

The Rise of Intangible Assets & the Growth vs. Value Debate

November 2020

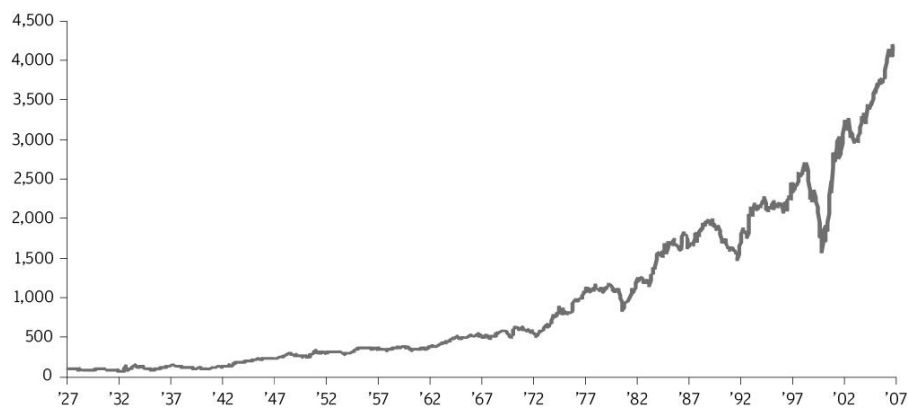
Executive Summary

- This paper argues that a profound recent shift in the mix of assets employed by businesses – specifically, the rise of intangible assets – may have played a role in the recent underperformance of value stocks.
- The value investing approach, which traditionally emphasises investments in stocks trading at discounts to book value or at a low multiple of reported profits, tends to result in lower levels of portfolio exposure to intangible assets.
- This occurs at least partly because present day accounting rules, which were formalised in the mid-20th century at a time when tangible assets dominated company balance sheets, specify that intangible investment should be expensed. Current period expensing of intangible investment reduces profits and book value and can make intangible-based businesses appear prohibitively expensive when assessed through the value investing lens.
- After also noting other potential headwinds for value investing, including low interest rates and declining growth, this paper: i) defines intangible assets in more detail; ii) explores the specific characteristics they possess that can produce compelling investment outcomes; and iii) examines some risks associated with investment in intangibles.
- The paper concludes that Intermede's investment approach, which prioritises investments in businesses that possess valuable intangible assets and attractive growth prospects, while also maintaining valuation discipline, should offer a prudent path to capital appreciation over the long term.

Introduction

Prior to 2007, the growth vs. value debate was almost entirely one-sided. Across the 80-year history of available data, value stocks (businesses with share prices trading at low multiples of accounting profits or book value) achieved spectacular outperformance of growth stocks (those viewed as likely to expand revenues and profits over the long term).

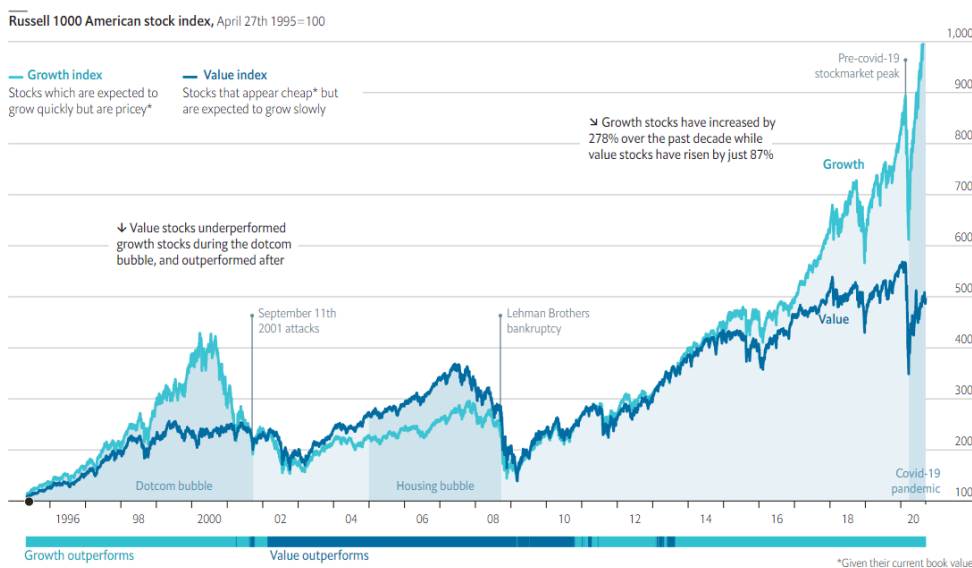
Figure 1: Relative performance of US value versus growth 1927 - 2007



Source: Fama French, JP Morgan. Index level rebased to 100 at January 1927

But since 2007, the trend has reversed, and value stocks have underperformed growth stocks. This paper argues that profound change in the nature of the assets employed by businesses to generate economic value may mean that the growth vs. value distinction, which is grounded in 20th century accounting conventions that cannot accurately reflect the intangible economy of 2020, has become an analytical stumbling block for investors, despite containing at its heart an evergreen insight – that price paid matters.

Figure 2: Relative performance of US value versus growth 1995 – 2020



Source: The Economist, Russell 1000 Index level rebased to 100 at April 1995

The Rise of Intangible Assets

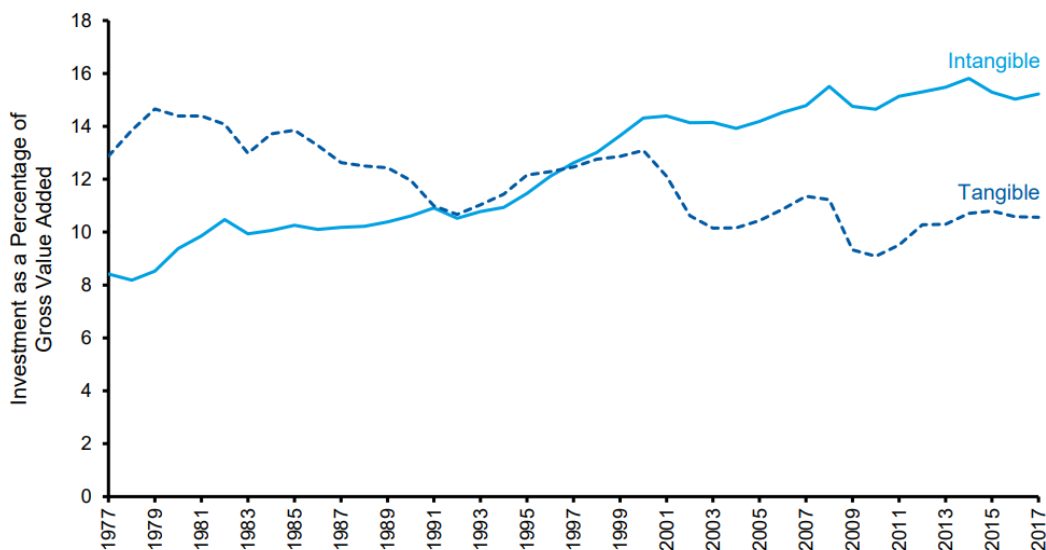
A Bloomberg News story¹ in October 2020 noted the following:

"Take all the physical assets owned by all the companies in the S&P 500, all the cars and office buildings and factories and merchandise, then sell them all at cost in one giant sale, and they would generate a net sum that doesn't even come out to 20% of the index's \$28 trillion value. Much of what's left comes from things you can't see or count: algorithms and brands and lists.

This is, in the broadest sense, a new phenomenon. Back in 1985, for instance, before Silicon Valley came to dominate the ranks of America's biggest companies, tangible assets tended to be closer to half the market's value."

And as the below chart confirms, the share of total business investment in the United States represented by intangible assets has increased materially in recent decades, and now substantially outweighs the share of tangible investment:

Figure 3: The rise of intangible investments in the US 1977-2017

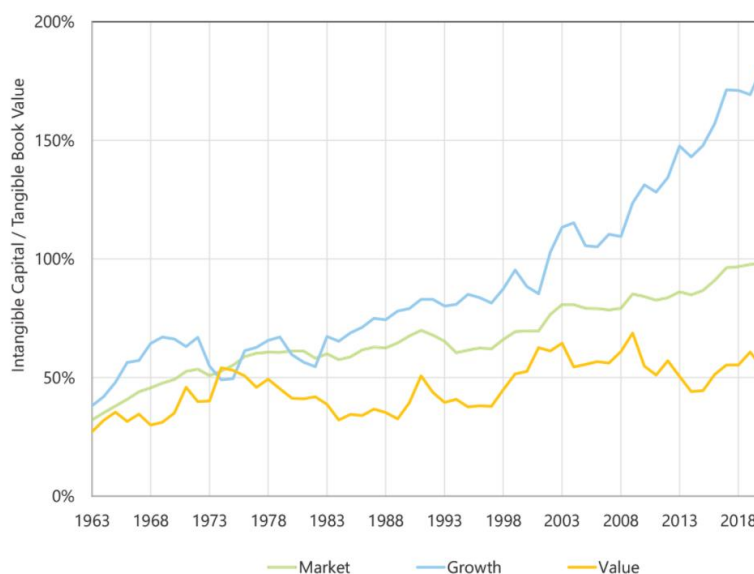


Source: Corrado and Hulten (2010-17), Morgan Stanley. Data shown for US corporate sector.

¹ <https://www.bloomberg.com/news/articles/2020-10-21/epic-s-p-500-rally-is-powered-by-assets-you-can-t-see-or-touch>

And from an investment style perspective, those intangible assets increasingly reside with firms categorised as growth businesses, with value firms possessing relatively few intangibles.

Figure 4: Ratio of intangible capital to tangible book value in total company capital, U.S., July 1963 – June 2020



Source: Research Affiliates LLC, Compustat, CRSP

A later section of this paper will assess the specific characteristics of intangible assets that can produce highly attractive economic outcomes. First, we examine some of the headwinds faced by traditional value investing, including the nature of the analytical challenges presented by the rise of intangible assets.

Headwinds for Value Investing

The foundational principles of value investing were first formalised in '*Security Analysis*', the seminal 1934 work by Graham and Dodd, which advocates investments in businesses that are statistically cheap relative to the value of the net assets on their balance sheets (low price-to-book ratios), or relative to their accounting profits (low price-to-earnings ratios).

The rise to dominance of intangible assets presents a significant analytical challenge for such traditional value investing approaches. Specifically, current accounting conventions, which evolved in the mid-20th century² to reflect the economic reality of businesses whose operations relied primarily on physical assets, struggle to capture the true economic performance of intangible-driven businesses, and can therefore create a distorted picture of value.

For example, software investment is typically expensed through the income statement, which reduces both reported accounting profits and balance sheet assets, thereby elevating price-to-earnings ratios and price-to-

² Perhaps the most significant decision occurred in 1974, with the publication by the Financial Accounting Standards Board of a statement mandating that companies should expense R&D spending, due to '*lack of causal relationship between expenditures and benefits*'.

book ratios. So even if a business is making value-accretive investments that will generate substantial future value for shareholders, these 'high multiples' can stamp the business as a no-go area for value strategies.

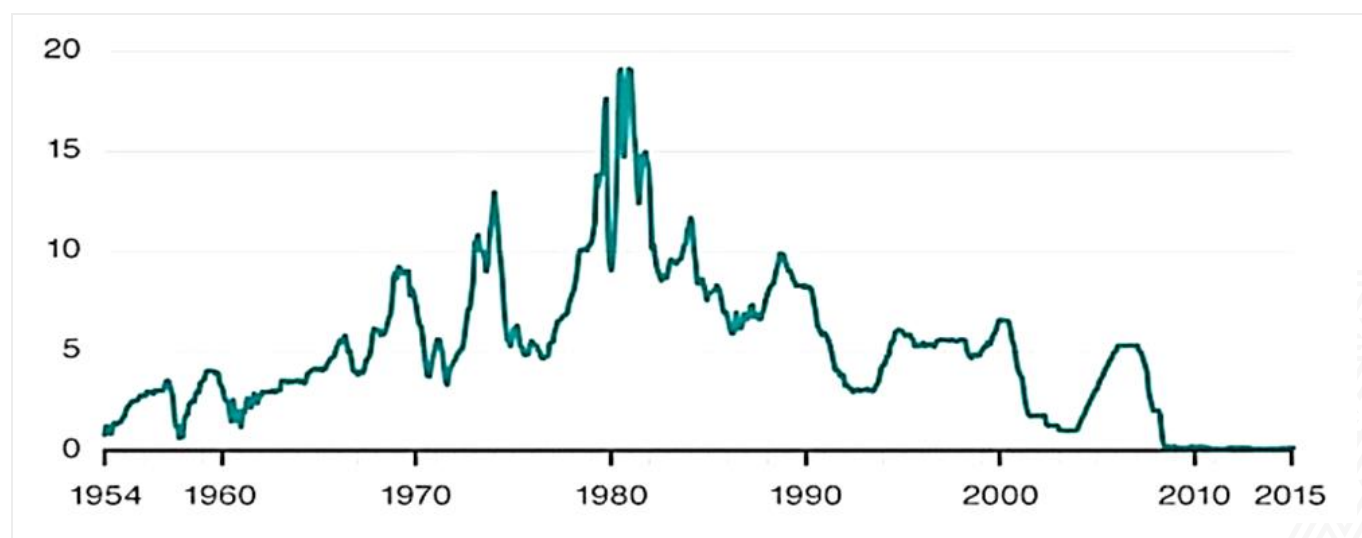
The accounting profession itself is increasingly aware that the accounting treatment of intangible assets is problematic. In February 2019 the ACCA, the global body for professional accountants, published an extensive report³ on 'The Capitalisation Problem'. The opening words of the executive summary are as follows:

"There are concerns that financial statements no longer reflect the underpinning drivers of value in modern business. Such concerns are particularly relevant to accounting for intangibles, including research and development costs."

But it is not just the evolving nature of the corporate asset base that has presented challenges to the value approach. A second headwind is the four-decade decline in interest rates that has been observed across developed markets.

For example, US rates commenced a 40-year descent following the April 1980 high water mark of Federal Reserve Chairman Paul Volcker's herculean battle to contain inflation, which saw the Fed Funds rate rise to almost 20%.

Figure 5: US interest rates (Federal Funds rate)



Source: St Louis Fed

This matters because the US sovereign interest rate ('the risk free rate') is a direct input into the discount rates employed by investment analysts to place a present value on the future cash flows of a business.

As discount rates decline to reflect lower treasury yields, the present value of future cash flows increases. Given that, relative to a typical value investment, a greater portion of the present value of a growth company necessarily resides in the future, simple discounting arithmetic means that, all else being equal, investors will be willing to pay more for those distant cash flows as interest rates decline.

³ https://www.accaglobal.com/content/dam/ACCA_Global/professional-insights/Intangibles/pi-intangibles-R%26D.pdf

And as well as boosting the present value of the growth stocks' future cash flows, low rates also present a significant headwind for a sector that composes a significant percentage of value indexes, namely banks, which depend for much of their income on 'net interest margins' which are pressured by low rates.

The challenge this presents to value investing in a global context is made clear when comparing the sector composition of the MSCI World Value and Growth indexes, as demonstrated by the following chart which shows the large overweight to financial stocks in the value index, and the equally large overweight to technology stocks in the growth index:

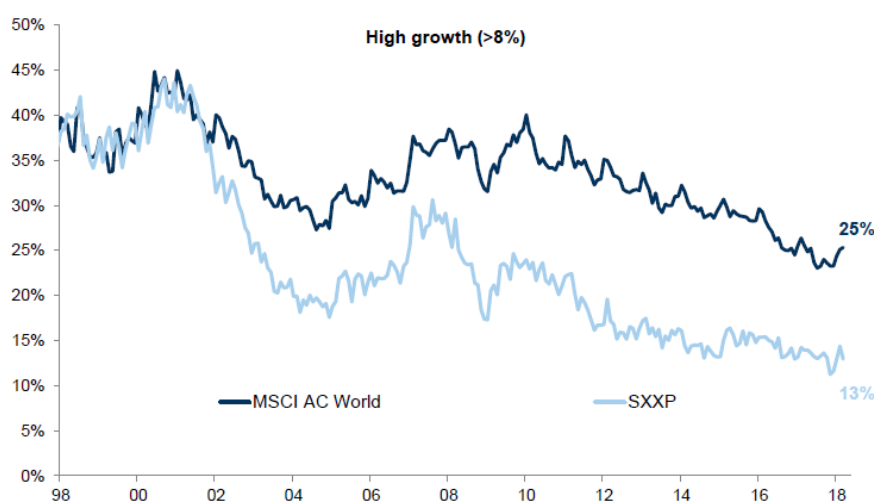
Figure 6: MSCI World Growth & Value indexes sector weighting comparison



Source: JP Morgan, MSCI, Datastream. Data as at 31/12/19

And the very fact that rates are so low also points to another background factor that is arguably supportive of growth stocks relative to value stocks. Namely, rates are low at least partly because growth is increasingly scarce, and therefore arguably more valuable, as shown in the below chart which shows a 20 year decline in the percentage of global (dark blue line) and European (light blue line) businesses achieving revenue growth in excess of 8%:

Figure 7: Just 13% of European companies have high expected sales growth

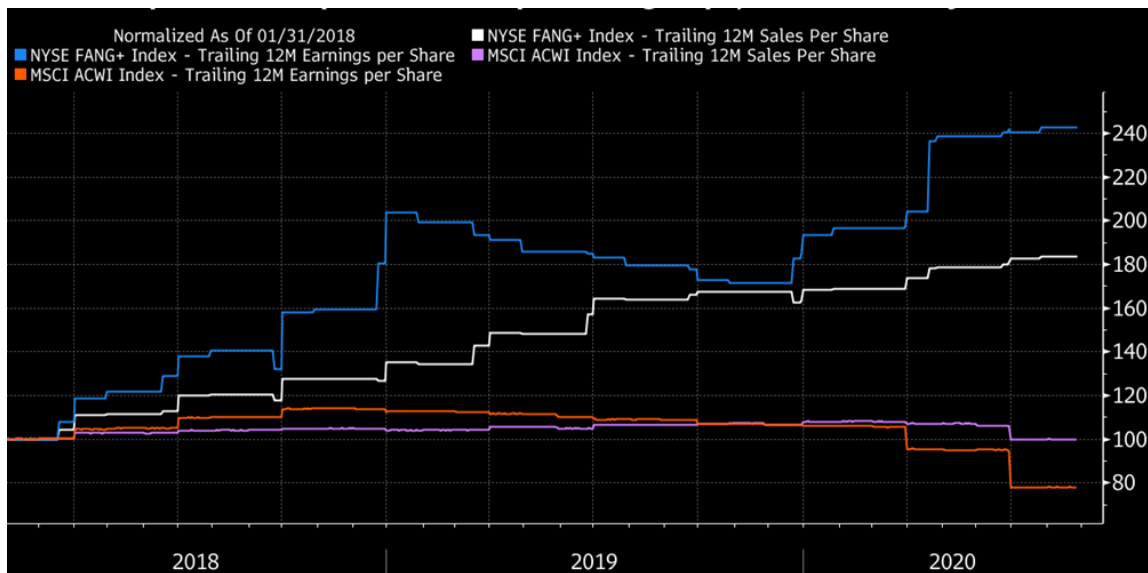


Source: Goldman Sachs Investment Research, Bloomberg

One reason for Europe's laggard status may be the relative dearth of intangible assets possessed by its listed businesses. The combined weighting of the technology and communication services sectors in the MSCI Europe Index is 11.4%, less than a third of the S&P 500's 38.6% weighting. Conversely, 'old economy' sectors that are rich in tangible assets (industrials, energy, materials and utilities) make up 31.4% of MSCI Europe's market capitalisation, almost twice the S&P 500's 16.3% weighting.

And the current impact of this gap becomes clear in the below chart which shows that, excluding the 'FANG+' group of companies, recent revenue and profit growth for the almost 3000 companies comprising the MSCI ACWI index has been negative:

Figure 8: Sales & profits are up for internet platform companies, but down elsewhere



Source: Bloomberg. NYSE FANG+ Index consists of: Alibaba, Apple, Amazon, Baidu, Facebook, Google, Netflix, NVIDIA, Twitter

Intangible Assets: Three Key Questions

The fact that a large amount of institutional capital is managed with a value approach may be one source of ongoing investment advantage for an investment approach such as Intermede's, which seeks to benefit from the long-term compounding power of high quality growth businesses that often possess attractive intangible assets.

But with current market valuations of software and ecommerce businesses indicating that the attractions of intangible assets are well understood by many market participants, it is worth taking stock of our own investment approach in the current context. We will ask three questions:

- ♦ What are intangible assets?
- ♦ Why are intangible assets such powerful drivers of economic value?
- ♦ What are the potential pitfalls of intangible investing?

What are intangible assets?

Perhaps the simplest definition of intangible assets is that they are not physical. However, a fuller and more helpful taxonomy was recently presented in Haskel and Westlake's 2017 book '*Capitalism Without Capital*', which Intermede's investment team reviewed at the time of its publication, and which assisted us in sharpening our thinking on this topic.

Categories of intangible assets include computerised information (such as software and databases), innovative property (such as R&D or valuable media properties), and economic competencies (which can include proprietary business processes, advantageous market research or training):

Broad Category	Type of Investment	Type of Legal Property that might be created
Computerised Information	Software development	Patent, copyright, design intellectual property rights (IPR), trademark, other
	Database development	Copyright
Innovative Property	R&D	Patent, design IPR
	Mineral exploration	Patent, other
	Creating entertaining and artistic originals	Copyright, design IPR
	Design and other product development costs	Copyright, design IPR, trademark
Economic Competencies	Training	Other
	Market research and branding	Copyright, trademark
	Business process re-engineering	Patent, copyright, other

Source: Jonathan Haskel and Stian Westlake, *Capitalism Without Capital: The Rise of the Intangible Economy* (Princeton, NJ: Princeton University Press, 2017), 44.

Why are intangible assets such powerful drivers of economic value?

The key insight here is deeply counterintuitive in the context of conventional economic theory, and was first clearly formulated by the economist Brian Arthur in the mid-1990s. In a Harvard Business Review article titled '*Increasing Returns and the New World of Business*'⁴ Arthur noted that businesses possessing certain configurations of intangible (typically digital) assets, could defy seemingly ironclad economic mean reversion, and achieve 'increasing returns to scale', often proceeding to achieve market 'lock-in', or winner-takes-all outcomes, in their competitive category.

The opening paragraph of the article is worth quoting in full:

"Our understanding of how markets and businesses operate was passed down to us more than a century ago by a handful of European economists—Alfred Marshall in England and a few of his contemporaries on the continent. It is an understanding based squarely upon the assumption of diminishing returns: products or companies that get ahead in a market eventually run into limitations, so that a predictable equilibrium of prices and market shares is reached. The theory was roughly valid for the bulk-processing, smokestack economy of Marshall's day. And it still thrives in today's economics textbooks. But steadily and continuously in this century, Western economies have undergone a transformation from bulk-material manufacturing to design and use of technology—from processing of resources to processing of information, from application of raw energy to application of ideas. As this shift has occurred, the underlying mechanisms that determine economic behavior have shifted from ones of diminishing to ones of increasing returns."

Capitalism Without Capital expanded this insight by presenting a useful theoretical framework for analysing the differentiated characteristics and value-capturing potential of intangible assets. The book's core thesis argued that intangible assets benefit from a unique set of characteristics including the following:



SCALABILITY: Intangible assets are 'non-rival' goods that can be reused infinitely by different users. For example, a software program can be re-sold to millions of users at near-zero marginal cost, while a given car can only be sold to one customer before the next car needs to be built (at significant incremental cost). Scalable intangible assets in combination with large total addressable markets have led to the extraordinary economic outcomes achieved by mega-cap US technology companies in recent years.



SYNERGIES: Intangible investments tend to possess complementarities that mean they can be extremely powerful when combined.



SPILOVERS: Intangible assets are sometimes easy for competitors to replicate. Counterintuitively though, this can cement the competitive position of dominant businesses. For example, large digital businesses can simply adopt and integrate the innovative features of competitive products, as has occurred with Facebook's adoption of Snapchat's user experience with its successful 'Stories' feature, and Microsoft's successful implementation of the key features of Slack Technologies' productivity software into the Teams product, which has quickly eclipsed Slack's level of user adoption.

⁴ <https://hbr.org/1996/07/increasing-returns-and-the-new-world-of-business>

And perhaps the most important single theoretical concept driving the dominance of intangible businesses is that of network effects. The basic insight – the network becomes more valuable to each user with the addition of each new user, creating a positive flywheel effect of growth driven by rising user satisfaction – is well understood by now.

What is perhaps less well understood is how deep the history of network effects driving winner-takes-all market outcomes goes. Morgan Stanley's Michael Mauboussin recently pointed us to a wonderfully clear-sighted discussion of the power of network effects in the 1908 annual report of AT&T

Figure 9: Extract From AT&T 1908 Annual report

A telephone—without a connection at the other end of the line—is not even a toy or a scientific instrument. It is one of the most useless things in the world. Its value depends on the connection with the other telephone—and increases with the number of connections.

Source: https://beatriceco.com/bti/porticus/bell/pdf/1908ATTar_Complete.pdf

In the digital era, a rich ecosystem of network effects has emerged, several of which are at work with Intermede's global equity portfolio. These include: i) network effects driven by entrenched compatibility and standards, such as Mastercard's secure, seamless and near instantaneous facilitation of financial information flows between merchants, card issuing banks and cardholders; ii) two-sided network effects, where a mutually beneficial relationship exists between two groups, such as buyers and sellers on Facebook's fast-growing 'Marketplace' service, and iii) 'indirect' network effects, where increases in usage encourage the consumption of complementary products, for example the rapid growth being seen in Apple's wearables category, including Apple Watch and AirPods, which are sold as complements to the iPhone, and further entrench users within the growing ecosystem of Apple's products and services.

A further economic advantage possessed by intangible businesses resides in the fact that, with assets that are disembodied and therefore easily legally transferrable, they are well positioned to optimise their global operations from a tax perspective, as illustrated by the propensity for global technology and pharmaceutical businesses to domicile their valuable intellectual property in the low tax jurisdiction of Ireland.

And finally, the ability of some intangible businesses to reinvest internally generated capital at high incremental rates of return suppresses immediate profitability (while generating material future value), also a pattern likely to minimise current tax burdens.

Potential Pitfalls of Intangible Investing?

A first potential pitfall was identified in '*Capitalism Without Capital*', namely that investment in intangible assets tends to be a sunk, or irretrievable, cost. For example, as opposed to an investment by a business in a new factory or physical inventory, both of which would retain some amount of economic value in a sale or liquidation of the business, an intangible investment such as brand building via an expensive advertising campaign does not reliably result in the ownership of a transferrable asset with a measurable market value.

Counterintuitively though, this fact can make certain long-lived intangible assets (luxury brands in particular) more difficult for new entrants to challenge, and therefore more defensible as a source of competitive advantage. For example, even with access to unlimited capital, a competitor couldn't replicate the prestigious 280-year heritage of the Moët & Chandon champagne house owned by Intermede's portfolio company LVMH.

A second issue, detailed discussion of which is beyond the scope of this paper, could be described as societal risk. The ongoing replacement of physical goods and services with their digital equivalents (which can be reproduced and distributed infinitely at near-zero cost) means that employee headcounts, particularly in legacy industries, are shrinking. For example, Bloomberg News recently cited estimates⁵ that growth in usage of Adobe's desktop publishing programs has cut employment in the printing industry by half. Over the long term this trend may increase already elevated levels of economic inequality.

A third potential pitfall is regulatory risk. The CEOs of Apple, Amazon, Google and Facebook all faced hostile questioning from Congressional lawmakers during 2020, and the EU has levied \$9 billion of fines on Google in three antitrust cases since 2017. Additionally, in October 2020 the US Department of Justice filed an antitrust lawsuit against Google, accusing the company of abusing its dominance of online search.

However, as detailed in Lina Khan's intriguing paper *Amazon's Antitrust Paradox*⁶, US antitrust legislation has focused primarily on consumer welfare, as measured via the price charged for goods or services, since the terms of the debate were defined by the influential work of legal scholar Robert Bork in the late 1970s.

The fact that the consumer offerings of the mega cap tech companies are either keenly priced (Amazon) or free (Google and Facebook) therefore mitigates this risk somewhat, although certain recent Congressional hearings have pressed for changes to antitrust law to reflect the market dominance of the digital giants, albeit with limited success so far.

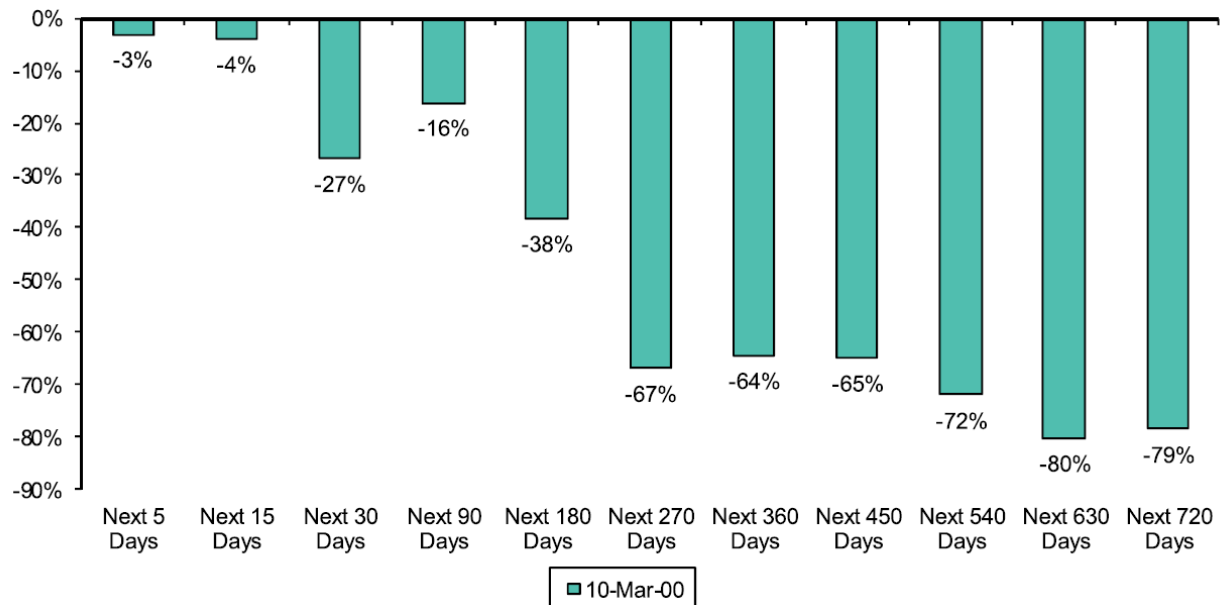
A final potential pitfall relates to valuation. An immutable truth central to the value investing ethos is that any asset can be a bad investment if the price paid is excessive. And history has shown that the perceived attractions of intangible assets, particularly in the technology sector, can lead to euphoric, even irrational, investor behaviour.

For example, as figure 10 shows, while tech stocks outperformed strongly in the late 1990s, the subsequent impact on shareholders' portfolios as the bubble deflated was severe and long lasting. In the two years following the peak of the NASDAQ on March 10th 2000, the index lost 80% of its value.

⁵ '*Epic S&P 500 Rally Is Powered by Assets You Can't See or Touch*', Bloomberg News, Oct 21st 2020

⁶ <https://www.yalelawjournal.org/note/amazons-antitrust-paradox>

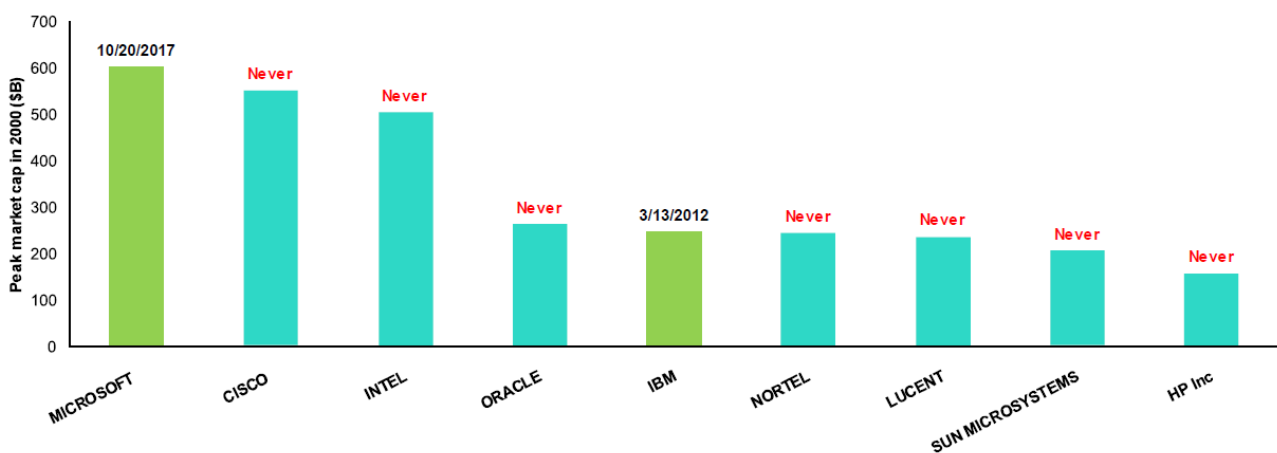
Figure 10: NASDAQ returns: sell off from the March 2000 peak



Source: Bernstein Quantitative Research

And of the nine leading technology businesses in the index (measured by peak market capitalisation), only two (IBM and Microsoft) ever achieved equivalent market capitalisation again (taking 12 and 17 years to do so respectively):

Figure 11: Peak market cap in year 2000 and date when company next achieved the same market cap



Source: Bernstein Quantitative Research

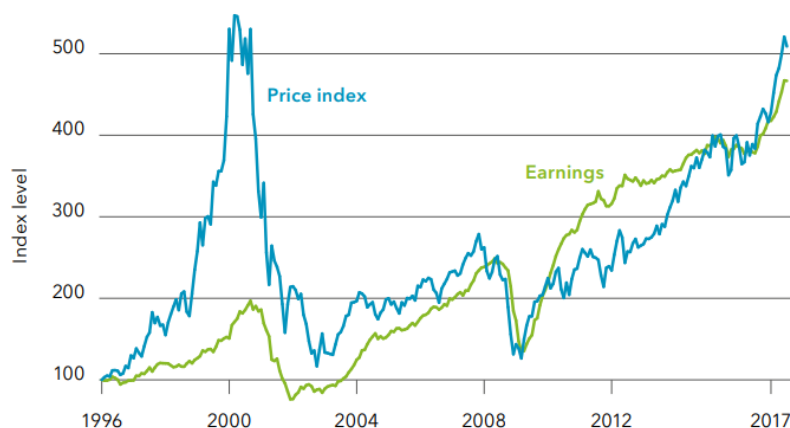
⁷ Four of which (Apple, Amazon, Alphabet and Facebook) are current holdings for Intermede's global equity strategy

This Time is Different?

So, what is different this time? Why is Intermede comfortable allocating client capital to dominant technology businesses at a time at which they have recently approached all-time high market capitalisations?

A key change since the late 1990s is profitability. The below chart (which only contains data to 2017, since which the profitability of the technology sector has continued to rise sharply), shows that earnings support was absent in the dotcom boom era but is abundant today.

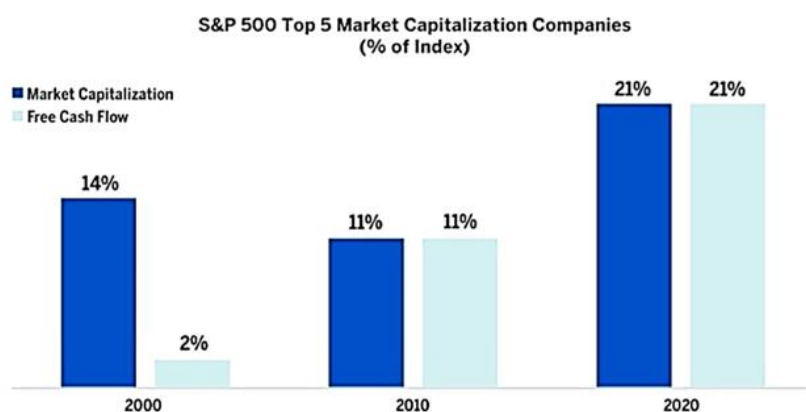
Figure 13: World technology stock prices & earnings, 1996-2017



Source: Black Rock Investment Institute

But even more importantly, a core aspect of Intermede's investment process, which we believe mitigates valuation risk, is a focus on free cash flow. And for the large tech companies to which Intermede has allocated client capital since the inception of the global equity strategy in 2014, abundant cash generation means that current market capitalisations reflect equivalent levels of growth in free cash flow, providing further evidence of significant valuation support.

Figure 14: Market capitalization is increasingly concentrated but so is free cash flow



Source: Factset

Conclusion

We believe that a significant source of the recent outperformance of growth strategies relative to value strategies is the former's freedom from constraints that prohibit value managers investing in compelling intangible businesses. The tenacity of the hold on investors' minds of the traditionally conceived 'value vs. growth' distinction may be serving to obscure this trend.

However, we also believe that the central intuition of value investing, namely that no asset for which an excessive price is paid can be a good investment, remains urgently relevant for any investment strategy seeking to deliver compelling long term returns to clients. Intermede will therefore continue to remain discerning with respect to price paid, even for the most attractive intangible businesses with clear competitive advantages and large addressable markets.

Intermede's investment approach is simple but powerful. By taking long term positions in businesses capable of sustained growth in earnings and cash flows, and applying consistent valuation discipline to ensure that we don't overpay, the compounding of economic value being achieved by our portfolio companies should translate to good outcomes for our clients when measured over long time horizons, even allowing for inevitable fluctuations of equity market sentiment.

With annualised outperformance of +5.8% vs. MSCI ACWI (USD, net of fees, to 30/9/20) across the six years since the inception of our global equity strategy on October 1st 2014, this goal has been achieved to date, and our team remains excited and motivated by the challenge of continuous learning required to sustain this positive trend.

Mike Gallagher, CFA, CAIA

Head of Distribution

November 2020

Important Information

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