Long-Term Stakeholder Value (LTSV)

Identifying Companies that Create Long-Term Value for all Stakeholders

The investment landscape is undergoing a profound transformation as stakeholders – ranging from customers and employees to regulators and communities – demand greater accountability from corporations for sustainable value creation. Similarly, many investors are moving beyond traditional investment models focused solely on share price maximisation, recognising the interconnectedness of financial performance with social and environmental stewardship.

Long-Term Stakeholder Value (LTSV) is an approach to systematic investing. It translates stakeholder theory into a quantitative framework, leveraging alternative data and advanced analytical techniques to identify companies that create durable value for all stakeholders. In doing so, LTSV seeks to capture persistent sources of returns that may be overlooked by traditional factor models. Importantly, LTSV is designed to complement Sustainable Investing (SI) frameworks, which focus on risk management and broad sustainability objectives – by providing a targeted, performance-driven enhancement to systematic investment strategies.

Executive Summary

This paper introduces LTSV as an integral component of a systematic investment strategy designed to generate excess returns by investing in companies that create enduring value for all stakeholders, including shareholders. LTSV focuses on theme-specific, measurable signals that reflect stakeholder alignment and resilience. Key highlights include:

- Theoretical Foundation: LTSV is grounded in stakeholder theory, which emphasises that long-term corporate success depends on balancing the interests of all stakeholders – not just shareholders.
- LTSV as a complement of SI: Sustainable Investing encompasses a range of approaches – including exclusionary screens, best-in-class[1] selection, ESG integration, and thematic investing – of which ESG ratings are just one tool. ESG ratings provide a standardised assessment of companies' environmental, social, and governance practices, but SI strategies may also include other methods to manage risk and pursue sustainability objectives. While SI and stakeholder theory share common roots, SI frameworks typically cover a broad spectrum of topics to help manage risk but have shown limited predictive power for excess returns. LTSV does not seek to replace SI approaches; instead, it leverages targeted themes to directly pursue alpha, offering a more focused and performance-driven approach that can be layered alongside SI frameworks.

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- Sources of Returns: LTSV signals draw on risk premia and behavioural inefficiencies, exploiting under-attention to stakeholder-related factors.
- Practical Implementation: We present four investible LTSV signals – Green Innovation, Corporate Culture, Circular Economy & Green Revenue Leaders, and Resource Efficiency – demonstrating how alternative data and advanced modelling can uncover alpha. LTSV offers investors a robust, forward-looking framework that aligns financial performance with stakeholder value creation, without compromising on rigour or investability.

What is LTSV?

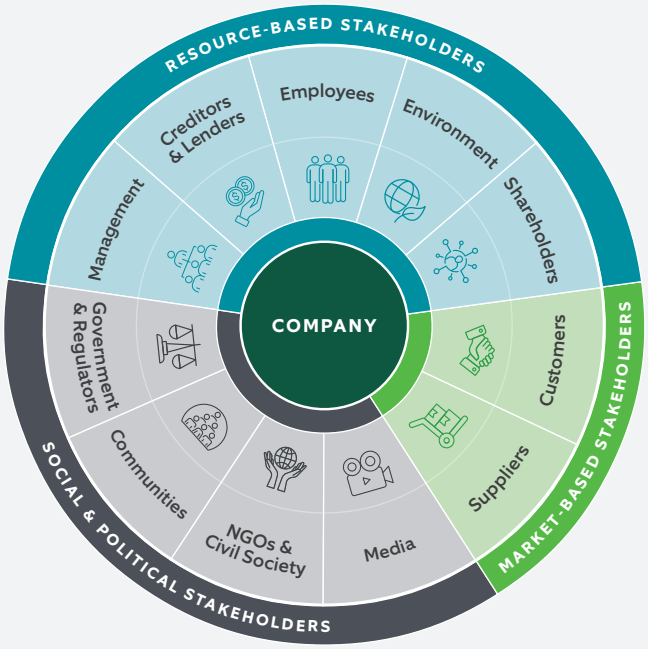
LTSV is an integral component of a systematic investment approach built on a combination of quantitative signals designed to capture excess returns by investing in companies that maximise value for all stakeholders over the long term. At its core lies the conviction that outperformance over the long term is impacted by a company's culture and how it manages its stakeholder relationships.

LTSV is an implementation of stakeholder theory within a quantitative framework, modelling stakeholder alignment as an economically material attribute – one that influences risk, resilience, and long-term value creation.

When stakeholders perceive harm (i.e., actions/strategies that stakeholders reasonably judge as injuring their interests or violating ethical expectations), companies often face negative reciprocity in the form of reputational damage, legal action, or regulatory scrutiny.[2] Conversely, companies that proactively balance stakeholder interests and avoid harmful strategies may avoid such backlash. They are better positioned to avoid disruptions such as labour disputes, consumer boycotts, environmental incidents, and regulatory sanctions – events that can impair cash flows and depress valuations. Companies that consistently consider stakeholder interests are more likely to avoid negative externalities and may deliver superior long-term results because of the alignment between "positive" actions and cashflow generation.

Empirical evidence supports this view: past controversies are predictive of future controversies,[3] while our LTSV identifies market opportunities aligned with a stakeholder inclusive management philosophy.[4]

EXHIBIT 1:
Stakeholder Framework



Who are the Stakeholders?

Stakeholder theory and corporate social responsibility (CSR) frameworks recognise a broad set of stakeholders whose interest influence corporate strategy and long-term value creation. These include core groups – employees, customers, suppliers, shareholders, communities, and the environment – as well as additional stakeholders such as governments and regulators, civil society, and financial counterparties. For clarity, these stakeholders can be grouped into three broad categories[5]: Social and political, resource-based and market-based. See Exhibit 1 for a visual summary of categories within each one of these categories.

Source: *Stakeholders, stakeholder theory and Corporate Social Responsibility* (CSR), Awa, H., Etim, W., Ogbonda, E., 2024, International Journal of Corporate Social Responsibility

1. Market-based stakeholders

- **Customers** are critical for corporate sustainability and brand loyalty. CSR initiatives often target customer satisfaction and ethical marketing practices. Key considerations include fair trading, product quality, and service standards.
- **Suppliers** are integral to sustainable supply chains and operational efficiency. They are frequently included in ESG assessments. Relevant factors include procurement terms, pricing, and the stability of supply relationships.

2. Resource-based stakeholders

- **Shareholders:** Traditionally the primary focus of corporate governance, shareholders remain essential but are now considered alongside other stakeholders in modern models. Important to them are profit maximization and long-term value appreciation.
- **Employees** are central to value creation and organizational performance. Key dimensions include job safety, security, satisfaction and working conditions.
- **Management** drives corporate performance, governance, policy, culture, and strategic execution.
- **Environmental** stewardship is a cornerstone of CSR and ESG frameworks. Companies are increasingly held accountable for their ecological footprint and resource use.
- **Creditors and Lenders:** These financial stakeholders influence capital structure and liquidity. Their concerns include solvency, repayment capacity, and overall financial health.

3. Social & political stakeholders

- **Communities:** Host communities are vital for maintaining a social license to operate. Companies are expected to contribute to societal welfare and mitigate environmental and social impacts.
- **Governments and Regulators:** These entities establish legal frameworks and enforce compliance. Their priorities include societal security, sovereignty, adherence to the rule of law, and tax compliance.
- **NGOs and Civil Society:** Acting as partners in sustainability initiatives, NGOs influence public perception and policy development.
- **Media** plays a pivotal role in shaping stakeholder narratives and corporate reputation.

What is Stakeholder Theory

The theoretical foundation of LTSV is stakeholder theory. This framework is not a radical departure from classical economics; rather it extends Adam Smith's broader vision of capitalism as a moral system. Modern stakeholder debates echo Smith's insight: long-term prosperity depends on trust, fairness, and cooperation.[6]

Stakeholder theory views corporations as operating within a network of stakeholders – not only shareholders, but also employees, customers, suppliers, communities, and other who can affect or are affected by the company's objectives.

Normative foundation

Stakeholder theory asserts that companies have an ethical obligation to consider stakeholder interests, not merely to profit but as an intrinsic responsibility. This principle underpins CSR and sustainability frameworks,[7] shifting the focus from shareholder primacy to a broader sense of corporate purpose. There are varying degrees to which companies respect, enhance, or structurally empower stakeholder interests. These range from instrumental approaches to more structural forms of stakeholder capitalism,[8] each with implications for governance and long-term value creation.[9]

Instrumental perspective

Managing for stakeholders is strategically advantageous.[10] Effective stakeholder management fosters competitive advantage, resilience, and legitimacy, leading to superior long-term performance.[11] Stakeholder theory emphasises that value creation is joint and cooperative:[12] companies create value by balancing stakeholder interests rather than prioritizing shareholders exclusively. This perspective has influenced global corporate purpose statements, such as the Business Roundtable's 2019 declaration.[13]

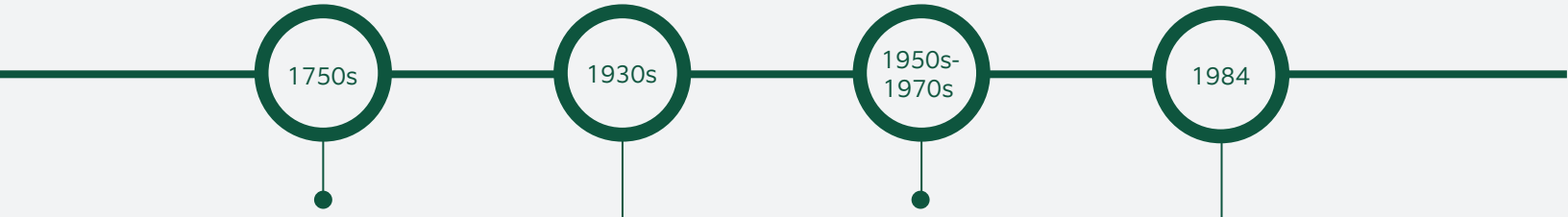
The theory proposes a multi-dimensional view of value beyond financial returns, incorporating fairness, trust, and stakeholder well-being. Academic research indicates that companies that optimise stakeholder value tend to achieve superior long-term performance.[14] All stakeholders benefit as the "pie" grows. A clear sense of purpose fosters innovation, strengthens employee engagement, and builds trust - factors that enhance productivity and long-term resilience.[15] Material sustainability factors can provide insights into risks that may affect a company's future financial viability and clients' long-term risk-adjusted investment returns. When managed well, they can position a company for success and when mismanaged, they can result in significant risks.

Descriptive Accuracy

Stakeholder theory also provides a more realistic description of how companies operate compared to shareholder-only models. It integrates with strategic management theories such as the Resource-Based View and behavioural strategy, offering a robust lens for measuring and managing stakeholder value. The 2019 debate between advocates of stakeholder purpose and proponents of Milton Friedman's 'shareholder supremacy' underscores its relevance in modern governance discourse.[16] It is noteworthy that while Milton Friedman advocated for companies to maximise enterprise value, he emphasised that this should be done "while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical custom."[17]

In summary: Stakeholder theory combines normative principles, instrumental benefits, and descriptive accuracy, making it a powerful foundation for LTSV. By embedding stakeholder considerations into corporate strategy, firms can enhance resilience, legitimacy, and long-term financial performance.

History of Stakeholder Theory



1750s

The origins of stakeholder theory can be traced back to Adam Smith's *The Theory of Moral Sentiments* (1759), which argued that markets require moral norms to function effectively. Smith introduced concepts such as mutual dependence, moral obligations, and the social nature of economic life – ideas that underpin modern stakeholder thinking.

1930s

The notion of balancing competing interests emerged in the 1930s legal debates on corporate governance and managerial responsibility, notably in *Berle & Means* (1932). These discussions questioned whether corporations should serve only shareholders or a broader set of constituencies.

1950s-1970s

During the 1950s–1970s, management scholars, including Igor Ansoff (1965), emphasised the importance of external constituencies for strategic planning, further expanding the concept of corporate responsibility beyond shareholders.

The term stakeholder first appeared in a 1963 internal memo at the Stanford Research Institute, defining stakeholders as "those groups without whose support the organization would cease to exist."

1984

The modern articulation of stakeholder theory came in 1984, when R. Edward Freeman published his seminal book *Strategic Management: A Stakeholder Approach, formalizing stakeholder theory.*

Freeman formalised the theory's core principle: Companies should manage relationships with all stakeholders – not just shareholders – to achieve long-term success.

If SI Factors are Based on Stakeholder Theory, Then Why LTSV Too?

The relationship between material SI frameworks, such as the International Sustainability Standards Board standard IFRS S1[18] and stakeholder theory is both conceptually rich and practically significant. While they share foundational principles, they differ in scope, application, and theoretical emphasis.

Both frameworks acknowledge that environmental, social and governance factors can be material. IFRS S1 recognises stakeholder concerns such as employee health and safety, human rights, community relations, and customer welfare. Increasingly, stakeholder theory and materiality frameworks like IFRS S1 guide corporate strategy, particularly in sustainability and enterprise risk management contexts.

Connections Between SI Frameworks and Stakeholder Theory

- **Shared theoretical foundations**

  SI frameworks and stakeholder theory both recognise the materiality of a broad set of stakeholders. SI frameworks often draw directly from stakeholder theory to justify the inclusion of environmental and social metrics in corporate performance evaluation. ESG ratings, as one type of SI tool, are frequently grounded in stakeholder, legitimacy, and agency theories, as highlighted in systematic reviews.[19] However, SI strategies may also include exclusionary screens, best-in-class selection, and thematic investing, which go beyond what ESG ratings alone can provide.

- **Mutual Reinforcement**

  Stakeholder theory provides the normative justification for SI: if sustainable investing frameworks acknowledge the materiality of stakeholder issues, standards like IFRS S1 establish a global baseline for companies to report on these issues.

Differences Between Sustainable Investing and Stakeholder Theory

- **Scope and Purpose**

  Sustainable Investing can be defined as investment strategies and accounts that utilise values-based and norms-based exclusionary screens, best-in-class selection, ESG integration, and/or thematic[20] investing focused on specific sustainability issues such as climate risk. SI is broad in scope, considering a wide range of environmental, social and governance indicators.

  Material SI analytics can be integrated into portfolio construction as these factors provide insights into risks that may affect a company's future financial viability and clients' long-term risk-adjusted investment returns.

  By contrast, stakeholder theory[21] concentrates on the relationships between a company and its stakeholders. It can be normative, descriptive, and instrumental, and is applied in strategic management, corporate ethics, and governance models. These insights can be valuable on a standalone basis or as a complement to other aspects of SI.

Applying LTSV

LTSV harnesses alternative data and advanced analytical techniques to evaluate stakeholder alignment and uncover long-term sources of returns. The approach prioritises companies with intellectual property in emerging technologies and those with a motivated and skilled workforce, as these attributes often underpin resilience and sustainable value creation.[22]

In the following sections, we examine four theme-specific LTSV signals in-depth:

1. Green Innovation,
2. Corporate Culture,
3. Resource Efficiency and
4. Circular Economy & Green Revenue Leaders.

Each signal has demonstrated predictive power for excess returns in backtests, see Exhibit 2 for a summary of data sources, start dates, coverage, performance, and ESG rating correlations. While historical depth and coverage vary by signal – and are often narrower than traditional factors - the available data provides a robust foundation for systematic implementation. Importantly, all signals have shown low sensitivity to prevailing ESG market regimes in historical analysis, reinforcing their role as differentiated, alpha-oriented insights. The individual LTSV themes as well as the (equally weighted) combined LTSV score show unique and uncorrelated performance as evidenced by IRs cleaned for well-known risk factors.

EXHIBIT 2:
LTSV Signal Theme Summary

Theme		Green Innovation	Resource Efficiency	Corporate Culture	Circular & Green Leaders	Combined LTSV Score
Data Source		Patents	Company Disclosure	Employee Reviews	Company Disclosure	
Number of Signals		5	5	5	4	19
Start Date (Subject to Availability)		1995	2006	2011	2017	1995
Coverage (%)		78	97	91	42	99
Long-short IR	Full Sample	0.52	0.77	0.63	0.25	0.72
	Since 2017	0.32	0.46	0.58	0.25	0.82
Residual long-short IR	Full Sample	0.41	0.85	0.62	0.52	0.60
	Since 2017	0.49	0.65	0.66	0.52	1.02
MSCI ESG Correlation	Return (%)	6	8	7	-16	-1
	Score (%)	4	4	2	11	4

Source: NTAM Quantitative Strategies. Sample period is Jan 1995 - Dec 2025 unless otherwise stated, and is subject to data availability. Universe coverage is expressed as the percentage of market cap in the MSCI World Investible Market Index with a score in Dec 2025. Long-short IRs are determined as the risk-adjusted return of a portfolio of long-short positions sized proportional to the (z-scored) signal multiplied by the square root of market cap and rescaled to be 100% long and 100% short. No trading costs or shorting fees are considered. Long-short GEMLT residual IR is calculated analogously, except returns are corrected for all elements in the Barra GEMLT risk model. The MSCI ESG return correlation is the time-series average correlation of long-short portfolio returns. The MSCI ESG signal correlation is the time-series average of cross-sectional correlations between the MSIC ESG and respective LTSV themes. The back-tested data contained herein does not represent the results of an actual investment portfolio but reflects hypothetical historical performance. **Past Performance is not indicative of future results. For Illustrative Purposes Only.** Please see important information on Hypothetical Returns at the end of this paper.

Theme 1: Green Innovation

Green Innovation leverages a global patents dataset to identify companies that own intellectual property in emerging technologies designed to address global sustainability challenges. It reflects a company's capacity to innovate in environmentally beneficial technologies - a capability increasingly critical for long-term competitiveness. These innovations often lead to cost efficiencies through more resource-efficient products and services.

A strong green innovation profile can also enhance a company's ability to attract and retain top talent, boost employee motivation, and improve overall productivity.

Furthermore, companies with credible green innovation strategies frequently enjoy better access to resources and growth opportunities, supported by favourable public and regulatory policies. Consumer preferences often favour sustainable products, reinforcing the commercial value of green innovation. Importantly, has also been shown to predict future improvements in profitability.[23]

Despite these advantages, markets often underappreciate the value of green innovation, creating opportunities for alpha generation. Companies that lead in this area have historically delivered superior portfolio outcomes over the longer term.

Measuring Green Innovation

Patents serve as a key proxy for innovation. For LTSV, patents are classified into nine categories:

1. Environmental management
2. Water-related adaptation
3. Biodiversity protection
4. Energy generation
5. Greenhouse gas capture
6. Transport
7. Buildings
8. Waste management
9. Sustainable production

Sector insights:

- Industrials, Information Technology, and Consumer Discretionary account for the largest number of green patents.
- Utilities, Industrials, Materials, and Consumer Discretionary sectors hold a higher-than-average share of green patents.
- While most listed companies have no green patents, approximately 1,000 companies own more than 10. Many patents are concentrated in transport and energy technologies.

Signal Construction and Performance

Metrics such as granted patent counts, share of patents in green categories, and patent citation frequency are combined to construct investible signals. Undesired biases to regions, industries, market beta, and size are removed. Backtesting demonstrates strong performance across developed and emerging markets, driven primarily by stock selection effects and with minimal exposure to traditional factors. The signal shows a long-short risk-adjusted excess return (IR) of 0.52 over the period Jan 1995 – Dec 2025 in a universe of MSCI World Investible Market Index stocks.[24] When correcting for all dimensions of risk in the Barra GEMLT model, the long-short IR of the signal is 0.41 over the same period.

Theme 2: Corporate Culture

Corporate culture is a critical intangible asset and a foundational element of sustainable future cash flow. It can also be a driver of innovation. Unlike formal contracts or legal standards, culture embodies the shared norms and values that shape behaviour across an organization. Despite its significance, culture remains absent from financial statements and is frequently overlooked in conventional financial analysis due to the challenges of defining and quantifying it.

Nevertheless, culture plays a pivotal role. Employees routinely encounter situations that cannot be fully governed by predefined rules. A strong and cohesive culture fosters organizational alignment, ensures consistent decision-making, and minimises the risk of teams operating at cross-purposes.

Measuring Corporate Culture

Using natural language processing (NLP) techniques, companies can be scored across multiple cultural dimensions derived from employee-generated content, such as online employer reviews.

These dimensions include:

- Innovation ←→ stagnation
- Teamwork ←→ individualistic
- Results-orientation ←→ process-orientation
- Integrity ←→ dishonesty
- Customer-orientation ←→ product-centric

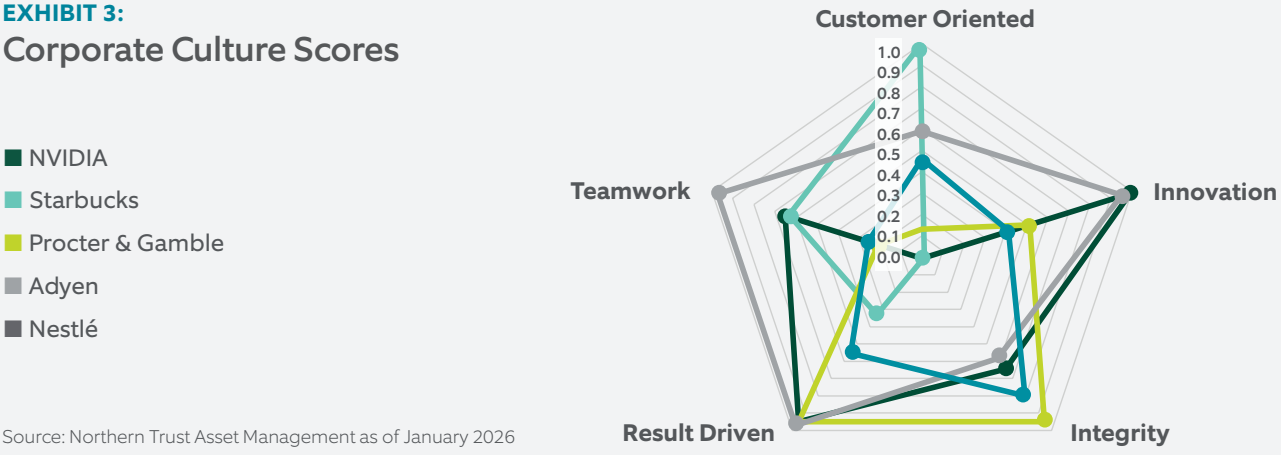
Signal Construction and Performance

The signal is built by calculating the probability of positive or negative sentiment towards each of the cultural dimensions after which scores are aggregated across reviews. Undesired biases to regions, industries, market beta, and size are removed. Exhibit 3 gives examples of these calculated scores for five companies.

Empirical analysis shows that innovation and results-orientation are the strongest alpha drivers. A composite score is constructed from all dimensions to maximise predictive power while maintaining robustness. The signal shows a long-short risk-adjusted excess return (IR) of 0.63 over the period Feb 2011 - Dec 2025 in a universe of MSCI World Investible Market Index stocks.[25] When correcting for all dimensions of risk in the Barra GEMLT model, the long-short IR of the signal is 0.62 over the same period.

EXHIBIT 3:

Corporate Culture Scores



Source: Northern Trust Asset Management as of January 2026

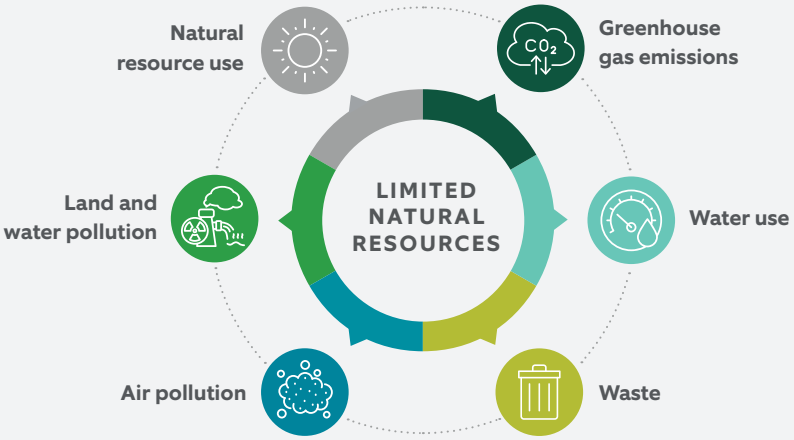
Theme 3. Resource Efficiency

Resource efficiency refers to maximising economic output while minimising the consumption of natural resources. It focuses on reducing dependency on finite resources and limiting environmental impact. Efficient resource utilisation benefits both society and the economy by lowering ecological footprints and supporting long-term sustainability. See Exhibit 4 for an overview of natural resource dimensions.

Companies that manage water, energy, and raw materials effectively tend to achieve superior operational performance. These companies are less vulnerable to supply chain disruptions, better equipped to manage commodity price volatility, and more prepared for evolving regulatory requirements. This operational resilience translates into higher profitability and stronger valuations over time.

EXHIBIT 4:

Resource Efficiency has Multiple Dimensions



Source: Northern Trust Asset Management as of January 2026

Signal Construction and Performance

The resource efficiency signal is built using environmental impact metrics – such as direct greenhouse gas emissions, water and raw material usage, waste generation, and pollution to air and water. These metrics are scaled by revenue and undesired biases to regions, industries, market beta, and size are removed before being combined into a composite score. In a backtest the signal delivered a long-short risk-adjusted excess return (IR) of 0.77 over the period Oct 2006-Dec 2025 within the MSCI World Investible Market Index universe.[26] When correcting for all dimensions of risk in the Barra GEMLT model, the long-short IR of the signal is 0.85 over the same period.

Theme 4. Circular Economy & Green Revenue Leaders

The Circular Economy & Green Revenue signal identifies companies that lead in adopting circular and green economy business models. These firms are less exposed to the risks inherent in the traditional linear economy – the "take-make-use-dispose" model – and are positioned to benefit from structural shifts toward a low-carbon economy. By driving the transition to a greener economic model, these companies are expected to attract higher investor demand amid growing environmental concerns. Circular Economy & Green Revenue leaders enjoy competitive advantages when facing resource constraints, supply chain disruptions, and evolving regulatory landscapes.

In addition, shifting consumer preferences favour companies that embrace circularity. Such companies often operate more efficiently and may pass these efficiencies on to customers. Certain customers also prefer sustainable products for reasons including personal values, product quality, and transparency. Regulatory trends further reinforce this transition, creating strong incentives for companies to adopt circular practices.

From Linear to Circular

We can distinguish three economic models:

1. **Linear Economy** – Resources are extracted, used, and discarded.
2. **Recycling Economy** – Incorporates feedback loops but still relies on raw material inputs and generates waste.
3. **Circular Economy** – Closes the loop by designing out waste and maximizing resource reuse.

The difference between a recycling economy and a fully circular economy lies in the degree of resource recirculation. While recycling and energy recovery reduce waste, they represent the lowest levels of circularity.

The 10-R Model of Circularity

Circularity can be measured along a spectrum defined by the 10-R model,[27] which ranges from the highest level of resource avoidance to the lowest level of recovery, see Exhibit 5.

EXHIBIT 5:
The 10-R Model of Circularity

Level	Name	Description	Example
0	Refuse	Make a product redundant by abandoning its function or by offering the same function with a radically different product.	Spotify's streaming service makes physical music media redundant by offering the same function on a radically different digital platform.
1	Rethink	Avoid resource use altogether.	Loop (TerraCycle) partners with brands to eliminate single-use packaging through reusable containers.
2	Reduce	Use fewer resources per product or process.	Unilever reformulates products to reduce water use (e.g., concentrated detergents).
3	Reuse	Extend product life by reusing items in good condition.	Patagonia's *Worn Wear* program resells used clothing.
4	Repair	Maintain and repair products to extend lifespan.	Decathlon offers in-store repair services for sports equipment.
5	Refurbish	Restore old products with updated features.	Fairphone's modular smartphones allow component upgrades.
6	Remanufacture	Use parts from discarded products to make new ones.	Xerox remanufactures printers and copiers to like-new condition.
7	Repurpose	Reuse components for different functions.	Freitag makes backpacks from discarded truck tarpaulins.
8	Recycle	Recover materials for new production.	Nespresso recycles aluminium capsules into new products.
9	Recover	Convert waste into energy when higher options are not feasible.	Veolia's waste-to-energy plants.

Signal Construction and Performance

Revenue data is mapped to over one hundred green activities and tiered according to the 10-R hierarchy. A weighted circularity and green revenue score is then calculated for each company, with higher weights assigned to market leaders in the green activities and to higher-order circularity strategies (e.g., Rethink, Reduce, Reuse). This approach ensures that firms leading in the green economy transition and in true circularity – not just recycling – are rewarded in the signal.

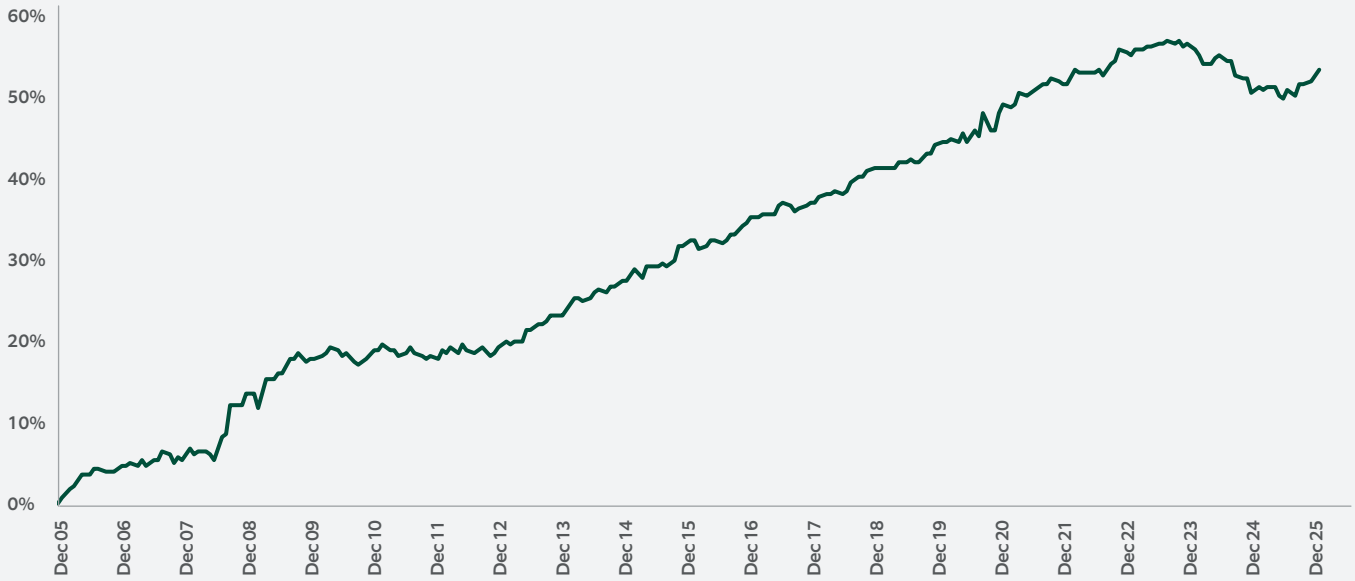
Undesired biases to regions, industries, market beta, and size are removed. In a backtest the signal shows a long-short risk-adjusted excess return (IR) of 0.25 over the period Aug 2017-Dec 2025 in a universe of MSCI World Investible Market Index stocks.[28] When correcting for all dimensions of risk in the Barra GEMLT model, the long-short IR of the signal is 0.52 over the same period.

Combined LTSV Score

In a backtest of MSCI World Investible Market Index stocks,[28] the combined LTSV score shows a long-short risk-adjusted excess return (IR) of 0.72 over the period Jan 1995 - Dec 2025, which increases to 0.82 over the period since July 2017 when all four themes are available. When correcting for all dimensions of risk in the Barra GEMLT model, the long-short IR of the combined LTSV score is 0.60 over the period January 1995-December 2025, which increases to 1.02 over the period since July 2017 when all four themes are available.

Exhibit 6 shows the cumulative returns of the combined LTSV signal over the last 20 years (the period where at least two LTSV themes were available).

EXHIBIT 6:
Cumulative Return of LTSV



Source: NTAM Quantitative Strategies. Long-short positions are sized proportional to the (z-scored) signal multiplied by the square root of market cap and rescaled to be 100% long and 100% short. No trading costs or shorting fees are considered.

Conclusion

Capital markets change fast. As stakeholder considerations become integral to corporate strategy, investors seeking alpha and sustainability-related opportunities need approaches that go beyond traditional factors and augment risk focused ESG metrics.

LTSV delivers exactly that: research-driven, actionable signals that turn stakeholder theory into measurable selection advantages and long-term value creation.

By selecting companies that innovate sustainably, build strong cultures, and embrace circular business models, LTSV aligns with societal and regulatory trends while pursuing superior risk-adjusted returns. For institutional investors, LTSV is a coherent, systematic framework that fuses stakeholder alignment with returns generation – positioning portfolios for resilience and durable growth in a stakeholder-driven economy.

Key benefits to investors:

- LTSV complements SI frameworks – enhances sustainability mandates without replacing them.
- LTSV leverages theme-specific, measurable signals – grounded in alternative data and advanced analytics (e.g., Green Innovation, Corporate Culture, Resource Efficiency, Circular Economy and Green Revenue).
- LTSV can deliver robust, uncorrelated returns – orthogonal to traditional style factors, adding diversification and resilience across market cycles.
- LTSV supports SI-optimised solutions – balances return, risk, and sustainability profiles; tailored to client objectives and constraints.

At NTAM, we will continue to advance research in this area and expand LTSV as a core sleeve within our systematic platform. As the investment landscape evolves, LTSV will remain a cornerstone of our approach, supporting clients in achieving both financial and stakeholder-aligned outcomes.

END NOTES

1. Best-in-class ESG is industry terminology referring to an investment approach that selects companies that are leaders in implementing ESG.
2. *Harmful Stakeholder Strategies*, Harrison, J., Wicks, A., 2021, *Journal of Business Ethics.*
3. *Repeat Offenders: ESG Incident Recidivism and Investor Underreaction,* Glossner, S., 2021, Working Paper.
4. *Stakeholder Theory and Managerial Decision-Making: Constraints and Implications of Balancing Stakeholder Interests,* Reynolds, S., Schultz, F., Hekman, D., 2006, *Journal of Business Ethics.*
5. *Stakeholders, stakeholder theory and Corporate Social Responsibility (CSR),* Awa, H., Etim, W., Ogbonda, E., 2024, *International Journal of Corporate Social Responsibility.*
6. *CSR and Stakeholder Theory: A Tale of Adam Smith,* Brow, J., Forster, W., 2012, *Journal of Business Ethics*
7. *A New Approach to CSR: Company Stakeholder Responsibility,* Freeman, R., Velamuri, S., 2006*, Corporate Social Responsibility.*
8. *What does "Stakeholder Capitalism" mean to you?,* Paine, L., 2023, *Harvard Business Review.*
9. *Corporate Leaders Say They Are For Stakeholder Capitalism – But Which Version Exactly? A Critical Look at Four Varieties,* Paine, L., *Harvard Business School Working Paper.*
10. *Stakeholder theory, strategy, and organization: Past, present, and future,* Bridoux, F., Stoelhorst, J., 2022, *Strategic Organization.*
11. As demonstrated in the four case studies in this paper.
12. *Stakeholder Theory, Value, and Firm Performance,* J., Wicks, A., 2013, *Business Ethics Quarterly.*
13. https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans.
14. *Maximizing Stakeholders' Interests: An Empirical Analysis of the Stakeholder Approach to Corporate Governance,* Ayuso, S., Rodriguez, M., Garcia-Castro, R., Ariño, M., 2012, *Business & Society.*
15. *Grow the pie: How great companies deliver both purpose and profit,* Edmans, A., 2021, *Cambridge University Press.*
16. https://www.cii.org/aug19_brt_response
17. *The Social Responsibility of Business is to Increase its Profits,* Friedman, M., 1970, *The New York Times Magazine* 13th September.
18. https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s1-general-requirements/
19. *Environmental, social, and governance (ESG) factors and firm value: A systematic literature review of theories and empirical evidence,* Bani-Khaled, S., Azevedo, G., Oliveira, J., 2025, *AMS Review.*
20. Definitions: 1 Exclusionary - the exclusion of securities through negative screening or norms-based screening. 2 Best-in-class - industry terminology referring to an investment approach that selects constituents for positive ESG performance relative to industry peers from within the investible universe. 3 Integration - incorporating ESG considerations across business activities and investments. 4 Thematic - an investment approach that has a thematic approach or tilt in the portfolio construction.
21. *Applying stakeholder theory in sustainability management. Links, similarities, dissimilarities, and conceptual framework,* Hörisch, J., Freeman, R., Schaltegger, S., 2014, *Organization & Environment.*
22. *Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices,* Edmans, A., 2011, *Journal of Financial Economics.*
23. *Green innovation as a sustainable alpha driver,* de Lange, G., Smit, M., Sugandi, H., Sun, Y., 2023, *CFA Society Netherlands VBA Journaal.*
24. Source: NTAM; long-short positions are sized proportional to the (z-scored) signal multiplied by the square root of market cap and rescaled to be 100% long and 100% short. No trading costs or shorting fees are considered. Results available upon request to qualified prospects.
25. Source: NTAM; long-short positions are sized proportional to the (z-scored) signal multiplied by the square root of market cap and rescaled to be 100% long and 100% short. No trading costs or shorting fees are considered.
26. Source: NTAM; long-short positions are sized proportional to the (z-scored) signal times the square root of market cap and rescaled to be 100% long and 100% short. No trading costs or shorting fees are considered.
27. *Circular Economy: Measuring innovation in product chains,* Potting, J., Hekkert, M., Worrell, E., Hanemaaijer, A., 2017, PBL Netherlands Environmental Assessment Agency.
28. Source: NTAM; long-short positions are sized proportional to the (z-scored) signal multiplied by the square root of market cap and rescaled to be 100% long and 100% short. No trading costs or shorting fees are considered.