# Expert's View

# ESG Sectors : Diversification with Benefits

## Overview

— Amundi ETF recently launched a **full range of ESG Global Sector ETFs**.

— In this report, we **analyse** the **ESG improvement** provided by this product range and compare the **risk and return metrics** with those of traditional sector indices.

## Key Takeaways

— Sectors are a powerful means of **increasing equity portfolio diversification**

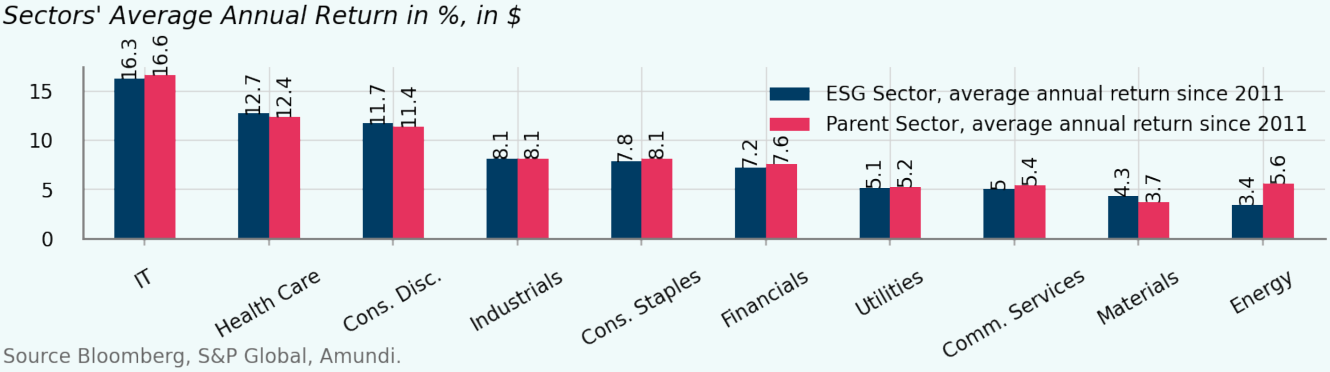
— ESG Sectors provide **virtually the same diversification benefits of parent sectors** while improving ESG scores and reducing carbon footprint.

— They perform **largely in line** with parent sectors as witnessed by their limited respective tracking-error, high beta and correlations.

## ESG Sectors : a close long term performance

**ESG Sectors since 2011: A -0.3% mean difference in annual return**

*Sectors' Average Annual Return in %, in $*




Source Bloomberg, S&P Global, Amundi.
Data as at 31/10/2022.
Past performance is not indicative of future performance.

## Amundi ETF Investment Strategy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We take the opportunity of Amundi's launch of a Global ESG Sector ETF range to revisit the investment case for **Sector Investing**.

ESG sectors indices (or simply "ESG Sectors") exhibit key features such as :

- Each **sector** is a **coherent and diversified** portfolio of stocks operating in the same business field, and as such demonstrate similar sensitivity to underlying to macro-economic trends ;
- Sectors can **strongly differ from one to another**, depending on their : positioning in the value chain, sensitivity to the economic cycle, the geographical exposure of their stream of revenues. Hence the low correlation that can be observed between sectors' performance All these factors are monitored by investors when it comes to sector allocation in their portfolio ;
- In this report, we will show that bringing **ESG improvements** like ESG score or carbon footprint **do not come with any significant change in the market behaviour** of the sector indices compared to their parent indices.

# Sector Investing, from tactical to core allocation

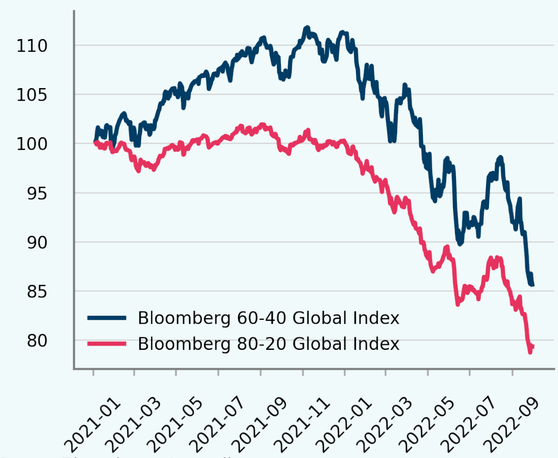
## Sector Investing in 2022 : a much needed diversification

### Market volatility challenged both Equities and Fixed Income returns

It has been a **volatile year** for equity markets, hit by higher inflation, tighter liquidity conditions and the perspective of a global slowdown in the last few months. More importantly, **Fixed Income did not play its traditional role** of portfolio protection, as it did over the past 20 years.

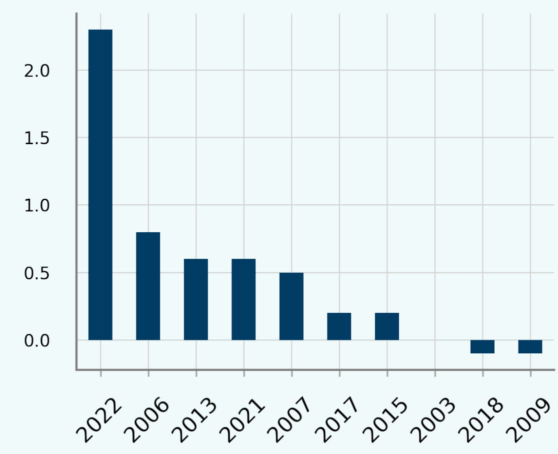
A challenging 2022 for multi-asset portfolios

**Multi-asset portfolios have been challenged**
*Wealth curve, basis 100 in 31/12/2020*




Source Bloomberg, Amundi.
Data as at 31/10/2022.Past performance is not indicative of future performance.

**Fastest increase in interest rates for decades**
*Annual increase in € 10Y Swap Rate*




Source Bloomberg, Amundi.
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## A challenge for 60-40 portfolios

There has been a **heavy de-rating in performance for both equities and bonds** on the back of the strong repricing of the outlook for central banks' policies in the face of elevated and persistent inflation prints. The market downturn also challenged the performance of standard multi-asset portfolios since the beginning of the year. These couldn't benefit from the help of their traditional protection tools (the inverse correlation between equity and bond returns).

In this context, we believe that **adding granularity** when constructing a portfolio allocation with the help of **sectors and factors** would enable adjustment of overall risk exposure in a more efficient manner.

## A look under the hood : dispersion in sector returns

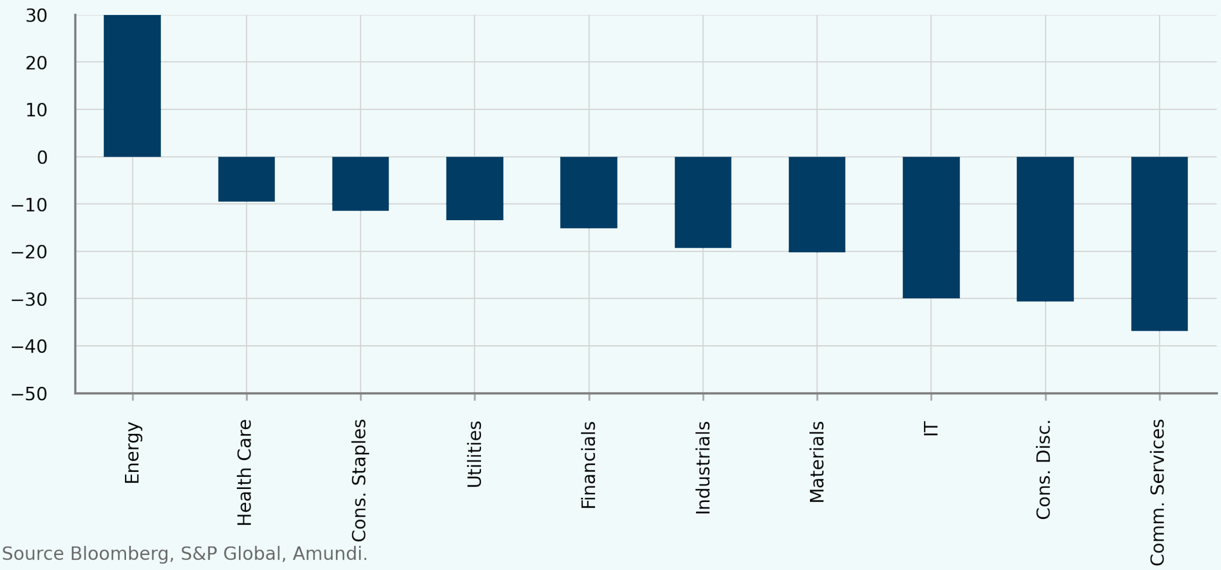
Despite periods of heightened volatility since the beginning of the year, we note a **high level of dispersion** in returns among sectors.

The performance of defensive sectors such as **utilities, healthcare and consumer staples** proved more resilient compared to more cyclical sectors such as industrials or consumer discretionary. **energy** has been the only sector with positive returns YTD, benefiting from **elevated uncertainty on the energy mix in Europe**.

The dispersion in returns is an **important and structural feature** in sector allocation and 2022 is a clear reminder of that. In the coming section, we will look further into the **drivers of such de-correlation of returns**. We will also shed some light on investors' appetite for sector investing over time.

### 2022 brought a significant dispersion in sector performance

*Sectors' YTD Return in %, in $*




Source Bloomberg, S&P Global, Amundi.
Data as at 31/10/2022.
Past performance is not indicative of future performance.

## Anatomy of Sector Funds & ETFs

### A € 1.5 Trillion universe, tapped by both Active and Passive managers

Total Assets under Management (AuM) for sector Funds and ETFs now stand at **€1.5 Trillion**, allotted between Exchange-Traded Funds ("ETFs") and Open-End Funds ("Funds").

### A Sector universe dominated by technology and healthcare funds

When focusing on the breakdown of AuMs, we find that :

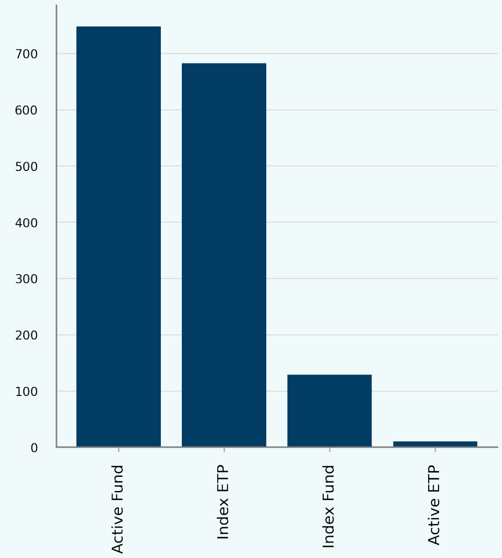
— **Technology** exposures hold the lion's share of sector funds' AuMs with € 357 Bn of total assets. Flows into technology have accelerated in the market rally that followed the Covid 19 crisis ;

— **Healthcare** funds also gathered significant assets, some of these funds specifically look at disruptive healthcare technologies ;

— Turnover in sector funds' AuMs may be greater compared to other asset segments. **Sector allocation can be used for tactical positioning** following investors' view on underlying macro-economic trends.

Asset breakdown by Investment Type

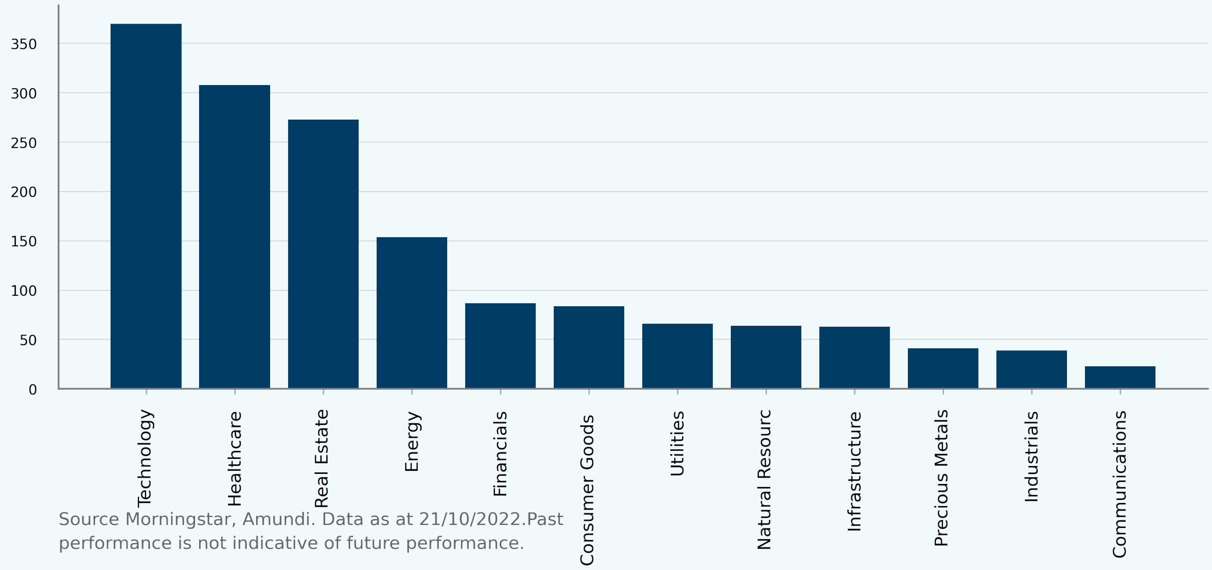
**Sectors: both Active and Passive in favor**
*AUMs, US & EU Funds & ETFs, in € bn*




Source Morningstar, Amundi. Data as at 21/10/2022.
Past performance is not indicative of future performance.

Asset breakdown by Sector

**Sector Funds: a € 1.6 Tr universe**
*AUMs, US & EU Funds & ETFs, in € bn*




Source Morningstar, Amundi. Data as at 21/10/2022.Past performance is not indicative of future performance.

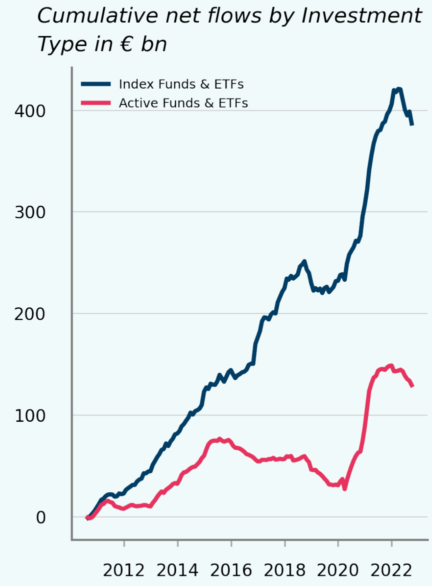
## Strong flows over the last decade

Investors' appetite for sector investing has accelerated over the last ten years.

Index Funds & ETFs have gathered a **combined €334 bn over the last decade** whilst Active Funds gathered a total of €115 bn of net new assets. Of note also is the **significant pickup in net new assets into Active** funds over the last 18 months.

Investors' appetite for **technology** stocks via either sector or thematic funds (which are included in this segmentation) have driven part of these flows.

### Increasing appetite for Sector Investing

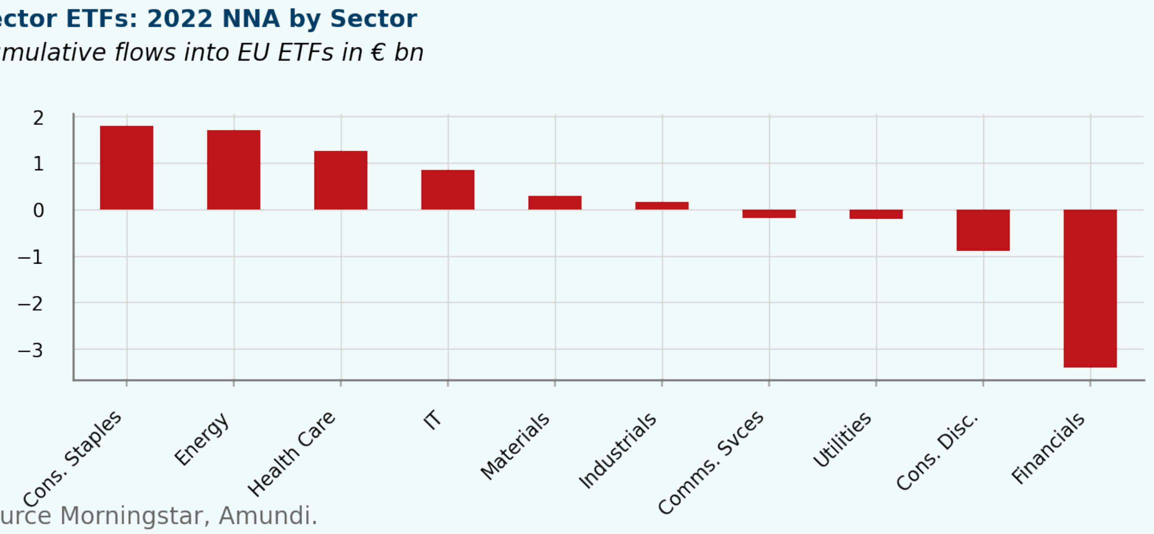



Source Morningstar, Amundi.
Data as at 21/10/2022. Past performance is not indicative of future performance.

## 2022 : Defensive Sectors in favour

**Consumer staples** and **healthcare** traditionally considered as defensive sectors, gathered noticeable flows YTD. **Energy** was also picked to maximise exposure to the inflationary environment.

### Investors have flocked into Defensive Sectors




Source Morningstar, Amundi.
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## The case for Sector Investing in 2022

**Sector Investing** is pretty **pervasive** among investors and Sector classification of a single stock may seem straightforward.

However, some **underlying factors** may add some **complexity** such as :

— **Sector classification** tends to be defined by market standards and rely on **index providers** such as MSCI, S&P and Qontigo ;

— The sector classification of a single stock **can vary between index providers** and over time ;

— Moreover, when looking at investable products, the funds' classification under the same sector umbrella does not forbid **differences in underlying portfolio allocation**. This can lead to **strong divergence in performance** as we have seen for the energy sector and calls for caution when it comes to fund selection.

All these considerations warrant a **comprehensive analysis of absolute and relative performances of sector indices**, in order to assess their optimal use in a particular investment context.

**A few sectors**

- Energy
- Industrials
- Utilities
- Information Technology
- Consumer discretionary
- Real estate
- Travel & leisure
- Food & beverage

## Sector Investing : different investment approaches

Sector investing can support **different aims**, as with granular investment building blocks, :

— **Fundamental investing** : investor would rely on comparative valuation, earning growth estimates and key development of each sector's value chain to support their investment conviction.

— **Macro-economic approach** : closely related to fundamental investing, such an approach relies on the key relationship between sectors and underlying macro-economic trends (see below).

— **Momentum-based investing** is a very popular approach, particularly well-suited to sector investing, thanks to the dispersion of returns as previously discussed.

## Sectors : an investor's toolbox to navigate economic cycles

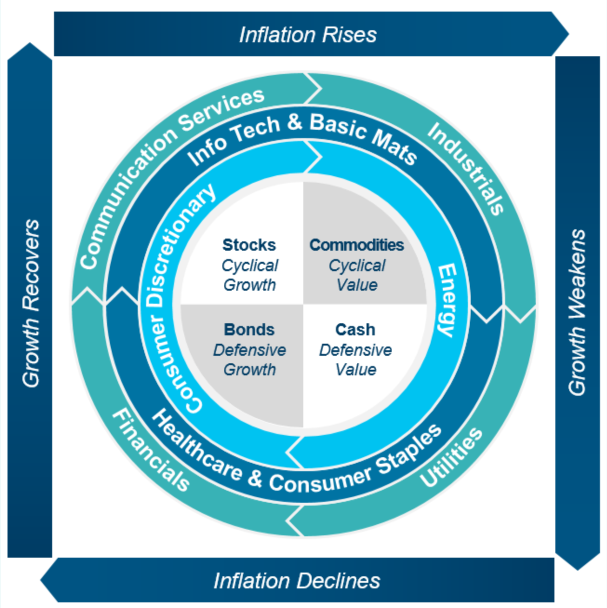
In the picture below we represent the **cyclical nature** of sector returns and their close **link to underlying macro-economic trends**.

These can be summarised under two fundamental metrics : **economic growth** and **inflation**.

Albeit each economic cycle is different, sectors returns broadly follow this pattern.

The key for investors is therefore to identify **inflection points** in the economic cycle. As an outcome of their macro-economic analysis, investors essentially aim to identify **entry and exit points in their sector allocation**.

Sectors' exposures to macro-economic cycles




## Current market volatility : opportunities in defensive sector picking

Beyond the traditional approaches to sector investing, we see several strategic trends that go far beyond tactical allocations :

- Investors are looking for **portfolio protection** ;
- The race for **energy independence** has never been this strong ;
- In the long term, the **digital economy** will play an even increasing role, whilst interest rates can in the short term be damaging for the Tech sectors, which can be the case for portfolios' agility,
- **Fight against climate change** is increasingly on each investor's agenda.

Albeit vastly different, these cases all share a common trait : they might be addressed, at least partially, by sector allocation.

## Inside the large sector universe, selectivity is key

As mentioned above, single stocks belonging to the **same sector** usually share a **similar exposure to several factors** (e.g. macro-economic, financial, etc.). Nonetheless, beyond the sector investing theory, there is a wide range of funds deemed to invest in the same contemplated sector, and we can see in the picture below the wide divergence between funds' performances.

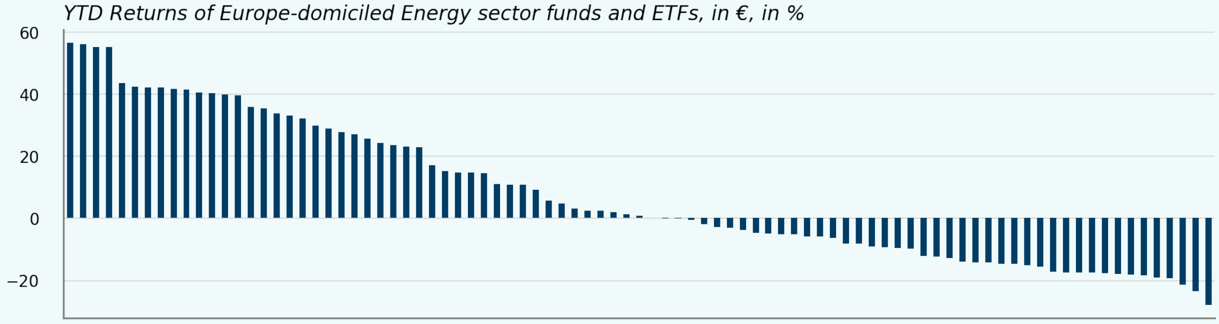
For sake of clarity we included in this analysis all Europe-domiciled Open-Ended Funds & ETFs deemed to invest in the *energy Sector Equity* Global Category from Morningstar. We observe a difference of more than 80% between the best and the worst fund of this universe.

We assume that some of the outperforming active funds have taken large successful bets in 2022 and turned the market turbulence into opportunities, whilst others might have been caught off-guard by the market volatility (or exposed in tech savvy energy exposures such as clean energy).

Dispersion : YTD performances of global energy Funds and ETFs

**Energy Sectors: massive dispersion in funds' performances**

*YTD Returns of Europe-domiciled Energy sector funds and ETFs, in €, in %*




Source Morningstar, Amundi. Data as at 21/10/2022.
EU-domiciled Funds classified as 'Global Category = Energy Sector Equity'
Past performance is not indicative of future performance.

## Scorecard for Sector Investing

When it comes to sector investing, the following **key features** come to mind :

— **Intuitiveness** : The strongest possible relationship between the single stock's activity and its underlying sector. Portfolio construction typically relies on indices when it comes to index funds and ETFs, hence the importance of the index providers' expertise and underlying sector classification methodology.

— **Representativeness** : ideally, a sector index fund or ETF holds the *right* number of stocks : a) enough to reduce significantly the specific risk (ie the risk coming from company specific factors within the portfolio) and b) not too many to avoid excessive dilution. This could indicate the need to break a portfolio into two sectors. Assessing current mainstream sectors and reputed index providers, such risk seems low. Sectors' definition allow for clear classification and are well recognised by industry standards.

— **Internal Diversification** : a direct outcome of representativeness, a sector portfolio should hold a sufficient number of stocks to ensure a minimal specific risk, with an aim to maximise the exposure to the sector's systematic risk.

— **External Diversification** : making sure that each sector will at best reflects an independent, specific segment of a particular geographic universe (e.g. developed world sectors) when contemplating a sector toolbox. This will allow for a low correlation of the returns between each sector and provide diversification benefits for equity portfolios.

— **Consistency** : ideally, sector portfolios addressing similar geographical exposure for the same industry should demonstrate similar performance.

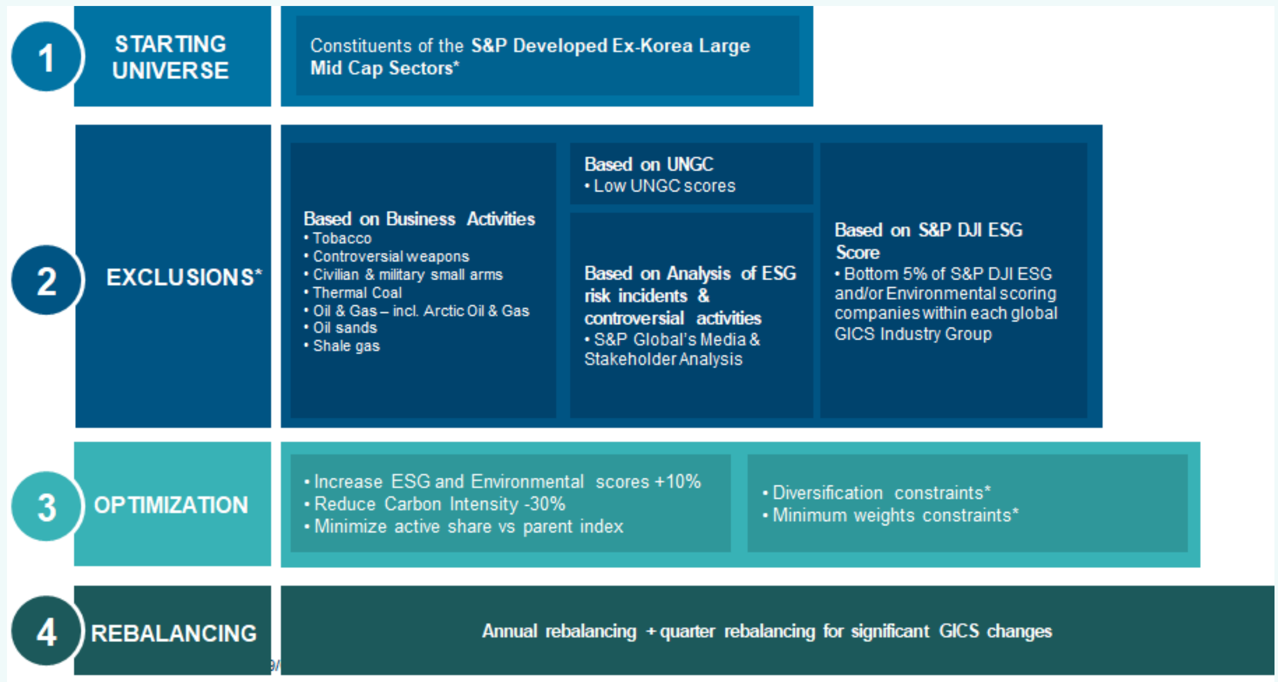
# A toolbox with a meaningful ESG improvement

In this section, we assess how ESG Sectors can be constructed and what portfolio construction benefit they might bring.

## Portfolio Construction

1. **Starting Universe** : in the context of the S&P ESG Sectors, it starts with the S&P Developed ex-Korea Large Mid Cap Sectors.
2. **Exclusions** : a suite of *business activity related*, *UNGC*[1] *scores related*, *risk incident related*, *controversial activities related* and *ESG scores related* filters are applied.
3. **Optimisation** : an optimisation process is implemented in order to obtain a consistent improvement in the ESG score and carbon intensity. This process takes into account diversification and minimum weight constraints.
4. **Rebalancing** : to ensure time-consistency, portfolio-rebalancing rules are put in place; S&P ESG sector indices are rebalanced on an annual basis.

S&P Global Indices : Portfolio Construction




1. UNGC : The United Nations Global Compact is a non-binding United Nations pact to encourage businesses and firms worldwide to adopt sustainable and socially responsible policies, and to report on their implementation.

## ESG Sectors : sectors with significant ESG improvements

In this section we aim to validate the outcome in terms of improvement across esg metrics and assess if the optimisation objectives (**10% ESG Score improvement, 30% reduction in carbon intensity**) are obtained in practice.

### ESG Score Improvement

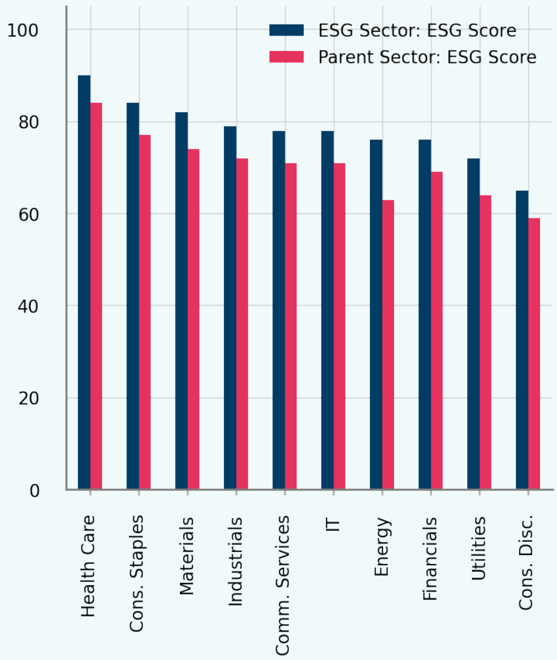
Our analysis (see picture below) shows that there is a **10% average improvement in ESG scores**. This is exactly in line with the **expected outcome** of the optimisation process. The bar chart demonstrates that the improvement in ESG scores is well distributed across sectors.

### Carbon Intensity

The figures below confirms the significant reduction in carbon intensity, ie a **30% average reduction**. These are also in line with the expected outcome of the optimisation process.

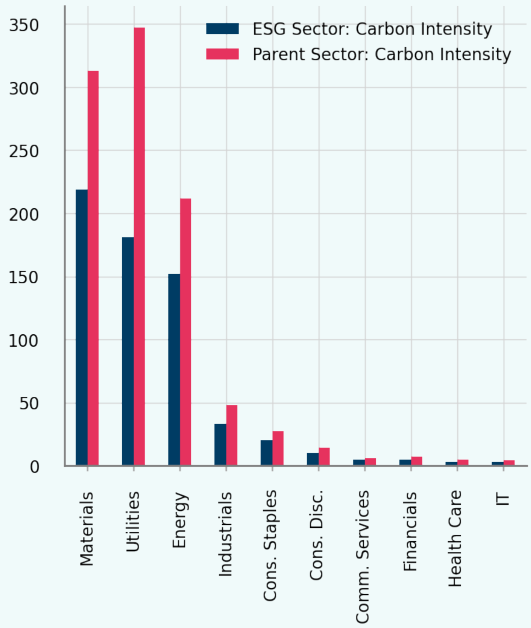
**ESG Sectors provide a meaningful improvement across ESG metrics**

**ESG Sectors: average increase in ESG score**
*ESG Scores of Sectors*




Source S&P Global, Amundi.
Data as at 31/10/2022.
Past performance is not indicative of future performance.

**ESG Sectors: Carbon Intensity**
*Sectors' Carbon Intensity / EVIC (Scope 1 + Scope 2)*




Source S&P Global, Amundi.
Data as at 31/10/2022, Scope 1 + Scope 2 / EVIC
Past performance is not indicative of future performance.

## Sector representativeness and diversification

When building a **single sector allocation**, we are looking at a **diversified portfolio of stocks** with a **similar sensitivity** to underlying macro-economic trends.

As often acknowledged among the investment community, **diversification** is probably the **only free lunch**, and a key pillar of index investing.

Focusing on Developed Markets, the **stock count** for each sector varies greatly and reflects the **difference from one industry to another**. As an example, the S&P Developed industrials sector holds 284 stocks compared to only 48 for the energy Sector. Still, single sectors remain well diversified with an average of 116 stocks per sector index.

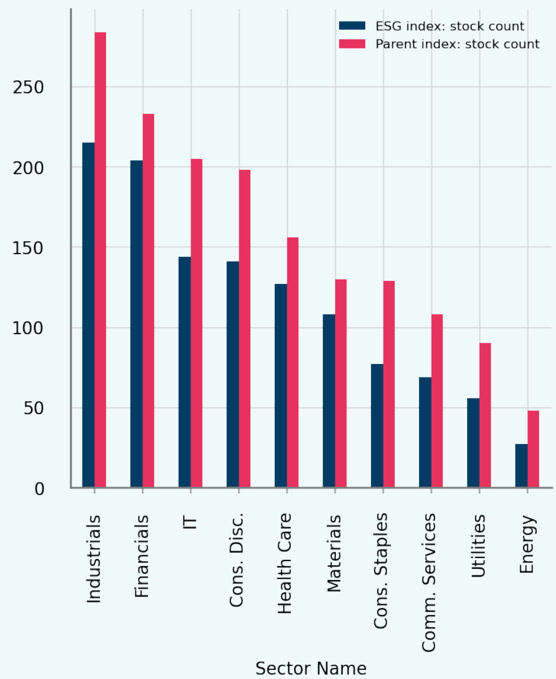
When **transitioning** from the **parent** S&P sector index into an **ESG filtered allocation**, there is on average a **28% drop** in the number of stocks. This reflects the selectivity implemented at the ESG filtering and optimisation steps presented in the previous sections.

Overall, ESG sectors significantly improve the ESG and carbon footprint of traditional sector indices, whilst staying **well in line** in terms of **diversification** and **representativeness**.

### High level of representativeness across sectors

**116 stocks held by ESG Sectors on average**

*Number of stocks held by each sector index*




Source S&P Global, Amundi. Data as at 31/10/2022.
Past performance is not indicative of future performance.

## ESG Sectors : the exposure you had in mind

In this section, we look at whether ESG Sectors are **“close enough”** from parent **sector indices**.

### Year to date performances

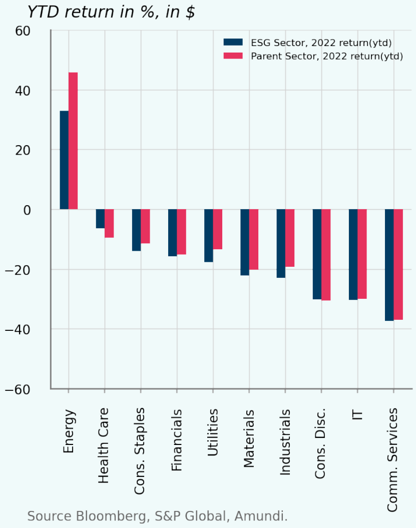
The performance of the **energy** sector has **dominated** other sector returns since the beginning of the year (+22%). Meanwhile, the **Energy Carbon Reduced** Index delivered a **stellar return of 13%**, albeit this came to a much lower extent compared to its non ESG parent index. Overall, the underperformance of combined ESG Sectors was mostly due to the performance differential from the energy sector.

The average return difference between each ESG and non-ESG sector indices was much more contained (**2.3% over the same period**).

ESG Sectors : year to date returns

**ESG Sectors in 2022: a -2.3% mean difference**

*YTD return in %, in $*




Source Bloomberg, S&P Global, Amundi.
Data as at 31/10/2022.
Past performance is not indicative of future performance.

### Long term returns

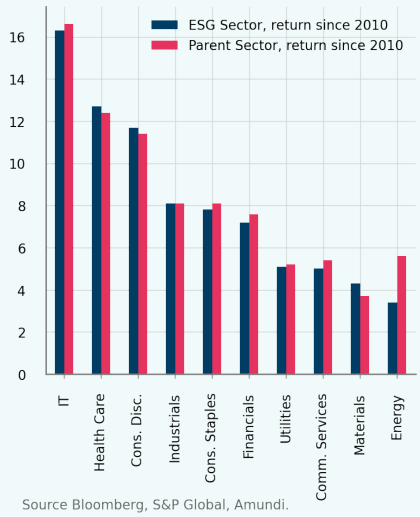
**2022** has been marked by a unique **geopolitical** and **macro-economic context**, which vouches for an assessment of ESG sectors in the longer run.

Our analysis suggests that the **performance differential** of ESG filtered sector indices vs their parent index has been **minimal in the long-run**, averaging 0.3% per annum.

ESG Sectors : Long Term Returns returns

**ESG Sectors since 2011:**
**A -0.3% mean difference**

*Sectors' YTD Return in %, in $*




Source Bloomberg, S&P Global, Amundi.
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## Beta of ESG Sector Indices vs Reference Index

When looking at a **defensive positioning** using ESG sector allocation, **beta analysis** of performances can prove useful. This allows checking whether the beta level of each ESG sector is consistent with those from their respective parent index.

Our analysis shows that, on average, the **differential in beta** of an ESG sector vs its parent index is very **close to 0%**. Overall global ESG sectors demonstrate a very similar behaviour compared to their parent indices.

## Correlations

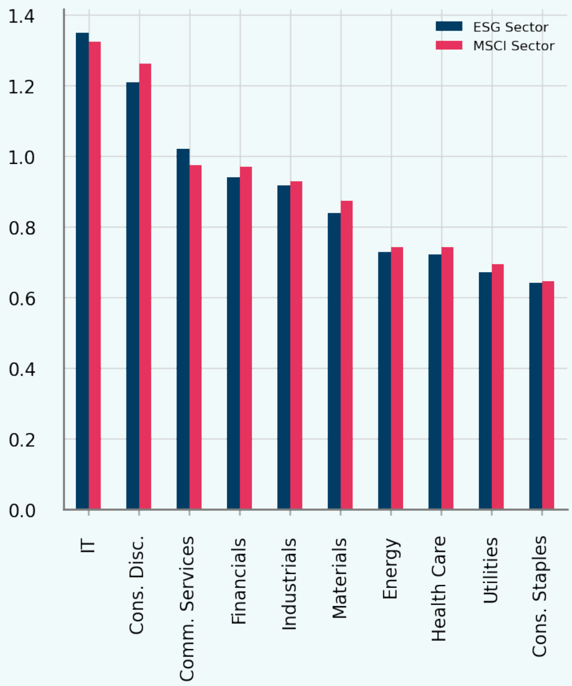
The **correlation of returns** brings a similar perspective to that of the tracking-error, and allows investors to assess the similarities and divergences between two assets.

The average correlation of returns between ESG sectors and their respective parent index is **very high at 99.3%**. This confirms the **very strong link** between each other.

ESG Sectors : a very similar market exposure and high correlations compared to parent sectors

**Betas: a minimal -1.2% average difference**

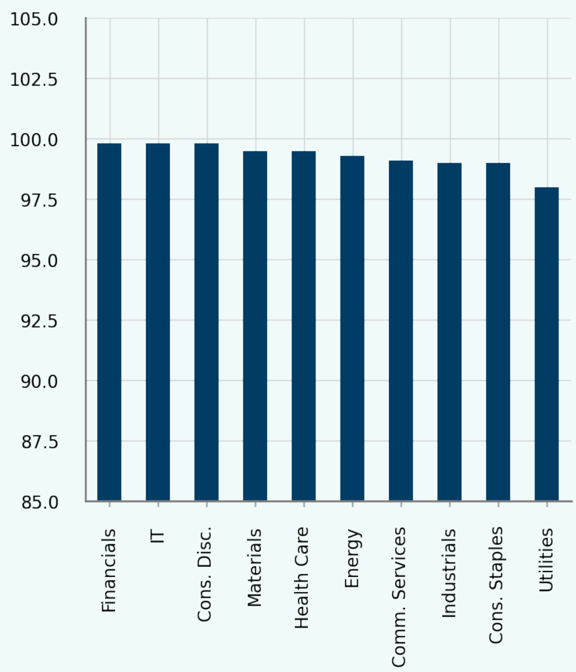
*Sectors' beta vs MSCI World (last 52w, in $)*




Source Bloomberg, S&P Global, Amundi.
Data as at 31/10/2022.
Past performance is not indicative of future performance.

**Correlations: a high 99.3% average**

*ESG vs Parent Correlation (52w, in %, in $)*




Source Bloomberg, S&P Global, Amundi.
Data as at 31/10/2022.
Past performance is not indicative of future performance.

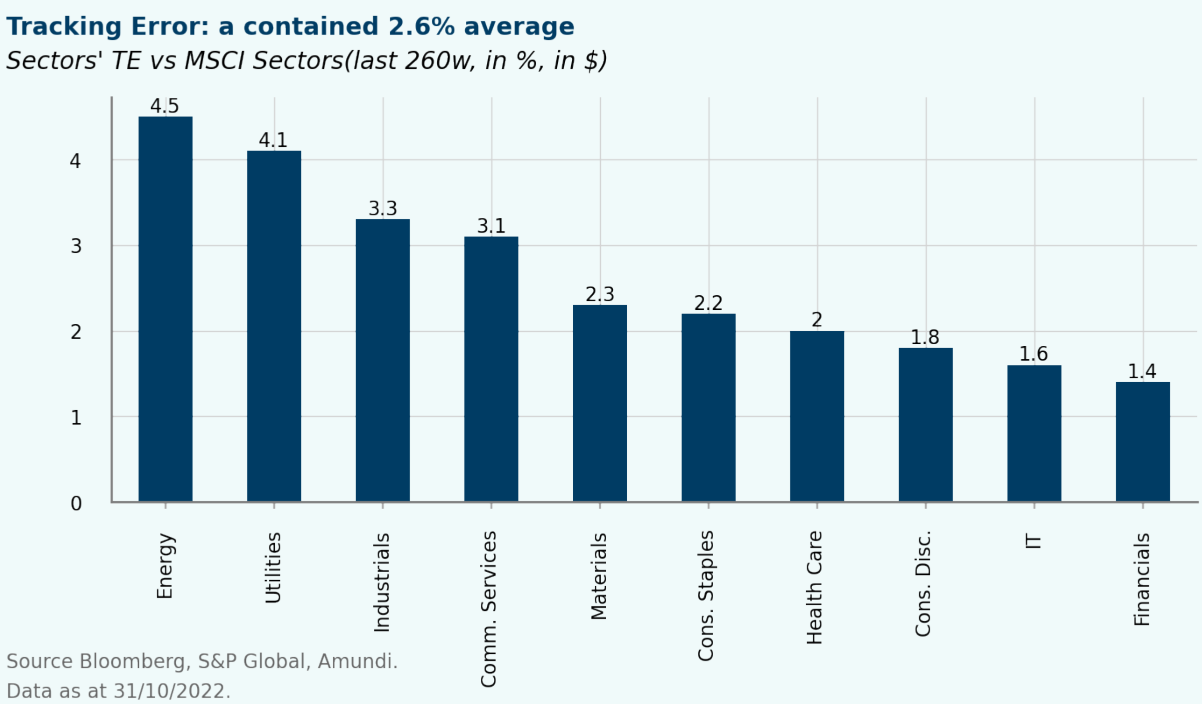
## Tracking-Error

The **tracking-error** is probably the **most efficient** measure to assess the statistical **differences between ESG sector and parent sector returns**.

Our analysis suggests that the **average tracking-error** for ESG sectors stands **around 2.6%**[2]. The highest tracking error comes up at 4.4% for the Energy sector and go as low as 1.4% for the financials sector. These numbers are a reassurance that an ESG sector will perform in line with expected returns for such an allocation.

As shown below, the average tracking-error is equal to 2.6%, with a 4.5% maximum value for the energy sector and going down to 1.4% for the financials sector. These numbers should **reassure the investor** that the **sector allocation will perform in line with his/her expectations**.[3]

**Tracking-Error of ESG sectors vs parents indices**




Source Bloomberg, S&P Global, Amundi.
Data as at 31/10/2022.
Past performance is not indicative of future performance.

2. The tracking-error has been calculated here on the basis of the last 260 last weekly returns, source Amundi, Bloomberg. Past performance is not indicative of future performance.
3. In this note, we interchange the analysis of the ESG Sectors from the S&P parents indices and the corresponding MSCI indices, widely used as well.

# Sector Investing with ESG Sectors

## Diversification, year after year [4]

**Performance analysis** comes as the easiest way to assess the benefits of sectors' portfolio construction. We look here at the **annual returns** of each index. The results are quite striking : year after year, there's a **wide dispersion of returns** from one sector to another.

These results suggest that fund and ETF investors can deliver alpha via sectors exposure.

We see two points of focus in such assessment :

— A **medium-term performance cycle** (e.g. annual returns) is an appropriate timeframe. It allows investors to **set up models** and any **required oversight committee** ahead of their investment decision, as opposed to high frequency/systematic strategies ;

— The **vast dispersion in performance** brings a solid source of **alpha potential**, should the investor successfully **predict the next outperforming sectors**.

ESG Sectors : annual returns

| Index Name | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P Communication Services ESG | -0.2 | 4.0 | 35.9 | -4.0 | 0.1 | -1.9 | 7.1 | -13.5 | 31.3 | 25.3 | 13.5 | -37.4 |
| S&P Consumer Discretionary ESG | -4.0 | 23.8 | 37.6 | 3.3 | 6.6 | 2.4 | 23.5 | -4.7 | 28.4 | 34.0 | 19.4 | -30.1 |
| S&P Consumer Staples ESG | 5.8 | 13.3 | 21.6 | 5.6 | 4.9 | -0.2 | 17.9 | -6.7 | 23.8 | 9.5 | 12.7 | -14.0 |
| S&P Energy Carbon Reduced ESG | -3.4 | 1.6 | 19.1 | -12.7 | -23.4 | 27.6 | 0.7 | -18.5 | 14.4 | -27.8 | 30.5 | 33.0 |
| S&P Financials ESG | -20.3 | 31.8 | 28.1 | 2.5 | -3.3 | 9.1 | 23.1 | -18.6 | 26.1 | -3.0 | 26.6 | -15.8 |
| S&P Health Care ESG | 11.1 | 16.8 | 32.8 | 16.7 | 5.3 | -5.9 | 20.7 | 4.6 | 24.0 | 12.0 | 20.2 | -6.4 |
| S&P Industrials ESG | -10.6 | 15.5 | 27.1 | 1.4 | -7.2 | 16.4 | 30.5 | -16.0 | 26.7 | 18.8 | 17.9 | -23.0 |
| S&P Information Technology ESG | -0.3 | 13.6 | 25.4 | 16.7 | 5.5 | 11.3 | 37.9 | -2.5 | 45.5 | 40.5 | 32.3 | -30.4 |
| S&P Materials ESG | -16.3 | 12.3 | 5.2 | -2.9 | -11.3 | 18.5 | 28.3 | -16.3 | 24.9 | 18.7 | 12.1 | -22.1 |
| S&P Utilities ESG | 1.1 | 4.4 | 14.5 | 17.5 | -5.2 | 6.3 | 9.0 | 0.0 | 21.6 | 3.0 | 7.0 | -17.8 |

4. Source Bloomberg, Amundi. Data as at 31/10/2022. Past performance is not indicative of future performance.

## Exposure to main financial benchmarks

Ultimately, the **main investment case** for an allocation to Sector ETFs is about leveraging their **exposure to macro-economic factors**, with an aim of **improving performance** or **reduce portfolio risk**, depending on the investor's appetite for risk.

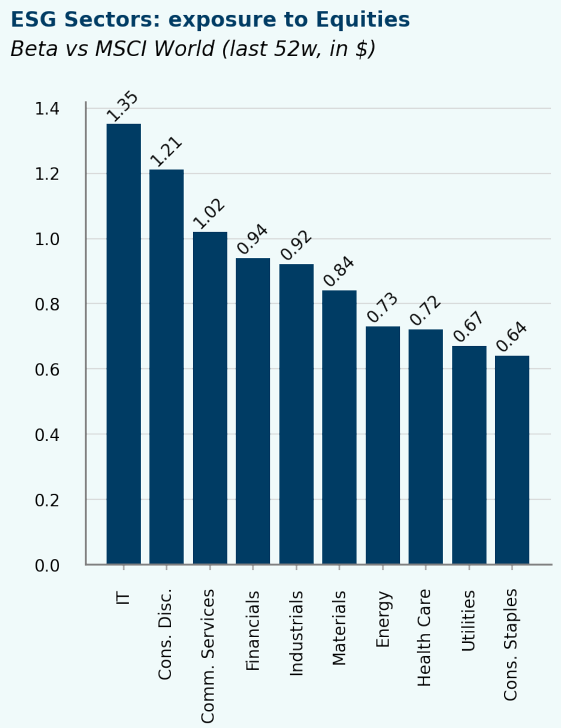
### Equity exposure : positioning for cyclical versus defensive

When it comes to sector allocation in an **equity exposure**, making the distinction between **cyclical** and **defensive** sectors can prove a useful instrument :

— **Cyclical** sectors tend to outperform during periods of economic expansion & financial stability ;

— **Defensive** sectors tend to outperform during periods of economic contraction & financial volatility.

ESG Sectors : market beta




Source Bloomberg, S&P Global, Amundi.
Data as at 31/10/2022.
Past performance is not indicative of future performance.

A common way to assess cyclical versus defensive sectors is their **beta compared to the market** (i.e. the slope of the regression line between benchmark and sector returns).

Our analysis shows the **beta for each S&P ESG sector**. Those with a beta above 100% can be identified as "cyclicals", while those with a beta below 100% can be considered as "defensive".

While these value can change over time, we find some of the usual suspects in each category. IT and consumer discretionary hold the highest beta while utilities, consumer staples and healthcare stand at the other end of the spectrum.

### Interest rates' exposure

A more advanced analysis is to assess each sector's sensitivity to changes in interest rates, sometimes referred to as *Equity Duration*.

Here we compute the expected return for a sector for a given change in interest rates. Here,the analysis is performed in USD, using the USD 5 year swap rate, a common and liquid benchmark medium term rate.

Our analysis suggests that the financial and energy sectors tend to prove the most positively sensitive to an increase in interest rates.

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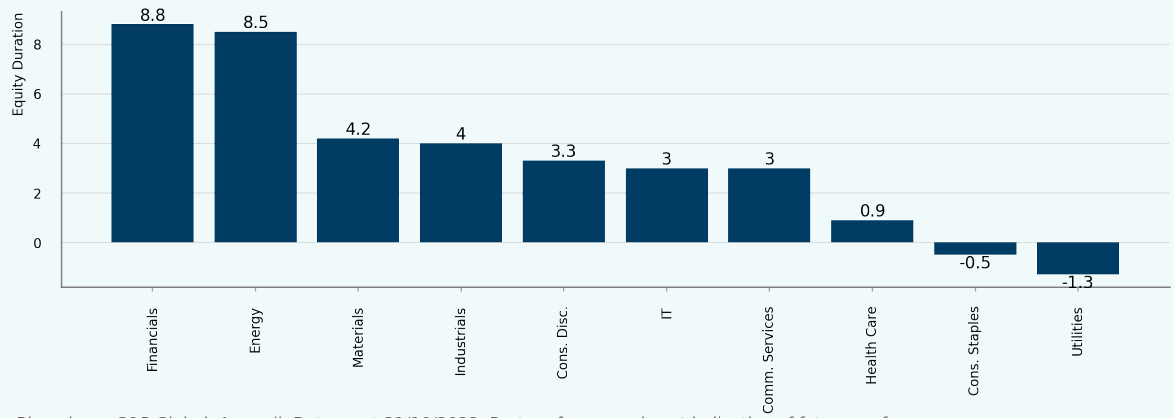
## ESG Sectors : exposure to a change in interest rates

**Sectors' Equity Duration**

*Estimated sectors' exposure to a change in 5Y US Swap Rate (last 260w, in $)*




Source Bloomberg, S&P Global, Amundi. Data as at 31/10/2022. Past performance is not indicative of future performance.

## Diversification between sectors

### Absolute returns

Stock classification into sectors can result in a well-balanced suite of portfolios provided the classification is performed in a rigorous manner. In such case, each portfolio would be well differentiated. Here, we look at the extent of these diversification benefits.

The quickest way to assess diversification benefits is the statistical correlation of returns shown in the table below (last 260 weekly returns). Results show that sector correlation range from 0.4 to 0.8 and confirm the strong de-correlation between sectors returns.

Note that when it comes to absolute returns, correlation is not zero as sectors are still equities and share common equity risk factors.

## ESG Sectors : Correlation matrix for Total Returns

| Sector Name | Comm. Services | Cons. Disc. | Cons. Staples | Energy | Financials | Health Care | Industrials | IT | Materials | Utilities |
|---|---|---|---|---|---|---|---|---|---|---|
| Sector Name | | | | | | | | | | |
| Comm. Services | | | | | | | | | | |
| Cons. Disc. | 0.86 | | | | | | | | | |
| Cons. Staples | 0.69 | 0.74 | | | | | | | | |
| Energy | 0.56 | 0.58 | 0.49 | | | | | | | |
| Financials | 0.74 | 0.81 | 0.65 | 0.76 | | | | | | |
| Health Care | 0.72 | 0.71 | 0.78 | 0.54 | 0.64 | | | | | |
| Industrials | 0.78 | 0.88 | 0.73 | 0.73 | 0.90 | 0.73 | | | | |
| IT | 0.86 | 0.88 | 0.70 | 0.49 | 0.70 | 0.75 | 0.79 | | | |
| Materials | 0.73 | 0.81 | 0.69 | 0.75 | 0.84 | 0.71 | 0.92 | 0.72 | | |
| Utilities | 0.63 | 0.69 | 0.75 | 0.58 | 0.71 | 0.71 | 0.74 | 0.62 | 0.71 | |

## Relative Returns

In the relative-oriented world, ie taking the hypothetical role of an equity portfolio manager who aims to outperform a benchmark, the correlation of the excess-returns can be even more relevant. Most of the time, a portfolio view will be deployed in a relative context, ie by over-weighting or under-weighting a particular sector.

The results can be found in the table below. Correlations are just over zero, ranging from -0.5 to +0.5) when removing the benchmark's performance.

This is a powerful example of the diversification benefits brought by sector in a relative value landscape.

**ESG Sectors : Correlation matrix for Relative Total Returns**

| Sector Name | Comm. Services | Cons. Disc. | Cons. Staples | Energy | Financials | Health Care | Industrials | IT | Materials | Utilities |
|---|---|---|---|---|---|---|---|---|---|---|
| Sector Name | | | | | | | | | | |
| Comm. Services | | | | | | | | | | |
| Cons. Disc. | 0.09 | | | | | | | | | |
| Cons. Staples | 0.06 | -0.18 | | | | | | | | |
| Energy | -0.25 | -0.32 | -0.22 | | | | | | | |
| Financials | -0.28 | -0.09 | -0.30 | 0.42 | | | | | | |
| Health Care | 0.01 | -0.42 | 0.47 | -0.18 | -0.46 | | | | | |
| Industrials | -0.36 | 0.03 | -0.14 | 0.25 | 0.43 | -0.29 | | | | |
| IT | 0.18 | 0.21 | -0.25 | -0.50 | -0.53 | -0.11 | -0.42 | | | |
| Materials | -0.27 | -0.13 | -0.06 | 0.37 | 0.24 | -0.11 | 0.54 | -0.43 | | |
| Utilities | -0.15 | -0.24 | 0.44 | 0.01 | -0.02 | 0.25 | 0.03 | -0.41 | 0.07 | |

## Conclusions

Overall, we revisited sector investing and looked at how the S&P ESG Global Sectors might bring an impactful alternative for sector investors. We found that :

- **Sector investing** is a powerful means of increasing equity portfolio diversification
- **Sector ETFs** bring a focused exposure to macro-economic cycles with an aim of improving returns or reducing risk, according to investors' individual preferences and views.
- **ESG Sectors** provide virtually the same diversification benefits of parent sectors while improving ESG scores and reducing carbon footprint.
- They perform largely in line with parent sectors as seen by their limited respective tracking-error, high beta and correlations.
- To sum it up, it seems that **ESG filtered sectors indices bring largely all of the benefits of traditional sector allocation**, along with a meaningful esg improvement. Whilst performances might differ from time to time, the divergences we observed look relatively small in light of the considerable benefits of ESG.

# Appendix

## ESG Sectors : Representative Indices

| Sector / Region | Index Range | Index Name | Bloomberg Ticker |
|---|---|---|---|
| Communication Services | MSCI | MSCI World Communication Services | NDWUTEL |
| Communication Services | S&P | S&P Developed Ex-Korea LargeMidCap Communication Services Index | SPDL50UN |
| Communication Services | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Communication Services Index | SPDSECUN |
| Consumer Discretionary | MSCI | MSCI World Consumer Discretionary | NDWUCDIS |
| Consumer Discretionary | S&P | S&P Developed Ex-Korea LargeMidCap Consumer Discretionary Index | SPDL25UN |
| Consumer Discretionary | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Consumer Discretionary Index | SPDSEDUN |
| Consumer Staples | MSCI | MSCI World Consumer Staples | NDWUCSTA |
| Consumer Staples | S&P | S&P Developed Ex-Korea LargeMidCap Consumer Staples Index | SPDL30UN |
| Consumer Staples | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Consumer Staples Index | SPDSESUN |
| Energy | MSCI | MSCI World Energy | NDWUENR |
| Energy | S&P | S&P Developed Ex-Korea LargeMidCap Energy Index | SPDL10UN |
| Energy | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Energy Index | SPDSEEUN |
| Financials | MSCI | MSCI World Financials | NDWUFNCL |
| Financials | S&P | S&P Developed Ex-Korea LargeMidCap Financials Index | SPDL40UN |
| Financials | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Financials Index | SPDSEFUN |
| Health Care | MSCI | MSCI World Healthcare | NDWUHC |
| Health Care | S&P | S&P Developed Ex-Korea LargeMidCap Health Care Index | SPDL35UN |
| Health Care | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Health Care Index | SPDSEHUN |
| Industrials | MSCI | MSCI World Industrials | NDWUIND |
| Industrials | S&P | S&P Developed Ex-Korea LargeMidCap Industrials Index | SPDL20UN |
| Industrials | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Industrials Index | SPDSEIUN |
| Information Technology | MSCI | MSCI World Information Technology | NDWUIT |
| Information Technology | S&P | S&P Developed Ex-Korea LargeMidCap Information Technology Index | SPDL45UN |
| Information Technology | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Information Technology Index | SPDSETUN |
| Materials | MSCI | MSCI World Materials | NDWUMAT |
| Materials | S&P | S&P Developed Ex-Korea LargeMidCap Materials Index | SPDL15UN |
| Materials | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Materials Index | SPDSEMUN |
| Utilities | MSCI | MSCI World Utilities | NDWUUTIL |
| Utilities | S&P | S&P Developed Ex-Korea LargeMidCap Utilities Index | SPDL55UN |
| Utilities | S&P ESG | S&P Developed Ex-Korea LargeMidCap Sustainability Enhanced Utilities Index | SPDSEUUN |
| World | MSCI | MSCI World | NDDUWI |
| World | S&P | S&P Developed Ex-Korea LargeMidCap World | SPDKLMUN |

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