Thought Leadership Studio

COLUMBIA THREADNEEDLE INVESTMENTS

GRASPING THE INTANGIBLE

HOW INTANGIBLE ASSETS REVEAL LATENT VALUE



INTRODUCTION

It has long been accepted practice to account for intangible assets ("intangibles") when valuing companies. Over time, and given changes in the economy, this has increased in importance. But valuation methods vary and there are big differences in how investors approach the subject. There is also great debate on the adequacy of existing accounting methods for successfully valuing intangibles. Accounting standards developed during the industrial era were designed for companies primarily engaged in manufacturing. Today, these standards are not keeping pace as the global economy shifts to a services-oriented model. While the lack of a uniform definition may create uncertainty, it also has a practical aspect: Since there is ambiguity in determining the specific benefits intangibles may bring, or even what should be considered outside of financial statements, an information advantage exists for research-intensive investors who are better able to value a company's intangible assets.

In 2019, Columbia Threadneedle Investments commissioned Institutional Investor's Custom Research Lab to conduct an industry-wide survey of investment professionals and capture their views on the role of intangibles in investing, examine their attitudes on the existing methodologies for measuring intangibles, and evaluate approaches to differentiate intangibles. In this paper, we share the results of the survey and our analysis of this critical topic.

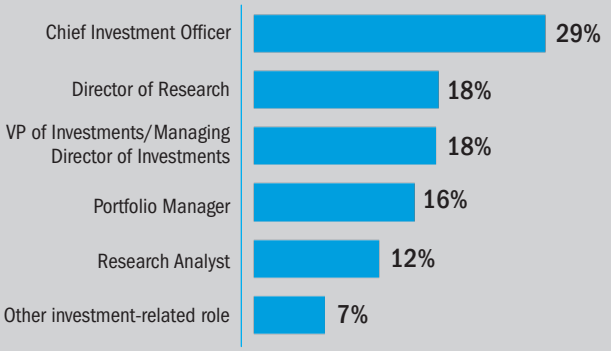
SUMMARY

Key findings emerged from the research:

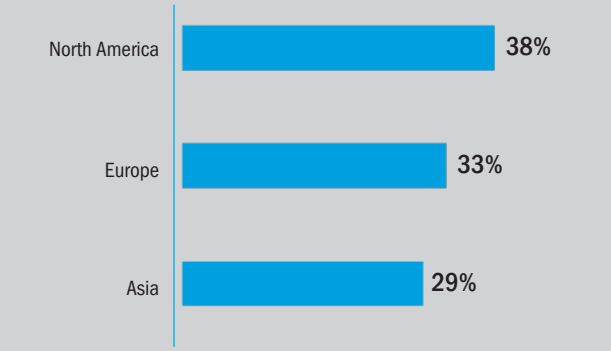
1. There is agreement that analysis of intangibles provides a competitive advantage to investors, and recognition that intangible research is increasingly important in analytical work. However, while investors find information about intangibles readily available, they believe that it is often unreliable, incomplete or inaccurate.
2. While acknowledging the growing importance of intangibles, investors say research processes may not have adequately adapted to address this shift.
3. Regulatory reforms, such as more transparent disclosure, stricter enforcement of IP rights, and standardized accounting treatment, could improve understanding of intangible assets.

Institutional Investor and Columbia Threadneedle jointly developed the agenda for this survey, and Institutional Investor gathered a total of 170 responses from senior investment decision makers at asset-owning institutions in North America, Europe, and Asia. In addition, we interviewed 12 CIOs, directors of investment, portfolio managers, and consultants at institutions around the world. The demographic highlights are below:

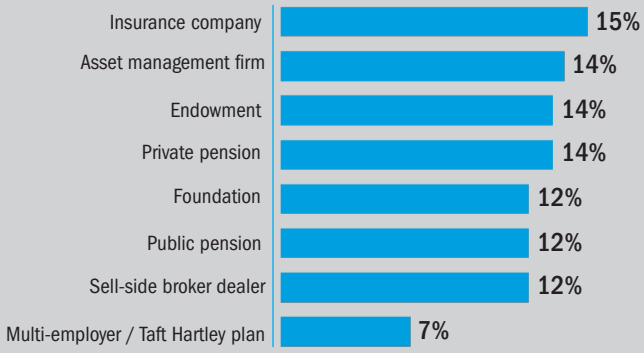
Respondents' titles



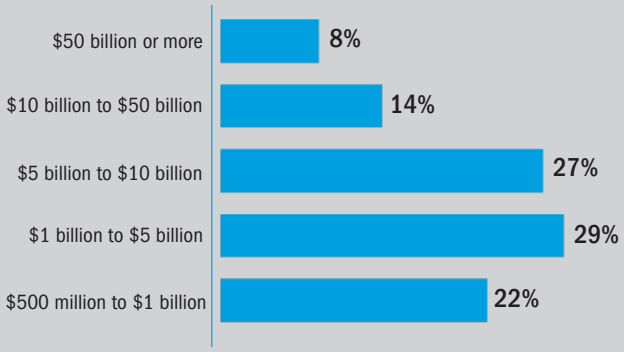
Respondents' location



Respondents' institution type



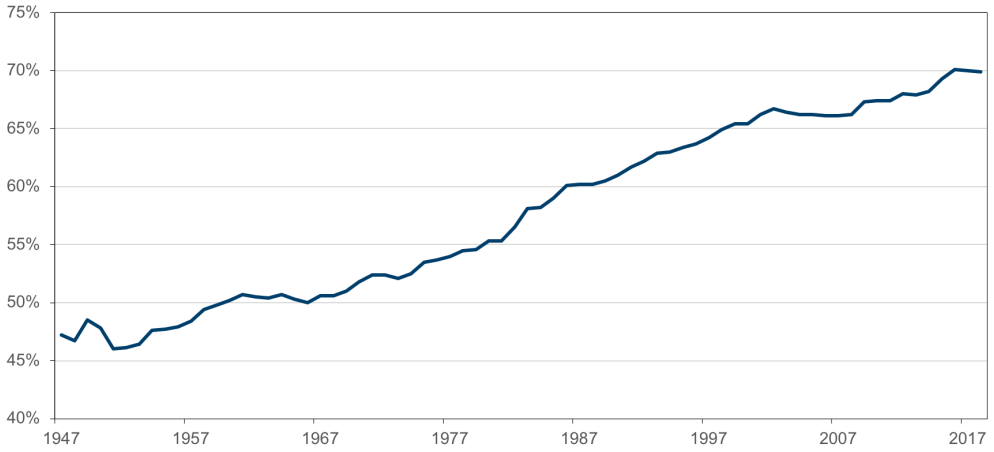
Respondents' assets under management



A SHIFTING GLOBAL ECONOMY

The U.S. and most developed markets have shifted from a manufacturing-based economy to a services-based one. Since 1950, services have come to represent an increasing share of U.S. GDP (see exhibit 1), a change that is mirrored in other global developed markets. Manufacturing's declining share of output isn't a sign of economic weakness — in fact, it can be an indicator of increasing efficiency (the loss in manufacturing jobs is due in part to automation). But the change has created dislocations in investment research: specifically how we measure value created by intangibles.

Exhibit 1. Since World War II, U.S. GDP has shifted toward services
Services as a percentage of U.S. GDP

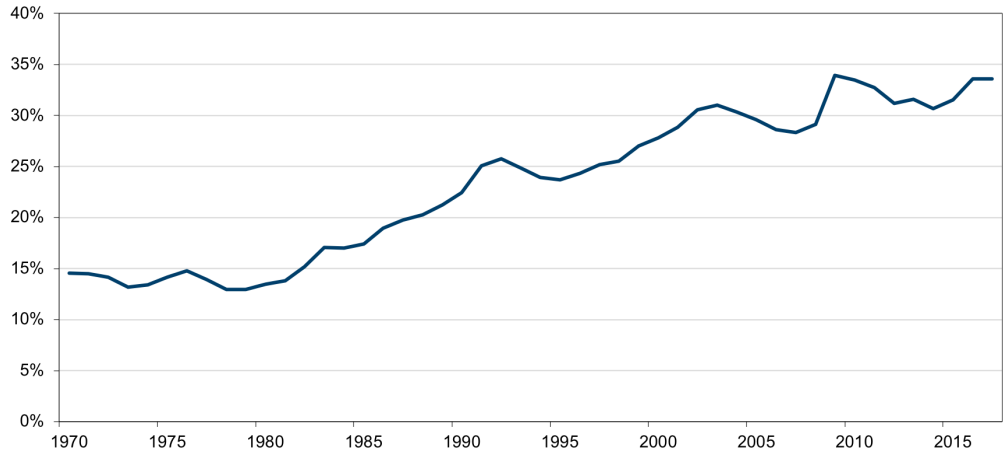


Source: Bureau of Economic Analysis; annual data through 2018.

ACCOUNTING FOR INTANGIBLES

Accounting for intangibles was less of an issue when the U.S. was a manufacturing-based economy. People, buildings, machines, and inventory are relatively easy to account for, but with the transition to services, a commensurate shift from investment in hard assets to intangible assets such as basic research, information technology, and firm organization has occurred. In fact, investment in intangibles has more than doubled since 1970 (exhibit 2).

Exhibit 2. With the shift to a services economy, U.S. intangibles investment has grown
Intellectual property share of non-residential investment



Source: Bureau of Economic Analysis, Empirical Research Partners; annual data through 2017.

The Financial Accounting Standards Board (FASB) defines intangibles as "assets, other than a financial asset, that lack physical substance," while the International Accounting Standards Board (IASB) proffers "an identifiable non-monetary asset without physical substance." By their nature, intangibles may elude easy definition, but examples include:

- Brand names
- Trademarks
- Internet domains and social media presences
- Patents
- Proprietary computer software
- Trade secrets, recipes, processes
- Customer lists and data sets
- Licenses, leases, royalties

How best to capture the value contributed by intangibles has sparked considerable debate in the investment community. Academics argue that valuation models are increasingly out of sync with the economy, and that accounting standards developed during the industrial era are not capturing value as the economy shifts to a services orientation.[1] Traditional valuation analysis relies on production, but as companies move away from making things and towards services, traditional frameworks lose power as analytical tools.[2] An examination of financial statements reveals a surprise — most of the investment in intangibles is simply not captured. In fact, Hulten and Hao found that book value explains just 31% of the market capitalization of 617 research and development (R&D)-intensive firms.[3] That means a significant portion of the value of the company is not captured by this standard measure.

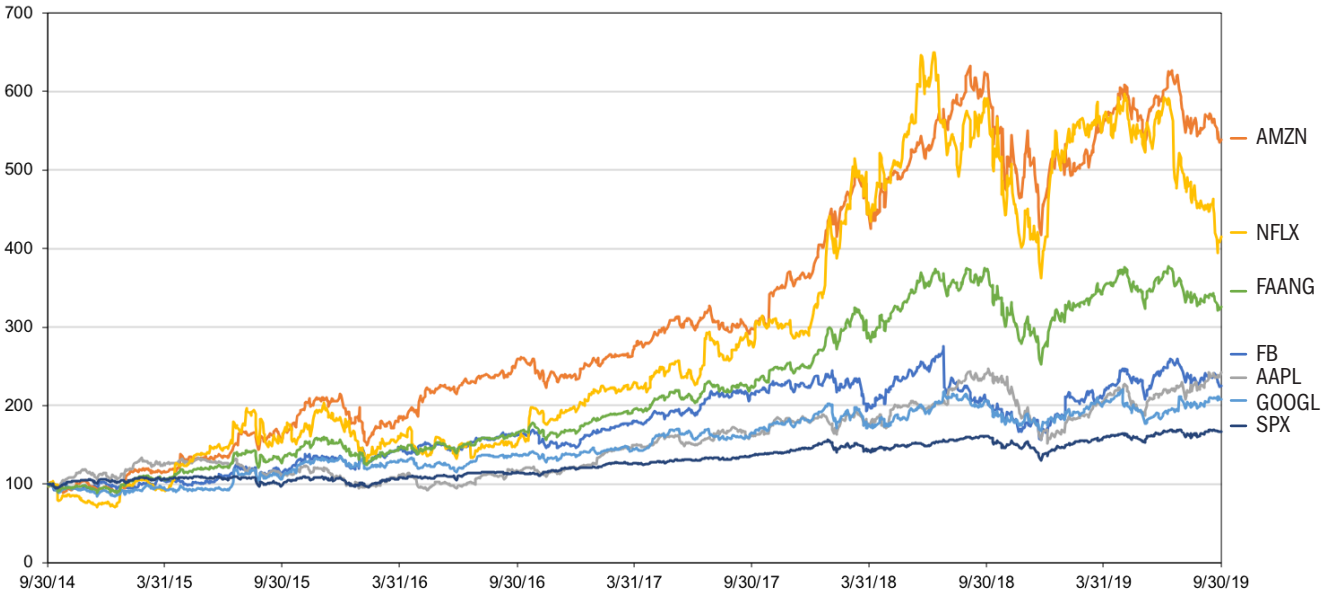
Accepted accounting practices may be contributing to this undercounting. Under the U.S. Generally Accepted Accounting Principles (GAAP), value-creating internally developed intangibles are treated as expenses (like salaries), ignoring their future benefit to a company. FASB justifies the full expensing of R&D on the grounds that there is no evidence of a consistent relationship between R&D outlays and subsequent benefits for any specific project, even though some of these related benefits could last for years. Investors typically capitalize and amortize R&D expenditures over 6 to 7 years.[4]

It's not just R&D. Firms can also create value through selling, general and administrative (SG&A) expenses, but the market fails to fully recognize them as "investment," as many view high SG&A-to-sales as an indication of poor cost control.[5] Interestingly, accounting standards mandate that businesses can only recognize internally generated intangible capital through mergers and acquisitions (M&A), where it shows up as goodwill. This creates pitfalls of its own, given the wide latitude granted to management in valuing acquired intangibles. As a result of this rule, a firm that amasses intangibles through acquisition will have a higher share of intangible assets recorded on its balance sheet than one that develops them internally, affecting valuation ratios (e.g., P/E and P/B) and reported earnings. This disparity was addressed in a recent CFA Institute paper that examined Microsoft and Apple: intangibles represent 16.9% of Microsoft's total assets, due in large part to that company's acquisitive tendencies, while they represent only 2.7% of total assets of Apple.[6] These types of disparities demonstrate the need for mechanisms that allow for a consistent comparison of companies.

While they may not be consistently accounted for, intangibles' power in driving share price higher has been well demonstrated. For example, the performance of the FAANG stocks (Facebook, Amazon, Apple, Netflix, and Google) is notable in this regard. Over the last five years, ending September 30, 2019, this cohort has outperformed the broader market significantly and, in our view, intangibles can explain nearly all of these companies' excess total returns (exhibit 3).

[1] The End of Accounting and the Path Forward for Investors and Managers, Baruch Lev and Feng Gu, (Hoboken, NJ: John Wiley & Sons, Inc., 2016).
[2] "How Do You Measure a 'Technological Revolution?'" Carol A. Corrado and Charles R. Hulten, The American Economic Review, May 2010.
[3] "What Is a Company Really Worth? Intangible Capital and the 'Market to Book Value' Puzzle," Charles R. Hulten, Xiaohui Hao, NBER Working Paper No. 14548, 2008.
[4] "The Economic Value of the R&D Intangible Asset," Marta Ballester, European Accounting Review, 2003.
[5] "Market Valuation of Intangible Asset: Evidence on SG&A Expenditure," Rajiv Banker, The Accounting Review, Forthcoming publication.
[6] "The Intangible Valuation Renaissance: Five Methods," Antonella Puca, CFA, CIPM, CPA, and Mark Zyla, CFA, CPA/ABV, ASA, CFA Institute, 1/11/2019.

Exhibit 3. The power of intangibles in delivering market out-performance



Source: Bloomberg; Columbia Threadneedle Investments; through September 30, 2019
Note: Cumulative total returns September 30, 2014 through September 30, 2019; September 30, 2014 = 100

SURVEYING INVESTOR ATTITUDES

Original research conducted by Columbia Threadneedle

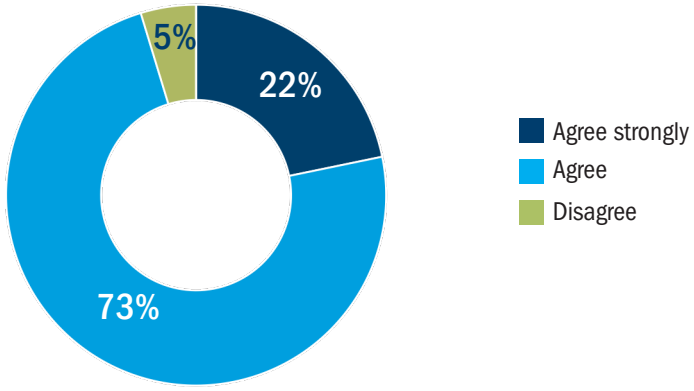
Given the debate among investors, Columbia Threadneedle surveyed investors for their view on intangibles. Participants in the survey included CIOs, directors of research, portfolio managers, and analysts employed in the asset management industry, as well as in insurance, endowments and foundations, broker-dealers, and private pensions. (Columbia Threadneedle employees did not participate in the survey.) Respondents work across sectors, and are located around the world, managing between $500 million and $50 billion or more. The following key findings emerged:

1. Agreement that analysis of intangibles provides a competitive advantage to investors, and recognition that intangibles research is increasingly important in analytical work. However, while investors find information about intangibles readily available, they believe that it is often unreliable, incomplete, or inaccurate.
2. While acknowledging the growing importance of intangibles, investors say that investment processes may not have adequately adapted to address this shift.
3. Regulatory reforms, such as more transparent disclosure, stricter enforcement of IP rights, and standardized accounting treatment, could improve understanding of intangible assets.

That intangibles contain valuable information about a company's prospects was widely agreed upon, with only 5% of respondents disagreeing with the idea that intangibles contain important information about the future strength of a company's business model (exhibit 4).

Exhibit 4. Intangibles reveal strength of companies' business model

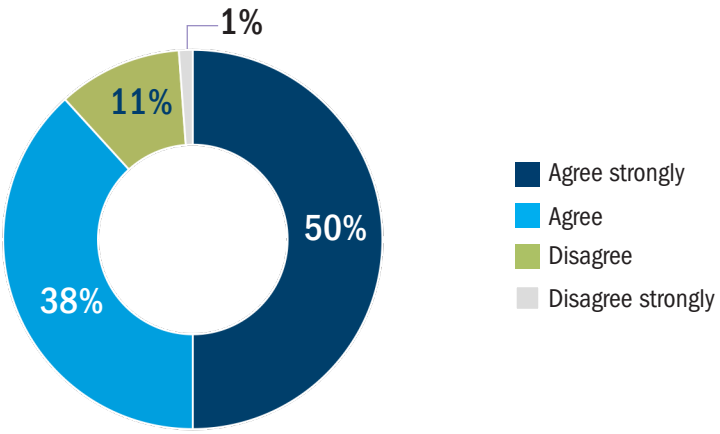
"A company's intangible assets contain important information about the future strength of its business model."



There was consensus that conventional valuation methods on their own are inadequate for establishing a comprehensive valuation metric; that is, investors need to consider intangibles in order to build a meaningful mosaic of company valuation. Investment decision makers generally concur that intangibles play a critical part in informing conventional discounted cash-flow (DCF) valuation, with 88% in agreement, and 50% strongly so (exhibit 5).

Exhibit 5. Investors call for including intangibles in company analysis

"Conventional valuation methods such as discounted cash flow are inadequate without thorough consideration of intangible assets."

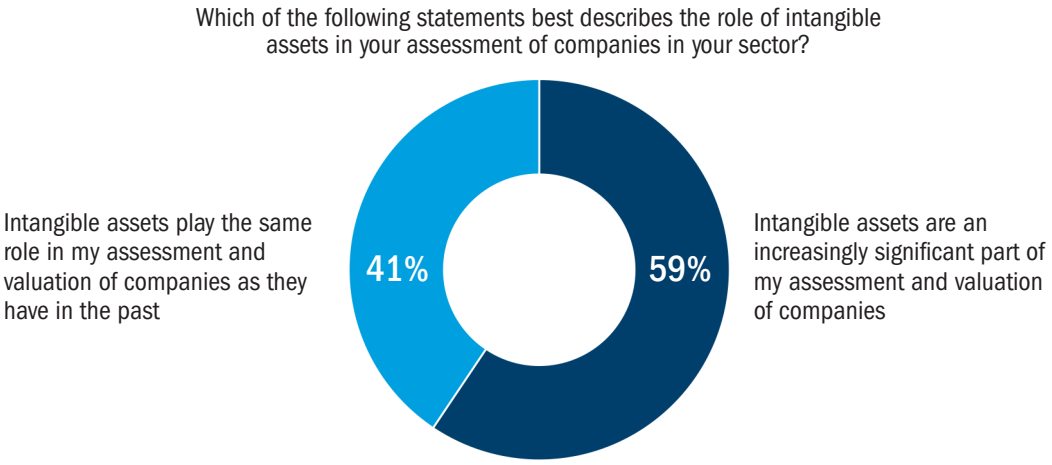


Alternative methodologies employed in conjunction with DCF and other traditional techniques play a role, according to survey respondents. One offered, "You could look at the public market price and ask what it says about the value of hard cash flow versus other balance sheet items that aren't being monetized today. That would be a different approach from going through every line and saying, 'Goodwill is worth a range of x to y, and the intangibles are worth a to b, and so forth'".

Survey participants also agreed upon the growing importance of intangibles in their investment analysis, with nearly 60% of respondents agreeing that analysis of intangibles is an increasingly significant component of valuation work, but some respondents draw a distinction between perceived value and new

methodologies. “Intangibles are always important, but their value becomes clearer [as we have] more data about a company to paint a detailed, granular picture of that company’s activities,” offered one respondent (exhibit 6), while another stated, “The ability to recognize the value of intangibles has changed more than the value of the intangibles themselves.”

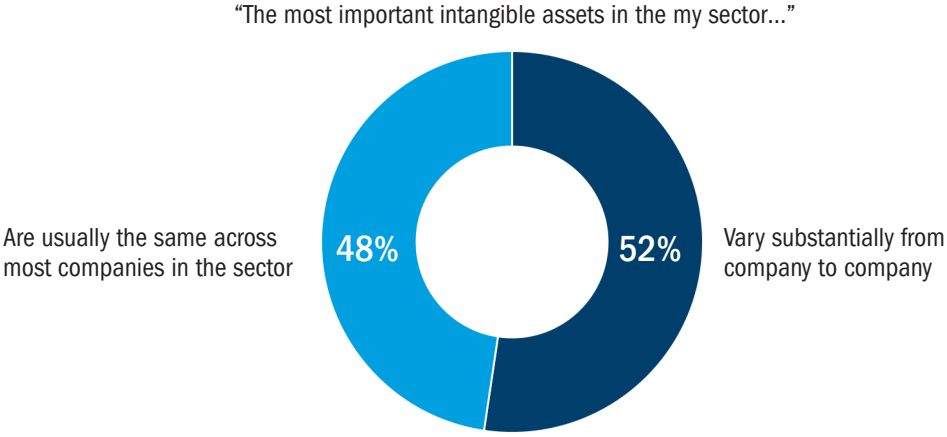
Exhibit 6. Investors increasingly use intangibles in assessing investment opportunities



Information needed to inform a studied analysis is readily available, decision makers report. At the same time, the glass also appears only half full with respondents noting that conclusions are inevitably subjective. Evaluation can be both a subjective art and an analytical science, and frequently combines both skills, but respondents are not always comfortable with the subjective component.

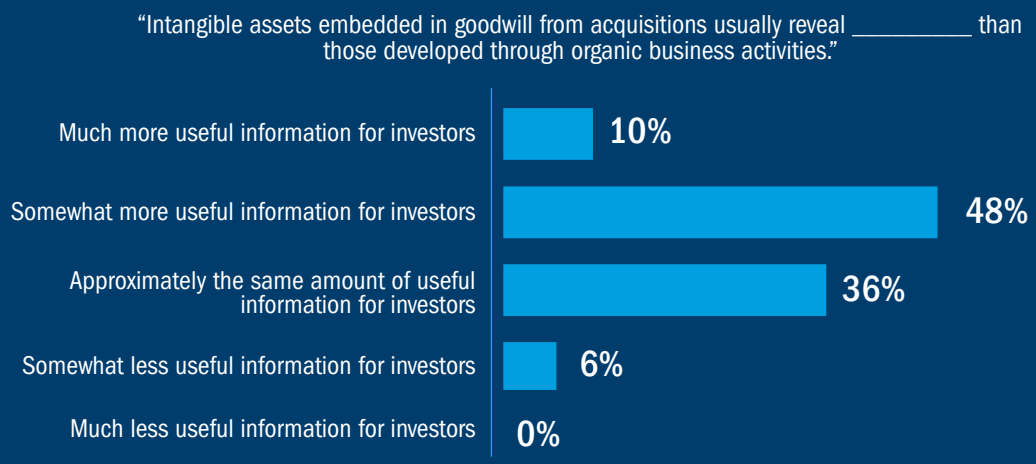
While investors agree on the growing importance of intangibles, and the challenges in using traditional valuation measures to fully capture a company’s value, research processes have not always adapted. Similarly, investors don’t always make distinctions among companies or sectors. For example, while the value of a proprietary software platform will vary from company to company, and industry to industry, analysts need to recognize when it may be valuable to pull in the analytical models of an adjacent sector or industry while considering the limitations that may exist when doing so. While one-half of investors surveyed make distinctions among companies in their evaluation of intangibles within a sector, the nearly even split in exhibit 7 indicates that many are taking a rote approach.

Exhibit 7. Diversity of intangible assets within a sector



Given the wide variation in both the categories and significance of intangibles that may occur across or within a sector, this one-size-fits-all approach implies that security prices may not fully capture the value of intangibles. Additionally, investors may be overvaluing the usefulness of information on intangibles embedded in goodwill versus those developed internally.

Exhibit 8. Goodwill vs. organically developed intangibles

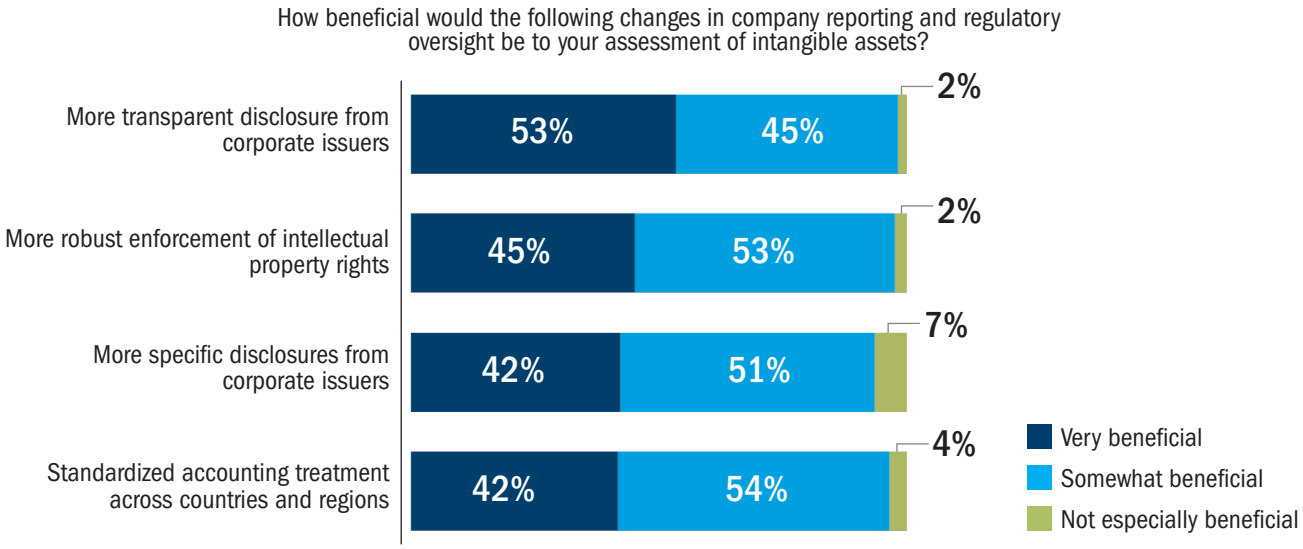


Intangibles are typically embedded in goodwill when companies make acquisitions. The shortfalls of acquisition accounting, and the tendency for these transactions to occur at a premium to current market value, creates an opportunity for fundamental analysts. Simply put, you have to know what has gone into the goodwill pot to make any sense of it.

Despite the respondents' emphasis on goodwill, we did find skepticism. "Goodwill just reflects what the acquirer had to do to get the transaction done and what their management was willing to pay. The goodwill that a company generates by its activities is highly valuable, but that's different kind of goodwill," distinguished one survey participant. One analyst, with a focus on technology and healthcare, offered that, "Most of our analysis has suggested that typically acquisitions have a negative impact. Companies that spend a lot on this tend to underperform. There are various explanations, but I think it comes down to companies overpaying. It's easy for a company to overpay in their zealous search for new acquisitions and castle building."

For improved oversight, most investors would like to see more transparent and specific disclosure from companies, and more robust enforcement of intellectual property (IP) rights. In a nod to ongoing divergences in accounting standards worldwide, 97% of respondents call for more standardized accounting approaches.

Exhibit 9. Investors call for transparency and stricter performance of IP rights



FUNDAMENTAL ANALYSIS

Rigorous analysis of intangibles can reveal winners and losers

Financial statement information on intangibles may be deficient, but institutional investors are exposed to information beyond financial reports, such as access to management, relationships with key opinion leaders, and deep industry expertise, all of which are critical in understanding the impact of intangible assets on company value.

These research resources are particularly useful when applied to smaller firms earlier in their life cycle — a period in which a company may be rapidly building its intangible assets. For example, early-stage biotechnology companies often have no revenue, but could possess valuable intellectual property and scientific processes that leads to a cure for a debilitating disease. Unlike “hard assets,” these types of intangible assets are difficult to ascertain and value. Is it possible to value a developing capability in artificial intelligence? While many in the survey argued for more disclosure from companies and greater oversight from regulators, such changes would reduce the information asymmetry prevalent in high-intangibles companies, and diminish the advantage of well-resourced asset managers.

Columbia Threadneedle has seen multiple circumstances in which fundamental analysis was instrumental in revealing the value of intangible assets, where the embedded intangible assets created a much more durable barrier to entry than expected by other investors, and thus a growth rate in excess of expectations. Tangible assets, such as manufacturing facilities, oil rigs, and mines, can be replicated by anyone with sufficient capital. Intangible assets are much more difficult to copy. These assets cannot simply be built by going to a set group of suppliers, but would require significant investment in R&D and marketing that may not yield success. These businesses often have first mover advantages, network effects, and high stickiness for mission critical aspects of their businesses.

CASE STUDIES

Square

Square, a merchant services and payments company

Square started in 2009 in San Francisco, CA with a credit card reader designed to plug into a smartphone. The Square reader allowed small merchants to process credit card transactions in a simple and affordable fashion, an exchange that previously was unavailable to small merchants or individuals, required bulky equipment, and came with a hefty service fee. In the past 10 years, the company has become a dominant player in "point-of-sale" software and hardware products, further rolling out its own business debit card and payroll software, and expanding into food delivery.

The value of the proprietary platform to acquire customers as an intangible

When Square entered the payments space, it was a mature, competitive environment with little differentiation. New customers were acquired through a dedicated sales force or through bank referrals.

By focusing on small merchants and individuals, Square set out to capture a part of the market that others had little interest in by building a proprietary platform to acquire customers. It opened up mobile payments to everyone (banks traditionally rejected 40% to 50% of the payment applications that came to them from micro and start-up businesses), and made access self-serve. A Square credit card reader and account could be acquired and set up online, opening the credit payment system to a wider set of individuals. At the time of its IPO, Square had no sales team versus a salesforce in the thousands for many of its competitors.

While some elements of this platform are captured in the R&D on the balance sheet, its value to Square now transcends the costs of equipment and coding. A competitor seeking to replicate Square's model would likely need to spend tens of billions to create an equivalent system.

Assessing the value of the proprietary platform at Square required drawing on knowledge of the traditional payments model as well as the software as a service (SAAS) models of the Technology sector. The ability to pull in the SAAS model traditionally employed in modeling information technology companies became critical to understanding the digital acquisition strategy of Square – and being able to properly model its future growth.

eog resources

EOG Resources, an energy exploration and production company

EOG was founded in 1999 when it was spun out of Enron and operates across the energy-producing regions of the U.S. Like most operators in the space, it grows profits in two ways – increasing the efficiency of their extraction operations, or simply extracting more. Some may not think that intangibles would be a component of valuing an industry whose businesses rely significantly on capital equipment. However, intangibles can also play a substantial part in establishing valuations in asset-heavy industries.

A repository of data as an intangible asset

Energy exploration and production includes a set of repeatable activities that can be tracked. In the case of EOG, a commitment to gathering and harnessing that data has become a critical component of establishing the company's value. As in all asset-heavy industries, reducing non-productive time for equipment is essential. In the case of EOG, the firm developed a device for each wellhead that collects and reports daily on operational efficiency. This data helps the company dispatch engineers to specific equipment for preventative maintenance, reducing the amount of time a well may spend offline, and helping the company operate in a more efficient manner.

Those with deep knowledge of industry production levels in similar operating environments were able to recognize that EOG was re-engineering to use data as a competitive advantage and translate this observation into a quantifiable assessment of the company's value. By evaluating how EOG was outperforming its peers, an analyst could build a model that properly valued the firm's repository of data.

Note: These examples are provided for illustrative purposes only. Securities may or may not have been held in any Columbia Threadneedle Investments portfolio, and may not have been profitable if held.

CONCLUSION

As intangibles have grown in importance to companies, investors have been challenged to understand the value that they create. With imperfect information, rigorous analysis is necessary to uncover potential value in those companies that have built a competitive advantage through intangible assets. Similarly, investment research can be applied to avoid firms that have under invested or misrepresented the strength of their intangibles.

The value of intangibles becomes clearer with the ability to process more data about a company and paint a detailed, granular picture of that company's activities. This argues for an intensive, independent research organization for asset managers in which the silos of analysis are broken down. A collaborative approach that integrates fundamental, quantitative and ESG research is most effective at helping to uncover and value intangibles assets, and ultimately in understanding why a certain business model succeeds at one company but does not at another.

An active manager's ability to understand that excess return may be generated by intangible assets is a competitive advantage when making investment decisions. While market efficiency is widely acknowledged, our survey results indicate disparities in the interpretation as well as the presentation of the data. Valuing intangibles has become an increasing part of financial statement analysis and is key to helping determine a firm's true market value. As long as valuing assets "that lack physical substance" is a key component of the investment process, research intensity will underpin investment managers' ability to deliver alpha.

ABOUT COLUMBIA THREADNEEDLE

Millions of people around the world rely on Columbia Threadneedle Investments to manage their money, and we partner with individual investors, financial advisers, wealth managers, and large financial institutions. Together, they entrust us with more than US$469 billion*.

All our clients have needs, goals and dreams bound up with their investments, and our job is to do everything we can to help them meet their objectives. Columbia Threadneedle is intentionally built to help our clients succeed. Our reach is expansive with a global team of 2,000 people working together. Our expertise is diverse with more than 450 investment professionals around the globe sharing their perspectives across all major asset classes and markets. Customized solutions matched to clients' specific requirements draw on a broad array of investment strategies.

Behind every investment, you'll discover vigorous, independent research, powered by 190 analysts dedicated to finding original, actionable insights. Integrated fundamental, quantitative and proprietary responsible investment research tools inform and augment human insight. Our robust framework allows us make better investment decisions that benefit our clients, and help them meet their return and sustainability goals.

Our Investment Consultancy & Oversight team ensures the integrity of each investment strategy and fosters continuous improvement. This independent team works in partnership with our portfolio managers to ensure that each strategy is managed according to its stated objectives, and is achieving its desired outcome in a fashion that is consistent with our promise to our clients.

To all our clients, we have one message: your success is our priority.

*Source: Columbia Threadneedle Investments as of September 30, 2019.

Past performance does not guarantee future results.

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