

Quantitative Equities

Human instincts drive the Value premium

Sustainable Investing Expertise by
ROBECOSAM

- Risk alone cannot explain Value anomaly
- Hardwired human behavior gives rise to Value
- Strong hands are required to harvest Value premium

In recent times, Value has been one of the most contested styles in the investing fraternity. Its present-day validity is the subject matter of many debates, often leading to polarized viewpoints and colorful metaphors such as death, winter and resurrection.¹ This is in stark contrast to the popularity it enjoyed for most of the 20th century, when many investors followed in the footsteps of Benjamin Graham and Warren Buffett. While Value has experienced performance headwinds in the last decade or so, the factor has delivered market-beating returns over the long run and in most decades since the 1930s. In this article, we delve into the driving factors behind the Value premium from both a risk and behavioral perspective, review the evolution of the style, and outline the reasons why we believe the Value factor will continue to persist over the long term.

Value investing is predicated on selecting stocks that appear to be trading at a discount to their intrinsic value and avoiding those that seem to be trading at a premium. Investors can therefore harvest the value premium by investing in undervalued companies and ignoring their overvalued counterparts, based on the belief that the market will recognize their true value in the long run. The general idea behind this is that markets overreact to good and bad news in the short run, leading to stock price moves that do not reflect the long-term fundamentals of companies. This overreaction provides attractive entry points that market participants can exploit by purchasing stocks at discounted prices. In simple terms, value investors ferret out firms that are underestimated by the market from their perspective.

But pinpointing what actually drives the value premium is a contentious issue among academics and practitioners. One argument is that it is compensation for some type of risk,

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¹ For extensive analyses on recent value performance, please see: Arnott, R. D., Harvey, C. R., Kalesnik, V., and Linnainmaa, J. T., January 2021, "Reports of value's death may be greatly exaggerated", Financial Analysts Journal; Van Vliet, P., and Baltussen, G., August 2020, "[Will value survive its long winter?](#)", Robeco article; and Blitz, D., Hanauer, M. X., January 2021, "[Resurrecting the Value Premium](#)", Journal of Portfolio Management.



such as distress or macroeconomic risk. Or it could be a reward for stomaching long periods of underperformance. Value investing can be afflicted by protracted phases of subdued relative returns, like those witnessed during the tech bubble of the late 1990s, the global financial crisis, or the most recent ‘quant winter’ of 2018-2020.² This possibility of prolonged underperformance could be supportive of a risk-based explanation.³

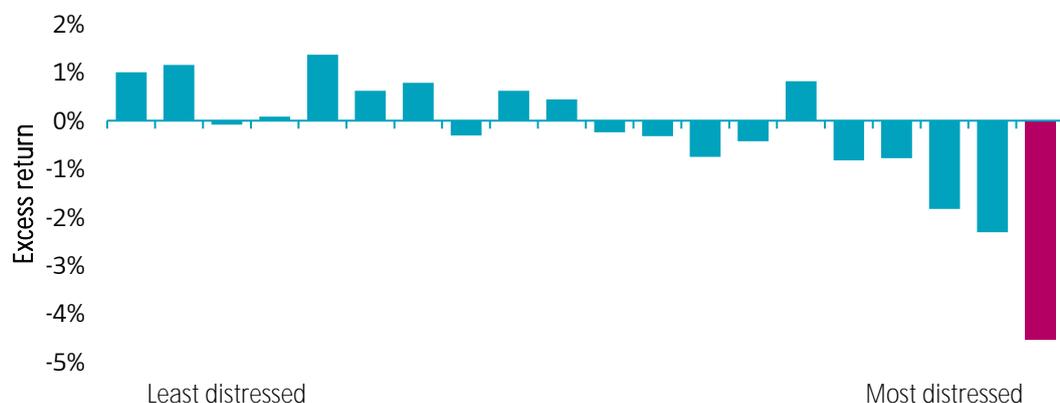
Another view is that the value premium is attributed to rational decisions or behavioral biases that cause ‘irrational’ reactions. This could vary from a rational buy-side analyst who recommends glamorous growth stocks to further their career (and improve their compensation) in the short run, to ‘animal spirits’ – as described by John Maynard Keynes – which can influence the decision-making of investors. On the back of our extensive research at Robeco, we believe behavior in particular explains the value premium.

Risk does not account for the Value premium

Risk-based explanations of the value premium are largely linked to the efficient market hypothesis (EMH), which states that higher risk should lead to higher returns. In the early 1990s, a number of Fama and French publications⁴ posited that the value premium is not explained by the capital asset pricing model (CAPM) or standard risk measures such as beta and volatility. Instead, they argued that the return differences between value and growth stocks are driven by common risk factors such as financial distress. The economic rationale behind this notion is that investors are rewarded for taking on the risk of investing in companies that are facing financial difficulty; i.e., those that have typically low market values compared to their book values and are therefore classified as value stocks.

However, there is a lack of consensus in the academic literature on whether this is indeed the case. For example, a Robeco study conducted in 2018 investigated whether the value premium is attributable to financial distress.⁵ The researchers found no evidence of a causal relationship between value and distress risk and no evidence to support the pricing of this risk. Figure 1 reflects the latter outcome as it shows that a distress risk premium is not concentrated in distressed stocks.

Figure 1 | Relationship between excess return and distress risk



Source: The chart uses monthly EUR returns from Jan 1986 to Dec 2014 for developed markets of the largest 3,000 stocks of all Broad Market Index constituents, ranked by Robeco’s distance-to-default factor, assuming a one-month holding period and ignoring transaction costs.

² Blitz, D., May 2021, “The quant crisis of 2018-2020: Cornered by ‘big growth’”, Journal of Portfolio Management.

³ Asness, C. S., Frazzini, A., Israel, R., and Moskowitz, T., October 2015, “Fact, fiction, and value investing”, Journal of Portfolio Management.

⁴ Fama, E. F., and French, K. R., June 1992, “The cross-section of expected stock returns”, Journal of Finance; Fama, E. F., and French, K. R., February 1993, “Common risk factors in the returns on stocks and bonds”, Journal of Financial Economics; Fama, E. F., and French, K. R., March 1995, “Size and book-to-market factors in earnings and returns”, Journal of Finance; and Fama, E. F., and French, K. R., December 1998, “Value versus growth: The international evidence”, Journal of Finance.

⁵ De Groot, W., and Huij, J., March 2018, “Are the Fama-French factors really compensation for distress risk?”, Journal of International Money and Finance.

Financial distress is not the only risk flagged as a potential driver of the value anomaly. In one academic paper, the authors argue that the value premium reflects the compensation investors receive for taking on macroeconomic risk.⁶ In their study, they observed that value stocks have a high exposure to bond market variables that predict future economic activity, attributing this to the underlying cash flow dynamics of these companies. More specifically, they found that value stocks experienced negative cash flow shocks in economic downturns, and this coincided with periods of low returns for them versus their growth counterparts.

While numerous risk-based explanations do feature in the asset pricing literature, it is not widely accepted that the value premium is driven solely by risk factors. Indeed, numerous academics and practitioners have provided compelling evidence that suggests behavior, rather than risk, is the reason the value anomaly persists.

Instead, the Value anomaly is rooted in innate human behaviors

According to the behavioral school of thought, human tendencies are behind the existence of the value premium. Many investors are lured by the appeal of companies with exciting growth stories and prospect of strong short-term returns, while being deterred by those that receive little fanfare or are unloved by the masses.

As explained by Andrew Lo in his book *Adaptive Markets*, “Intelligence is the ability to generate accurate cause-and-effect descriptions of reality” (or, simply put, narratives).⁷ This innate skill has been passed down through generations and contributed to the survival of humans throughout time. Therefore, people are hardwired to be favorably disposed to good narratives and they might struggle to overrule or ignore such a strong instinct.

In one paper, researchers discussed how value strategies outperform the market as they exploit the behavioral errors made by typical investors, and not because they are fundamentally riskier.⁸ They noted how private investors can extrapolate past growth rates of glamour stocks well into the future even though they are unlikely to persist. They could also equate well-run companies with good investments irrespective of price. Moreover, their short-term horizons may lead them to shun value strategies which typically require longer-time periods to pay off. Thus, their resulting optimism about glamour stocks and pessimism about their value counterparts give rise to the value premium.

In another study, the authors concurred with these findings as they looked into how irrational behavior impacted the long-term returns of growth and value stocks.⁹ They illustrated how investors overreacted to past operating results by naively extrapolating historical growth rates. This caused them to erroneously invest in growth stocks based on the belief (narrative) that their operating performance would continue unabated, and to avoid value stocks due to their low growth profiles. But over time, they found that once the errors stemming from the naïve extrapolations were realized, investors would then adjust their positions accordingly, causing value firms to outperform their growth peers.

Similarly, recent research examined the factor exposures of passive thematic indices.¹⁰ Thematic strategies typically catch the eye of investors by being exposed to stocks, sectors or themes with good narratives (such as emerging macroeconomic, geopolitical or technological trends) or strong historical returns. The study, however, showed that most of these passive thematic indices had negative exposures to factors, including value. From an asset-pricing perspective, the author concluded that this implies that investors in these indices potentially face lower long-term expected returns.

By contrast, some investors take a conscious and rational decision to go against value.¹¹ This perspective is also explored in detail in an academic paper.⁸ For example, the researchers state that professional investors have career concerns to consider over and above generating good long-term performance. Demanding bosses and clients also evaluate them on their short-term returns and their ability to beat benchmarks. From a commercial perspective, they are also judged on their capacity to market their investment strategies and create appealing stories around them. Given these concerns, they

⁶ Kojien, R. S. J., Lustig, H., and Van Nieuwerburgh, S., June 2017, “The cross-section and time series of stock and bond returns”, *Journal of Monetary Economics*.

⁷ Lo, A. W., April 2017, “Adaptive markets: financial evolution at the speed of thought”, Princeton University Press.

⁸ Lakonishok, J., Shleifer, A., and Vishny, R.W., December 1994, “Contrarian investment, extrapolation, and risk”, *the Journal of Finance*.

⁹ Broussard, J.P., Michayluk, D., and Neely, W.P., December 2005, “The role of growth in long term investment returns”, *Journal of Applied Business Research*.

¹⁰ Blitz, D., August 2021, “[Betting against quant: examining the factor exposures of thematic indices](#)”, working paper.

¹¹ Blitz, D., November 2020, “[Why I am more bullish than ever on quant](#)”, Robeco article.

could opt for more growth style-related approaches which are easier to sell, have more catchier narratives, and potentially offer strong short-term returns relative to ‘unloved’ value stocks.

In recent years, growth stocks with enticing storylines have become very popular investments. This is not surprising, especially with the current ease of investing, proliferation of indicators focused largely on attention-grabbing information (such as recent returns or stock popularity lists) and more visible marketing aimed at luring private investors. With these factors in mind, even the most seasoned investors can become susceptible to the ‘fear of missing out’. But such behavioral biases are likely to strengthen the value factor.

The evolution of the Value factor

Value investing has come a long way from when it was introduced by Benjamin Graham and popularized by Warren Buffet. Well-renowned academics and practitioners have since made significant contributions to the academic literature, including Sanjoy Basu in the 1970s as well as Eugene Fama and Kenneth French in the 1990s. More recently, numerous researchers have continued to evolve the investment style so that it incorporates relevant present-day considerations that can enhance its efficacy.

For example, intangibles are now included in book-to-market metrics by some practitioners. Recent Robeco analysis outlines how research and development (R&D) expenses have increased over time relative to capital expenditure.¹² Since R&D outlays are treated as an expense under most accounting standards, they are immediately recognized as costs on the income statement instead of being capitalized as assets.

As a result, the book values that are reported on the balance sheets of affected companies might not be representative of their true assets, while their earnings might be distorted by the deduction of their long-term R&D investments. Therefore, the adjustment of their book values and income statements, by treating R&D spending as an investment instead of an expense, increases the performance of the value factor.

Another example of present-day considerations is accounting for climate risk. The value factor is typically tilted towards asset-heavy sectors such as energy, materials and utilities. Unsurprisingly, the environmental footprints of these industries are high relative to other sectors. And although climate change has only taken center stage in recent years, climate-related risks are expected to become increasingly important for investors going forward.

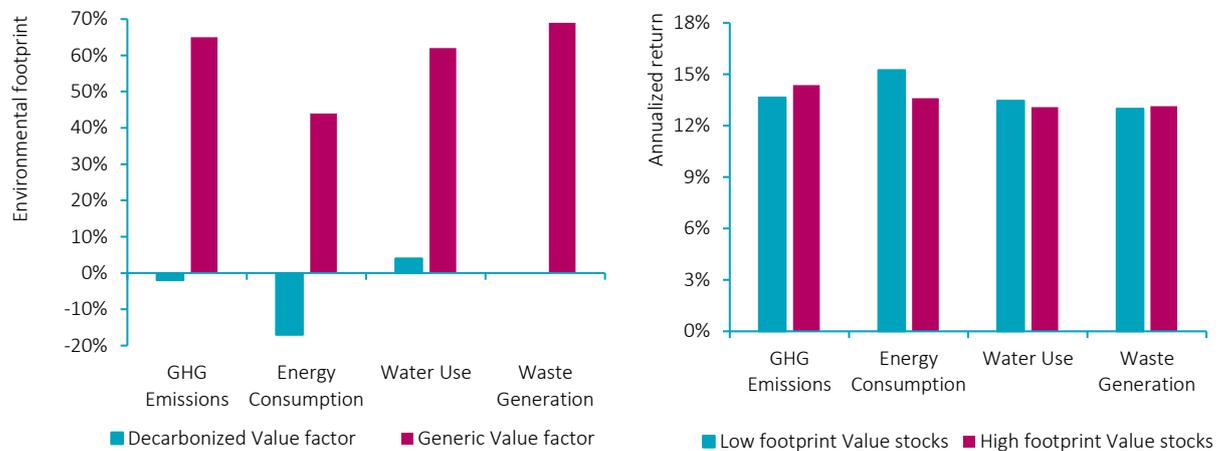
In light of this, Robeco researchers have designed an innovative methodology to derive a decarbonized value signal that adjusts the valuations of high-polluting firms by making them less attractive, based on their environmental footprints. This results in a ‘greener’ value signal that removes a large tilt to ‘brown’ companies, without significantly impacting the value premium.¹³

This is illustrated in Figure 2 which shows materially lower footprints for the decarbonized value factor on the left-hand side chart, but broadly similar returns compared to a generic value signal on the right-hand side chart. This enhancement ensures that investors are less vulnerable to climate-related risks, thus making the value signal more future-proof in terms of the ongoing transition to a low-carbon economy.

¹² Hanauer, M.X., and Swinkels, L., May 2020, “The tangible value of intangibles”, Robeco article.

¹³ Swinkels, L., Üsaitè K., Zhou, W., and Zwanenburg, M., October 2019, “Decarbonizing the Value factor”, Robeco article.

Figure 2 | Environmental footprint of generic and decarbonized value factor and their returns, January 1986 to December 2018



Source: Robeco Quantitative Research. The left-hand side chart shows the average environmental footprint of the highest value quintile portfolio minus the lowest value quintile portfolio as a percentage of the footprint of the equally-weighted universe for the conventional and “decarbonized” book-to-price value variable. A positive number means that the value stocks have a larger footprint than non-value stocks. The right-hand side chart shows the average USD returns of the highest and lowest environmental footprint quintile portfolios within the highest quintile value portfolio. The stock universe consists of MSCI All Country World Index constituents supplemented with large off-benchmark stocks.

A value strategy can also avoid unrewarded risks that are associated with negative exposures to other established factors, such as momentum and quality. Indeed, a couple of studies reveal how the return of generic value strategies can be significantly enhanced by following this approach.^{14,15} In addition, a value portfolio that is diversified across different value variables can potentially result in improved and more stable performance. This is outlined in recent analyses that depict the returns of a composite value signal versus a generic value factor, with the former delivering superior results.^{16, 17}

Why hasn't Value been arbitrated away?

As the value premium is rooted in rational and irrational behavior, the likelihood of it being eroded is fairly low. Indeed, it has been around for decades, giving arbitrageurs enough time to profit from it, yet it remains a fixture of global stock markets. In fact, recent developments, such as the rise of the retail investor, are likely to fuel behavioral biases that could result in the strengthening of the premium over the long run.

Furthermore, the constantly evolving mold of the value factor also works in its favor, as its adaptive nature makes it less prone to the prospect of arbitrage. To truly capture the value premium, investors will likely have to enhance their approaches as market environments change, which should help keep the factor alive.

Lastly, harvesting the value anomaly can be a painful exercise. The experience of protracted underperformance is likely to shake out any investors with ‘weak hands’, which limits the risk of arbitrage. In fact, investors (humans) have the natural tendency to avoid pain and seek short-term rewards. Therefore, it is our hardwired human instincts that give rise to value premium.

In the next paper of this series, we will discuss the quality factor through the lens of behavioral finance.

¹⁴ Blitz, D., Roscovan, V., and Vidojevic, M., December 2017, “[Mixed versus integrated multi-factor portfolios](#)”, Robeco article.

¹⁵ Asness, C. S., Frazzini, A., Israel, R., and Moskowitz, T., October 2015, “Fact, fiction, and value investing”, *Journal of Portfolio Management*.

¹⁶ Blitz, D., Hanauer, M. X., January 2021, “[Resurrecting the Value Premium](#)”, *Journal of Portfolio Management*.

¹⁷ Baltussen, G., Hanauer, M.X., Schneider, S., and Swinkels, L., September 2021, “[What valuations and interest rates tell us about equity factors](#)”, Robeco article.

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Additional Information for investors with residence or seat in Thailand

The Prospectus has not been approved by the Securities and Exchange Commission which takes no responsibility for its contents. No offer to the public to purchase the Shares will be made in Thailand and the Prospectus is intended to be read by the addressee only and must not be passed to, issued to, or shown to the public generally.

Additional Information for investors with residence or seat in the United Arab Emirates

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Robeco is subject to limited regulation in the UK by the Financial Conduct Authority. Details about the extent of our regulation by the Financial Conduct Authority are available from us on request.

Additional Information for investors with residence or seat in Uruguay

The sale of the Fund qualifies as a private placement pursuant to section 2 of Uruguayan law 18,627. The Fund must not be offered or sold to the public in Uruguay, except under circumstances which do not constitute a public offering or distribution under Uruguayan laws and regulations. The Fund is not and will not be registered with the Financial Services Superintendency of the Central Bank of Uruguay. The Fund corresponds to investment funds that are not investment funds regulated by Uruguayan law 16,774 dated September 27, 1996, as amended.