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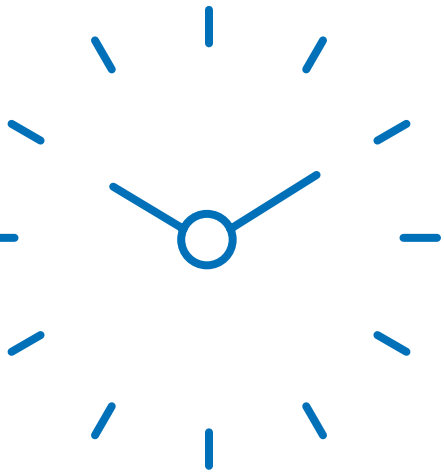
FOCUSING CAPITAL ON THE LONG TERM

REPORT

Worth the Wait

R&D-INTENSIVE PUBLIC COMPANIES OUTPERFORM OVER THE LONG TERM



Mobilizing companies and investors to focus capital on the long term to create lasting value

Millions of people around the world are saving money to meet personal goals—funding a comfortable retirement, saving for someone's education, or buying a home, to name a few.

The funds to support these goals are safeguarded by institutional investors—pension funds, sovereign wealth funds, insurers, and asset managers—who invest in companies for the prospect of growth and security. These savers, their communities, and the institutions that support them make up the global investment value chain, and each benefit from long-term decisions in different ways.

Data shows that long-term-oriented investors deliver superior performance, and long-term-oriented companies outperform in terms of revenue, earnings, and job creation. But despite overwhelming evidence of the superiority of long-term investments, short-term pressures are hard to avoid. A majority of corporate executives agree that longer time horizons for business decisions would improve performance, and yet half say they would delay value-creating projects if it would mean missing quarterly earnings targets.

Today, the balance remains skewed toward short-term financial targets at the expense of long-term value creation.

FCLTGlobal mobilizes companies and investors to focus capital on the long term to create lasting value. We are a non-profit organization bringing together leading global companies and institutional investors. We pursue our mission by developing research-backed strategies that enhance long-term value creation for savers and communities.

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FOUR COMMON MYTHS ABOUT INNOVATION IN PUBLIC MARKETS



Myth 1: Public markets don't produce breakthrough innovation

Fact: Large public companies have had significant breakthrough innovation (e.g. AlphaFold and Waymo at Google, the Moderna vaccine). Dollar-amount-wise, public companies make up 64% of R&D spend in the U.S., compared to 15% at private companies and 19% at the government level.



Myth 2: Public markets do not reward innovation

Fact: All else equal, companies with the highest R&D intensity outperform those with the lowest by 5% annually on average over a 15-year period. However, it's worth noting that this separation is only visible from year 8 onwards.



Myth 3: Spending too much money on R&D harms company survival in the long run

Fact: All else equal, MSCI ACWI companies with the highest R&D intensity have a survival rate that is 13 percentage points higher than those with the lowest.



Myth 4: Private markets innovate faster

Fact: The median age of average IPOs in the U.S. (a proxy for average time-to-market) over the last 25 years is 11 years, whereas public market innovation can often be faster.

EXECUTIVE SUMMARY

The most R&D intensive companies are more likely to survive and deliver long-term outperformance, but these benefits take time to materialize. Notably, the performance gap only becomes visible after 8 years.

This creates a fundamental challenge. Public companies operate in an environment shaped by quarterly reporting, earnings sensitivity, and activist scrutiny, all of which reinforce short-term decision-making. As a result, companies often face pressure to reduce or smooth innovation investment precisely when long-horizon commitment is most needed.

This tension has led to a belief that public markets discourage innovation. Our analysis suggests a more nuanced conclusion: innovation is not stifled in public markets; it is slow to materialize, unevenly measured, and often underappreciated in the short term.

Examining MSCI ACWI companies from 2009–2024, we find the following key insights:

1. **R&D-intensive companies are more likely to survive.**
   All else equal, companies in the highest quintile of R&D intensity are 13 percentage points more likely to remain in the MSCI ACWI than those in the lowest quintile.
2. **Innovation drives long-term outperformance but requires patience.**
   High-R&D firms outperform low-R&D peers by roughly five percent annualized over a 15-year period. However, this separation becomes visible only after eight years.
3. **Public companies remain the primary spender in innovation.**
   In the US, public companies account for over 60 percent of total R&D spend, nearly double that of private companies, government, and non-profits combined.
4. **Innovation outcomes depend on how investment is governed and communicated.**
   Companies that effectively sustain long-term innovation typically combine R&D investment with clear strategy, aligned incentives, and proactive investor engagement.

Sustaining innovation in public markets, therefore, requires not only capital but also discipline. Companies must navigate short-term pressures while maintaining long-term investment commitments.

CEOs and boards play a critical role. Maintaining discipline requires clearly communicating the company's long-term innovation roadmap and ensuring its governance frameworks support sustained investment over the long term.

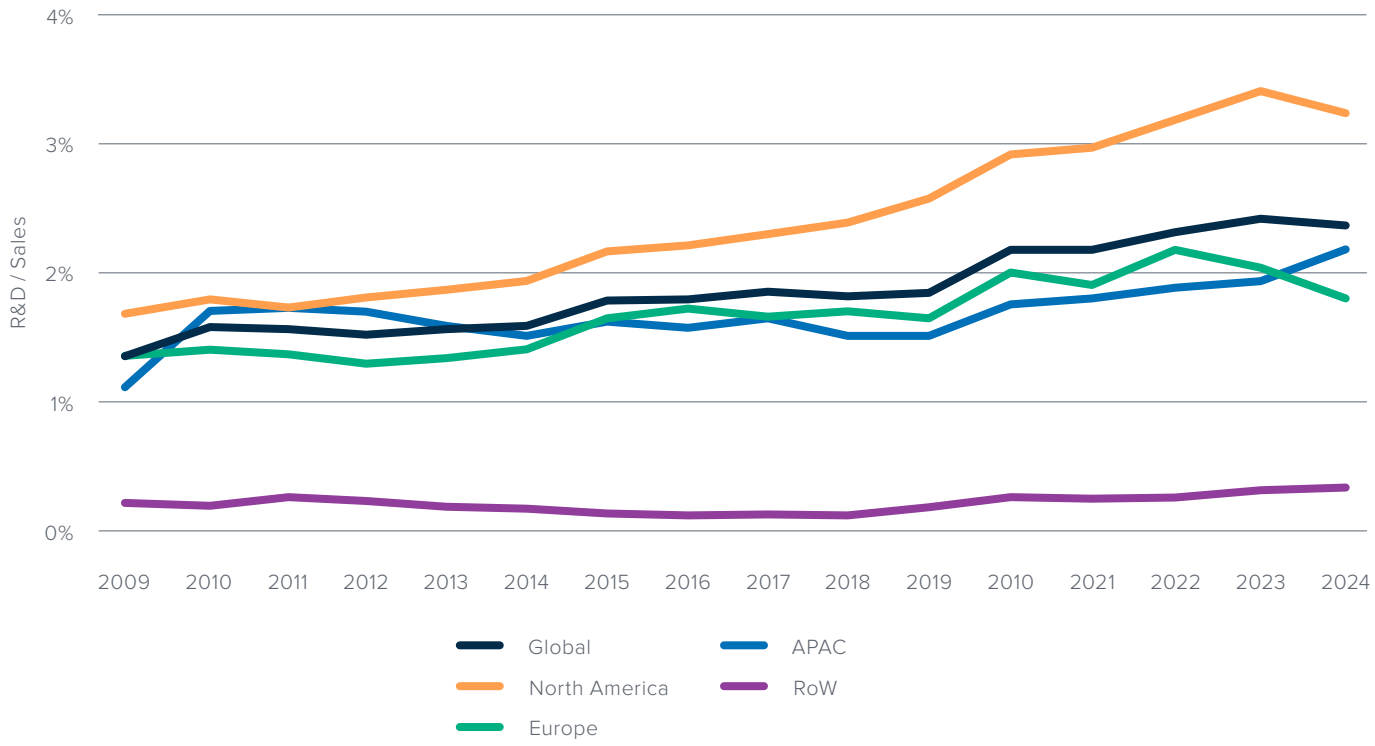
INTRODUCTION: THE INNOVATION PARADOX IN PUBLIC MARKETS

Companies are spending more than ever on innovation. However, it's unclear whether that investment is being rewarded in the public markets outside of AI hyperscalers.

Since the COVID-19 pandemic, the scale, speed, and nature of corporate innovation have shifted materially. Companies are investing more than ever in research and development (R&D), driven by structural forces like the rise of AI, the digitalization of businesses, and increasing global competition. At the same time, innovation itself has also shifted and become more complex to track. Many of today's important investments, particularly in AI, data infrastructure, and platform capabilities, require high upfront costs, have uncertain timelines, and outcomes that are difficult to measure using traditional financial metrics.

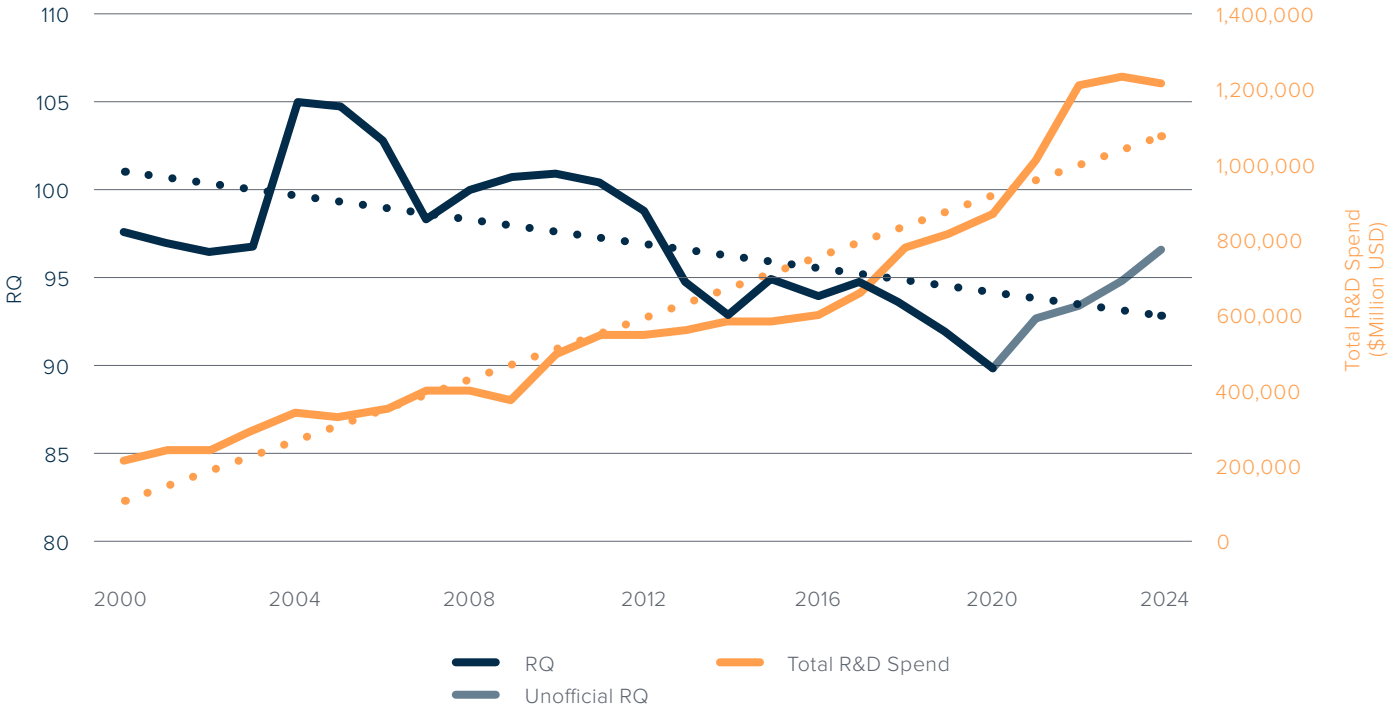
As seen previously in *Funding the Future: Investing in Long-Horizon Innovation*, trackable metrics tell a conflicting story.[1] Figure 1 shows that aggregate R&D spending among MSCI ACWI companies has increased by roughly 40 percent since 2020, buoyed by spending from tech giants in the North America and APAC regions.[2]

Figure 1: Global R&D investment continues to rise, led by technology and AI-related spending



However, despite higher levels of spending, evidence suggests that the productivity of incremental R&D has declined over time. As shown in Figure 2, the output generated per dollar of R&D investment remains below levels observed in the 2000s, even accounting for recent advancements associated with AI.[3]

Figure 2: The productivity of incremental R&D investment has declined over time



Taken together, companies are investing more in innovation than ever before, yet returns to that investment have become less predictable and harder to measure.

This creates a core challenge for both companies and investors in how to evaluate innovation, particularly in public markets. When the returns to R&D are uncertain and may take years to materialize, the burden of proof on innovation rises. This becomes increasingly problematic for innovative companies in public markets, where performance is assessed quarterly, and financial metrics emphasize near-term outcomes.[4]

Further short-term pressures, like many activists and short-term shareholders, can influence corporate strategy, leading many once-innovative companies to prioritize incremental improvements over more transformational innovation, shorten their investment horizons, or manage to quarterly expectations.[5]

The result is a familiar tension: innovation likely creates value over long and uncertain time horizons, while market signals and management incentives often remain focused on the near term. This has led to speculation as to whether public markets – particularly outside of the largest companies – stifle innovation.

DO MARKETS REWARD INNOVATION?

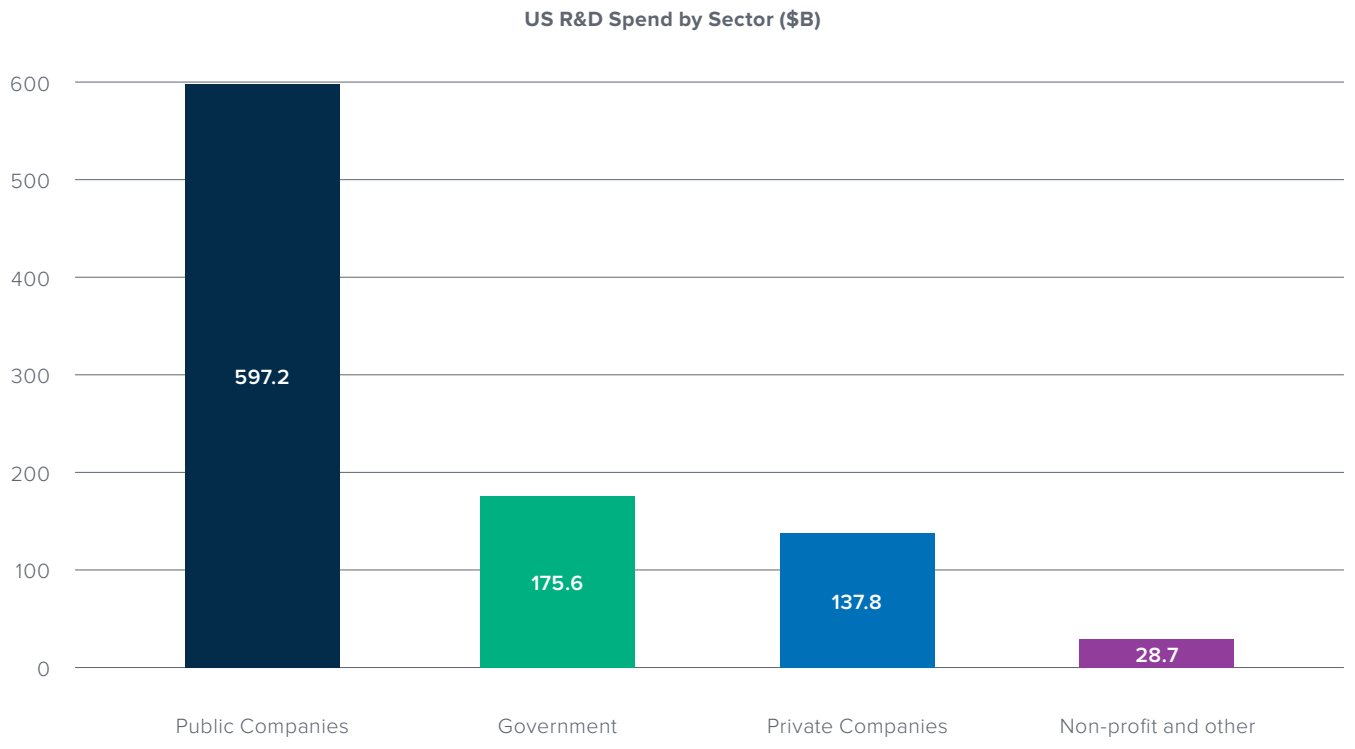
Prior evidence on this question is mixed but suggests that short-term pressures can shape innovation outcomes in consistent ways. Research links short-term orientation to the production of fewer influential inventions and finds that the quality of internally generated innovation declines following an IPO by roughly 40 percent over the subsequent five years.[6,7] Other studies document similar post-IPO slowdowns in innovation output, particularly in the consumer sectors.[8] Taken together, these findings suggest that public market pressures may constrain innovation.

At the same time, this is not simply a binary public vs. private story. Innovation outcomes vary significantly by industry, financing needs, business model, and governance structure. Firms in sectors with longer development cycles, heavier upfront investment, or greater technological uncertainty may face different innovation tradeoffs than firms in sectors where innovation is more incremental and commercialization is faster.[9]

Private markets, often viewed as more flexible environments for experimentation, are not necessarily 'better' or 'faster'. For starters, not all private capital is inherently patient or long-term. In recent years, private market dynamics, particularly in tech, have shifted toward shorter-term 'build-to-sell' strategies, rather than the more enduring 'build-to-scale' models historically associated with innovation-led growth.[10] Furthermore, the median age of IPOs for U.S. companies over the last 25 years has been steady at 11 years, suggesting that the average time to market can be lengthy – even for highly innovative private companies.[11]

Meanwhile, public companies remain the dominant engine of R&D spending. In the US, R&D spending is by far the highest among public companies, accounting for an estimated 64 percent of total spending in the US. This total exceeds that of private companies, the federal government, and non-profits combined, as seen in Figure 3.[12] Other OECD countries follow a similar pattern, with business (primarily public company) R&D spend accounting for between 50-80 percent of the total, consistently outpacing government spending.[13]

Figure 3: Public Company R&D spend dominates[14]



And for all the talk of their lower innovation efficiency, examples of successful innovation at or adjacent to large public companies are abundant. OpenAI was spun off from Microsoft, AlphaFold was developed at Google, and Moderna innovated its COVID vaccine.

Thus, if public companies account for most measurable R&D spending, and if innovation outcomes depend heavily on time horizon and context, then the central issue is not whether public markets produce innovation at all. It is whether public markets reward that innovation consistently, especially when its benefits are delayed, intangible, or difficult to capture in conventional metrics.

That challenge is particularly visible outside a narrow set of leading technology firms. A common market narrative today is that sustained R&D investment can depress near-term EPS, increase volatility, and lower reported near-term ROIC, even when it may be building long-term capability and strategic optionality. In that environment, it is easy for markets to reward visible near-term efficiency while underappreciating longer-dated innovation.

Rather than focusing on innovation outputs or post-IPO changes, we examine a sample of practical questions for CEOs and boards:

- **Do public markets actually reward sustained investment in innovation?**
- **Can companies maintain it under short-term pressure?**

KEY FINDINGS

To answer these questions, we analyzed long-term survival and performance across MSCI ACWI companies between 2009 and 2024.

Drawing upon the Fama French HML factor methodology, we split our dataset into quintiles based on R&D intensity (R&D / Sales).[15] We then compared long-term survivorship and returns across those groups. We found that:

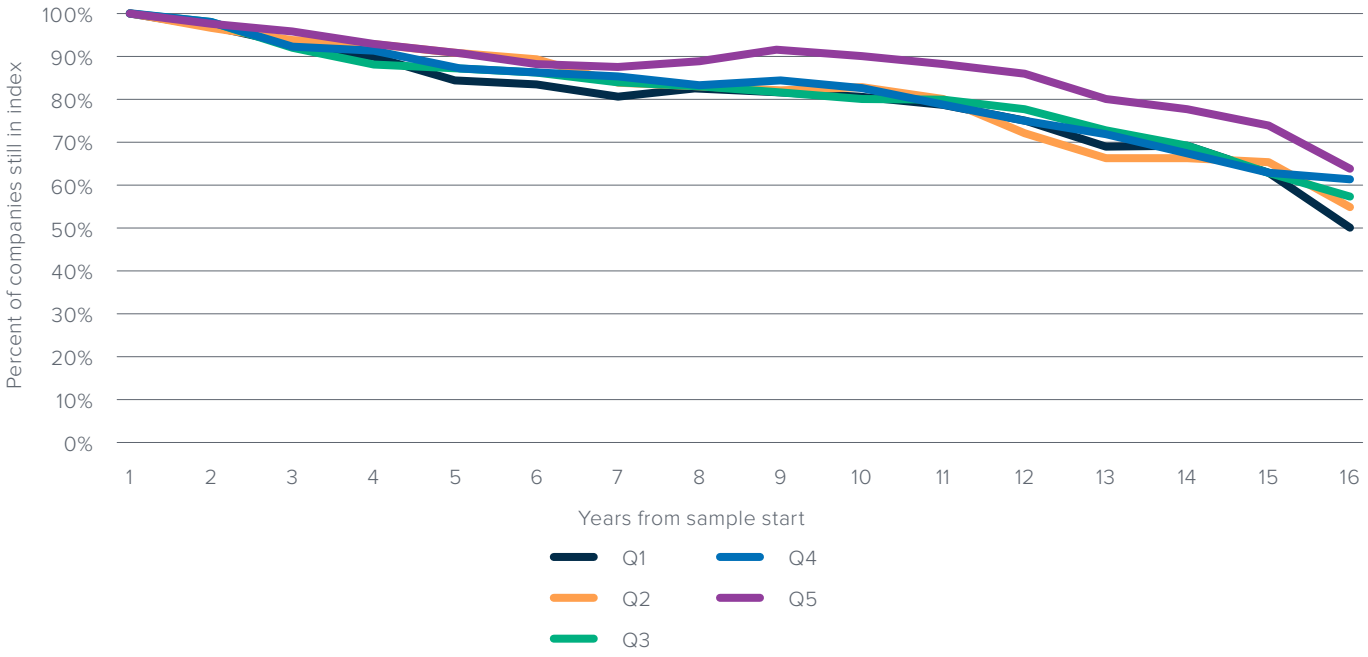
1. R&D-Intensive Firms Survive Longer

All else equal, companies in the highest quintile of R&D intensity (R&D / Sales) were more likely to remain in the MSCI ACWI throughout the duration of our study (2009-2024) compared to their peers in the lowest quintile.

As seen in Figure 4, there is a 13-percentage point difference in the percentage of companies from 2009 still there in 2024 between the lowest and highest R&D quintiles (53.8% to 40.5%), resulting in a significant t-stat of 2.55.[16]

This result is also robust, accounting for the different types of delistings across all five quintile groups, as seen in Figure 5 below. Delisting reasons were evenly spread across all groups, and there was no skew or higher likelihood of distress-related exits in any group.

Figure 4: R&D-intensive firms are significantly more likely to survive in public markets



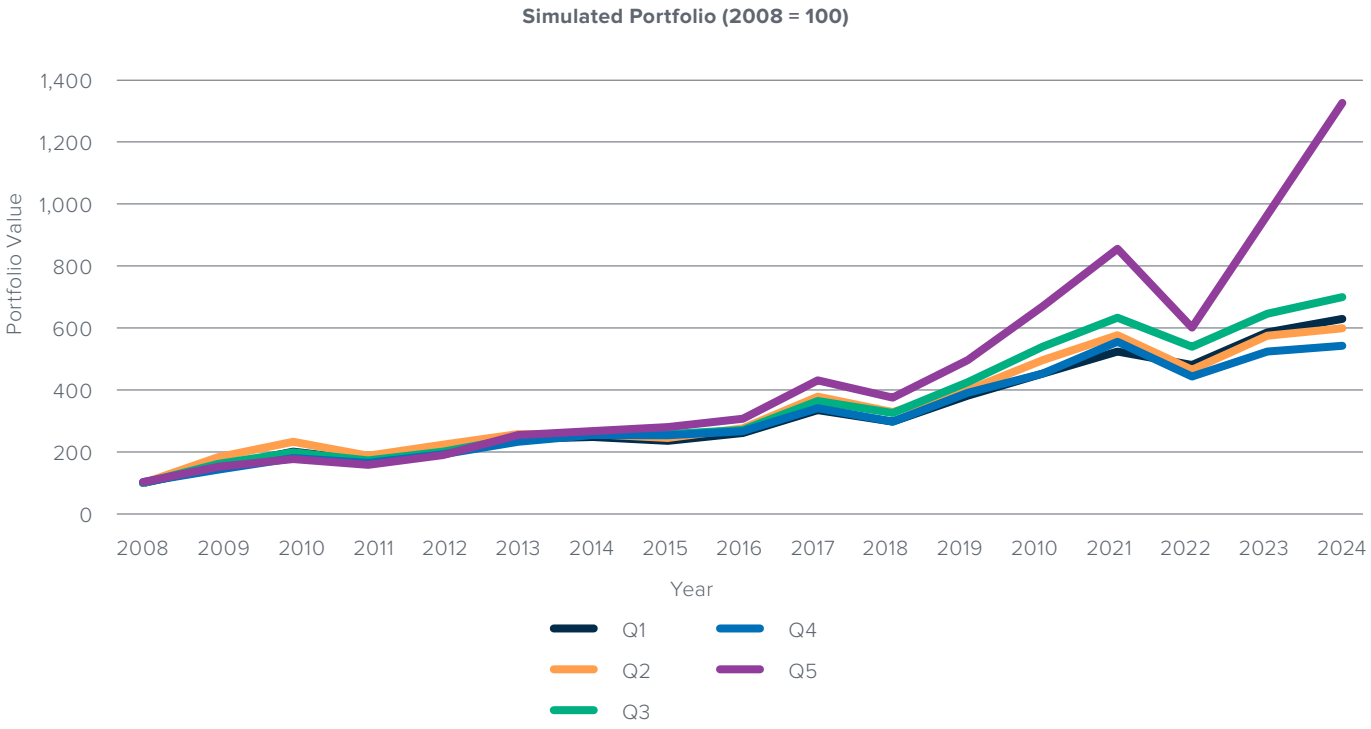
2. R&D Intensive Firms Outperform in the Long Run

High-R&D-intensity firms outperform low R&D intensity firms by approximately 5% annualized (TSR) over 15 years. However, it's worth noting that return differences become visible only after year eight.

As seen in Figure 5, the relationship is not linear, and stratification is only clear at the top and bottom quintiles. In the middle quintiles, there is no obvious relationship, and in fact some of the lower quintiles (e.g., Q2) outperform some of the higher ones (e.g., Q4).[17]

As such, the results of Figure 5 suggest that innovation requires patience. Markets do not fully price innovation in the short to medium term, and many R&D projects may take years to pay off.

Figure 5: The payoff to innovation is real, but it takes nearly a decade to appear



IMPLICATIONS FOR CEOS AND BOARDS

Our findings suggest that sustained R&D is associated with improved survival and long-term returns, but only for companies that can maintain investment discipline over extended periods.

The core challenge lies in the differing time horizons: innovation benefits may take nearly a decade to materialize, while market pressures operate on a quarterly basis. Bridging this gap requires deliberate action from both senior management and boards.



For CEOs, this means:

- **Setting explicit expectations on time horizon through long-term roadmaps**: Clearly communicate that innovation outcomes may take eight or more years to materialize[18]
- **Separating innovation from core performance narratives**: Avoid evaluating long-term innovation through short-term financial metrics alone[19]
- **Building a supportive investor base**: Engage shareholders who understand and support long-term strategy[20]



For boards, this means:

- **Protecting long-horizon investment**: Ensure that R&D budgets are not reduced in response to short-term performance pressure
- **Aligning incentives with innovation timelines**: Structure compensation and evaluation periods to reflect long-term value creation
- **Allocating time to strategy, not just oversight**: Prioritize discussions on the innovation roadmap and capital allocation[21]

More broadly, companies that succeed in sustaining innovation combine investment with alignment across the governance, incentives, engagement, and metrics levers, as outlined in the *FCLT Gold Standard* and Toolkit 2 on page 14.

Ultimately, innovation in public markets is not constrained by structure, but by the level of company and investor support and discipline. Companies that align their organizations around long-term value creation are better positioned to capture the benefits of innovation over time.

CONCLUSION

Contrary to common belief, public markets do not inherently stifle innovation. Our analysis shows that companies with sustained R&D investment are more likely to survive and outperform over the long run.

However, innovation in public markets requires discipline. Companies must balance short-term market pressures with long-term investment strategies.

The companies that succeed are those that combine sustained innovation investment with aligned governance, incentives, and shareholder engagement.

For CEOs and boards, the challenge is not whether innovation creates value. It is whether the company's governance and capital allocation frameworks allow that value to compound over time.

Innovation is not a myth in the public markets – it is long-dated, unevenly measured, and frequently misunderstood.

TOOLKIT: OPTIMIZING R&D FOR LONG-TERM SUCCESS – INCREMENTAL VS. BREAKTHROUGH INNOVATION

Sustaining innovation in public markets requires more than increasing R&D budgets. Companies that innovate successfully balance incremental and breakthrough innovation across governance, incentives, engagement, and metrics levers.

Lever	Instead of...	Do this...
Governance	Focusing board and executive management on oversight of core business and returns	Create dedicated governance structures (e.g., innovation committees, ring-fenced units) with longer time horizons (8+ years)
	Cutting long-horizon R&D projects during a downturn to "beat EPS guidance."	Protect long-term R&D budgets during downturns, avoiding reactive cuts that undermine future competitiveness
Incentives	Linking compensation solely to operational and financial KPIs (margins, ROIC, earnings growth)	Tie incentives to long-term (8+ year) value creation, innovation milestones, and outputs
	Evaluating investments through traditional DCF or NPV frameworks	Recognizing that transformational innovation can follow a different timeline, and use scenario-based or options-based valuation frameworks
	Integrating all innovation within the existing enterprise-wide framework or structure	Create separate or hybrid structures to protect innovation from short-term pressures
Engagement	Emphasizing predictability, capital discipline, and steady returns to shareholders	Set expectations on time horizon, risk, and asymmetric payoff potential of breakthrough innovation
	Treating your shareholder base as a given, which you have no control over	Cultivate anchor shareholders who understand the company's innovation strategy and can provide stability during periods of investment
Metrics	Tracking R&D spend all in one bucket	Bucket innovation into incremental and transformational based on horizon and impact
	Prioritizing projects with clear ROI and shorter payback periods	Adopt an options-based portfolio approach to assess innovation, recognizing that a small number of breakthrough projects often generate most of the long-term value

APPENDIX: METHODOLOGY

Sample

- Years: 2009-2024
- Universe: MSCI ACWI constituents, filtered for those that reported an R&D expense (about 40 percent of firms)
- Firms were then sorted into quintiles based on R&D intensity (the 'Fama-French-like' factor), sector, and geography. See the Fama-French model for more information.
- Long-term performance (cumulative TSR, cumulative ROIC) and survival (binary 0 vs. 1 in the MSCI ACWI) was then tracked over 15 years.

Methodology

To assess how innovation relates to long-term corporate outcomes, we construct firm-year measures of innovation intensity using companies in the MSCI ACWI universe over 2009–2024. Our primary innovation measure is R&D intensity, defined as reported research and development expense divided by sales. This ratio provides a standardized measure of how much of each dollar of revenue is being reinvested in innovation-related activity. Because innovation norms differ meaningfully across industries, geographies, and time, firms are not ranked globally. Instead, each year we compare firms only against their relevant peer set.

Specifically, firms are sorted within each year × sector × region cell. Sector is defined using the firm's reported GICS sector, and region is assigned based on the company's country of domicile, with custom mapping adjustments applied where needed to ensure consistency across the sample. This peer-relative approach is intended to avoid overstating innovation among firms in inherently R&D-light sectors or understating it among firms in sectors where R&D is structurally high.

Before sorting, R&D intensity is winsorized within each year × sector × region cell at the 2.5th and 97.5th percentiles to reduce the influence of extreme outliers. Firms are then ranked from lowest to highest R&D intensity within each cell and partitioned into five approximately equal-sized groups (quintiles). Quintile 1 contains the firms with the lowest R&D intensity relative to peers in the same year, sector, and region, while Quintile 5 contains the highest. This methodology allows innovation intensity to be interpreted on a relative basis, rather than as an absolute level that may be driven by sector or regional composition.

These quintiles are then used to examine differences in long-term outcomes across firms with relatively low versus relatively high innovation intensity. In subsequent analysis, we compare performance, survival, and other outcome variables across quintiles, with particular emphasis on the spread between the highest- and lowest-intensity groups. This design is intended to isolate whether firms that sustain relatively high innovation investment within their peer group experience systematically different long-term trajectories.

Delisting Classification

To account for biases with delistings in our survival analysis, we also did a manual review of delistings in the MSCI ACWI dataset between 2009-2024. Each delisting event was reviewed using filings and news the year around the delisting event. Exits were categorized as:

- Distress (bankruptcy, liquidation, regulatory suspension)
- Non-distress (M&A, privatization, index removal, reclassification)

Approximately 81 percent of exits were non-distress-driven, and the mix of delisting reasons was relatively similar and robust across all five quintiles, with the majority reason being 'index removal'.

ROIC relationship

The TSR relationship we see, where Q5 outperforms Q1 in R&D intensity over the long run, does not hold for ROIC. Part of this, however, could be structural, as R&D spending increases "invested capital," and thus increases the denominator of ROIC, artificially lowering ROIC. It's curious, however, that this finding holds over the entire sample period, perhaps suggesting that R&D spend and outcome may not go as hand in hand anymore.

For more information on data methodology and analysis, please email research@fcltglobal.org.

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ENDNOTES

1. "Funding the Future: Investing in Long-Horizon Innovation," *FCLTGlobal*, 2020.
2. FCLTGlobal analysis of MSCI ACWI data from FactSet.
3. FCLTGlobal analysis of MSCI ACWI data from FactSet, based off Cooper, Michael, Anne Marie Knottt, and Wenhao Yang, "RQ Innovative Efficiency and Firm Value", *Journal of Financial and Quantitative Analysis*, 2021.
4. Sampson, Rachelle and Yuan Shi, "Are U.S. firms becoming more short-term oriented? Evidence of shifting firm time horizons from implied discount rates, 1980-2013" *Strategic Management Journal*, 2020.
5. Of note, the SEC have recently proposed moving away from mandatory quarterly reporting in the US. However, the fact still remains that private companies have much fewer (if any) reporting requirements compared to their public company counterparts. See, e.g. *SEC Prepares Proposal to Eliminate Quarterly Reporting Requirement*, 2026.
6. Shai Bernstein, "Does Going Public Affect Innovation?" *Journal of Finance*, 2015.
7. Sampson, Rachelle and Yuan Shi, "Are U.S. firms becoming more short-term oriented? Evidence of shifting firm time horizons from implied discount rates, 1980-2013" *Strategic Management Journal*, 2020.
8. Wies, Simone et al., "Innovation Imprinting: Why Some Firms Beat the Post-IPO Innovation Slump", *Journal of Marketing*, 2023.
9. Acharya, Viral and Zhaoxia Xu, "Financial dependence and innovation: The case of public versus private firms", *Journal of Financial Economics*, 2017.
10. Broughman, Brian, Matthew Wansley, and Samuel Weinstein, "No Exit", *NYU Law Review*, 2025.
11. Data from Jay Ritter, "Initial Public Offerings: Median Age of IPOs Through 2025", 2026.
12. National Science Foundation. Public/private breakdown estimated based off FCLT Compass data.
13. FCLTGlobal analysis of OECD Main Science and Technology Indicators dataset, 2026..
14. National Science Foundation. Public/private breakdown estimated based off FCLT Compass data.
15. Full details can be found in the appendix.
16. FCLTGlobal analysis of MSCI ACWI data via FactSet.
17. FCLTGlobal analysis of MSCI ACWI data via FactSet.
18. See, e.g. "A CEO Guide to Long-Term Roadmaps", *FCLTGlobal*, 2019.
19. See, e.g. "Funding the Future: Investing in Long-Horizon Innovation", *FCLTGlobal*, 2020.
20. See, e.g. "Unlocking Value by Targeting Long-term Shareholders", *FCLTGlobal*, 2023.
21. See, e.g. "Is My Board Cultivating Long-Term Habits?", *FCLTGlobal*, 2019.

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