.

Figure 87: Performance of Non-ESG Equity Mutual Funds by Category vs. Passive ETFs

		ACTIVE													
Style		**1Q17**	**2Q17**	**3Q17**	**4Q17**	**1Q18**	**2Q18**	**3Q18**	**4Q18**	**1Q19**	**2Q19**	**3Q19**	**4Q19**	**1Q20**	**2Q20**
U.S. LC Blend		5.8%	3.1%	4.4%	6.3%	-1.1%	2.9%	6.3%	-13.6%	12.9%	3.8%	0.9%	8.9%	-21.1%	19.6%
U.S. LC Growth		9.2%	5.6%	5.7%	6.5%	3.2%	5.5%	6.9%	-15.6%	15.3%	4.2%	-1.1%	10.5%	-14.7%	27.8%
U.S. LC Value		4.0%	2.0%	3.8%	5.8%	-2.6%	1.6%	5.5%	-12.0%	11.2%	3.4%	1.7%	7.5%	-25.8%	15.5%
U.S. MC Blend		4.5%	1.9%	3.5%	4.9%	-0.8%	3.6%	4.1%	-17.0%	14.6%	3.1%	0.4%	7.6%	-29.3%	22.8%
U.S. MC Growth		7.8%	5.5%	4.6%	5.7%	3.6%	3.5%	7.1%	-16.2%	18.5%	6.8%	-1.2%	7.4%	-20.4%	29.6%
U.S. MC Value		3.9%	1.8%	3.4%	5.4%	-1.8%	2.0%	2.9%	-15.3%	12.6%	2.9%	0.7%	8.1%	-30.8%	19.5%
U.S. SC Blend		1.7%	1.5%	5.1%	3.8%	-1.0%	5.8%	3.5%	-19.4%	13.4%	2.7%	-1.1%	8.0%	-32.0%	23.2%
U.S. SC Growth		5.8%	4.2%	5.4%	5.3%	3.0%	7.1%	7.2%	-19.8%	17.9%	5.2%	-3.3%	8.7%	-23.8%	31.4%
U.S. SC Value		0.4%	0.3%	4.9%	3.9%	-2.4%	5.6%	1.5%	-19.2%	12.2%	1.5%	-0.4%	8.1%	-36.8%	20.4%
Intl ex-U.S.		8.3%	6.9%	6.0%	3.9%	-0.4%	-2.2%	0.1%	-13.5%	11.2%	3.5%	-1.3%	9.6%	-23.4%	19.9%
Emerging Mkts.		7.6%	5.2%	4.7%	4.7%	0.1%	1.0%	2.8%	-13.6%	12.9%	3.5%	-0.8%	9.5%	-21.3%	21.8%
Global Equity		12.2%	5.7%	7.5%	6.3%	1.8%	-8.2%	-2.4%	-7.2%	11.3%	2.1%	-3.3%	11.0%	-25.1%	21.2%

		PASSIVE													
Style	**ETF**	**1Q17**	**2Q17**	**3Q17**	**4Q17**	**1Q18**	**2Q18**	**3Q18**	**4Q18**	**1Q19**	**2Q19**	**3Q19**	**4Q19**	**1Q20**	**2Q20**
U.S. LC Blend	SPY	5.1%	3.1%	4.4%	6.3%	-1.7%	5.8%	7.4%	-13.8%	13.5%	4.2%	1.8%	9.0%	-19.4%	20.2%
U.S. LC Growth	IWF	8.0%	4.6%	5.8%	7.6%	0.4%	8.3%	8.5%	-16.0%	16.0%	4.2%	1.7%	10.5%	-14.1%	27.7%
U.S. LC Value	IWD	2.4%	1.3%	3.0%	4.8%	-3.4%	3.5%	5.6%	-11.9%	11.8%	3.6%	1.5%	7.3%	-26.7%	14.2%
U.S. MC Blend	IWR	4.2%	2.6%	3.5%	5.5%	-1.2%	5.2%	4.8%	-15.0%	16.5%	3.9%	0.5%	7.0%	-27.1%	24.5%
U.S. MC Growth	IWP	6.1%	4.2%	5.2%	6.2%	1.3%	5.7%	7.1%	-15.5%	19.5%	5.3%	-0.7%	8.1%	-20.2%	30.2%
U.S. MC Value	IWS	2.8%	1.3%	2.1%	5.1%	-3.2%	4.6%	3.3%	-14.7%	14.3%	3.1%	1.2%	6.3%	-31.7%	20.0%
U.S. SC Blend	IWM	1.7%	2.5%	5.9%	2.0%	-1.1%	10.6%	2.9%	-19.2%	14.6%	1.9%	-2.3%	9.9%	-30.6%	25.5%
U.S. SC Growth	IWO	4.8%	4.4%	6.4%	3.2%	1.2%	10.1%	4.6%	-20.5%	17.2%	2.3%	-3.9%	11.4%	-26.0%	31.0%
U.S. SC Value	IWN	-0.9%	0.6%	5.3%	0.8%	-3.6%	10.5%	1.1%	-17.7%	12.0%	1.0%	-0.4%	8.4%	-35.8%	19.3%
Intl ex-U.S.	EFA	7.2%	6.4%	5.0%	3.9%	-1.6%	-0.6%	2.5%	-12.7%	10.3%	3.5%	-0.8%	7.7%	-23.0%	15.5%
Emerging Mkts.	EEM	11.2%	5.6%	8.3%	6.7%	0.6%	-8.0%	0.0%	-7.7%	9.9%	0.7%	-4.8%	12.1%	-23.9%	17.9%
Global Equity	ACWI	6.1%	4.7%	5.1%	5.6%	-1.5%	2.4%	4.7%	-13.0%	12.5%	3.4%	0.1%	8.7%	-21.0%	18.8%

		QUARTERLY ALPHA													
Style vs.	**ETF**	**1Q17**	**2Q17**	**3Q17**	**4Q17**	**1Q18**	**2Q18**	**3Q18**	**4Q18**	**1Q19**	**2Q19**	**3Q19**	**4Q19**	**1Q20**	**2Q20**
U.S. LC Blend	SPY	0.6%	0.0%	0.0%	0.0%	0.6%	-3.0%	-1.2%	0.2%	-0.6%	-0.5%	-0.9%	0.0%	-1.7%	-0.5%
U.S. LC Growth	IWF	1.2%	1.0%	0.0%	-1.1%	2.8%	-2.8%	-1.6%	0.5%	-0.6%	-0.1%	-2.9%	0.0%	-0.6%	0.2%
U.S. LC Value	IWD	1.6%	0.7%	0.8%	1.0%	0.9%	-1.9%	-0.1%	-0.1%	-0.6%	-0.2%	0.2%	0.2%	0.9%	1.2%
U.S. MC Blend	IWR	0.3%	-0.7%	0.0%	-0.6%	0.4%	-1.6%	-0.7%	-1.9%	-1.9%	-0.8%	-0.1%	0.6%	-2.1%	-1.7%
U.S. MC Growth	IWP	1.7%	1.3%	-0.7%	-0.5%	2.4%	-2.2%	0.0%	-0.7%	-1.0%	1.5%	-0.5%	-0.7%	-0.3%	-0.6%
U.S. MC Value	IWS	1.1%	0.5%	1.4%	0.3%	1.4%	-2.6%	-0.5%	-0.6%	-1.7%	-0.3%	-0.4%	1.9%	0.9%	-0.5%
U.S. SC Blend	IWM	-0.1%	-1.0%	-0.8%	1.8%	0.2%	-4.7%	0.6%	-0.2%	-1.2%	0.8%	1.2%	-1.8%	-1.4%	-2.4%
U.S. SC Growth	IWO	1.0%	-0.2%	-1.1%	2.1%	1.7%	-3.0%	2.6%	0.7%	0.6%	2.9%	0.6%	-2.7%	2.2%	0.4%
U.S. SC Value	IWN	1.4%	-0.3%	-0.4%	3.1%	1.2%	-4.9%	0.4%	-1.6%	0.3%	0.5%	0.0%	-0.3%	-1.0%	1.1%
Intl ex-U.S.	EFA	1.1%	0.5%	1.0%	0.0%	1.2%	-1.6%	-2.4%	-0.8%	0.8%	0.0%	-0.6%	1.9%	-0.4%	4.4%
Emerging Mkts.	EEM	-3.6%	-0.4%	-3.6%	-2.0%	-0.4%	9.0%	2.8%	-5.9%	3.0%	2.8%	3.9%	-2.6%	2.6%	3.9%
Global Equity	ACWI	6.2%	1.0%	2.4%	0.7%	3.3%	-10.6%	-7.2%	5.8%	-1.2%	-1.3%	-3.3%	2.2%	-4.0%	2.4%
Asset-Weighted		**1.1%**	**0.5%**	**0.2%**	**0.0%**	**1.5%**	**-2.1%**	**-1.1%**	**-0.3%**	**-0.2%**	**0.2%**	**-0.8%**	**0.2%**	**-0.3%**	**1.3%**

Source : Morningstar Direct, Deutsche Bank

Appendix 1

Important Disclosures

*Other information available upon request

During the period November 2018 to March 2020 Deutsche Bank may have shown incomplete information regarding Disclosure 1 in some parts of the equity research and debt research coverage. If you require any further information please contact DVS.Support@db.com.

Disclosure checklist

Company	Ticker	Recent price*	Disclosure
BlackRock	BLK.N	554.8 (USD) 29 Sep 2020	1, 7, 8, 14, 15
Eaton Vance	EV.N	38.1 (USD) 29 Sep 2020	2, 8, 14, 15
Franklin Resources	BEN.N	20.04 (USD) 29 Sep 2020	2, 7, 8, 14, 15
Invesco	IVZ.N	11.43 (USD) 29 Sep 2020	2, 7, 8, 14, 15

*Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors . Other information is sourced from Deutsche Bank, subject companies, and other sources. For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at http://gm.db.com/ger/disclosure/DisclosureDirectory.eqsr. Aside from within this report, important conflict disclosures can also be found at https://gm.db.com/equities under the "Disclosures Lookup" and "Legal" tabs. Investors are strongly encouraged to review this information before investing.

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8. Deutsche Bank and/or its affiliate(s) expects to receive, or intends to seek, compensation for investment banking services from this company in the next three months.
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Disclosures marked with an asterisk may also be required by at least one jurisdiction in addition to the United States.See Important Disclosures Required by Non-US Regulators and Explanatory Notes.

1. Within the past year, Deutsche Bank and/or its affiliate(s) has managed or co-managed a public or private offering for this company, for which it received fees.
2. Deutsche Bank and/or its affiliate(s) makes a market in equity securities issued by this company.
7. Deutsche Bank and/or its affiliate(s) has received compensation from this company for the provision of investment banking or financial advisory services within the past year.

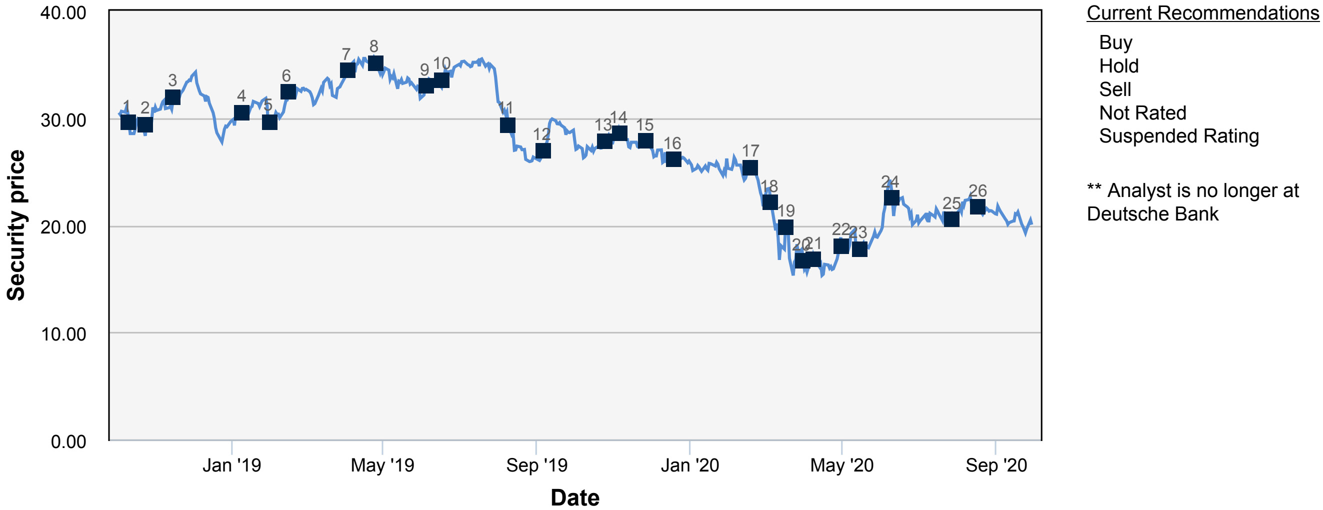
For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at https://research.db.com/Research/Disclosures/CompanySearch

Analyst Certification

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst about the subject issuers and the securities of those issuers. In addition, the undersigned lead analyst has not and will not receive any compensation for providing a specific recommendation or view in this report. Brian Bedell.

Historical recommendations and target price: Franklin Resources (BEN.N)

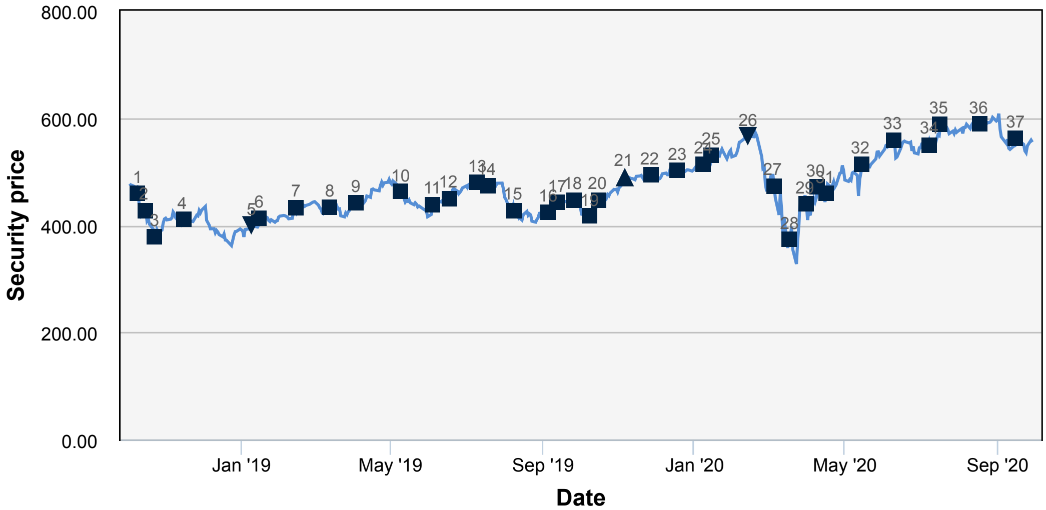
(as of 09/29/2020)



1.	10/11/2018	Hold, Target Price Change USD 29.00 Brian Bedell
2.	10/25/2018	Hold, Target Price Change USD 30.00 Brian Bedell
3.	11/16/2018	Hold, Target Price Change USD 29.00 Brian Bedell
4.	01/10/2019	Hold, Target Price Change USD 31.00 Brian Bedell
5.	01/31/2019	Hold, Target Price Change USD 29.00 Brian Bedell
6.	02/15/2019	Hold, Target Price Change USD 31.00 Brian Bedell
7.	04/04/2019	Hold, Target Price Change USD 33.00 Brian Bedell
8.	04/26/2019	Hold, Target Price Change USD 34.00 Brian Bedell
9.	06/05/2019	Hold, Target Price Change USD 33.00 Brian Bedell
10.	06/18/2019	Hold, Target Price Change USD 34.00 Brian Bedell
11.	08/09/2019	Hold, Target Price Change USD 33.00 Brian Bedell
12.	09/06/2019	Hold, Target Price Change USD 30.00 Brian Bedell
13.	10/25/2019	Hold, Target Price Change USD 29.00 Brian Bedell
14.	11/06/2019	Hold, Target Price Change USD 31.00 Brian Bedell
15.	11/27/2019	Hold, Target Price Change USD 29.00 Brian Bedell
16.	12/19/2019	Hold, Target Price Change USD 25.00 Brian Bedell
17.	02/19/2020	Hold, Target Price Change USD 27.00 Brian Bedell
18.	03/05/2020	Hold, Target Price Change USD 24.00 Brian Bedell
19.	03/18/2020	Hold, Target Price Change USD 22.00 Brian Bedell
20.	03/31/2020	Hold, Target Price Change USD 19.00 Brian Bedell
21.	04/09/2020	Hold, Target Price Change USD 17.00 Brian Bedell
22.	05/01/2020	Hold, Target Price Change USD 19.00 Brian Bedell
23.	05/15/2020	Hold, Target Price Change USD 18.00 Brian Bedell
24.	06/10/2020	Hold, Target Price Change USD 22.00 Brian Bedell
25.	07/28/2020	Hold, Target Price Change USD 23.00 Brian Bedell
26.	08/18/2020	Hold, Target Price Change USD 24.00 Brian Bedell

Historical recommendations and target price: BlackRock (BLK.N)

(as of 09/29/2020)



Current Recommendations

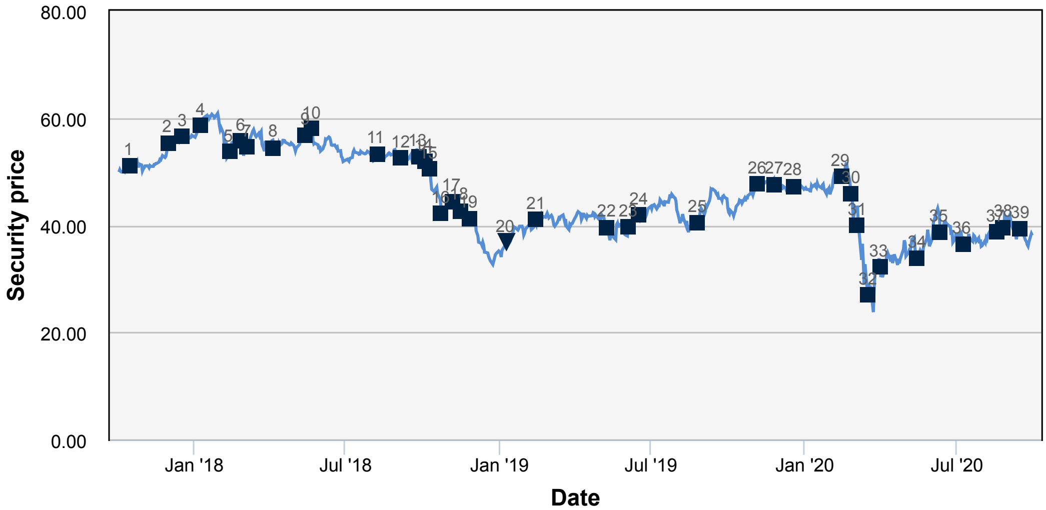
Buy
Hold
Sell
Not Rated
Suspended Rating

** Analyst is no longer at Deutsche Bank

1.	10/10/2018	Buy, Target Price Change USD 550.00 Brian Bedell
2.	10/16/2018	Buy, Target Price Change USD 475.00 Brian Bedell
3.	10/24/2018	Buy, Target Price Change USD 458.00 Brian Bedell
4.	11/16/2018	Buy, Target Price Change USD 444.00 Brian Bedell
5.	01/10/2019	Downgraded to Hold, Target Price Change USD 405.00 Brian Bedell
6.	01/16/2019	Hold, Target Price Change USD 410.00 Brian Bedell
7.	02/15/2019	Hold, Target Price Change USD 428.00 Brian Bedell
8.	03/14/2019	Hold, Target Price Change USD 431.00 Brian Bedell
9.	04/04/2019	Hold, Target Price Change USD 440.00 Brian Bedell
10.	05/10/2019	Hold, Target Price Change USD 445.00 Brian Bedell
11.	06/05/2019	Hold, Target Price Change USD 421.00 Brian Bedell
12.	06/18/2019	Hold, Target Price Change USD 436.00 Brian Bedell
13.	07/11/2019	Hold, Target Price Change USD 444.00 Brian Bedell
14.	07/19/2019	Hold, Target Price Change USD 451.00 Brian Bedell
15.	08/09/2019	Hold, Target Price Change USD 453.00 Brian Bedell
16.	09/06/2019	Hold, Target Price Change USD 447.00 Brian Bedell
17.	09/13/2019	Hold, Target Price Change USD 458.00 Brian Bedell
18.	09/26/2019	Hold, Target Price Change USD 463.00 Brian Bedell
19.	10/09/2019	Hold, Target Price Change USD 459.00 Brian Bedell
20.	10/16/2019	Hold, Target Price Change USD 465.00 Brian Bedell
21.	11/06/2019	Upgraded to Buy, Target Price Change USD 543.00 Brian Bedell
22.	11/27/2019	Buy, Target Price Change USD 546.00 Brian Bedell
23.	12/19/2019	Buy, Target Price Change USD 563.00 Brian Bedell
24.	01/09/2020	Buy, Target Price Change USD 570.00 Brian Bedell
25.	01/15/2020	Buy, Target Price Change USD 585.00 Brian Bedell
26.	02/14/2020	Downgraded to Hold, Target Price Change USD 584.00 Brian Bedell
27.	03/05/2020	Hold, Target Price Change USD 516.00 Brian Bedell
28.	03/18/2020	Hold, Target Price Change USD 463.00 Brian Bedell
29.	03/31/2020	Hold, Target Price Change USD 462.00 Brian Bedell
30.	04/09/2020	Hold, Target Price Change USD 478.00 Brian Bedell
31.	04/16/2020	Hold, Target Price Change USD 487.00 Brian Bedell
32.	05/15/2020	Hold, Target Price Change USD 488.00 Brian Bedell
33.	06/10/2020	Hold, Target Price Change USD 565.00 Brian Bedell
34.	07/09/2020	Hold, Target Price Change USD 563.00 Brian Bedell
35.	07/17/2020	Hold, Target Price Change USD 566.00 Brian Bedell
36.	08/18/2020	Hold, Target Price Change USD 568.00 Brian Bedell
37.	09/16/2020	Hold, Target Price Change USD 576.00 Brian Bedell

Historical recommendations and target price: Eaton Vance (EV.N)

(as of 09/29/2020)



Current Recommendations

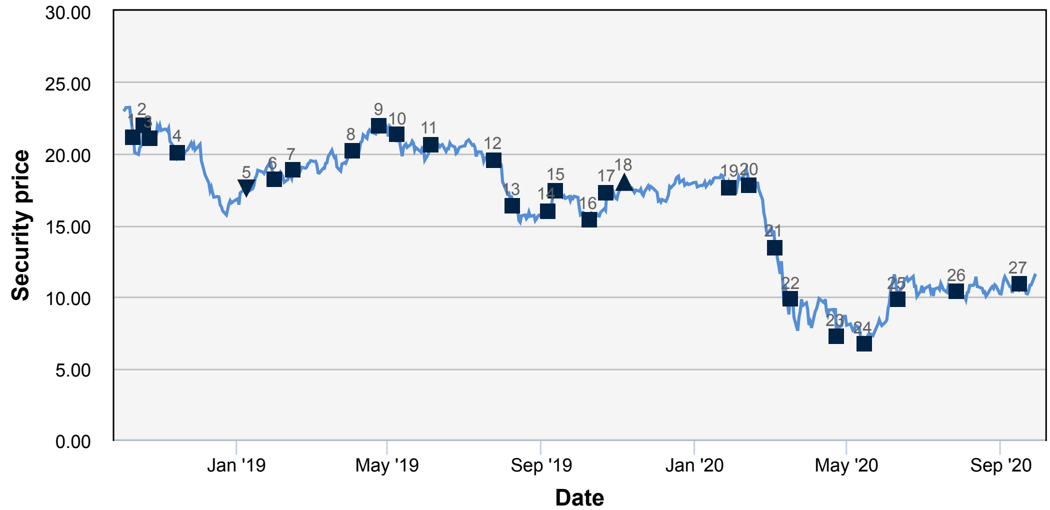
Buy
Hold
Sell
Not Rated
Suspended Rating

** Analyst is no longer at Deutsche Bank

1. 10/16/2017 Buy, Target Price Change USD 57.00 Brian Bedell
2. 12/01/2017 Buy, Target Price Change USD 59.00 Brian Bedell
3. 12/19/2017 Buy, Target Price Change USD 60.00 Brian Bedell
4. 01/10/2018 Buy, Target Price Change USD 67.00 Brian Bedell
5. 02/13/2018 Buy, Target Price Change USD 63.00 Brian Bedell
6. 02/27/2018 Buy, Target Price Change USD 62.00 Brian Bedell
7. 03/06/2018 Buy, Target Price Change USD 61.00 Brian Bedell
8. 04/06/2018 Buy, Target Price Change USD 64.00 Brian Bedell
9. 05/15/2018 Buy, Target Price Change USD 69.00 Brian Bedell
10. 05/22/2018 Buy, Target Price Change USD 66.00 Brian Bedell
11. 08/08/2018 Buy, Target Price Change USD 65.00 Brian Bedell
12. 09/06/2018 Buy, Target Price Change USD 64.00 Brian Bedell
13. 09/27/2018 Buy, Target Price Change USD 63.00 Brian Bedell
14. 10/04/2018 Buy, Target Price Change USD 64.00 Brian Bedell
15. 10/10/2018 Buy, Target Price Change USD 63.00 Brian Bedell
16. 10/24/2018 Buy, Target Price Change USD 61.00 Brian Bedell
17. 11/06/2018 Buy, Target Price Change USD 60.00 Brian Bedell
18. 11/16/2018 Buy, Target Price Change USD 58.00 Brian Bedell
19. 11/27/2018 Buy, Target Price Change USD 57.00 Brian Bedell
20. 01/10/2019 Downgraded to Hold, Target Price Change USD 39.00 Brian Bedell
21. 02/15/2019 Hold, Target Price Change USD 41.00 Brian Bedell
22. 05/10/2019 Hold, Target Price Change USD 43.00 Brian Bedell
23. 06/05/2019 Hold, Target Price Change USD 42.00 Brian Bedell
24. 06/18/2019 Hold, Target Price Change USD 44.00 Brian Bedell
25. 08/27/2019 Hold, Target Price Change USD 45.00 Brian Bedell
26. 11/06/2019 Hold, Target Price Change USD 51.00 Brian Bedell
27. 11/26/2019 Hold, Target Price Change USD 49.00 Brian Bedell
28. 12/19/2019 Hold, Target Price Change USD 45.00 Brian Bedell
29. 02/14/2020 Hold, Target Price Change USD 48.00 Brian Bedell
30. 02/26/2020 Hold, Target Price Change USD 49.00 Brian Bedell
31. 03/05/2020 Hold, Target Price Change USD 44.00 Brian Bedell
32. 03/18/2020 Hold, Target Price Change USD 39.00 Brian Bedell
33. 03/31/2020 Hold, Target Price Change USD 36.00 Brian Bedell
34. 05/15/2020 Hold, Target Price Change USD 37.00 Brian Bedell
35. 06/11/2020 Hold, Target Price Change USD 41.00 Brian Bedell
36. 07/09/2020 Hold, Target Price Change USD 37.00 Brian Bedell
37. 08/18/2020 Hold, Target Price Change USD 41.00 Brian Bedell
38. 08/26/2020 Hold, Target Price Change USD 42.00 Brian Bedell
39. 09/16/2020 Hold, Target Price Change USD 38.00 Brian Bedell

Historical recommendations and target price: Invesco (IVZ.N)

(as of 09/29/2020)



Current Recommendations
- Buy
- Hold
- Sell
- Not Rated
- Suspended Rating

** Analyst is no longer at Deutsche Bank

1.	10/11/2018	Buy, Target Price Change USD 27.00 Brian Bedell
2.	10/19/2018	Buy, Target Price Change USD 29.00 Brian Bedell
3.	10/24/2018	Buy, Target Price Change USD 27.00 Brian Bedell
4.	11/16/2018	Buy, Target Price Change USD 25.00 Brian Bedell
5.	01/10/2019	Downgraded to Hold, Target Price Change USD 18.00 Brian Bedell
6.	01/31/2019	Hold, Target Price Change USD 17.00 Brian Bedell
7.	02/15/2019	Hold, Target Price Change USD 19.00 Brian Bedell
8.	04/04/2019	Hold, Target Price Change USD 20.00 Brian Bedell
9.	04/25/2019	Hold, Target Price Change USD 22.00 Brian Bedell
10.	05/10/2019	Hold, Target Price Change USD 23.00 Brian Bedell
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12.	07/25/2019	Hold, Target Price Change USD 21.00 Brian Bedell
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15.	09/13/2019	Hold, Target Price Change USD 18.00 Brian Bedell
16.	10/09/2019	Hold, Target Price Change USD 17.00 Brian Bedell
17.	10/23/2019	Hold, Target Price Change USD 18.00 Brian Bedell
18.	11/06/2019	Upgraded to Buy, Target Price Change USD 21.00 Brian Bedell
19.	01/29/2020	Buy, Target Price Change USD 20.00 Brian Bedell
20.	02/14/2020	Buy, Target Price Change USD 21.00 Brian Bedell
21.	03/05/2020	Buy, Target Price Change USD 19.00 Brian Bedell
22.	03/18/2020	Buy, Target Price Change USD 13.00 Brian Bedell
23.	04/23/2020	Buy, Target Price Change USD 12.00 Brian Bedell
24.	05/15/2020	Buy, Target Price Change USD 11.00 Brian Bedell
25.	06/11/2020	Buy, Target Price Change USD 14.00 Brian Bedell
26.	07/28/2020	Buy, Target Price Change USD 13.00 Brian Bedell
27.	09/16/2020	Buy, Target Price Change USD 14.00 Brian Bedell

Equity Rating Key

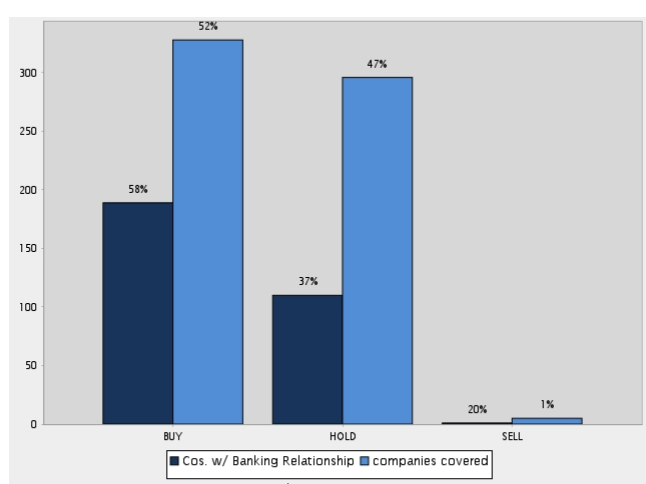
Buy: Based on a current 12- month view of total share-holder return (TSR = percentage change in share price from current price to projected target price plus pro-jected dividend yield) , we recommend that investors buy the stock.

Sell: Based on a current 12-month view of total share-holder return, we recommend that investors sell the stock.

Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.

Newly issued research recommendations and target prices supersede previously published research.

Equity rating dispersion and banking relationships



Additional Information

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