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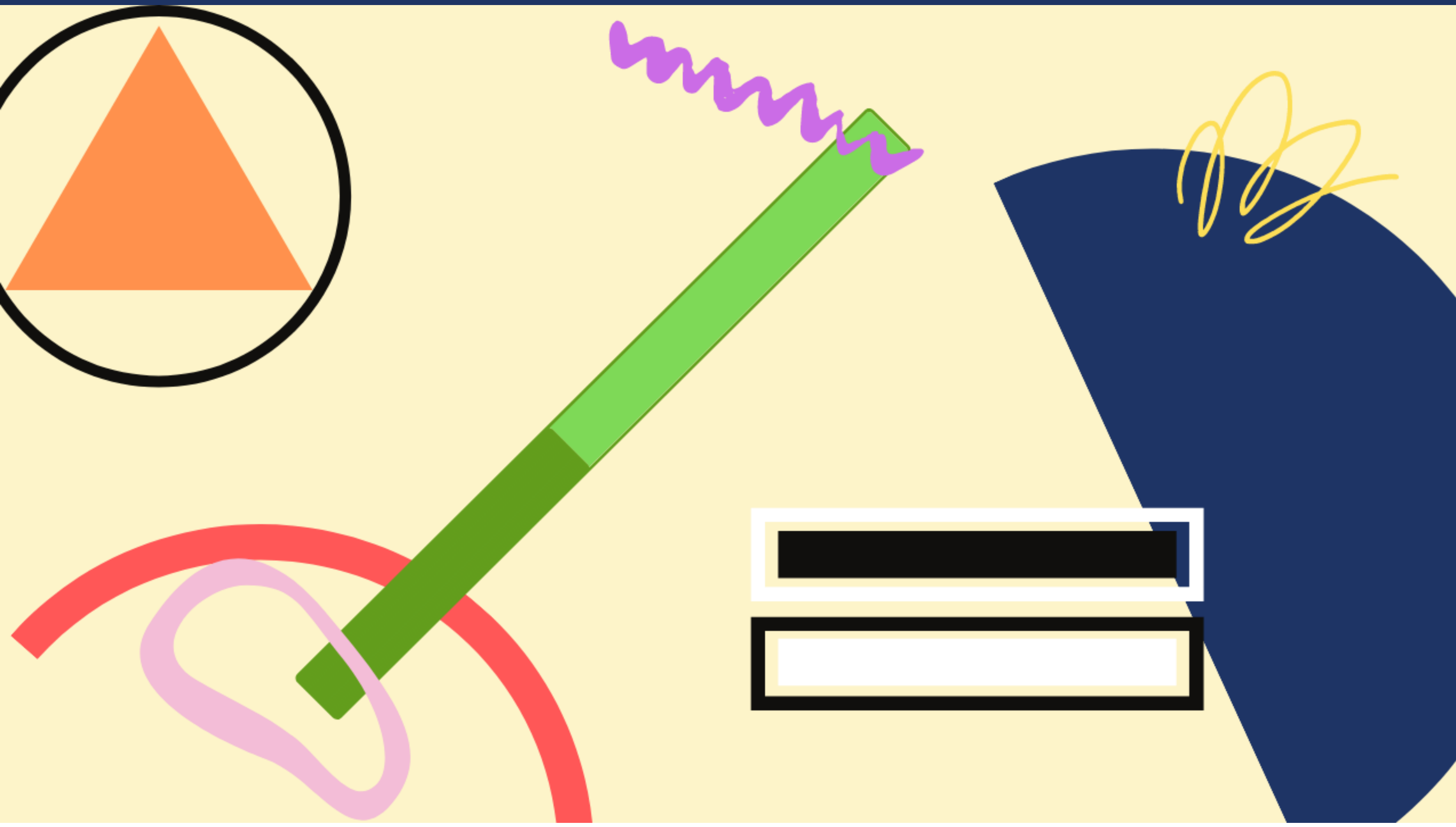

WHITEPAPER

IS ESG INVESTING A BUBBLE OR PARADIGM SHIFT?

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THOUGHT LEADERSHIP AHEAD OF THE CURVE

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An irresponsible bandwagon or a paradigm shift? ESG investing has certainly been a polarising topic. Typically, opinions fall into one of two categories, you either love it or you hate it. Unless of course you are one of the many apprehensive and curious investors who is yet to make up their mind and form a strategy.

In fact, this group is larger than you would think. In fact, 53% of investors do not know how to have a measurable impact across different ESG criteria[1]. You may fall into this group yourself, and if so, welcome, you are not alone in your deliberations. There is a lot that has been written about ESG investing over the years with ample reasons given by both sides as to the virtues and vices of this trend. This whitepaper however, far from supporting one side or the other, attempts to give an unabashed perspective of this phenomena to the undecided, anxious and peer pressured investor who wants clarity in one place.

Does ESG investing truly reduce carbon emissions? Do ESG funds really produce alpha over the long run? What gives with the disparity of ESG metrics? And, how does one successfully manoeuvre through what seems like a bubbly trend? These are just some of the questions we attempt to answer for the apprehensive and curious investor.

For simplicity, in this whitepaper we focus on investors who trade in stocks, although there is a lot of material that can be covered for ESG innovation in financial services and products like Trade Finance, Bonds, Insurance, Real Estate etc. which we may cover in subsequent whitepapers.

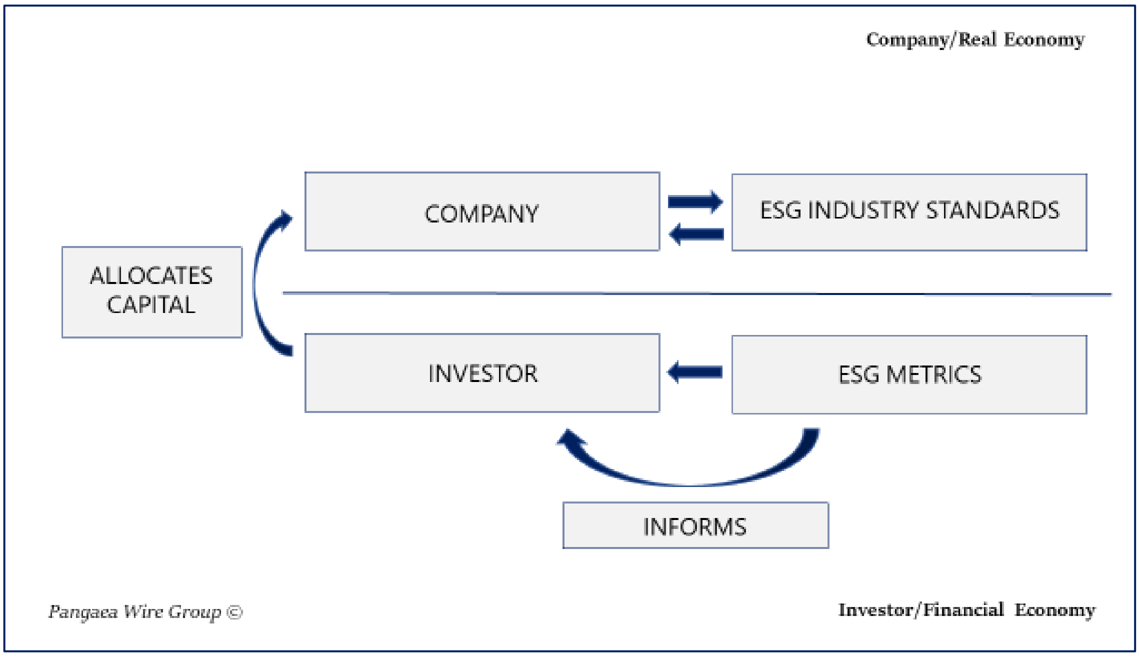
Two Tiered ESG

A lot of the time, ESG activity is lumped in altogether as one homogenous goliath. This approach is unspecific and unhelpful as ESG activity can broadly be divided into two distinct tiers. Firstly, the “Company/Real Economy” tier and secondly, the “Investor/Financial Economy” tier. They operate in two different worlds with different incentives, pressures, and dynamics. Their journey in the ESG ecosystem is also very different.

Tackling the “Company/Real Economy” tier first, we notice a more simplistic structure but with more complex applications. That is to say, a company which operates in any industry will be aware of the ESG strategies/milestones and agreed to protocol that already exists within their industry. These cover broad considerations including ecological sustainability, community outreach etc. These standards have a somewhat reflexive relationship, as to say, they shape each other. Standards shape firms and firms contribute to the standards set.

[1] The Story Behind Talent & ESG, 2020, BRUIN FINANCIAL, ESG Initiative Survey

Figure 1. ESG Transmission Framework



Typically, however, this focus leans heavily on the "E" side especially for industrial sectors like construction, mining, natural resources etc. The "S" side has also been a concern especially for industries like diamond mining, which gave rise to the Kimberly process in 2003 to help prevent "conflict diamonds" from entering the mainstream rough diamond market. The "G" can also be department specific, for example, the compliance function in a bank or Fintech for example pays a lot of attention to governance within their organisation.

However, some aspects of ESG have been harder to implement and measure. These include changes that companies make off the back of social outcry. For example, the death of George Floyd in the USA brought to light in a sharp way the growing and sustained grievances of police brutality. Soon after, the conversation turned to racial inequality and prejudice in the workplace. Many firms attempted to address this grievance, but responding in unison has been difficult especially when there wasn't a sustained targeted campaign to one company or industry, but rather a macro all-encompassing call for equality.

On the second tier we have the "Investor/Financial Economy" ecosystem of ESG. Investors and asset managers play a dule role, firstly by investing with ESG parameters, and secondly, by wearing at the same time the hat of a business which have their own ESG policies that they implement within their firm and share standards within the industry. The issues and processes of the latter have been explained above.

The process of ESG investing begins with the metrics investors decide to use. These metrics, whether created in house or externally provided, informs the investor as to what companies fit the criteria, which then allows investors to allocate client capital to those firms. Although this sounds simple, many problems emerge especially when determining what metrics to use and how to classify the ESG worthiness of companies. Two different metrics may rate the same company high in one score and another low, they often do. Therefore, the reliability and validity of these measures are pulled into question.

The reasons why these metrics are so diverse is two-fold. Firstly, because there are no common standards when creating ESG metrics. This is a result of many reasons, including the relative infancy of ESG metrics, as well as a values-based approach to ESG investing which allows for customisable measures and a lack of regulatory standards that allow for a clearer and more divided playing field. Secondly, environmental, social and governance measure are very different and distinct things, that having a homogenous measure that encapsulates all dimensions has proven so far unworkable.

This is a point of frustration for many investors. Having such diverse measures has severely undermined the legitimacy of the quintessential ESG fund, and overcoming this hurdle is of paramount importance in order to increase the validity to ESG investing.

KEY TAKE AWAYS

- A clear distinction exists between the real economy and financial economy in relation to the understanding and application of ESG standards and metrics
- There is a reflexive relationship that exists between industries in the real economy and ESG standards.
- Companies in the real economy are seeing an increase in reputational risk because they are finding it increasingly difficult to respond to social outcry and demands for change from their customer base.

The Problems with ESG Metrics

Investing with ESG principles in mind is not a new thing, in fact in theory, this is a good philosophy to implement into any business. The problems arise however when investors try to formulate this investing angle into a metric. Fair and comparable comparisons on something like environmental standards are difficult to create for companies within industries, this point is even more complex when trying to create a homogenous "E" measure cross industry. Couple this with the sample problems that present itself with the "S" and "G", you quickly find how problematic having a unified ESG metric becomes. Fundamentally, there is a qualitative judgement call that is made on all three levels hence the stark deviations.

Furthermore, we also face an issue of authority in measuring. In other words, who is to say what the correct or optimum governance structure a corporation should have? Who sets the standards? So far, it seems each company controls and develops their own governance, including hiring and leadership tracks, which are in line with their values. So how can a governance measure for example be created which inevitability uses a self-created measure when all firms included in that metric have their own approach?

There is no doubt that ESG considerations are important in regards to the wider impact an industry/company has on the planet. The current measures however, can be argued to encapsulate too much in a metric which has made it unreliable. Moreover, the investing world has come to view this new trend as just another investment product which will attract more AuM, as opposed to a real push by the investment community for more holistic standards for the business community to adopt.

So, for the conscious investor who is trying to find a response to this reality, the current landscape should serve as an example of what has been done and not as a template of what should be done moving forward.

KEY TAKE AWAYS

- Translating ESG considerations into a useful and valid metric has been very difficult to achieve.
- In relation to Governance, there emerges the issue of authority. Which is to say, who gets to decide what governance structures are the most valid?
- The current ESG measures attempt to encapsulate too many variables to produce a valid measure that can be applied to stock picking.

The Who's Who of ESG Metrics

Knowing who has it right and who has it wrong in the world of metrics providers is an important consideration especially for the apprehensive but curious investor. So, when first diving in to the market of metric providers, one may be surprised to see the sheer number of metrics on offer. On last count there exists more than 70 firms offering ESG data[2].

Even within the narrowed scope of ESG data providers, a highly dispersed and scattered industry is observed, mainly driven by the fact that 13% of asset managers use in-house data

[2] According to Research Affiliates.

management and that every ESG data provider uses different variables and weights when assessing a firm's ESG friendliness.

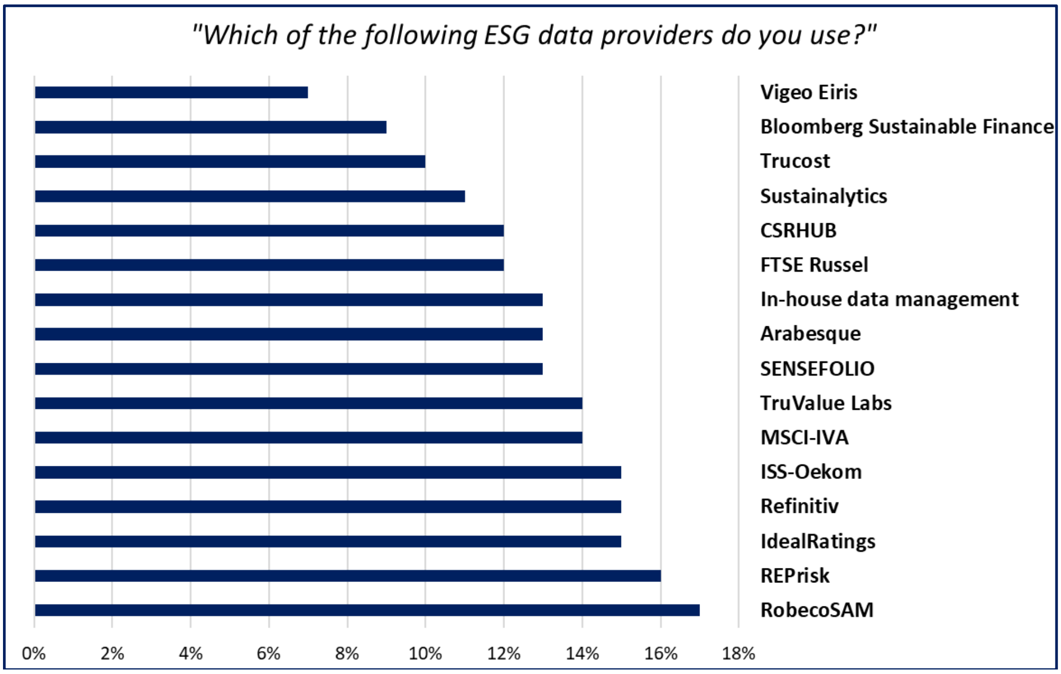
Moreover, recent reports shed light on the fragmented ESG data providers industry. 200 asset managers were asked which ESG data providers they use. To simplify the survey, researchers limited their industry scope to 16 providers due to the sheer number of providers available[3].

"RobecoSAM" tops the list at 17%, but the difference between them and the least chosen option, "Vigeo Eiris" at 7% is not big enough to speak of a dominate market position. (Cf. Figure 2)

This supports the finding that ESG data providers' rating processes differ greatly in evaluating a firm's ESG profile. Research has found that in the Governance rating of Wells Fargo, the two main and established ESG data providers, rank Wells Fargo respectively in the top-third and the bottom 5% in their universe which gives investors a hard time to really know how E, S or G-friendly a firm really is and to adjust their investment decision accordingly[4].

In relation to this study, it was surprising to find that no one provider had a functional monopoly. This could be due to the fact that ESG considerations are still in their infancy and as the market matures, these measures will eventually homogenise and an agreed set of standards will be imposed. Although, if we are to believe that ESG is a value driven investing movement, then the chances of this homogenisation happening will be fractious as by their nature, values are diverse. Therefore, agreeing on a set of universally held standards may not happen.

Figure 2. PwC survey question on choice of ESG data provider



Pangaea Wire Group *Source: PwC Asset & Wealth Management 2020*

[3] PwC Asset & Wealth Management, Luxembourg
[4] Research Affiliates' Li and Polychronopoulos (2020)

KEY TAKE AWAYS

- More than 70 firms exist that offer ESG data, notwithstanding that almost a quarter of asset managers also produce their own in-house metrics.
- There is no clear leader in ESG data, all mentioned have a relatively equal market share.
- Common ESG standards are needed in order to make metrics more valid. However, if ESG is values driven, then common standards will be impossible as values will vary.

Bull Markets and its Impact on Risk

Bubble or paradigm shift? This is the main question investors want and need answers to. According to a global survey[5] among 212 fund managers representing $598 billion in assets, 78% of investors find stock markets to be overvalued with three quarters of investors saying that internet stocks are expensive (57%) and even bubble-like (18%). Since the Global Financial Crisis (GFC) in 2008, stock markets have been rising at an annualized growth rate of 15%[6].

Covid-19 induced massive selloffs which reached its peak on March 16th, 2020, with the S&P500 hitting 2,304 points. This saw a rapid recovery in the course of the last 8 months to an all-time high of 3,699 points[7] in what seems like a V-shaped recovery. Have investors, been overly enthusiastic about the underlying factors, rushed in too fast? This concern is common among analysts who expect the V-shaped recovery turning into a W-shaped one, accompanied by a period of high volatility.

Investors should ask themselves why is it that I am willing to accept relatively more risk than ever before? Returns are indeed supporting risk-taking, but volatility is higher than before, fuelled by overly expansive central bank policies, low interest rates and a more than ever unpredictable geopolitical climate which impacts globalisation and affects stock markets in a seemingly unpredictable way, especially given the unprecedented connectivity of the world as a result of technological advancements.

The Shiller Price to Earnings Ratio (P/E adjusted for cyclicality) for the S&P500, is at an all-time high at 33 since its peak in the Dot-Com Bubble at 43.53 (cf. Figure 3). A relevant example to this end is the recent IPO valuation of Airbnb which reached a market capitalization of $100 billion in early trading. Furthermore, global stock market capitalization recently broke through the $100 trillion mark. Major asset managers have been adjusting their strategy from growth towards value investing as they expect value stocks to outperform growth stocks. Value stocks typically have low P/E, low P/B, low P/cash flow and high dividend yields while growth stocks

[5] Bank of America Global Fund Manager Survey

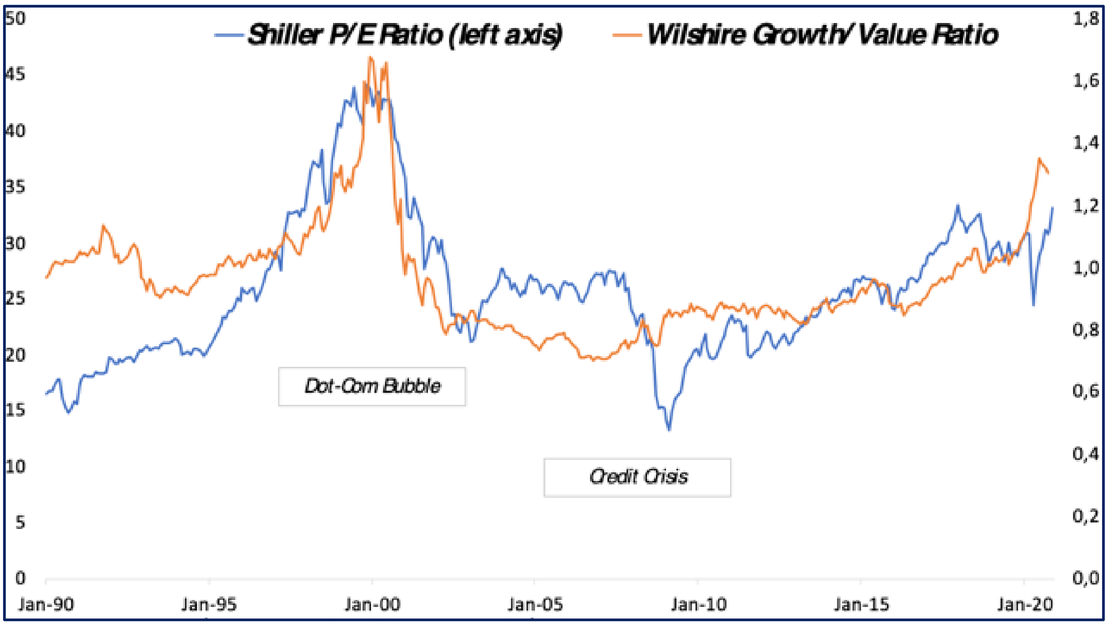
[6] Yahoo Finance, time of writing 11th of December 2020

[7] Yahoo Finance, time of writing 11th of December 2020

are exactly the opposite and typically don't pay dividends in order to reinvest in growth. The latter typically outperform during bull markets while value stocks do better during recessions.

With the Wilshire Growth/Value Ratio (cf. Figure 3) standing at 1.30, an all-time high since the highs of the Dot-Com bubble (1.69), together with the duration of the current bull market, investors are increasingly anticipating a bear market. Investors may expect increased volatility and corrections in the near future as major asset managers have openly stated that these valuations are unprecedented and even bubble-like[8]. Subsequently, asset allocations towards more alternative, real and less risky assets like gold, oil, commodities and real estate are likely. Furthermore, given ESG's alternative-asset-like behaviour when it comes to returns and perceived risk, we might see increased momentum in ESG related stocks.

Figure 3. Cyclically adjusted P/E ratio and growth/value ratio 1990 to date



Pangaea Wire Group *Source: Standard & Poor's*

[8] Bank of America Global Fund Manager Survey

Cash Is King

The main drivers of relatively high valuations are the unconventional monetary policy and the subsequent dry powder, ease of diversification through passive investing and emerging markets becoming more developed economically and financially. The Federal Funds Rate and the Main Refinancing Operations Rate have been stuck at the Zero Lower Bound, resulting in Quantitative Easing to bring long term interest rates down and to stimulate employment and inflation respectively.

These policies have resulted in great amounts of dry powder and have incentivised households to invest in stocks as a replacement for low-yielding savings accounts or low risk asset classes. This investment has and will most likely continue to take the form of passive investing and diversification through ETFs which have lower barriers to entry for relatively new stock market participants. On the institutional side, dry powder has increased mega M&A deals in the US, dividend payments and share buybacks.

We have seen a surge in mega M&A deals caused by corporations and their increasingly activist shareholders pushing for competitive advantage through economies of scale. Dividend and share buybacks make up 109.7% of operating earnings. This ratio was 135% in run-up of the GFC and knew its bottom in the peak of the GFC at 60%[9]. The S&P500 would be 5% lower if companies would hold the number of buybacks since 2010 in T-Bills and even 19% lower if buybacks vanished[10]. The latter assumption is not empirically correct but shows the dependency of S&P500 performance on buybacks. Next to that, SWFs, pension funds, family offices, infrastructure and patient investment vehicles in general are becoming active participants in the stock market in their hunt for yield. Given the popularity of ESG investing due to the unique combination of risk-adjusted returns and their “doing-good”-character, a significant AuM increase is caused by these new cash rich market participants.

KEY TAKE AWAYS

- Low interest rates are incentivising retail investing to increase, typically these take the form of passive ETF funds.
- Smart/institutional money is also being put to work due to low interest rates with an increase in M&A deal flow, dividend payments and share buybacks.
- Low interest rates are incentivising cash-rich market participants like retail investors, family offices, SWFs, infrastructure funds to place capital into ESG related funds as this investment class suits them by nature.

[9] Yardeni Research, 2020

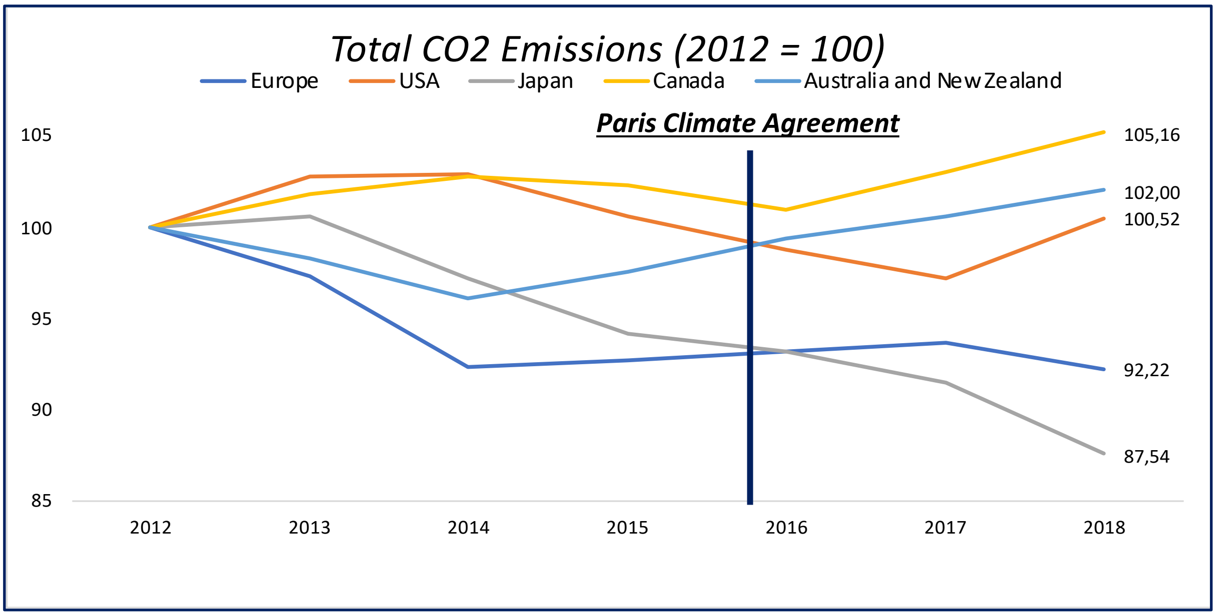
[10] Ned Davis Research, 2019

Does ESG Investing Impact Carbon Emissions?

ESG-themed investing has dramatically grown in popularity among asset managers and retail investors. In order to address key Environmental, Social and Governance issues, capital is being allocated to companies that have these issues high on their agenda. This white-paper earlier addressed the lack of clear and standardised ESG information on which a proper sustainable investment decision can be based. Still, investors are exponentially investing in companies with high ESG scores.

The fragmented ESG data provider market does not justify these massive AuM inflows. It appears investors ignore the current problematic state of ESG metrics by expecting a properly standardized framework that would justify current valuations and assets under management. Next to that, global sustainable assets under management have grown from \$13.3 trillion in 2012 to \$30.9 trillion in 2018 with Europe having the biggest share followed by the USA, Japan, Canada, Australia & New Zealand[11]. Maybe this AuM increase can be justified in light of expected reduced emissions and a greener future in general. However, Figure 4 shows that this increase in AuM is not as justified as investors think.

Figure 4. Total CO2 emissions 2012-2018 rescaled



Pangaea Wire Group *Source: International Energy Agency, Global Sustainable Investment Alliance*

[11] Global Sustainable Investment Alliance report, 2019

Table 1. Sustainable AuM 2012-2018 growth compared to CO_2 emissions evolution

Sustainable AuM	2012	2018	Delta	CAGR AuM	*CAGR CO2*
Europe	*$ 8,80 tr*	*$ 14,10 tr*	*$ 5,30 tr*	*8%*	*-1,3%*
USA	*$ 3,70 tr*	*$ 12,00 tr*	*$ 8,30 tr*	*22%*	*0,1%*
Japan	*$ 0,01 tr*	*$ 2,20 tr*	*$ 2,19 tr*	*146%*	*-2,1%*
Canada	*$ 0,59 tr*	*$ 1,77 tr*	*$ 1,18 tr*	*20%*	*0,9%*
Australia & New Zealand	*$ 0,18 tr*	*$ 0,70 tr*	*$ 0,52 tr*	*25%*	*0,3%*

Pangaea Wire Group *Source: International Energy Agency, Global Sustainable Investment Alliance*

CO_2 emissions for the listed countries has been rescaled to 100 in 2012 in order to visualize evolutions comparably. Europe and Japan are the only two with average reduced reduction with a yearly number of -1,3% and -2,1% respectively. Europe leads investors' embrace for ESG while CO_2 reduction for Japan could be seen in their service-oriented nature. Canada, Australia & New Zealand and the USA have known increased CO_2 emissions even though their AuM recorded average annual growth ranging from 20% to 25%. Even after the Paris Climate Agreement on December 12th, 2015, it is incorrect to state that investments in ESG will lead to reduced CO_2 emissions when such country-specific variations and influences are observed. It looks like sustainable investments are being defined too broadly because of their poor qualification and ratings to have a real impact. Research[12] shows that larger companies in the real economy have better ESG scores because they are included in more funds, therefore their ESG scores are higher which leads to further investment and consequently increasingly higher valuation, which comes at the cost of smaller companies who might have a more direct and real impact on ESG issues but are overseen due to their size and investor perception.

KEY TAKE AWAYS

- Global sustainable AuM has grown from $13.3 tr in 2012, to $30.9 tr in 2018.
- An increase in sustainable AuM does not necessarily correspond to lower carbon emissions.
- Only in Europe and Japan do we see a positive correlation between AuM & carbon emissions, whereas in the USA, Canada and Australia & New Zealand there exists a negative correlation.

[12] Refinitiv's Wu & Borovkova, 2020

Finding Alpha in ESG

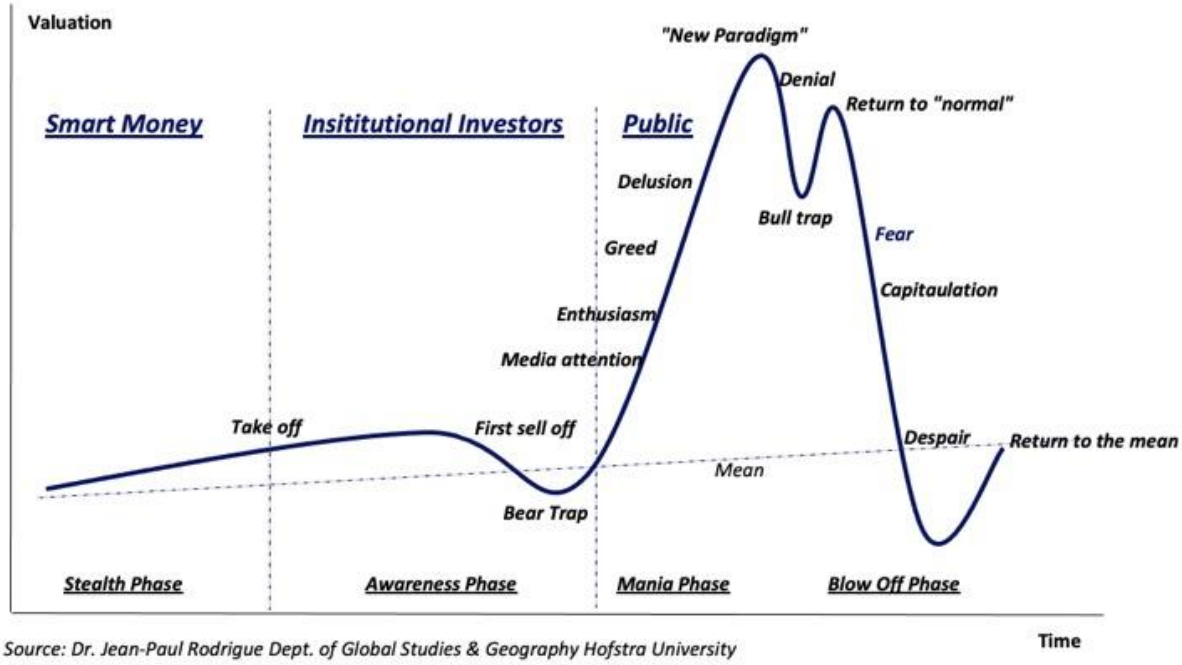
A major driver of ESG investing is the expected outperformance. The gap between ESG and non-ESG returns is widening and research shows that higher ESG scores lead to higher excessive returns for European companies. For the USA, this relationship is negative, again showing that sustainability in the USA does not receive the same focus as it does in Europe. ESG related fund inflows have definitely played a significant role in the high stock market valuation. Earlier on we mentioned how monetary policies, ease of investing and emerging markets drove the market to unprecedented highs. With sustainable European AuM making up 46% of local AuM and the USA at 39% of local AuM in 2018[13], it is hard to ignore the role of ESG in the current bull run.

Many investors have started allocating assets to alternative classes like gold and real estate but also ESG. As the gap between ESG and non-ESG performance widens and the correlation between equity markets and alternative assets starts to decrease, money is flowing away from non-ESG markets into ESG and alternative assets. This asset relocation towards alternative assets is common in turbulent times with high volatility and global uncertainty about monetary policy, inflation, GDP growth and international conflicts and heightened tensions. It might seem far-fetched to compare ESG to safe-haven stocks and classify the current trend as a gradual flight-to-safety but ESG is showing solid returns relative to an already high stock market.

It looks like ESG is one of investors' favourite places for stable returns in an unstable environment. Whether ESG is here to stay is a very important question. History has shown other investing trends like BRIC and SmartBeta to have narrow hype cycles. Typically, when capital inflows show a significant gain, these cycles are presented as introducing a new paradigm shift in the investing community, using the level of AuM as proof of this theory. If enough people invest, this gives credence and legitimacy to the trend, which then ultimately leads to a reflexive relationship between investor sentiment and stock price gains. This self-fulfilling prophecy perpetuates itself beyond the rational justification based on fundamental analysis of the stock or strategy. Eventually, this bubble pops, markets correct and investors revert to the mean. (Cf. Figure 5)

[13] Global Sustainable Investment Alliance report, 2019

Figure 5. The 4 psychological phases of asset bubbles



BRICS & Smart BETA

BRICs (later turned BRICS to accommodate South Africa) investing was introduced by Goldman Sachs' Chairman of Asset Management Jim O'Neill with "Building Better Global Economic BRICs'' to invest in world leading emerging countries with a focus on Brazil, Russia, India and China.

The Goldman Sachs's BRIC fund was introduced in 2007 with much anticipation, this was reflected in the rapid AUM surge to a peak of $800m in mid-2007, however due to the crisis of 2008, this evaporated to lows of $200m in mid-08. As markets adjusted, the fund regained momentum to see another peak of $842m in mid-2011, however this momentum didn't last and in October 2015 the fund closed due to poor performance and a subsequent cascade of investment withdrawals. Although this particular investment fund ended, the focus on emerging markets did not. Jim O'Neill can be said to have pioneered the focus for emerging markets investing, this focus did not disappear when the fund close. In fact, institutional investors still have an emerging markets strategy albeit not exclusively focused on the BRICS.

SmartBeta is another financial innovation that swept markets post 2008, essentially SmartBeta is a hybrid investment strategy theorised originally by Harry Markowitz in his work on Modern Portfolio Theory (MPT), which provides investors the opportunity to combine active and passive investing advantages through factors like volatility, momentum, size and market capitalization to reduce volatility and increase returns.

Again, like BRICS, SmartBeta investing followed a similar bell curve pattern. Global assets in SmartBeta funds have doubled over the last 5 years to over $1 trillion. Between 2009 and 2018 a global underperformance is observed, mainly because most factors suffer during bull markets. With the decade long equity rally and growth-outperformance, SmartBeta fails to meet the hype[14]. However, unlike the Goldman Sachs BRICS fund which inspired a wider focus into emerging markets despite the closure of their fund, SmartBeta has not paved the way for a new investing angle which can have benefits for the real economy.

It is hard to say which path ESG investing will take. No doubt the underlying fundamentals of ESG have real world impact and consequences which have been present in investors' minds for a while. The diligent reader may be quick to point out our assumption in comparing ESG to the two other investing trends by inferring that we believe ESG funds will inevitably succumb to the same fate as BRICS and SmartBeta, that is, a movement with great optimism, but ultimately short lived and deflated.

Our answer is that investors must be aware that investment trends come and go and ESG has still a long way to go to be a fundamental indicator for valuing companies. Value driven investing is not a new thing either, and furthermore, industry can benefit from a more systematic and long term ESG planning and adoption strategy. The main challenge of ESG investing is the standardisation of ratings methodologies and the subsequent elimination of unjustified ESG-labelled investments which will cause a great deal of volatility and sell-offs.

KEY TAKE AWAYS

- The closure of Goldman Sachs flagship BRICS fund did not close investors appetite for emerging markets growth.
- SmartBeta, like the BRICS, saw a similar bell-shaped curve pattern, but unlike BRICS, it did not expand an investing paradigm.
- ESG, like BRICS, does have an underlying real economy focus, however, its current execution is looking very bubble like which could cause problems for investors.

[14] Research Affiliates' Kalesnik

Further Research Questions

Below is a list of questions and themes we have investigated and think you would like the answers to.

1. Do ESG investors have anything to learn from Islamic Finance?
2. How can ESG metrics be improved?
3. How can investors develop better relationships with companies, in order to better incentivise ESG development?
4. How does ESG play out in the private equity space?
5. What are the primary KPIs that investors and businesses measure the impact of ESG policy?
6. Where is the drive for ESG considerations coming from?
7. Should ESG investing be values driven?
8. What is the difference between ESG and impact investing, and why is it important?
9. What role(s) do government and regulators play in the ESG debate?
10. How can investors better align themselves with UN Sustainable Development Goals?

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