



**EVEREDGE INTANGIBLE
BENCHMARK INDEX**

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Intangible assets
are the most
important drivers
of company growth
and value today.

Introduction to the EverEdge Intangible Benchmark Index (EIBI)

Over the past fifty years there has been a profound transformation in the global economy. The fundamental engine of wealth creation has evolved from primarily industrial to mainly digital activity. This shift has led to the ascendance of intangible assets (non-physical) relative to tangible (physical) assets.

In short, intangible assets such as data, confidential information, regulatory approvals, software, brands, designs, patents, internet assets, and external relationships have at least complemented and frequently replaced machinery, raw and intermediate goods, and other physical assets as the primary drivers of margin and earnings growth.

The Unique Properties of Intangible Assets

Today, intangible assets are the most important sources of company growth and profitability, primarily due to three defining properties:

- 1 Intangible assets are fundamentally unique assets.** Unlike tangible assets, which can often be directly reproduced (e.g., the majority of plant and equipment is available to any organisation with sufficient capital), intangible assets represent those elements of an organisation that are more difficult to replicate. The logical consequence is that if tangible assets present no real competitive advantage between participants in the marketplace because of their more or less general availability (or at least the availability of substitutes or alternative sources of supply), intangible assets are frequently the discriminating factor for competitors in a marketplace. Companies with high growth and high profit (strong indicators of relative competitive advantage) are more likely to also have a strong intangible asset position.
- 2 Intangible assets – especially technology assets – are more likely to support a value proposition that transcends geographic boundaries.** Untethered to land and lacking a physical presence, intangible assets are more easily transferable to other markets and geographies in a way that physical assets, such as a

steel refinery or mineral reserve, are not. This has led to intangible assets being both a driver and a beneficiary of the macro-trend of globalisation that has occurred over the last 40 years. As just one example, offshoring of manufacturing (and consequent light-weighting of corporate balance sheets) is only made possible by the transfer of intangible assets (primarily industrial know-how from locations such as the US and Europe to lower-cost manufacturing hubs in China, Southeast Asia and South and Central America).

- 3 Intangible assets have the potential to be scaled exponentially.** Unlike physical assets, intangible assets are effectively untethered from physical constraints, enabling radically higher potential rates of growth. A physical object cannot be scaled to be one million times larger in a week but a video that goes viral on TikTok can. For example, during the period from 1970 to 2020 the key measure of output in agriculture (global agricultural production) increased by roughly 40%. Over the same period the key measure of output in semi-conductors (processing power) increased by roughly 15,000,000,000%. This one outcome alone gave rise to the digital economy, which has in turn driven the development of multiple other sectors as diverse as GPS-enabled products, smart materials, high-frequency trading, and the gig economy.

In short, there is no Moore's law equivalent for agriculture (or virtually any other tangible assets), but such capacity for exponential growth is very common in intangible assets. It is worth mentioning as a corollary of this feature of intangible assets that their marginal cost of replication is often zero or close to zero. An opera singer in 1800 incurred a material

cost in the production of their nightly performance that both limited the effective ability to scale their talent and the gross margin they could command. The marginal cost of replication of a Beatles song in the 1960s collapsed with records and dropped effectively to zero with Spotify, enabling massively greater scale and increased effective margins.

These three characteristics of intangible assets have enabled companies that have been able to harness the growth potential, transferability, and competitive differential of intangible assets to scalable business models to generate materially faster growth rates. This has led to the emergence and then dominance of companies such as Amazon (cf Walmart), Microsoft (cf IBM) and Uber (cf traditional taxi companies), as well as the development of hitherto unknown segments such as social media (Facebook and TikTok), online searching (Google) and streaming services (Spotify), which had not existed just years before.

Tracing the Impact of Intangible Assets on Financial Markets

Unsurprisingly, financial markets responded to the growth fuelled by intangible assets (capital chases growth) and rewarded companies that effectively harnessed these assets with increased capital, thus driving stock prices up. The logic behind such rewards has either been the growth itself; the anticipation of the effective monopolies such intangible assets tend to generate (network economic effects); and/or

the anticipation of superior margins or market share relative to competitors due to the ownership of such assets.

It is this phenomenon in capital markets that is the subject and analysis of this, EverEdge's inaugural report. What we have found is that the core thesis that "indices are reflecting the growth generative potential of intangible assets" holds true. However, there is a vast difference in the way that companies – and countries – are leveraging the growth potential of these valuable assets, which is reflected in the relative performances turned in by the indices we have studied over the last twenty years. More details can be found in the remainder of the report.

EverEdge works with companies, investors, and governments, helping them to identify, manage, value, and monetise intangible assets. Over more than 14 years and 2,000 client engagements, EverEdge's observations and research highlight that intangible assets are materially increasing in importance across virtually all sectors and markets.

The persistence of certain trends beyond what could have reasonably been expected beforehand, the divergences between countries, and even the idiosyncrasies within sectors, can allow insights to be drawn and actions taken. By openly providing this framework and sharing its conclusions, EverEdge hopes to increase transparency and enrich the debate around recognising, mitigating risk, valuing, and commercialising intangible assets.

EverEdge Intangible Benchmark Index (EIBI) & Methodology

EverEdge has released its inaugural EverEdge Intangible Benchmark Index (EIBI). In designing the index, EverEdge has built on its experience in working with several thousand company owners, executives, and investors to understand the impact of intangible assets on business value. This analysis benchmarks the evolution of intangible assets as drivers of company value for the underlying Global Industry Classification Standard (GICS) sectors within major stock indices.

To date, existing research has focused on the rise of intangible assets as a proportion of market capitalisation. However, focusing solely on intangible assets as a proportion of market capitalisation risks conflating operating performance and financing choices.

For instance, a large US airline currently has intangible assets amounting to 200% of market capitalisation. This is counterintuitive since an airline clearly has tangible assets. At an aggregate level this means that, in principle, an index could have an intangible asset to market ratio exceeding 100%.

To neutralise the effect of financing choices, EverEdge has deliberately expressed intangible assets as a proportion of a company's enterprise value instead of Market Capitalisation. Enterprise value provides a more accurate measure of the capital required for any business because it includes the debt the company takes on to finance its activities.

Expressing intangible assets as a proportion of enterprise value yields a lower and slower-moving number than if it was compared to equity. However, it is a more robust expression of the importance of intangible assets for company valuations and deliberately and perceptibly neutralises the effect of financing choices. **Overall, it allows for better analysis of a company's strategic position and management's build-up of intangible assets.**

Focusing solely on intangible assets as a proportion of market capitalisation risks conflating operating performance and financing choices.

Benchmarking Global Indices

EverEdge’s research looks at four financial indices over an approximately 20-year span. The research demonstrates a persistent trend towards an increase in intangible assets as a function of enterprise value across most leading equity indices.

Tracking intangible assets as a proportion of enterprise value for the S&P 500 establishes a baseline for the analysis of indices in the Asia-Pacific countries where EverEdge currently conducts most of its business: Singapore, Australia, New Zealand, and the United States.

The S&P 500 has seen the steady growth of intangible assets as a percentage of enterprise value. This trend was only temporarily halted by the bursting of the technology and housing bubbles in the early 2000s.

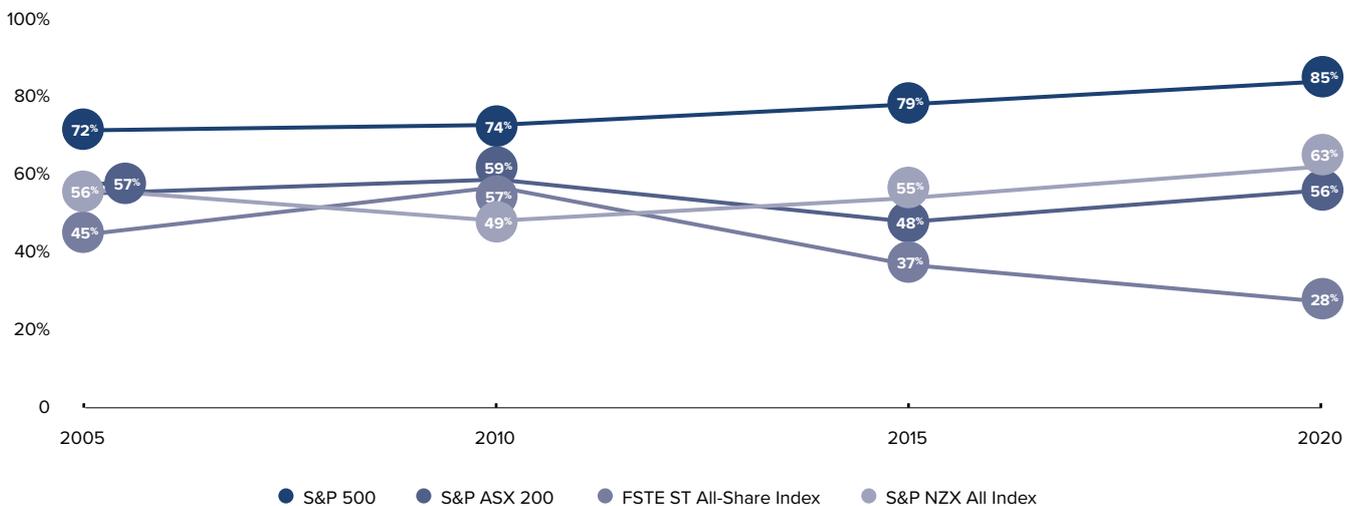
Because it is the largest, most liquid, and diversified index, the S&P 500 continues to be the flagship equity benchmark for many investors.

In the case of New Zealand and Australia, analysis of the S&P NZX All Index and the S&P ASX 200 shows more fluctuations in the proportion of intangible assets over the previous 15 years. However, both markets have seen an 8-percentage point increase in the proportion of intangible assets over the past five years, largely due to the relative derating of the energy sector and the vagaries of the mining/resources sector. Fluctuations in these smaller markets may be seen as a consequence of the influence

of different sectors on the overall (small) market, with different sectors having different ratios of intangible assets. In short, in smaller markets with a lower number of stocks the relative fluctuations of sectors can be more volatile than in a larger, more diversified index such as the S&P500.

In the Singapore market the FTSE ST All Share Index has seen a significant decline in intangible assets as a proportion of enterprise value over the past decade, due in part to a change in the mix of companies listed in Singapore and a substantial number of de-listings over the period. This relative absence tells its own story: in Singapore, with its dominance by offshore domiciled multi-national companies, the relatively few indigenous intangible asset-rich companies have typically been identified as having high growth potential by private equity firms and have tended to remain private. Alternatively, those Singaporean companies that do seek to list, do so in markets (such as the US) that demonstrate a more visible preference for intangible asset-rich companies. In short, if you have a high-growth company (fuelled by intangible assets) in Singapore, your investors will encourage you to list in the US to maximise returns. The result is a market dominated by sectors that do not have the same intangible asset ratios as those in the US S&P 500. The US S&P 500 companies represent the greatest diversity of sectors, with the Australian, Singapore and New Zealand indices being considered in our analysis as more vulnerable to influence by local factors.

Intangible Asset Enterprise Value Trend 2005 – 2020



1. The US, Australia and New Zealand markets saw an accelerating growth in the share of intangible assets.
2. In Singapore, the share of Intangibles declined because of a change in the mix of companies and net de-listings.

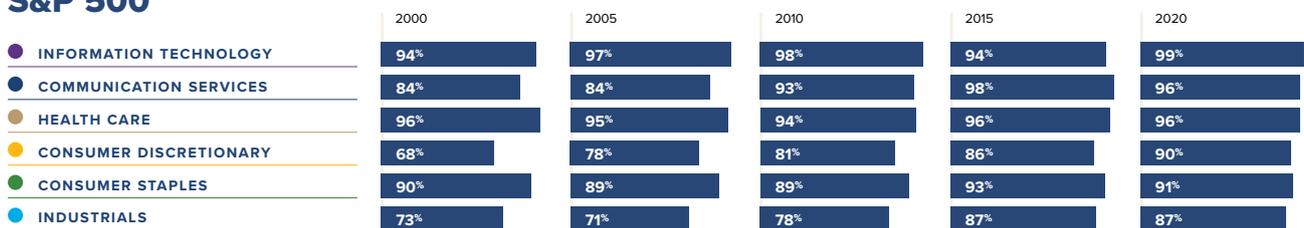
Benchmarking Global Indices by Sector

Analysing these indices at a sector level, the shift towards intangible assets over the last 20-years has been profound and has occurred in two dimensions:

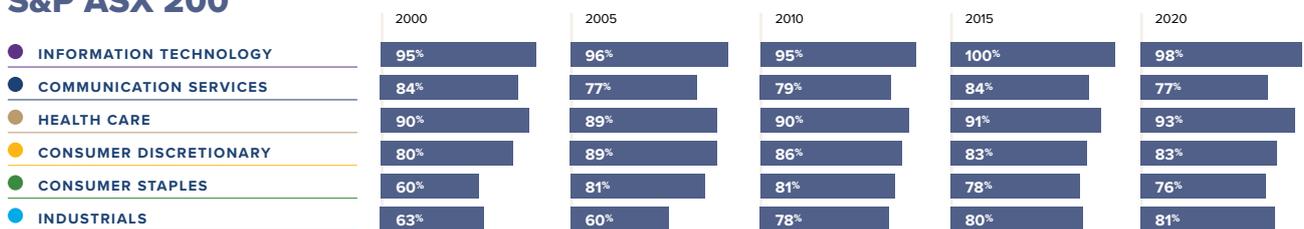
- Within sectors, the share of intangibles as a proportion of enterprise value has been increasing in most sectors, reflecting the shifting characteristics of businesses. In some sectors, such as Information Technology, it has nearly reached its theoretical maximum of 100%.
- Within markets, the persistent outperformance of sectors with high intangible assets has led to a shift in the composition of the indices, driving up the aggregate proportion of intangible assets as a proportion of enterprise value.

Intangible Assets Index Analysis by Sector 2000 – 2020

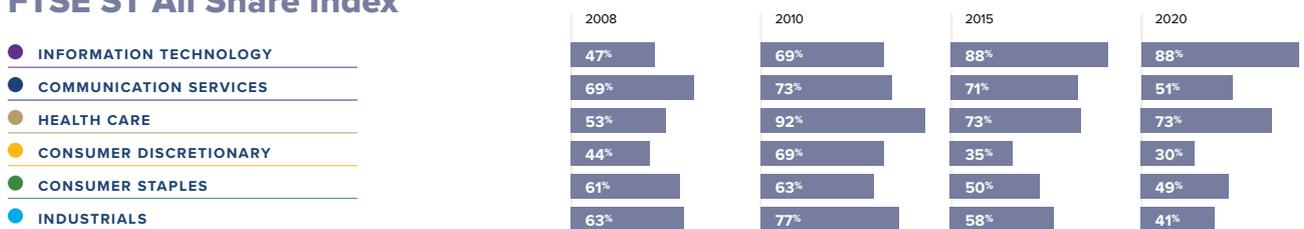
S&P 500



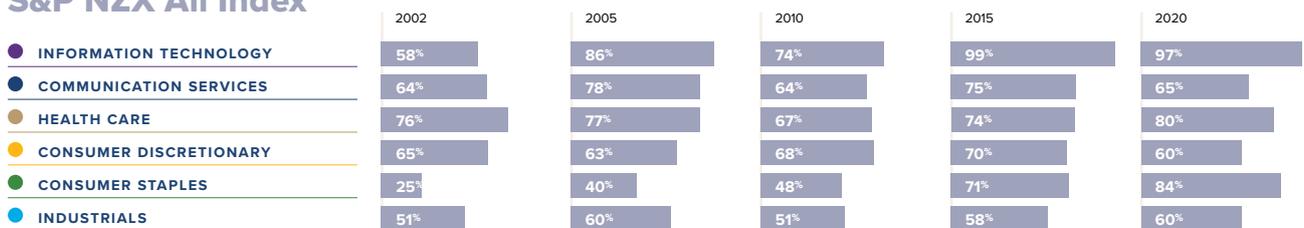
S&P ASX 200



FTSE ST All Share Index



S&P NZX All Index



See Appendices on page 18 and 19 for the full data tables.

1. Some sectors (e.g. IT) are reaching the theoretical maximum where 100% of enterprise value consists of intangible assets.
2. The level of intangible assets is mostly explained by particularities of each market.

SECTION ONE

S&P 500

EverEdge Intangible Benchmark Index

The Standard and Poor's 500 is a capitalisation-weighted measurement stock market index of 500 of the largest companies listed on stock exchanges in the United States. It is considered the bellwether of US equities.

The S&P 500 has the highest proportion of intangible assets relative to enterprise value. This reflects the willingness of capital in this market to ascribe value to such assets. The reasons that capital has been willing to do so have been discussed earlier and include:

- the higher growth rates of intangible asset companies; and/or
- the anticipation of the effective monopolies such intangible assets tend to generate (network economic effects); and/or
- the anticipation of superior margins or market share relative to competitors due to the ownership of such assets.

This attractiveness extends to US capital markets beyond just the S&P 500 index.

The recognition given to intangible assets attracts other companies with high intangible asset content. This has led to an accelerating number of listings of intangible asset-rich companies on US exchanges relative to other exchanges.

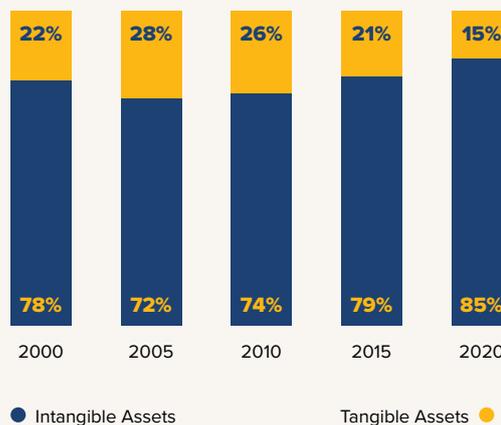
It is this combination of a willing supply of capital pursuing intangible assets in the S&P 500, and the desire of suitable companies to pursue that capital, which confers a persistent competitive advantage on those exchanges.

This competitive advantage of US equity markets is further enhanced by the ability of intangible asset-rich companies to crystallise value across geographic boundaries and be less bound by local conditions and knowledge.

As can be seen in Figure 1.1, following the deflation of the Technology, Media, and Telecommunications (TMT) bubble in the mid-to-late 1990s, there was a slight reduction in the proportion of intangible assets relative to enterprise value. This dip lasted until 2005, at which time the growing impact of intangible assets resumed its upward march and accelerated between 2015 and 2020, against a backdrop of good overall market performance. This resulted in intangible assets outgrowing an already appreciating market.

1.1 S&P 500

Intangible Asset Enterprise Value Trend 2000 – 2020



1. The backlash from the 2000 TMT bubble can be seen lasting until 2005.
2. The growth of intangible assets as a proportion of enterprise value accelerated in the 2015-2020 period.

THE S&P 500 HAS THE HIGHEST PROPORTION OF INTANGIBLE ASSETS RELATIVE TO ENTERPRISE VALUE.

S&P 500 EverEdge Intangible Benchmark Index by Sector

This evolution to a more knowledge-based economy is also reflected in the mix of industries and companies now making up the S&P 500. The companies that dominate this index have changed significantly over the past 60 years.

A review of the market shows growth in intangible assets as a function of enterprise value across all sectors. Today, more than 85% of enterprise value for companies in the S&P 500 is driven by intangible assets, with companies like Facebook, Apple, Alphabet, Microsoft, and Amazon (where tangible assets now only reflect a tiny portion of total assets), dominating the market.

Information Technology (99% intangible assets as a percentage of enterprise value in 2020 vs 94% in 2000) has led the way with its growth in intangible assets being recognised by the market early. It has continued its strong showing with little further room to grow as it reaches its theoretical maximum of 100%.

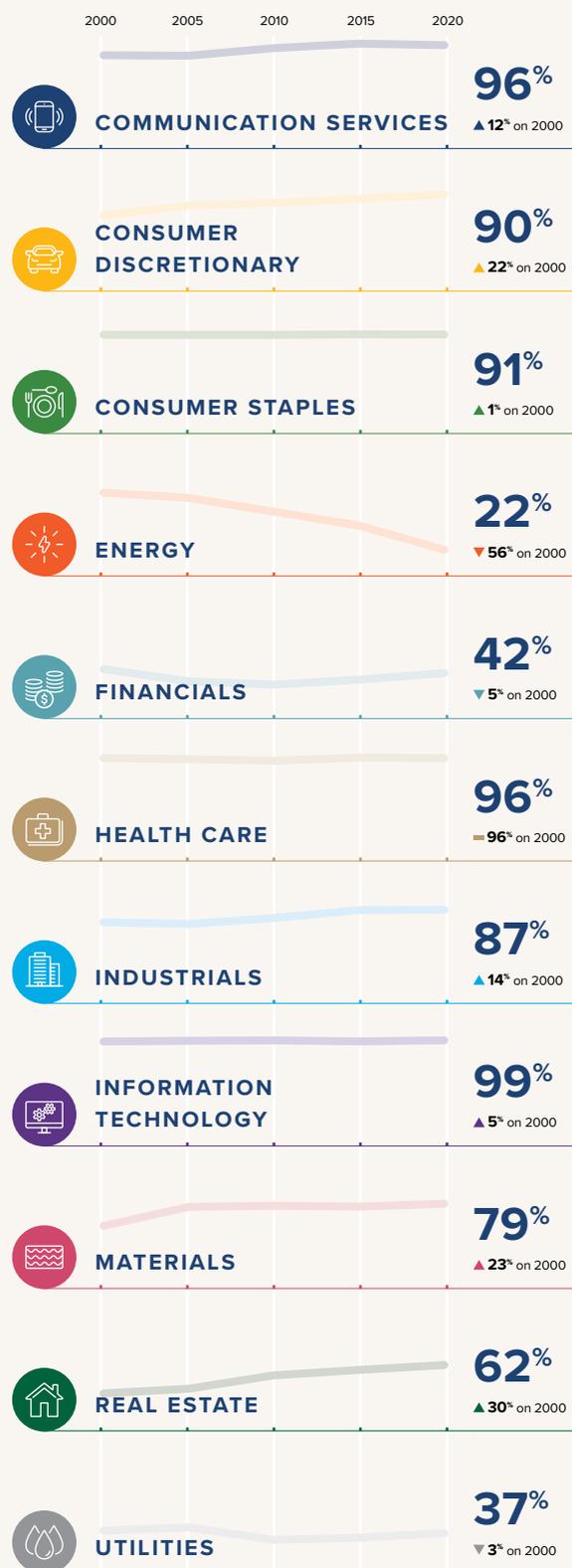
Likewise, the Health Care (96% in 2020 vs 96% in 2000) and Communication Services (96% in 2020 vs 84% in 2000) sectors continue to perform well, and are close to reaching their theoretical maximum of 100%.

The growing dominance of intangible assets is also reflected in the Consumer Discretionary (90% in 2020 vs 68% in 2000), Materials (79% in 2020 vs 56% in 2000), and Industrials sectors (87% in 2020 vs 73% in 2000), which all saw significant rises in the proportion of intangible assets, reflecting widespread innovation and pricing power. While these sectors were lagging at the commencement of the study period, they now demonstrate how innovative technologies and strong brands (high value intangible assets) can attract capital and/or attributes such as growth or de facto monopolies that capital values.

Of 11 sectors, only Utilities (37% in 2020 vs 40% in 2000) and Financials (42% in 2020 vs 47% in 2000) stagnated, which can be attributed to the specific characteristics of these industries (regulated capital and structural leverage respectively).

While most sectors saw an increase in the proportion of intangible assets, the Energy sector’s intangible assets tumbled from 78% in 2000 to 22% in 2022 of enterprise value as prospective returns for those companies were compressed by structurally higher costs. However, as other sectors flourished, this had little effect on the overall benchmark.

1.2 S&P 500 Intangible Asset Analysis by Sector 2000 – 2020



See Appendix on page 18 for the full data table.

1. Most sectors are converging to very high levels of intangible assets as a proportion of enterprise value.
2. Some sectors stagnated (Utilities, Financials) because of their specific characteristics.

SECTION TWO

S&P ASX 200

EverEdge Intangible Benchmark Index

The S&P ASX 200 index measures the performance of the 200 largest index-eligible stocks listed on the Australian Securities Exchange (ASX) by float-adjusted market capitalisation. The index is considered the benchmark for the Australian equity market.

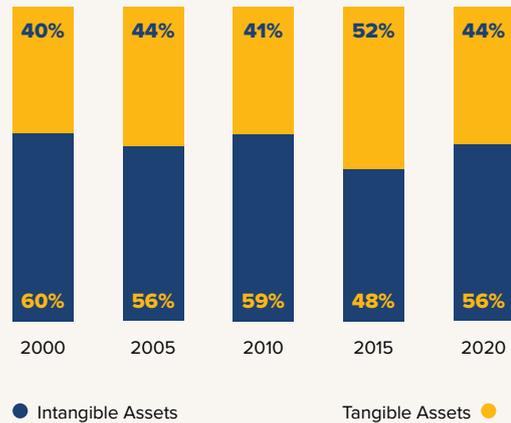
The proportion of intangible assets to enterprise value within the ASX-listed companies remained relatively consistent over the study period from 2000 to 2020. While there has been some variability from year to year, there has been little overall change across the two decades.

This lack of growth in the intangible asset ratio compared with the US markets is largely explained in the sector analysis below. However, as with other smaller markets discussed in this report, this may also reflect some preference by intangible asset-rich companies to seek capital in the US marketplace. The higher relative recognition of such assets in the US market and greater volumes of capital directed to such companies not only encourages listings into the US market but may also fuel acquisition by US entities who are able to source such capital directly from the US at lower cost than Australian entities.

WHILE THERE HAS BEEN SOME VARIABILITY FROM YEAR TO YEAR, THERE HAS BEEN LITTLE OVERALL CHANGE ACROSS THE TWO DECADES.

2.1 S&P ASX 200

Intangible Asset Enterprise Value Trend 2000 – 2020



1. Proportion of intangible assets in ASX hovered around 50-60% during the 2000-2020 period with the exception of 2015.

S&P ASX 200 EverEdge Intangible Benchmark Index by Sector

Most sectors in Australia have included a high intangible asset content, on par with the US, since 2005.

However, the high weighting of Financials, Materials and Infrastructure companies in Australia has kept the overall percentage of intangible assets as a proportion of enterprise value at a stable 60% since 2000.

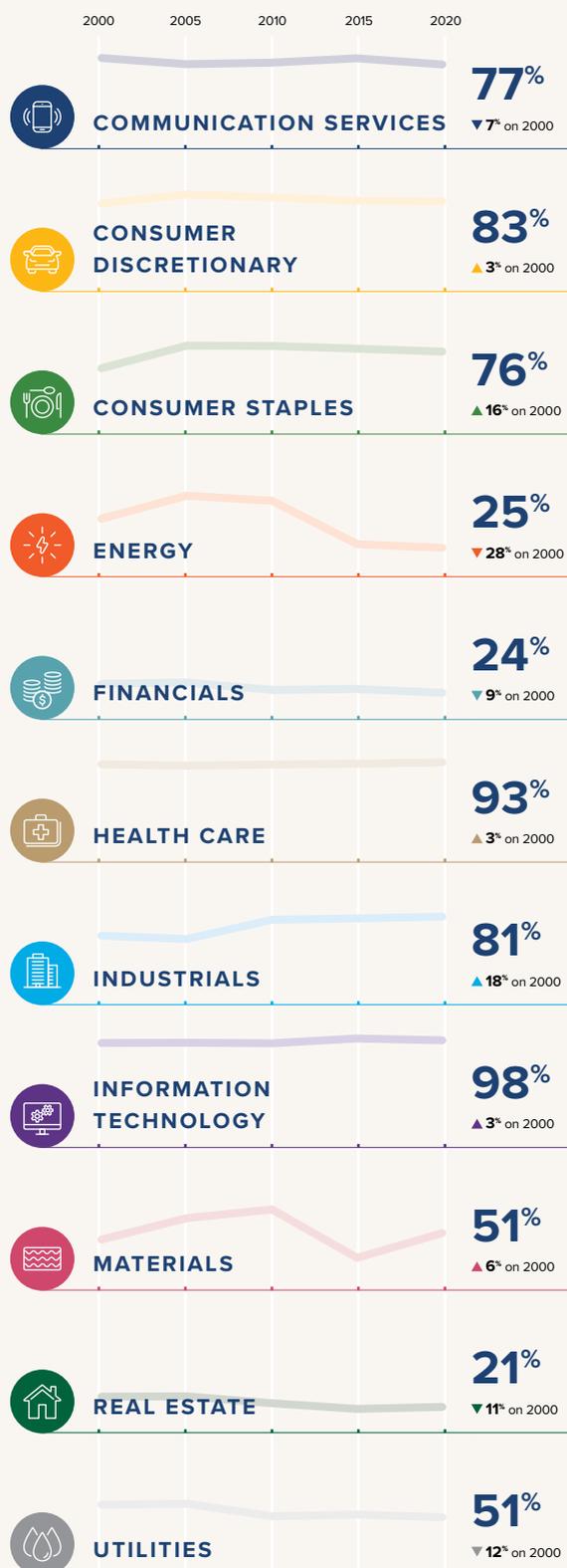
Much of the change has been due to the vagaries of the valuation of the Energy and Materials sectors in Australia. With the downward reappraisal of their values in 2015 (relative to 2010) these partly outweighed the increase in the market capitalisation of intangible asset-rich stocks, such as CSL (Health Care), which has increased by an order of magnitude since 2011 and is now the third largest stock in Australia.

The sectors with the lowest levels of intangible assets during this period were Energy (25% in 2020 vs 53% in 2000), Financials (24% in 2020 vs 33% in 2000), and Real Estate (21% in 2020 vs 32% in 2000).

The volatility of the intangible asset content of the overall index across the study period is more a function of the changing mix and dominance of sectors within the index than a reflection of the performance of the sectors themselves. Ultimately, the drastic fall in the proportion of intangible assets in the Energy (29% in 2015 vs 69% in 2010) and Materials (28% in 2015 vs 73% in 2010) sectors in 2015 pulled down the overall intangible assets proportion in the Australian market (48% in 2015 vs 59% in 2010).

From 2015 to 2020, the market saw an 8-percentage point increase in the proportion of intangible assets, largely due to the relative derating of the energy sector and the vagaries of the mining/resources sector.

2.2 S&P ASX 200 Intangible Asset Analysis by Sector 2000 – 2020



See Appendix on page 18 for the full data table.

1. Health Care and Information Technology sectors consistently topped the intangible assets composition ranking.
2. Financials and Real Estate sectors had the lowest intangible assets due to the nature of the businesses.

SECTION THREE

FTSE ST All Share Index

EverEdge Intangible Benchmark Index

Singapore's FTSE ST All Share Index is a market capitalisation weighted index that includes 98% of the aggregate market capitalisation of all companies listed on the Singapore Stock Exchange (SGX).

The proportion of intangible assets as a percentage of enterprise value decreased from 57% in 2010 to 28% in 2020, largely because of the shift in overall market composition and relative weightings of the sectors as a result of a flow of listings out of Singapore.

This fall is less a reflection of Singapore's business environment than of the SGX's ability to attract and retain listings and capital. Many growth companies in Singapore have been swept up by private equity without listing or have sought listing on indices (in particular in the US) that are more attractive due to their high propensity to recognise and reward growth.

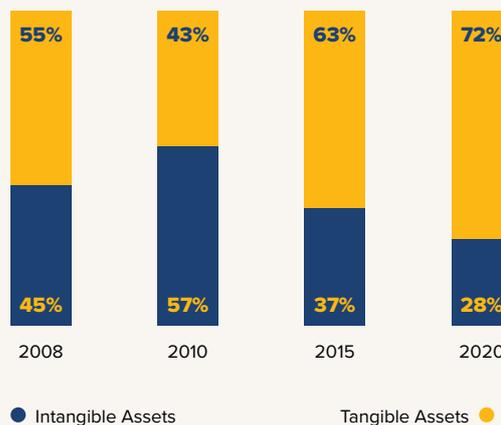
The result is that the SGX has witnessed a drastic decrease in the number of listings on the exchange since 2008. This has in turn increased the overall weighting of low intangible asset sectors such as Real Estate and Financials.

Even a single listing of an intangible asset-rich company can significantly alter the intangible asset content of the Singapore market. An example of this can be seen by considering the impact SEA Holdings would have if it were listed in Singapore. Despite having its operations based in Singapore, it is currently listed on the Nasdaq. Based on SEA Holdings' current value, this one stock alone would account for 20% of the narrower Straits Times Index benchmark. If SEA Holdings were listed in Singapore the overall intangible asset proportion of the enterprise value for the entire Straits Times index would rise from 36% to 49%.

As with the Australian index, not only is there a preference to list in the US, where there is a recognition of the higher value of intangible assets; in addition, larger US companies with access to cheaper capital tend to acquire smaller Singaporean companies. It is interesting to note that the press releases announcing such acquisitions frequently explicitly mention that the acquisition has been at least in part to gain access to innovative (read intangible asset-rich) companies. These companies own intangible assets the new American parent can transfer and scale in the US or other larger markets (a reflection again of the transferability and scalability of intangible assets).

3.1 FTSE ST All Share Index

Intangible Asset Enterprise Value Trend 2008 – 2020



1. Overall proportion of intangible assets declined in 2015 and 2020 as a result of decrease in intangible assets in most sectors in Singapore.

EVEN A SINGLE LISTING OF AN INTANGIBLE ASSET-RICH COMPANY CAN SIGNIFICANTLY ALTER THE INTANGIBLE ASSET CONTENT OF THE SINGAPORE MARKET.

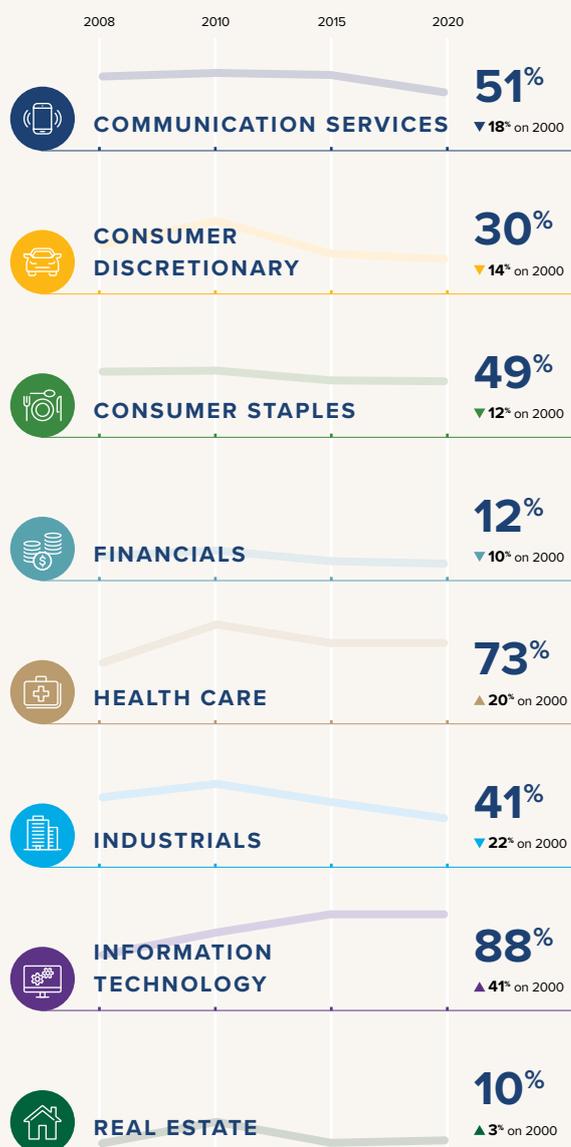
FTSE ST All Share Index EverEdge Intangible Benchmark Index by Sector

Following the 2007 Global Financial Crisis, all sectors saw an increase in the proportion of intangible assets within SGX-listed companies' enterprise values during the 2008-2010 period. This was particularly the case in the Health Care (92% in 2010 vs 53% in 2008) and Consumer Discretionary (69% in 2010 vs 44% in 2008) sectors. Subsequently, between 2010 to 2020, all sectors saw a decrease in the proportion of intangible assets (except for the Information Technology sector).

The intensity of intangible asset composition also shifted during this period. The Health Care sector topped the ranking in 2010 at 92%, while the Information Technology sector topped the 2015 and 2020 rankings at 88%. This intangible asset content is lower in Singapore than in other countries. As discussed earlier, this could be a function of the most intangible asset-rich companies choosing other venues to list in or being privately held.

Whilst intangible assets' contribution to enterprise value peaked in 2010, the outflow of intangible assets-dominant companies in sectors such as Information Technology, Health Care, and Industrials to other countries' exchanges through choice of listing or acquisition by companies on such exchanges, has eroded the overall proportion of intangible assets in the index.

3.2 FTSE ST All Share Index Intangible Asset Analysis by Sector 2008 – 2020



See Appendix on page 19 for the full data table.

* Energy, Materials and Utilities sectors have been removed due to a lack of sample size.

1. Systematic increase in proportion of intangible assets in the Information Technology sector between 2008 and 2020.
2. A fall in intangible assets composition was seen in numerous sectors between 2010 and 2020.

SECTION FOUR

S&P NZX All Index

EverEdge Intangible Benchmark Index

The S&P NZX All Index comprises all eligible securities quoted on the NZX Main Board (NZSX). The index is considered the overall market indicator for the New Zealand equity market. An analysis was performed on the intangible assets as a percentage of enterprise value from the inception of the index in 2002.

The S&P NZX All Index has shown a consistent rise in intangible asset value as a function of enterprise value over the last decade. From a low base, all sectors exhibited a consistent rise in the ratio throughout the period of the study.

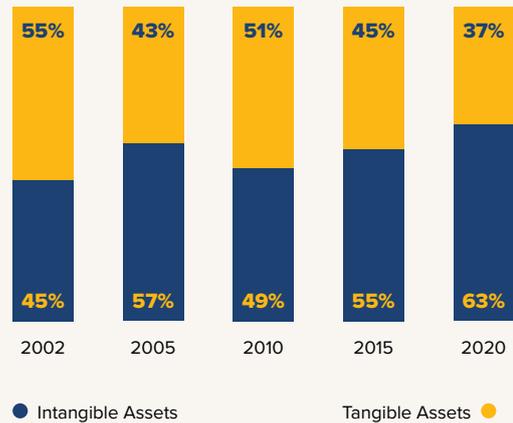
There was a noticeable tail effect from the 2007 global financial crisis that continued to affect the weighting in 2010. The timing of this recognition lagged some of the other markets; however, the consistent rise shows that at least a limited pool of capital within the market has pursued intangible asset-rich companies.

Compared to other indices in this study, the S&P NZX All Index's level in the contribution of intangible assets to enterprise value has risen to new highs on the back of growth in Health Care, led predominantly Fisher & Paykel Healthcare, and Utilities sectors, led by growth achieved by Meridian Energy and Mercury New Zealand.

THE S&P NZX ALL INDEX HAS SHOWN A CONSISTENT RISE IN INTANGIBLE ASSET VALUE AS A FUNCTION OF ENTERPRISE VALUE OVER THE LAST DECADE.

4.1 S&P NZX All Index

Intangible Asset Enterprise Value Trend 2000 – 2020



- 2010 shows the continued impact of the GFC as the share of IAs is compressed.
- The trend increase is mostly attributable to Consumer staples and Utilities.

S&P NZX All Index EverEdge Intangible Benchmark Index by Sector

The composition of intangible assets within NZX-listed companies' enterprise values has become more prominent in all sectors with the exception of the Consumer Discretionary (65% in 2002 to 60% in 2020) sector.

Comparing the S&P NZX All Share Index to other indices, the Utilities and Industrial sectors combined have grown from 28% in 2002 to over 44% of the total enterprise value of the index in 2020, with the percentage of intangibles in the Utilities sector reaching 58% in 2020 (up from 14% in 2002). We believe that this performance in a sector with a typically low intangible asset content can be attributed to New Zealand investors chasing the high dividend yields offered by the energy-producing companies in a jurisdiction with a relative absence of other investment opportunities.

Due to the narrowness of the NZX All Share Index, the index is susceptible to rapid and dramatic change.

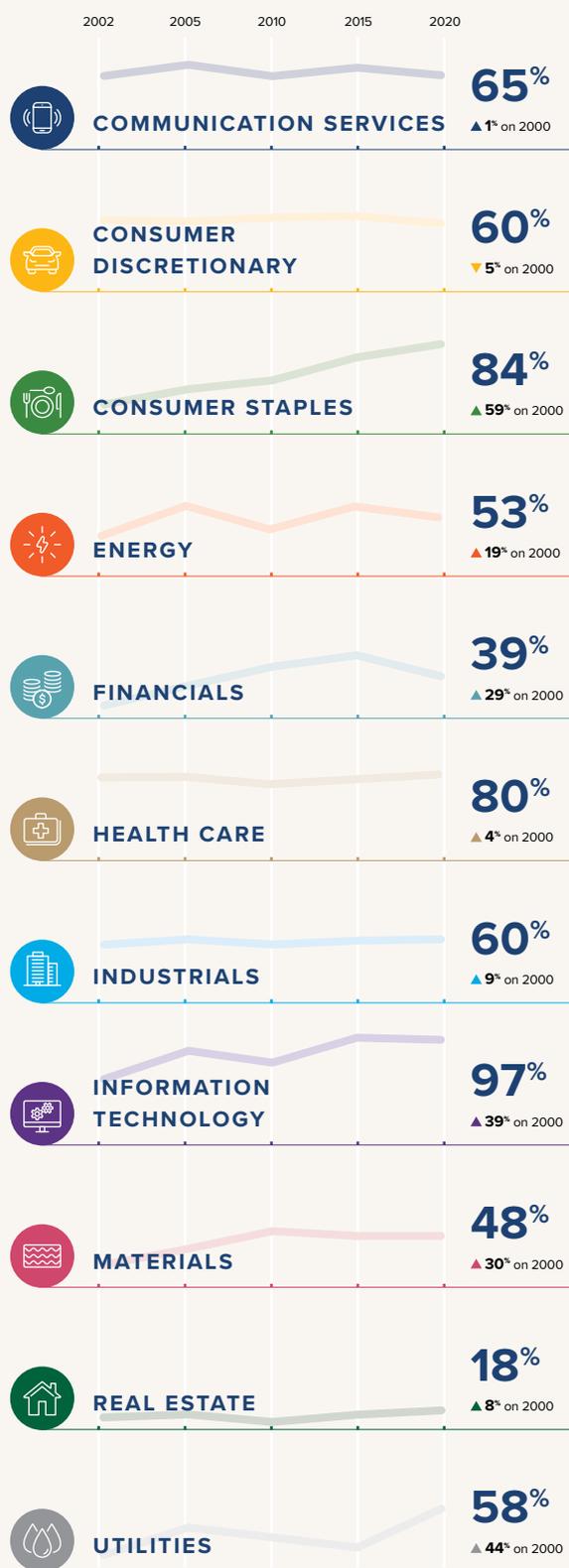
The sector with the highest intangible assets as a percentage of enterprise value is Information Technology, which has shown a steady rise (97% in 2020 vs 58% in 2002). This is despite online accounting business Xero decamping to the ASX Board in 2015. It reflects the available capital moving to pursue other growth opportunities in a narrow pool sector, such as Pushpay.

Other high-performing sectors include Consumer Staples (84% in 2020 vs 25% in 2002), predominantly as a result of the performance of A2 Milk (itself clearly an intangible asset-rich company based primarily around brand and patents), and Health Care (80% in 2020 vs 76% in 2002), as a result of Fisher & Paykel Healthcare, but the reliance on a small number of intangible asset-rich companies to drive the index highlights the potential for volatility. However, the market has exhibited a willingness to continue to support high-growth companies.

While factors affecting other smaller markets, such as decisions to list elsewhere or acquisition by entities in other markets, also affect the performance of the New Zealand exchange, the market clearly has a (limited) pool of capital directed to intangible asset-rich companies, capable of keeping some of these companies on shore at least for a period.

This highlights that these and other companies that focus on building, leveraging, and protecting their intangible assets, along with articulating their value to consumers and investors alike, are increasingly rewarded with disproportionate growth in investor capital allocation.

4.2 S&P NZX All Index Intangible Asset Analysis by Sector 2002 – 2020



See Appendix on page 19 for the full data table.

1. The performance of the Information Technology and Healthcare Sectors has been driven largely by select intangible asset-rich companies.
2. Consumer staples saw the sharpest rise in intangible assets over the period, from 25% to 84% of enterprise value.

Conclusion

Analysis of the evolution of equity indices in the United States, Australia, New Zealand, and Singapore provides some findings that are highly relevant to investors and company management teams alike:

- Changes in the indices mirror the changes in the real economy. As the industrial economy has given way to the digital economy, intangible assets have become increasingly prevalent and more important.
- Within industries, companies with higher intangible assets have persistently performed better, pulling up the intangible asset content.
- Within indices, stocks in sectors with high levels of intangible assets have generally outperformed those with low levels of intangible assets. This has left some jurisdictions with few companies listed, and/or with a narrow sector diversification. Across markets, the recognition and capital magnetism of intangible assets is strongest in the United States. Hence the US market has tended to attract listings from companies with high growth projections (and high ratios of intangible assets).
- United States companies have generally been net acquirers of companies in the other markets studied, due to the greater availability and lower cost of capital US companies enjoy (at least in part because of the greater recognition of the growth and performance potential of intangible asset-rich companies) leading to a relative loss of these companies from smaller exchanges where the impact of their intangible assets is less appreciated.
- The attraction of US listings to intangible asset-rich companies and the acquisition by US companies of offshore companies also highlights the transferability and scalability of intangible assets. Innovative technologies or brands developed in one market can be readily deployed into another (often larger) market (leveraging

the acquirer's own intangible assets (such as in market distribution) to drive outsized returns for the acquirer.

- These factors have all led to a divergence in the value within the individual markets of high-growth, intangible asset-rich companies from the growth of those marketplaces themselves.

The overall lesson for both investors and management teams is that over the twenty years of the study, capital has (consciously or unconsciously) actively and disproportionately rewarded intangible asset-rich companies. It has done so because, other things being equal, companies that can harness the inherent scalability, transferability, and differentiation of intangible assets to sound, scalable business models will generate outsized performance.

The broad finding of this analysis corroborates what EverEdge has observed in its own 2,000+ engagements over the last 14 years. Companies that comprehensively identify their intangible assets and deploy them via scalable business models not only perform better but are better able to articulate those assets to external investors. Consequently, they attract more capital and ultimately are valued more and thereby perform their ultimate function of increasing shareholder value.

EverEdge has been in a privileged position to help companies – from start-ups to large, listed champions – systematically develop and monetise their intangible assets and to assist investors who view their investments through an entirely investment lens: that of intangible assets.

Intangible assets have emerged as the indispensable link between companies and capital market investors. Our hope with this research to establish a framework that allows both constituencies to “speak the same language” when contemplating strategic choices and investments.

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Final thoughts:

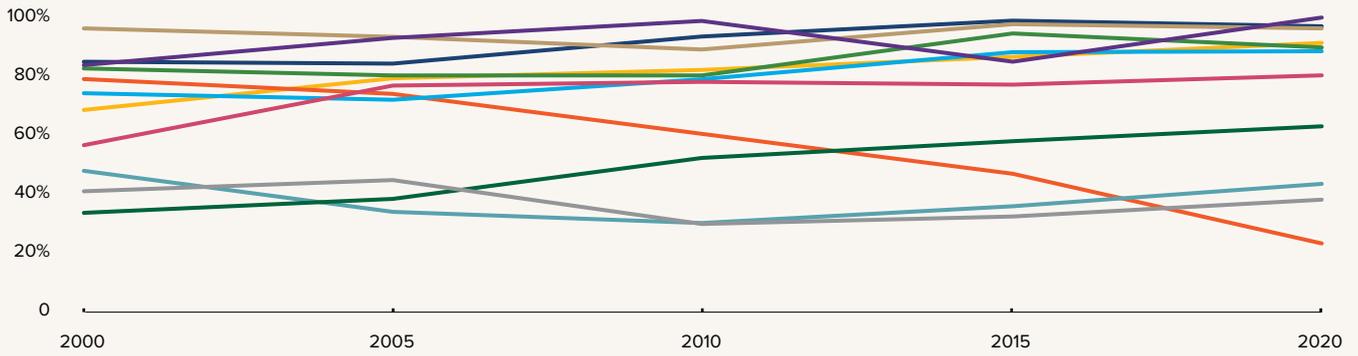
The Evolving Role of Management

The claim that intangible assets are the primary driver of corporate value today is a bold, but we believe defensible, assertion. The asset universe can be divided into three main categories: i. tangible assets (such as real estate and plant and equipment); ii. financial assets (such as currency, stocks, bonds, and derivatives of these assets); and iii. intangible assets. We believe we have made the case that in the last half century tangible assets have largely (but not entirely) surrendered their primary role as growth engines to intangible assets. Likewise, financial assets, although certainly critical, are fundamentally fungible and in a world awash with capital it is difficult to argue that access to capital alone is the primary driver of value creation. The logical conclusion is thus that intangible assets are dominant.

However, there is one other business element that could reasonably be argued to have a greater impact on corporate value creation than intangible assets: management. By definition, “management” is not an asset per se, but it does impact business performance and should therefore be considered alongside intangible assets. While management (including all aspects of leadership, culture and the capability and capacity of a management cohort) will exert tremendous influence on the success or failure of a given entity, we believe that ultimately this impact is trumped by the impact of intangible assets for two reasons:

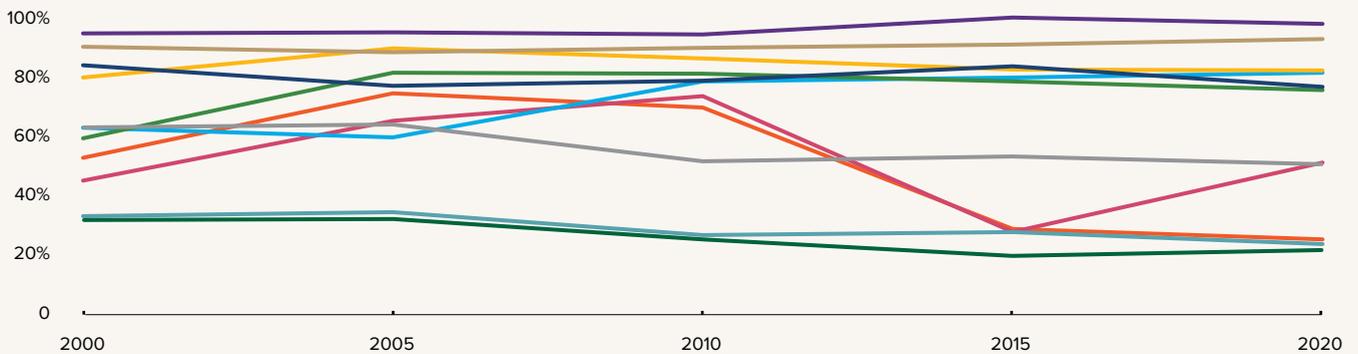
- 1. In many cases the fundamental function and indeed output of management is precisely to generate intangible assets.** Smart companies employ smart people to create smart things (brands, software, patents, designs, and data). Obviously if a company could acquire these intangible assets without reference to their creators it would, as this would deliver high-value assets to the company for low or zero cost. So, while not all things that management “does” results in the creation of intangible assets (culture and leadership are not intangible assets), a certain portion of the output of management is directed precisely at the creation of these assets so that they can be exploited. This is not to say we recommend companies should aim to have no staff and nothing but intangible assets, because until Artificial Intelligence matures, such staff are still the generators of the intangible assets – the “means of production” that modern companies use to drive their growth. For the moment at least, humans are safe.
- 2. While both high-quality management and intangible assets are critical to business success, ultimately intangible assets are more important.** If you have an exceptional management team but they are provided with poor quality intangible assets (a poor brand, inventions that infringe competitor’s patents, or inadequate software) they will struggle to survive, let alone generate above-average growth rates. On the other hand, a poor management team armed with exceptional intangible assets (the Beatles’ back catalogue or LVMH’s brand portfolio) may still be able to generate superior returns even via simple licensing deals. Clearly, it is not desirable to such an “either or” scenario and in reality, generally strong management teams will generate and attract strong intangible assets.

1.2 S&P 500 Intangible Asset Analysis by Sector 2000 – 2020



SECTOR	2000	2005	2010	2015	2020
Communication Services	84%	84%	93%	98%	96%
Consumer Discretionary	68%	78%	81%	86%	90%
Consumer Staples	90%	89%	89%	93%	91%
Energy	78%	73%	59%	46%	22%
Financials	47%	33%	29%	35%	42%
Health Care	96%	95%	94%	96%	96%
Industrials	73%	71%	78%	87%	87%
Information Technology	94%	97%	98%	94%	99%
Materials	56%	76%	77%	76%	79%
Real Estate	32%	37%	51%	57%	62%
Utilities	40%	44%	29%	31%	37%

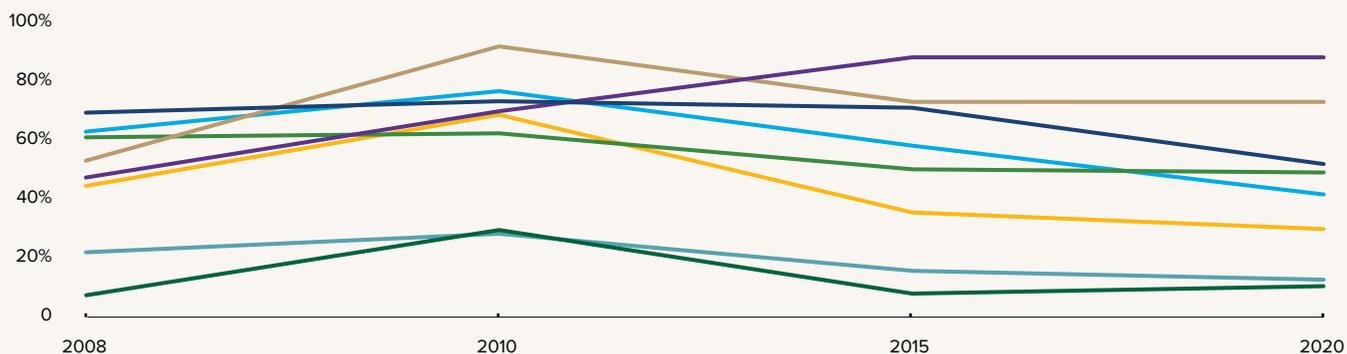
2.2 S&P ASX 200 Intangible Asset Analysis by Sector 2000 – 2020



SECTOR	2000	2005	2010	2015	2020
Communication Services	84%	77%	79%	84%	77%
Consumer Discretionary	80%	89%	86%	83%	83%
Consumer Staples	60%	81%	81%	78%	76%
Energy	53%	74%	69%	29%	25%
Financials	33%	34%	27%	28%	24%
Health Care	90%	89%	90%	91%	93%
Industrials	63%	60%	78%	80%	81%
Information Technology	95%	96%	95%	100%	98%
Materials	45%	65%	73%	28%	51%
Real Estate	32%	32%	25%	20%	21%
Utilities	63%	64%	52%	53%	51%

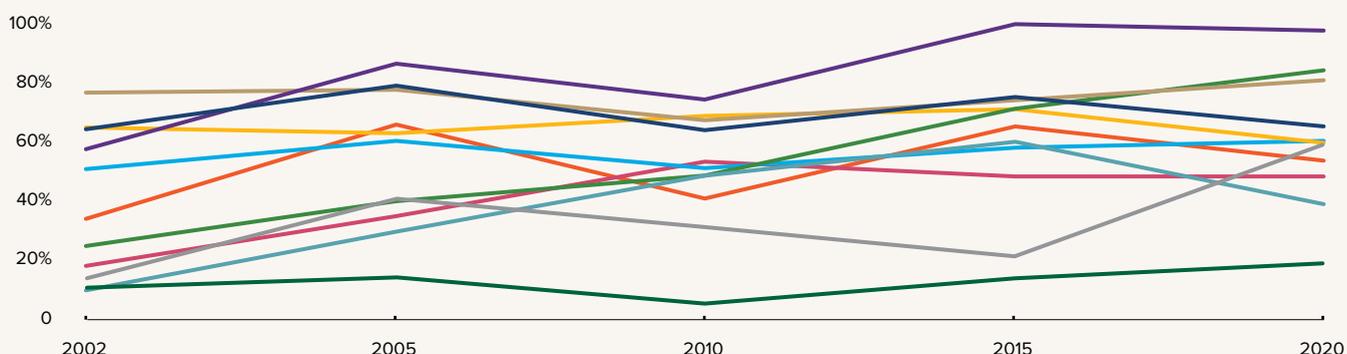
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3.2 FTSE ST All Share Index Intangible Asset Analysis by Sector 2008 – 2020



SECTOR	2008	2010	2015	2020
● Communication Services	69%	73%	71%	51%
● Consumer Discretionary	44%	69%	35%	30%
● Consumer Staples	61%	63%	50%	49%
● Financials	22%	29%	16%	12%
● Health Care	53%	92%	73%	73%
● Industrials	63%	77%	58%	41%
● Information Technology	47%	69%	88%	88%
● Real Estate	7%	30%	8%	10%

4.2 S&P NZX All Index Intangible Asset Analysis by Sector 2002 – 2020



SECTOR	2002	2005	2010	2015	2020
● Communication Services	64%	78%	64%	75%	65%
● Consumer Discretionary	65%	63%	68%	70%	60%
● Consumer Staples	25%	40%	48%	71%	84%
● Energy	34%	65%	41%	65%	53%
● Financials	10%	29%	48%	60%	39%
● Health Care	76%	77%	67%	74%	80%
● Industrials	51%	60%	51%	58%	60%
● Information Technology	58%	86%	74%	99%	97%
● Materials	18%	35%	53%	48%	48%
● Real Estate	10%	14%	5%	13%	18%
● Utilities	14%	40%	31%	21%	58%

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About EverEdge Global

EverEdge Global is a global intangible asset advisory, valuation, and transaction specialist. Intangible assets such as data, content, software, brands, confidential information, patents, trademarks, internet assets, and designs are the most important assets companies today own.

However, these assets are frequently under-reported on company balance sheets, creating or hiding major risks and opportunities. This is a significant problem for management, boards, and investors, because intangible assets can represent up to 85% of all company value and are the primary drivers of company performance today. EverEdge fixes this problem: we identify, strategize, value, and monetise these assets and reduce intangible asset risk.

Founded in 2007, EverEdge was the first company to specialise in consulting on intangible assets. Its track record of more than 2,000+ completed client engagements spans the full spectrum of business sizes, stages, and industries: from Fortune 100 corporations to major investors, national governments, research institutes and ambitious start-ups. Serving clients across the United States, Europe, Asia, and Australasia, EverEdge provides international reach and deep technical and commercial experience around the globe.

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