

OUTCOMES
BEYOND
PERFORMANCE

EQUITORIAL

A meeting of minds:
fusing fundamental and
systematic analyses

Lewis Grant, Senior Portfolio Manager

Hermes Global Equities
Newsletter, H2 2019

For professional investors only

www.hermes-investment.com


HERMES
INVESTMENT MANAGEMENT

For decades, investment managers have been largely split into two groups: fundamental investors and quantitative investors. And so, it is not surprising that we are often asked to choose a side. Of course, it's not that simple: we use a unique style, marrying a systematic approach, which minimises behavioural biases, with fundamental analysis. In this edition of *Equitorial*, we explain why we adopt an integrated investment approach and how it shapes our research agenda.

Imagine you're stuck in traffic during your morning commute – a route that your traffic-sensitive GPS suggests is the fastest option. Do you trust it, or do you think that perhaps an alternative route would be quicker?

Research shows that we prefer to go with our own gut instinct even though algorithms consistently outperform human judgement¹ – a phenomenon known as algorithm aversion. This can have real costs – in this instance, getting stuck in traffic.

But what if you trust the GPS and it makes an error causing you to arrive late for work? Many of us would quickly lose confidence in the machine, becoming reluctant to use it again². And yet when following our instinct leads to less favourable outcomes, we tend to be much more forgiving and will maintain faith in our own decision-making ability. Essentially, the mistakes we tolerate in humans become less tolerable when machines make them.

It is no surprise that many people are sceptical of machines and algorithms: they are complex and difficult to understand.

In finance, some quant-driven methods, such as opaque black-box strategies, use top-secret, sophisticated algorithms that are impossible to explain, while others are created for transparency but lean heavily on financial theory and, for the most part, remain in the domain of statisticians and PhDs.

QUANTITATIVE V FUNDAMENTAL

If you look at the investment landscape, you'd say that quantitative and fundamental approaches invest in very different ways.

Put simply, quantitative investment processes typically rely on machines to assess companies using available data. Quantitative investment strategies are generally lower skilled (as measured by hit rate, the number of successful investments as a percentage of the total), but they use the benefit of breadth to generate returns.

The origins of quantitative strategies can be found in the pioneering work of Harry Markowitz on portfolio theory, which dates back to the 1950s. In subsequent decades, other theories followed, such as the Capital Asset Pricing Model (CAPM), and by the 1990s and 2000s factor investing had grown in popularity.

\$35BN was withdrawn from quant funds in 2009

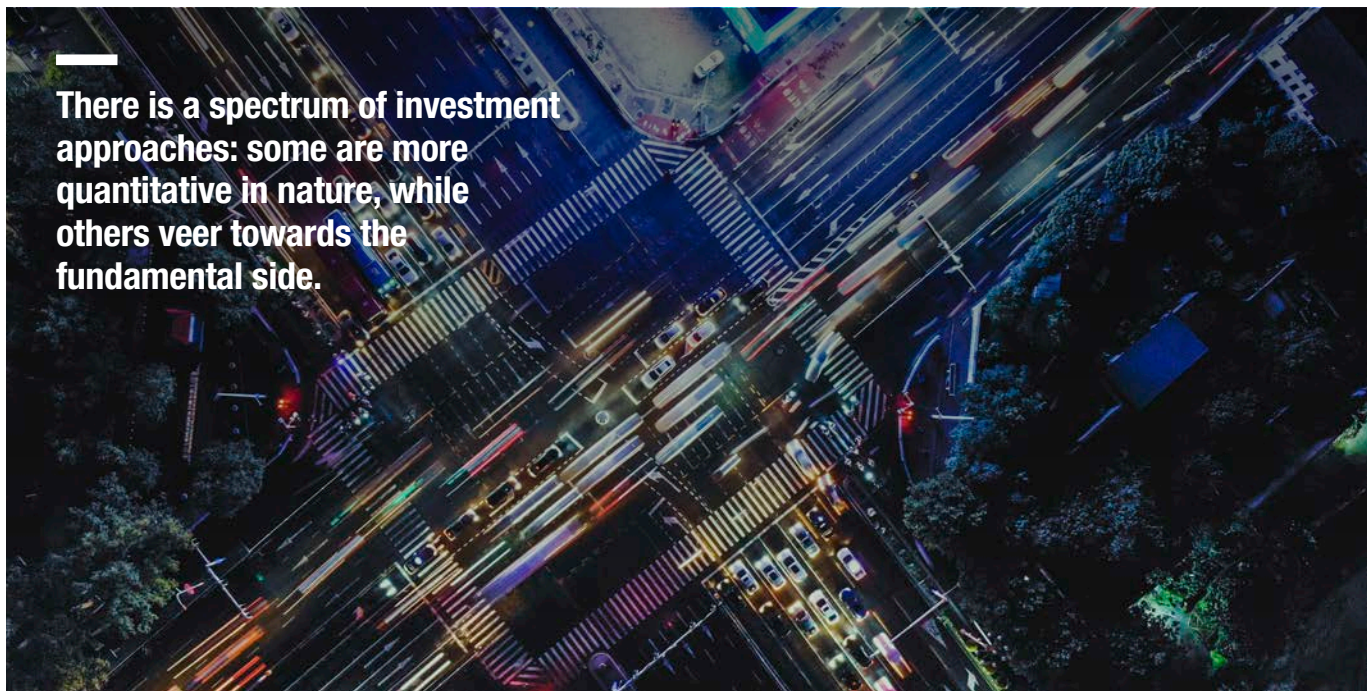
However, quantitative approaches fell out of favour in the wake of the global financial crisis (in 2009, withdrawals from quant funds hit \$35bn³). And although quant methodologies have enjoyed a renaissance in recent years, research shows that there are still plenty of sceptics, largely due to the perceived lack of transparency⁴. For example, a study conducted by Cambridge Associates last year found that more than half of the 20 institutional investors it surveyed were still uncomfortable with quant strategies⁵. Nevertheless, quant approaches exist in many forms today, from smart beta to high-frequency-trading strategies.

A study found that more than half of the 20 institutional investors it surveyed continue to be uncomfortable with quant strategies.

At the opposite side of the spectrum, investors rely on the judgement of analysts to value or assess a company, in what is commonly known as a fundamental investment process. For example, they make growth predictions about a company's sales and build a discounted cash flow model. Fundamental investors generally make fewer bets than quantitative investors and require a higher hit rate to generate alpha – their forecasts require higher skill. The asset management industry has conducted analysis in this way for decades: Benjamin Graham has long been considered the godfather of value investing, having introduced the idea of intrinsic value⁶ in the 1930s.

Indeed, separating the two approaches suits those seeking to simplify investment processes. But in reality, there is a spectrum of investment approaches: some approaches (and their sub-elements) are more quantitative in nature, while others veer towards the fundamental side. The majority of approaches that are characterised as fundamental will have quantitative elements, such as screens to select a long list of candidates or risk models to inform allocation decisions.

And so, the line between quant and fundamental is actually very blurred. Many self-professed fundamental investors use quantitative tools but consider them as merely a means to conduct fundamental research. Conversely, many quantitative investors will publicly shun any elements that could be considered fundamental for fear they could be construed as corrupting the objectivity of their models.



There is a spectrum of investment approaches: some are more quantitative in nature, while others veer towards the fundamental side.

^{1,2} "Algorithm Aversion: People Erroneously Avoid Algorithms After Seeing Them Err," by Berkeley J. Dietvorst, Joseph P. Simmons, and Cade Massey published by the Journal of Experimental Psychology in 2014.

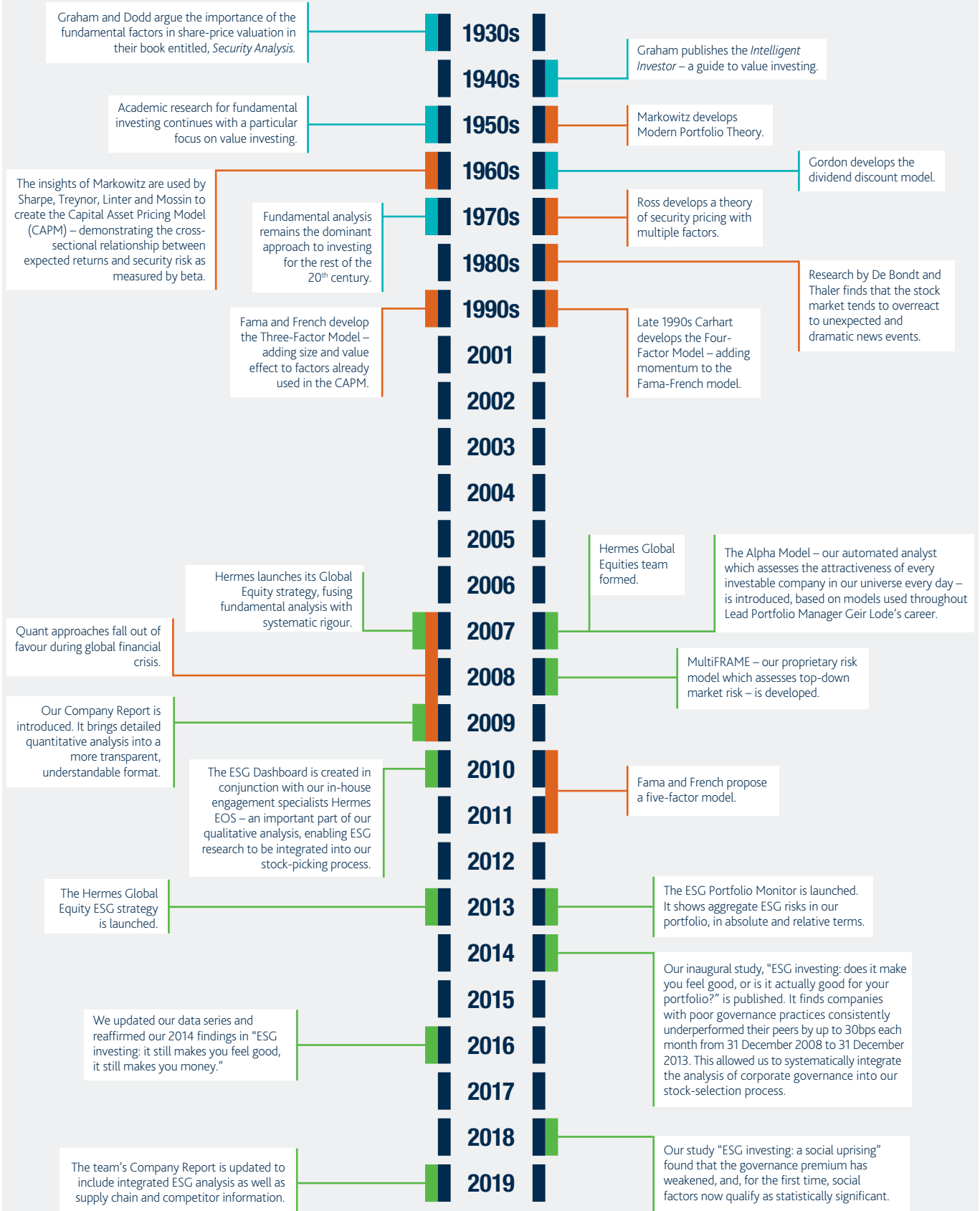
³ "Quant hedge funds lose their allure as performance sags," published by the Financial Times in July 2018.

^{4,5} "Investors express lack of trust in quant funds," published by Funds Europe in September 2018.

⁶ Intrinsic value is the underlying fair value of a stock based on its future earnings power.

THE EVOLUTION OF INVESTMENT STRATEGIES

Fundamental Quantitative Hermes Global Equities



AN INTEGRATED APPROACH

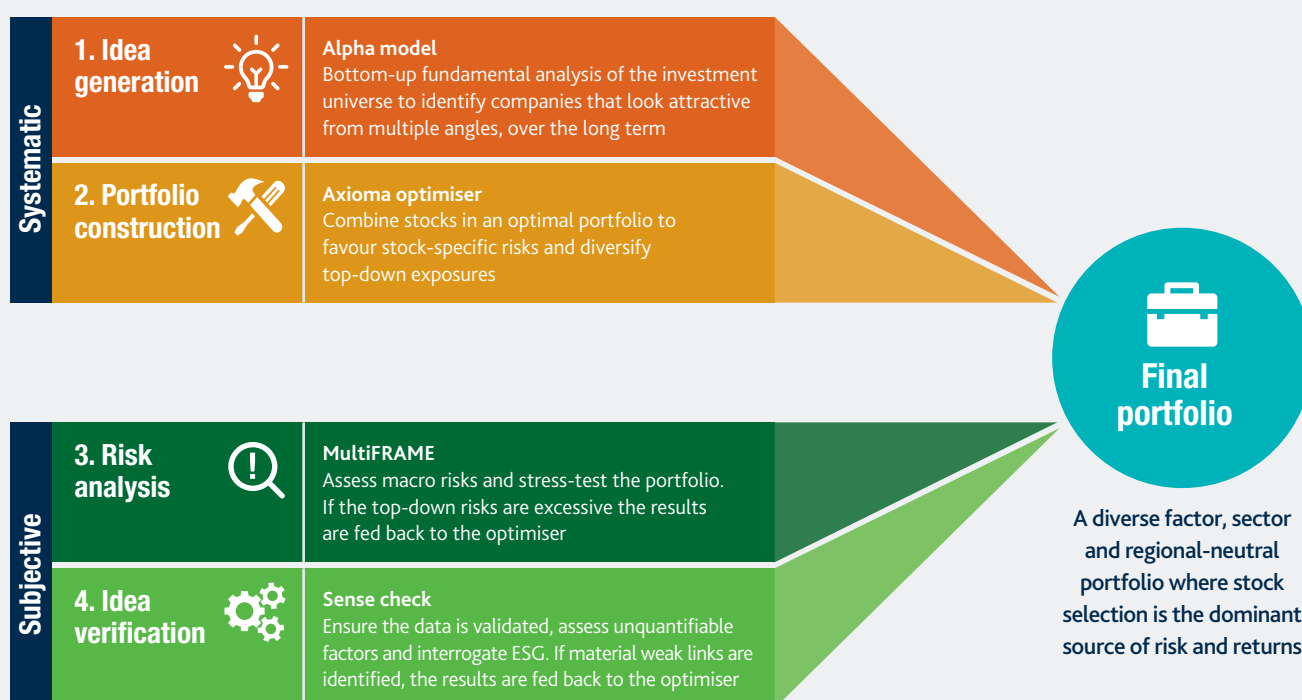
The industry likes to apply labels to investment styles, but we don't subscribe to that.

Within the Hermes Global Equities team, we embrace multiple investment styles: we are fundamental investors that use quantitative techniques – that is, we systematically analyse companies to identify those with the most attractive combinations of time-tested fundamental characteristics and undergo a bottom-up sense check before investing in them.

We believe the best way to generate superior, consistent returns is to **combine a systematic approach, which minimises behavioural biases, with disciplined subjective analysis and environmental, social and governance (ESG) considerations.** That's because it eradicates the biases of both investment styles and, in doing so, offers investors an all-weather solution.

We are fundamental investors that use quantitative techniques: we systematically analyse companies to identify those with the most attractive combinations of time-tested fundamentals.

Our investment process: fundamental focus, systematic execution



Our systematic model assesses the attractiveness of every stock in the investment universe each day. The metrics used to select stocks are justified by both economic reasoning and statistical effectiveness and have a long-term focus that leads to low portfolio turnover. They are grouped into six factor categories: valuation, sentiment, growth, profitability, corporate behaviour (including ESG characteristics) and capital structure. Our model identifies which stocks have the most attractive combinations of these characteristics and then creates an optimised portfolio that aims to maximise risk-adjusted returns.

Our portfolio is then subjected to two levels of risk analysis. First, MultiFRAME, our proprietary risk-management system, assesses top-down market risk. It has the flexibility to stress-test the portfolio, interpret how it would respond to different market environments and measure its exposure to any quantifiable risk. Second, we perform a bottom-up 'sense check' to ensure that the model has accurately assessed the nuances of each potential investment. At this stage, the ESG Dashboard, another proprietary tool, alerts us to stock-specific ESG risks, risks that are not typically covered in fundamental analyses of companies.

WHY DO WE USE THIS UNIQUE, HYBRID INVESTMENT STYLE?

Our logic stems from three core beliefs:

- 1 It is possible to partially predict future variance in stock prices, which can assist with identifying outperforming companies;
- 2 The amount of future variance that can be predicted is much smaller than many acknowledge (there is a lot of randomness in prices); and
- 3 The small element of future variance that can be predicted is difficult to predict (humans are not as skilful as they think).

We build models to explain how we believe the future will play out, not to best explain historical datasets.

These beliefs lead us to active investment, but we ensure sufficient breadth – that is, the number of independent investment opportunities as defined by the “fundamental law of active management”⁷ – in order to reduce exposure to noise and maximise our information ratio. A quantitative approach allows us to apply our investment skill consistently and reduce the influence of behavioural bias, which can introduce further noise.

For us, quantitative methods are appealing for two reasons:

- 1 It enables us to analyse the broadest set of securities. That’s because a systematic or quantitative approach can be applied at scale. For example, every day we analyse over 5,000 securities – a task that would not be feasible for an average-sized investment team.
- 2 It removes the emotional bias in investing – even if you could create a sufficiently large investment team, could you ensure each team member applies the same analysis with the same rigour and without their own inherent biases influencing the outcome? A rich body of research into behavioural biases⁸ exists, showing that simple things such as the weather or the proximity to lunchtime unconsciously influence our decision-making process – the same can’t be said for a quant process, where neither a downpour or a large pasta lunch will influence its outcomes.

Model behaviour

There are plenty of other behavioural biases that our unique style – a systematic approach with disciplined subjective analysis – minimises. Examples include:

- **Confirmation bias:** people are much more likely to seek information which confirms their existing opinions, thereby reinforcing their ideas rather than challenging them. For example, when an analyst decides that they like a stock, it is natural to find more information that supports their thesis rather than challenge it. Our objective investment approach seeks to remove such a risk.
- **Overconfidence:** many people tend to have an inflated assessment of their own ability to make predictions, thus ignoring one huge element – the randomness in financial markets. A disciplined risk management approach, such as our integrated investment process, is key to limiting the effect of such a bias.
- **Self-attribution:** fuelled by the overconfidence bias, many people tend to credit themselves for every positive outcome and attribute any poor performance to bad luck. This limits an investor’s ability to learn from experience. Our models are improved through a disciplined research process which objectively analyses the drivers of both positive and negative outcomes.

Importantly, there are plenty of elements of traditional quantitative approaches that we dislike. The following considerations shape how we apply quant techniques to our investment process:

- **We avoid data mining:** we build models to explain how we believe the future will play out, not to best explain historical datasets. Of course, our expectations of the future are shaped by our experience of the past and so, there is always an element of data mining. However, the models we build seek to reflect our views about what makes a good investment. Subsequently, the validity of our beliefs is then tested against history. We do not seek to optimise our model’s historical predictive power.
- **We believe in transparency:** the models we build are simply automating fundamental analysis. We use real-world variables, not statistical factors.
- **We believe in the power of engagement and ESG factors:** these are both long-term propositions that require a long holding period. As such, the factors within the model are long term in nature.
- **We buy and – on behalf of our clients – own companies:** as investors, we like to understand what we are buying (after all, we want to sleep at night). We are not statisticians trading in SEDOLs⁹. Instead, we look for companies with the most attractive blend of characteristics. We do not focus solely on the portfolio exposures.

⁷The Fundamental Law of Active Management by Grinold and Khan assesses the value of active management, expressed as: Information Ratio (a portfolio manager’s level of skill in selecting securities) × $\sqrt{\text{Breath}}$ (the number of independent investment opportunities).

⁸Behavioural biases are irrational beliefs or behaviours that unconsciously influence our decision-making process.

⁹SEDOL stands for Stock Exchange Daily Official List (SEDOL) number. It is a seven-digit European security identifier number.

DATA DOESN'T TELL THE WHOLE STORY

However, our most fundamental objection to a traditional quant approach is that **we believe that data cannot tell the whole story – and importantly, we believe in our own ability and skill to identify potential non-quantifiable risks as fundamental investors.** That's not to say that we are claiming to be able to forecast the number of iPhones that will be sold in China next quarter, we are saying that we are skilled in identifying risks to iPhone sales forecasts from the broker community.

Crucially, we believe **we can identify times when the data does not tell the whole story, or the model is not the best approach.** We do this by focusing on three key questions:

1 Is the data in the model correct, and does it accurately reflect the reality? As an experienced team with \$5.7bn in assets under management across five strategies¹⁰, and headed by Geir Lode with 24 years' industry experience (and who as former chairman of Bergen Yards oversaw its listing in 2007), we draw on real-world experience. In addition, to ensure the data used in the model accurately reflects reality, we analyse the footnotes of company accounts to confirm whether there have been any changes that may have affected the perception of the company, such as a change in accounting practice.

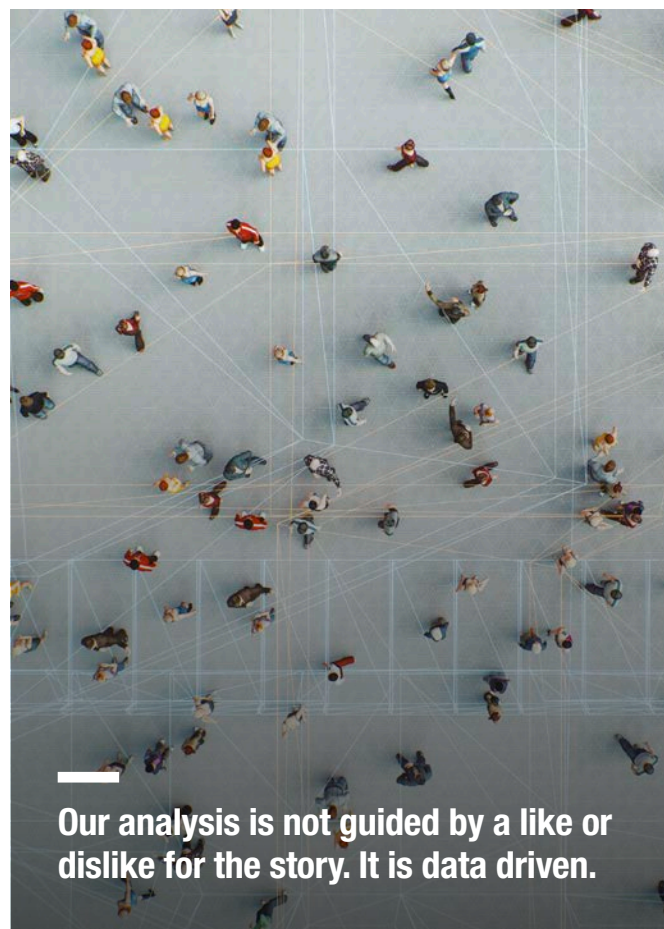
—
Hermes Global Equities manages

\$5.7BN

in assets under management
across five strategies¹⁰

2 What external forces is the company subject to? We search for factors beyond a company's control that could materially impact its share price. For example, changes to legislation or new regulations may affect a company's long-term prospects. It is here that we can draw upon not only the expertise within the team but insights from more than 100 investment professionals across the business.

—
100+ Hermes investment
professionals sharing insights



Our analysis is not guided by a like or dislike for the story. It is data driven.

3 How are the ESG factors changing? While ESG analysis is embedded within our quantitative models, many ESG issues remain difficult to assess quantitatively. Our proprietary tool, [the ESG Dashboard](#)¹¹, is used to identify each stock's exposure to a wide range of industry-specific ESG risk factors. This is complemented by regular dialogue with our in-house engagement specialists, Hermes EOS, on ESG issues. Clearly, if a company's ESG characteristics are improving, it makes a stock more attractive, and vice versa. We aim to avoid companies with exposure to ESG issues that their industry peers have not experienced. In addition, another bespoke tool, the Portfolio ESG Monitor, offers a portfolio-level perspective on ESG exposures. This tool reports on the ESG characteristics of portfolio holdings and highlights companies with potential controversies.

Of course, there is a risk of introducing behavioural bias back into the process. But importantly, our analysis is data driven. As such, it is not focused on our like or dislike for a story, rather it focuses on the validity of a quantitative approach in the specific circumstance. What's more, we do not introduce potential investments: we simply reject those with material, non-quantifiable risks and, in turn, our quantitative models find alternatives. So, while we cannot entirely remove bias, by adopting our hybrid investment approach, we can minimise it.

¹⁰ Source: Hermes as at 30 June 2018. Targets cannot be guaranteed.

¹¹ To read about our ESG Dashboard, use the following link: https://www.hermes-investment.com/ukw/wp-content/uploads/sites/80/2017/09/Hermes-Global-Equities-ESG-Dashboard-Overview_NB.pdf

THINKING DIFFERENTLY

Importantly, our unique investment style also informs our research agenda and thinking about industry hot topics. Here we explore three such topics, demonstrating how combining a systematic approach with a fundamental analysis shapes our views:



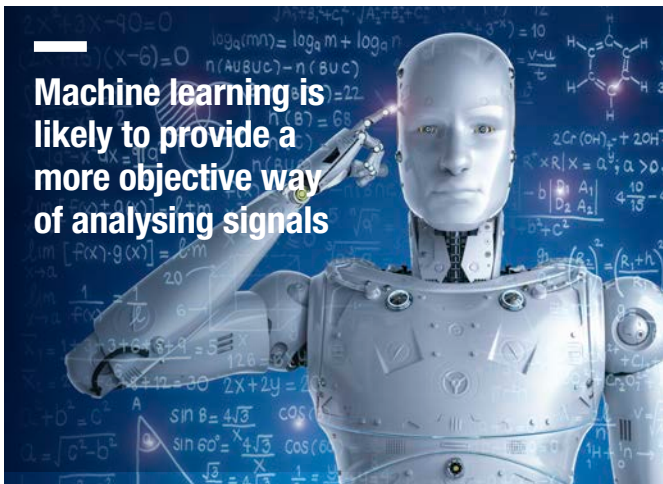
Machine learning and AI

Advances in machine learning and artificial intelligence (AI) have driven the increased interest in quantitative models in recent years. But as investors, not statisticians, machine learning is not a natural area for us.

Almost by definition, machine learning is data mining – and as we mentioned already, we seek to avoid data mining. Machine learning systems are all too frequently impenetrable black boxes, hard to understand in real-world terms. Instead, we rely on our own insights to guide the models we use.

That said, there are areas in which we believe that these techniques add value:

- **To confirm – and challenge – our insights.**
- **To better combine factors** – that is, we decide what matters, and machine learning helps us to find the nuance of how to use these insights. For example, we believed that companies with low accruals were more likely to generate better sustainable returns, but data alone provided little confirmation of this factor's efficacy. A machine-learning algorithm investigated how best to use 'accruals' alongside our factors. It showed that although the factor added little value when used in isolation, when it was used in conjunction with certain other indicators, we could generate better returns.
- **Analysing research** – machine learning is likely to provide a more objective way of analysing signals that are embedded in non-financial data, such as earnings calls.
- **Identifying hidden risks within our portfolio** – as aforementioned, MultiFRAME assesses top-down market risk. It has the flexibility to stress-test the portfolio, interpret how it would respond to different market environments and measure its exposure to any quantifiable risk.

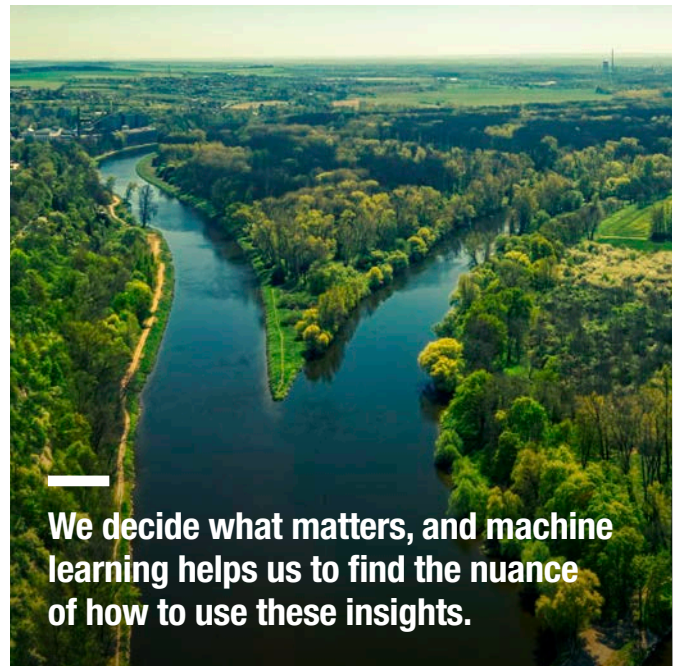


Machine learning is likely to provide a more objective way of analysing signals



ESG

We conduct our ESG analysis using qualitative and quantitative inputs – our hybrid approach allows both types of valuable information to be integrated. Through our bespoke tool, the ESG Dashboard, ESG metrics as well as research and engagement updates from Hermes EOS specialists inform our investment decisions.



We decide what matters, and machine learning helps us to find the nuance of how to use these insights.

A valuable component of the Dashboard is the QESG Score – a ranking applied to each company, based on the information collated. This score is used to systematically favour companies with an attractive ESG profile.

Often, insights we gain from engagements conducted by Hermes EOS are non-quantifiable. Importantly, they provide an information advantage: proprietary insights into engagement progress and forward-looking views of the ESG risk exposures of companies, compared to the retrospective analysis of external data vendors. The expertise of Hermes EOS has also helped define the key performance indicators or risk factors on which each company is measured. These are either generic, such as board structure, or sector specific, focusing on the major risks by industry – such as CO₂ emissions and fleet consumption for the automobiles industry, paper sourcing for media and energy efficiency for airlines.

In addition, we have studied the performance benefits of integrating ESG factors into investment decisions since 2014 (see our most recent commentary “[ESG investing: a social uprising](https://www.hermes-investment.com/ukw/insight/equities/esg-investing-a-social-uprising/)”)¹². Interestingly, our quantitative analysis demonstrated the non-linear importance of governance and social factors. By quantitatively analysing how ESG factors have impacted shareholder returns from 31 December 2008 to 30 June 2018, we found that the social factor was statistically significant, for the first time since our investigation began in 2014. While it reinforced our earlier finding of a robust link between underperforming firms and poor governance, this had worsened since our previous investigation in 2016.

¹² To read our commentary “ESG investing: a social uprising”, use the following link: <https://www.hermes-investment.com/ukw/insight/equities/esg-investing-a-social-uprising/>

Factor timing

We construct our portfolios so that they have significant breadth – that means the excess return is driven by a range of diversified risks rather than a few concentrated bets.

Factor timing – tactically monitoring and adjusting exposures to different factors – reduces breadth. For this method, the driver of success becomes the ability to time factors. But this is very difficult to do consistently – as evidenced when many investors were caught off guard by the sudden reversal of factor performance at the beginning of September.

Of course, we can demonstrate that our quality metrics work better when people are nervous. But predicting nervousness is not a simple task – people (and markets) can quickly shift from cautious to risk-on overnight (see figure 1). If you have a portfolio that has a significant tilt towards quality, getting it wrong hurts.

As such, we believe that traditional factor timing becomes less relevant and instead we focus on what makes a good company in the long term. After all, that doesn't really change. But that doesn't mean we always use the same factors.

The factors vary depending on the company type. For example, hyper-growth companies – which are typically at an early stage of their life cycle and experiencing stellar growth rates but often trading at high multiples – are valued using our 'hyper-growth' model, which uses forward-looking, primarily earnings-based metrics. Less weight is

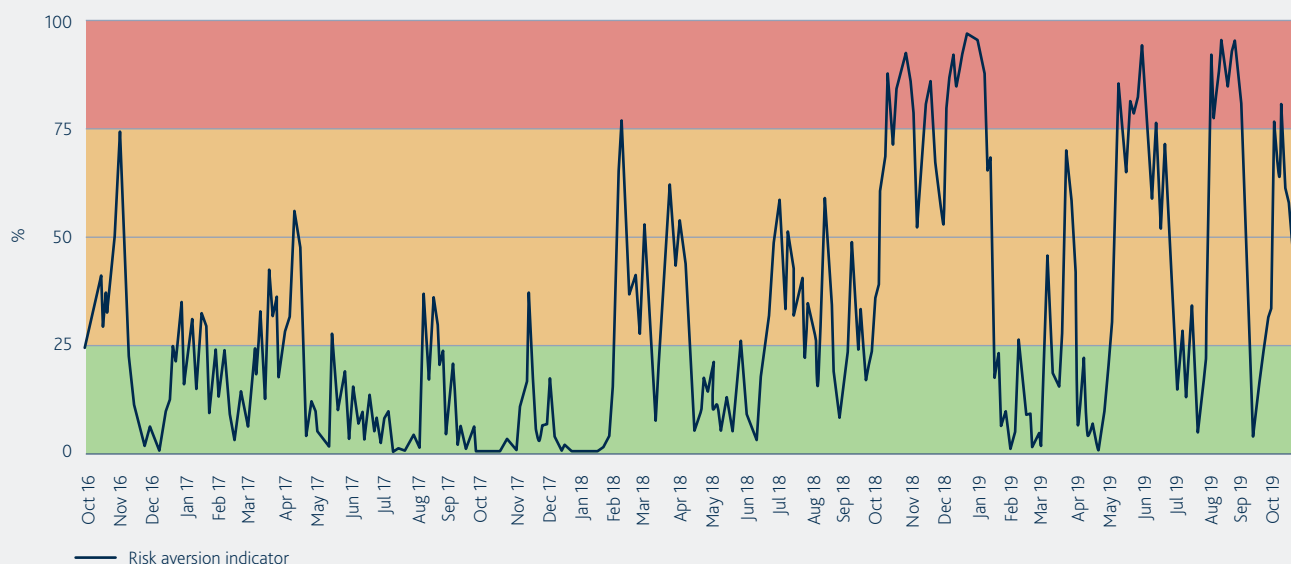
placed on backward-looking, asset-based metrics. In turn, this allows companies in a growth phase to look attractive to the model, as factors such as growth and sentiment are given priority when determining the investment case. This shows the added value a tailored approach can have; otherwise, the model's traditional metrics may have made the company look expensive.

What's more, the portfolio shifts from one style to the next gradually, with low portfolio turnover based on the relationship between the factors. Since our model favours companies with an attractive blend of characteristics, it is dynamic. As market conditions change, some characteristics will become overbought and it will become increasingly difficult to find companies with the overbought characteristic at an attractive valuation.

As shown in our historic style exposures (see figure 2), the model will favour different styles at different points in the cycle and the portfolio will slowly shift through investment styles as appropriate (typically with just 20%-25% turnover). This is not an explicit timing decision by the team or the model, but a natural outcome of seeking companies with multiple attractive characteristics.

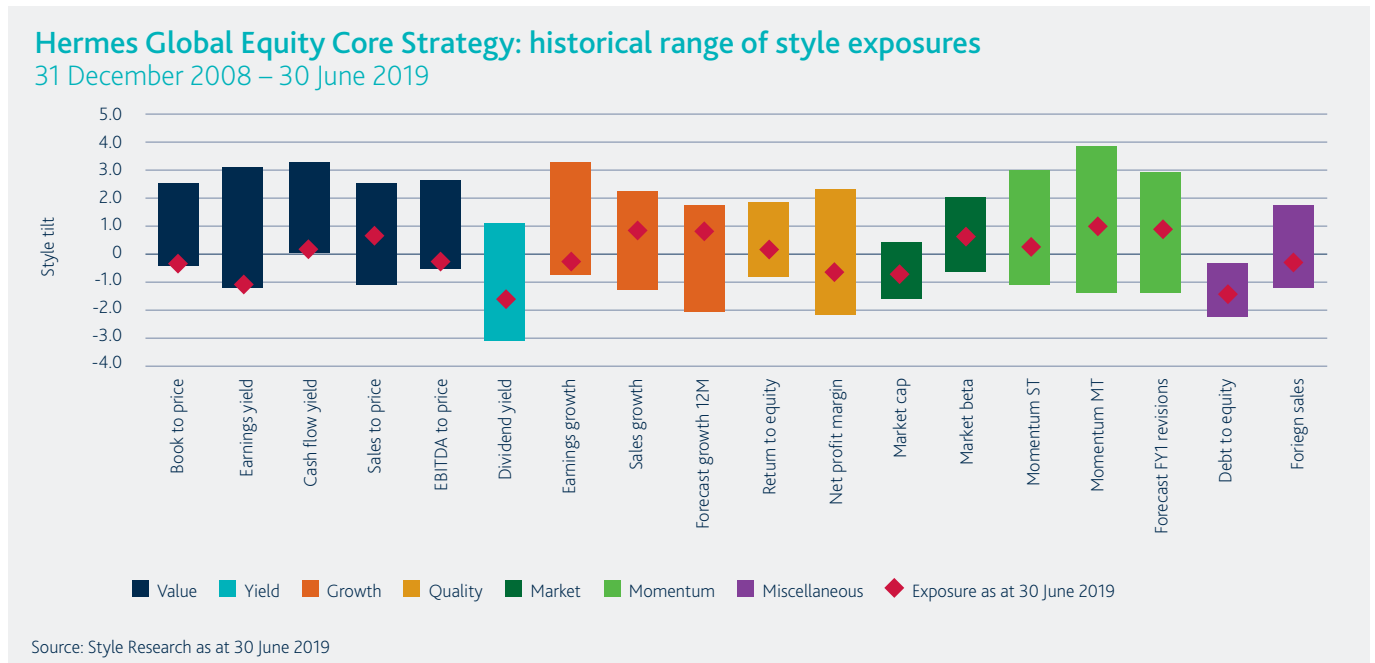
These three topics are merely a glimpse into what shapes our thinking – and we aim to expand our thoughts on these topics over the next 12 months.

Figure 1. Risk-on, risk off: investor sentiment can change overnight



Source: Hermes Global Equities as at November 2019. Note: risk aversion measures investor confidence – when the risk aversion indicator is in the green zone investors tend to be more speculative and seek higher risk assets; when it is in the red zone investors are nervous and tend to seek safety.

Figure 2. Capturing multiple investment styles



BEST OF BOTH WORLDS

In the investment community, the age-old debate continues: which is best – fundamental or quantitative analysis?

As we have demonstrated, we will not be choosing a side. That's because we use a unique investment style: we are fundamental investors that use quantitative techniques. Our disciplined process combines systematic models, which minimise behavioural biases, with subjective analysis and ESG considerations. It is an approach we have followed since our team's inception. And in so doing, we have generated strong risk-adjusted returns: since their 2007 and 2013 inception dates, our Global Equity and Global Equity ESG strategies have generated net annualised returns of 5.3% and 8.8% respectively (compared to 4.9% and 7.6% for the benchmark)¹³.

Our Global Equity Strategy has generated net annualised returns of

5.3%

since inception¹⁴

compared to

4.9%

for the benchmark¹⁴

Our Global Equity ESG Strategy has generated net annualised returns of

8.8%

since inception¹⁵

compared to

7.6%

for the benchmark¹⁵

¹³ Source: Hermes as at 30 September 2019. Performance is USD, net of fees. The benchmark for the Global Equity and Global Equity ESG strategies are the MSCI World (net WHT) and MSCI ACWI respectively. **Past performance is not a reliable indicator of future performance.**

¹⁴ Source: Hermes as at 30 September 2019. Performance is USD, net of fees. The inception date of Hermes Global Equity Core is 1 December 2007. The benchmark is the MSCI World (net WHT).

¹⁵ Source: Hermes as at 30 September 2019. Performance is USD, net of fees. The inception date of Hermes Global Equity ESG is 1 May 2013. The benchmark is the MSCI ACWI.

Table 1. Strategy rolling performance (%)

	30/09/2018 – 30/09/2019	30/09/2017 – 30/09/2018	30/09/2016 – 30/09/2017	30/09/2015 – 30/09/2016	30/09/2014 – 30/09/2015
Hermes Global Equity Core	-2.07	11.82	20.12	12.12	-4.64
Hermes Global Equity ESG	-1.52	11.20	19.80	10.76	-2.51
Hermes Global Equity Screened ESG	-0.63	11.97	18.31	12.42	-4.31
Hermes Global Equity Concentrated	-2.71	10.52	19.85	8.40	–
Hermes Global Equity Low Carbon	1.52	10.12	18.65	–	–

Source: Hermes as at 30 September 2019. Performance of the strategies is show in USD, net of fees. **Past performance is not a reliable indicator of future results.**

The value of investments and income from them may go down as well as up, and you may not get back the original amount invested. Past performance is not a reliable indicator of future results.

HERMES INVESTMENT MANAGEMENT

We are an asset manager with a difference. We believe that, while our primary purpose is to help savers and beneficiaries by providing world class active investment management and stewardship services, our role goes further. We believe we have a duty to deliver holistic returns – outcomes for our clients that go far beyond the financial – and consider the impact our decisions have on society, the environment and the wider world.

Our goal is to help people invest better, retire better and create a better society for all.

Our investment solutions include:

Private markets

Infrastructure, private debt, private equity, commercial and residential real estate

High active share equities

Asia, global emerging markets, Europe, US, global, small and mid-cap and impact

Credit

Absolute return, global high yield, multi strategy, unconstrained, real estate debt and direct lending

Stewardship

Active engagement, advocacy, intelligent voting and sustainable development

Offices

London | Denmark | Dublin | Frankfurt | New York | Singapore

Why Hermes Global Equities?

Transparency

Our accessible investment process and analysis is based on clearly defined statistical and economic evidence. It is not a 'black box' and the drivers of returns can be clearly explained.

Expertise

Our bottom-up stock-selection model systematically analyses companies' financial statements and gauges investor sentiment to generate an optimal portfolio. The team draws on its deep investment experience to identify unquantifiable risks such as negative news flow and regulatory change.

Flexibility

We partner with clients to create portfolios addressing their needs, amending the risk profile, investment universe and benchmark, and portfolio characteristics such as dividend yield and ESG exposure as required.

Broad risk awareness

MultiFRAME, our proprietary risk modelling system, detects exposures to all quantifiable risks. The Hermes Investment Office performs independent risk management services for clients and sustainability risks are identified by our ESG Dashboard.

For more information, visit www.hermes-investment.com or connect with us on social media:   

For professional investors only. This is a marketing communication. This document does not constitute a solicitation or offer to any person to buy or sell any related securities, financial instruments or financial products. No action should be taken or omitted to be taken based on this document. Tax treatment depends on personal circumstances and may change. This document is not advice on legal, taxation or investment matters so investors must rely on their own examination of such matters or seek advice. Before making any investment (new or continuous), please consult a professional and/or investment adviser as to its suitability. Any opinions expressed may change. All figures, unless otherwise indicated, are sourced from Hermes.

The value of investments and income from them may go down as well as up, and you may not get back the original amount invested. Any investments overseas may be affected by currency exchange rates. Past performance is not a reliable indicator of future results and targets are not guaranteed.

The main entities operating under the brand "Hermes" or "Hermes Investment Management" are: Hermes Investment Management Limited ("HIML"); Hermes Fund Managers Ireland Limited ("HFM Ireland"); Hermes Alternative Investment Management Limited ("HAIML"); Hermes European Equities Limited ("HEEL"); Hermes Real Estate Investment Management Limited ("HREIML"); Hermes Equity Ownership Limited ("HEOS"); Hermes Stewardship North America Inc. ("HSNA"); Hermes GPE LLP ("Hermes GPE"); Hermes GPE (USA) Inc. ("Hermes GPE USA") and Hermes GPE (Singapore) Pte. Limited ("HGPE Singapore"). HIML, HAIML and HEEL are each authorised and regulated by the Financial Conduct Authority. HAIML and HIML carry out regulated activities associated with HREIML. HIML, HEEL, Hermes GPE and Hermes GPE USA are each a registered investment adviser with the United States Securities and Exchange Commission ("SEC"). HGPE Singapore is regulated by the Monetary Authority of Singapore. HFM Ireland is authorised and regulated by the Central Bank of Ireland. HREIML, HEOS and HSNA are unregulated and do not engage in regulated activity.

Issued and approved by Hermes Investment Management Limited which is authorised and regulated by the Financial Conduct Authority. Registered address: Sixth Floor, 150 Cheapside, London EC2V 6ET. Telephone calls will be recorded for training and monitoring purposes. Potential investors in the United Kingdom are advised that compensation may not be available under the United Kingdom Financial Services Compensation Scheme.

In Australia: This document is directed at 'Wholesale Clients' only. Any investment products referred to in this document are only available to such clients. Hermes Investment Management Limited operates under the relevant class order relief and does not hold an Australian Financial Services Licence.

In Hong Kong: The contents of this document have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice. The strategies are not authorised under Section 104 of the Securities and Futures Ordinance of Hong Kong by the Securities and Futures Commission of Hong Kong. Accordingly the distribution of this document, and the placement of interests in Hong Kong, is restricted. This document may only be distributed, circulated or issued to persons who are professional investors under the Securities and Futures Ordinance and any rules made under that Ordinance or as otherwise permitted by the Securities and Futures Ordinance.

In Spain: Hermes Investment Management Limited is duly passported into Spain to provide investment services in this jurisdiction on a cross-border basis and is registered for such purposes with the Spanish Securities Market Commission – Comisión Nacional del Mercado de Valores under number 3674. BD004461 0007630 11/19