



# In·trin·sic Val·ue

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July 2022

DIAMOND HILL

INVESTED IN THE LONG RUN

## Introduction

When discussing Diamond Hill’s approach to equity investing, I am deliberate about my choice of words – I say that we are **intrinsic value focused investors**. My careful phrasing does not reflect a desire to distance myself from the key tenets of value investing as conveyed by Benjamin Graham over half a century ago. Indeed, I believe the central idea underpinning Graham’s philosophy – the purchase of securities with a margin of safety relative to an independently appraised intrinsic value – is timeless and allows for evolutionary changes in our understanding of business valuation and the competitive landscape. Graham’s philosophy is as relevant today as it was when Graham was investing.

However, many market participants’ understanding of intrinsic value, the critical reference point used to determine margin of safety, remains deeply rooted in the types of opportunities that existed in the formative years of value investing. Valuation metrics popularized in academic research have been institutionalized via widespread use of style benchmarks in recent decades (Exhibit 1). Accounting measures such as book value and historical earnings were often reasonable proxies for intrinsic value in earlier periods when tangible assets were central to value creation and growth in intrinsic value per share was bounded by the need for substantial physical capital investment. The investment landscape looks very different today.



Austin Hawley, CFA  
Portfolio Manager

“If you are going to live a long time, you have to keep learning. What you formerly knew is not enough. If you don’t adapt, you’re like a one-legged man in an ass-kicking contest.” Charlie Munger

### Exhibit 1: Statistical Measures of Value and Growth in Today’s Style Benchmarks

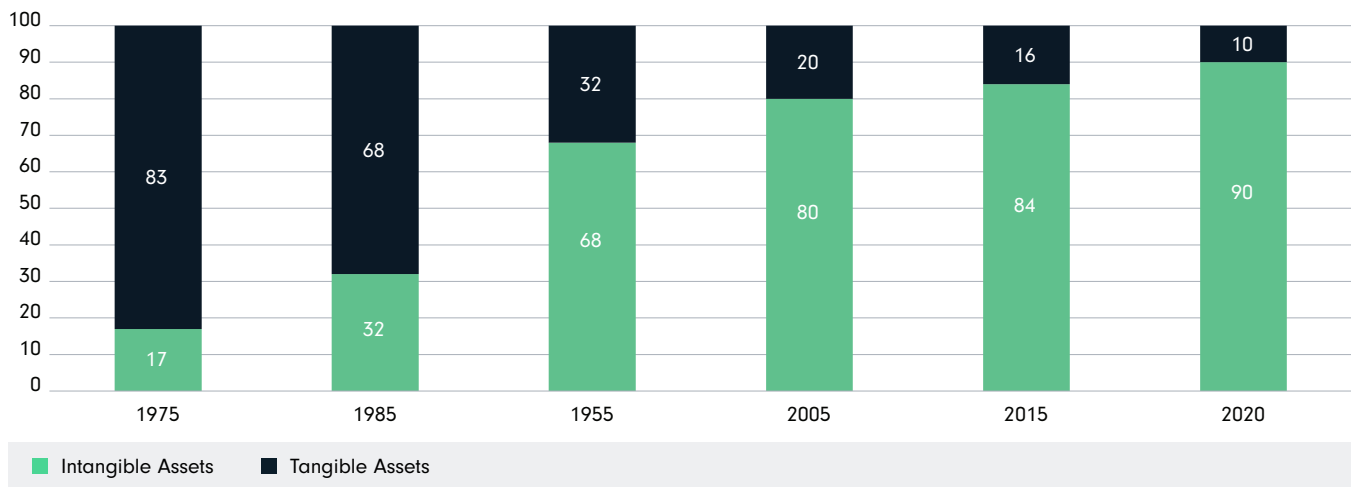
	Value	Growth
FTSE Russell	<ul style="list-style-type: none"> <li>• Book-to-price ratio</li> </ul>	<ul style="list-style-type: none"> <li>• I/B/E/S forecast medium-term growth (2Y)</li> <li>• Sales per share historical growth (5Y)</li> </ul>
MSCI	<ul style="list-style-type: none"> <li>• Book value to price ratio</li> <li>• 12-month forward earnings to price ratio</li> <li>• Dividend yield</li> </ul>	<ul style="list-style-type: none"> <li>• Long-term forward earnings per share (EPS) growth rate</li> <li>• Short-term forward EPS growth rate</li> <li>• Current Internal Growth Rate</li> <li>• Long-term historical EPS growth trend</li> <li>• Long-term historical sales per share (SPS) growth trend</li> </ul>
S&P	<ul style="list-style-type: none"> <li>• Book value to price ratio</li> <li>• Earnings to price ratio</li> <li>• Sales to price ratio</li> </ul>	<ul style="list-style-type: none"> <li>• Three-year net change in earnings per share (excluding extra items) over current price</li> <li>• Three-year sales per share growth rate</li> <li>• Momentum (12M % price change)</li> </ul>

Source: Company websites; data as of 2021 (MSCI and S&P) and 2022 (FTSE Russell).

### Technological change and the explosion of intangibles

In recent years, some of the most valuable companies have been found in industries that derive their value from intangible assets, with a dramatic shift in the allocation of market value towards intangible assets over the past 30 years (Exhibit 2). Investments in intangible assets are typically expensed rather than capitalized, depressing reported earnings and book value and distorting ratios based on these metrics.

**Exhibit 2: Components of S&P 500 Market Value (%)**



Source: Ocean Tomo, a part of J.S. Held, Intangible Asset Market Value Study, 2020.

Spending on research and development, advertising and human capital represent the most significant forms of investment for many of today’s leading companies (Exhibit 3). In the modern economy, companies that invest heavily in intangible assets, and succeed in creating large customer or product portfolios, benefit from exceptional profitability on incremental sales. Business models with high returns on incremental capital and significant growth opportunities dramatically change the intrinsic value calculus for investors.

**Exhibit 3: Largest US Companies by Market Cap**

Rank	1960	1970	1980	1990	2000	2010	2022
1	AT&T	IBM	IBM	Exxon	Microsoft	Exxon Mobil	Apple
2	General Motors	AT&T	AT&T	General Electric	General Electric	Microsoft	Microsoft
3	Dupont	General Motors	Exxon	IBM	Cisco	Walmart	Alphabet
4	Exxon	Eastman Kodak	General Motors	AT&T	Walmart	Apple	Amazon
5	General Electric	Exxon	Amoco	Philip Morris	Exxon Mobil	Johnson & Johnson	Tesla
6	IBM	Sears Roebuck	Mobil	Merck	Intel	Procter & Gamble	Berkshire Hathaway
7	Texaco	Texaco	General Electric	Bristol-Myers	Lucent	IBM	UnitedHealth Group
8	Union Carbide	Xerox	Chevron	Dupont	IBM	JP Morgan Chase	Johnson & Johnson
9	Eastman Kodak	General Electric	Atlantic Richfield	Amoco	Citigroup	AT&T	Meta Platforms
10	Sears Roebuck	Gulf Oil	Shell Oil	BellSouth	AOL	General Electric	Visa

Source: 1960 - 2010, @CharlieBilello, Compound Capital Advisors. 2022, FactSet as of 30 June 2022.

## Widely available data and increased competition

Not only has the investment opportunity set changed over the past half century, but the competition for valuable investment insights has intensified as well. During his years managing the Buffett Partnerships (1956-1969), Warren Buffett supposedly scoured the pages of the Moody's manuals (actual physical books!), familiarizing himself with the universe of potential investments and hoping to identify businesses that might be overlooked and cheap relative to their estimated tangible value. With limited competition from other performance-oriented investors at the time, Buffett's high IQ and discipline gave him a clear advantage relative to others manually sorting through information and looking for dollar bills trading at fifty cents.

The number of funds and analysts competing for investment ideas has grown significantly over the past five decades, and the collective brainpower dedicated to investment research is now being amplified by advances in computing power and data analytics. In the treasure hunt for neglected and valuable financial data, the balance of power has clearly shifted in favor of machines, as technological progress makes it possible for computers programmed with artificial intelligence to process and compare more company information than any human can comprehend. With increases in computing power and reductions in trading costs, it is possible to incorporate standard accounting information nearly instantaneously into market prices.


Today, valuable investment ideas are likely to be derived from information that is orthogonal to historical accounting data, such as insights about managerial talent, growth prospects, the value of intangibles, the duration of competitive advantages or changes in strategy. These insights are by their very nature more qualitative and lack the perceived certainty of accounting data. It can be difficult to identify these types of understandings about a business, but such knowledge can be extremely valuable and less likely to be efficiently priced by the market.

## Intrinsic value (re)defined

If intrinsic value is such a crucial input in any value investing process, and it isn't adequately represented by simple accounting measures like book value or historical earnings power, what is it? And how do we calculate it?

The term intrinsic value has been used by investors for decades as a reference to the value originating naturally from ownership of any asset (bond, stock, control of an entire business). Intrinsic value is value inherent to the business owned, or security purchased, not value ascribed by a capricious stock market.

While some assets, like art or gold, are not expected to ever produce cash flow for owners (other than uncertain resale value), rights to future cash distributions are a critical source of value for most assets. Indeed, many value investors focus exclusively on those assets that carry an expectation of future cash flows, believing that intrinsic value is only definable when cash flows exist. For assets where value is derived from future cash flows there is little controversy about the correct way to calculate the fair price:



*Intrinsic value = Sum of all cash distributions to owners over the life of the asset discounted for the time value of money and riskiness of the cash flows*

John Williams Burr documented the math behind the calculation of intrinsic value in his 1938 book *The Theory of Investment Value*, and the essential infrastructure for assessing intrinsic value remains much the same 85 years later. When it comes to equity investing, it is not the details of the mathematical formulas for intrinsic value that constrain investors' ability to identify attractive investments, but rather the challenge of estimating the timing and magnitude of expected cash flows over the life of an investment.

Book value (or recent earnings) provides sufficient information to estimate intrinsic value within a reasonable range of error for businesses with returns on capital that tend towards the cost of capital over the long term. However, for businesses with high returns on capital, estimating intrinsic value with any degree of precision requires investors dedicate significant energy to estimating future growth and verifying the sustainability of barriers that prevent competition from eroding excess returns. This type of due diligence is more important (and more complicated) for companies whose primary assets are intangible and therefore not fully reflected in traditional accounting statements.

Consider the two companies shown in exhibit 4. These companies are identical except for the fact that Company B, Intangibles Inc., has three quarters of its total productive assets invested in intangible assets instead of physical assets. While the free cash flow of the two companies are the same, accounting rules require intangible asset investment (other than acquired assets) to be expensed rather than capitalized, leading to meaningful differences in earnings and book value. Investors who are overly focused on *reported* earnings and book value (or constrained by style benchmarks) may be missing opportunities to buy similar cash flow streams at attractive relative prices, despite P/E and P/B ratios that look expensive.

#### Exhibit 4: Impact of Intangibles Investment on Earnings and Book Value

Company A: Tangible Inc					Company B: Intangibles Inc				
Period	0	1	2	3	Period	0	1	2	3
Tangible assets (PPE)	\$100	\$106	\$112	\$119	Tangible assets (PPE)	\$25	\$27	\$28	\$30
Intangible assets (R&D, brands, etc.)	—	—	—	—	Intangible assets (R&D, brands, etc.)	\$75	\$80	\$84	\$89
Total productive assets	\$100	\$106	\$112	\$119	Total productive assets	\$100	\$106	\$112	\$119
Sales		\$100	\$106	\$112	Sales		\$100	\$106	\$112
% change			6.0%	6.0%	% change			6.0%	6.0%
Margin prior to reinvestment (30%)		\$30	\$32	\$34	Margin prior to reinvestment (30%)		\$30	\$32	\$34
<i>Maintenance reinvestment (7Y asset life)</i>		\$14	\$15	\$16	<i>Maintenance reinvestment (7Y asset life)</i>		\$14	\$15	\$16
<i>Growth investment - tangible (capitalized)</i>		\$6	\$6	\$7	<i>Growth investment - tangible (capitalized)</i>		\$2	\$2	\$2
<i>Growth investment - intangible (expensed)</i>		—	—	—	<i>Growth investment - intangible (expensed)</i>		\$5	\$5	\$5
GAAP pretax earnings		\$16	\$17	\$18	GAAP pretax earnings		\$11	\$12	\$13
Tax @ 25% **		\$3	\$3	\$3	Tax @ 25% **		\$3	\$3	\$3
Net income		\$12.9	\$13.7	\$14.5	Net income		\$8.4	\$8.9	\$9.5
ROIC (100% equity funding)		12.9%	12.9%	12.9%	ROIC (100% equity funding)		33.6%	33.6%	33.6%
Free cash flow		\$6.9	\$7.3	\$7.8	Free cash flow		\$6.9	\$7.3	\$7.8
FCF growth			6.0%	6.0%	FCF growth			6.0%	6.0%

\*\* assumes Tangible Inc. gets tax benefits on growth capex to make cash taxes equal with Intangibles Inc.

	Company A	Company B	difference
Market value	\$173	\$173	
P/E	13.4	20.5	54%
P/B	1.7	6.9	300%
FCF yield	4.0%	4.0%	0%

Source: Diamond Hill, for illustrative purposes only.

## Value investing today (and tomorrow)

Intrinsic value focused investing is not the only path to attractive investment returns, but its combination of risk aversion and enduring logic make it a particularly attractive option – one that has stood the test of time and produced some of the industry’s great track records. However, intrinsic value focused investing only works if value opportunities are pursued where they exist today, not where they existed 50 years ago.

The composition of the modern economy and its key value drivers have changed, reducing the usefulness of many approximations for intrinsic value based on historical accounting metrics. In addition, the explosion of data availability and computing power, regulations preventing selective disclosures of company information, and increasing levels of competition within the asset management industry have diminished the prospects for earning excess returns utilizing simple accounting information.

Value as it is widely understood and measured in the investment community, as a reference to slower growing businesses with cheap prices relative to book value or earnings, no longer represents a likely source of undiscovered opportunity. Today, a more holistic approach to intrinsic value – considering potential strategic and operational changes, the impact of investments in intangibles and value-creating growth – is often required to uncover companies that are valued with a margin of safety.

Fifty years ago, it would have been impossible to predict the important technological changes, such as the internet, that enabled new business models. Over the coming decades we will (hopefully) witness more unimaginable change and new disruptive business models that challenge our existing accounting infrastructure. Value investors who recognize intrinsic value as an invaluable economic concept (not a static accounting value) will continue to adapt and prosper.

As of 30 June 2022, Diamond Hill owned shares of Microsoft Corp, Alphabet Inc, Amazon.com Inc, Tesla Inc (short), Berkshire Hathaway Inc, Meta Platforms Inc, Visa Inc, Cisco Systems Inc (short), General Motors Co, Chevron Corp and Citigroup Inc.

**S&P 500 Index** measures the performance of 500 large companies in the US.

**Margin of safety** is a principle of investing in which an investor only purchases securities when their market price is significantly below their intrinsic value. In other words, when the market price of a security is significantly below your estimation of its intrinsic value, the difference is the margin of safety.

**The views expressed are those of the author as of July 2022 and are subject to change without notice. These opinions are not intended to be a forecast of future events, a guarantee of future results or investment advice. Investing involves risk, including the possible loss of principal. Past performance is not a guarantee of future results.**