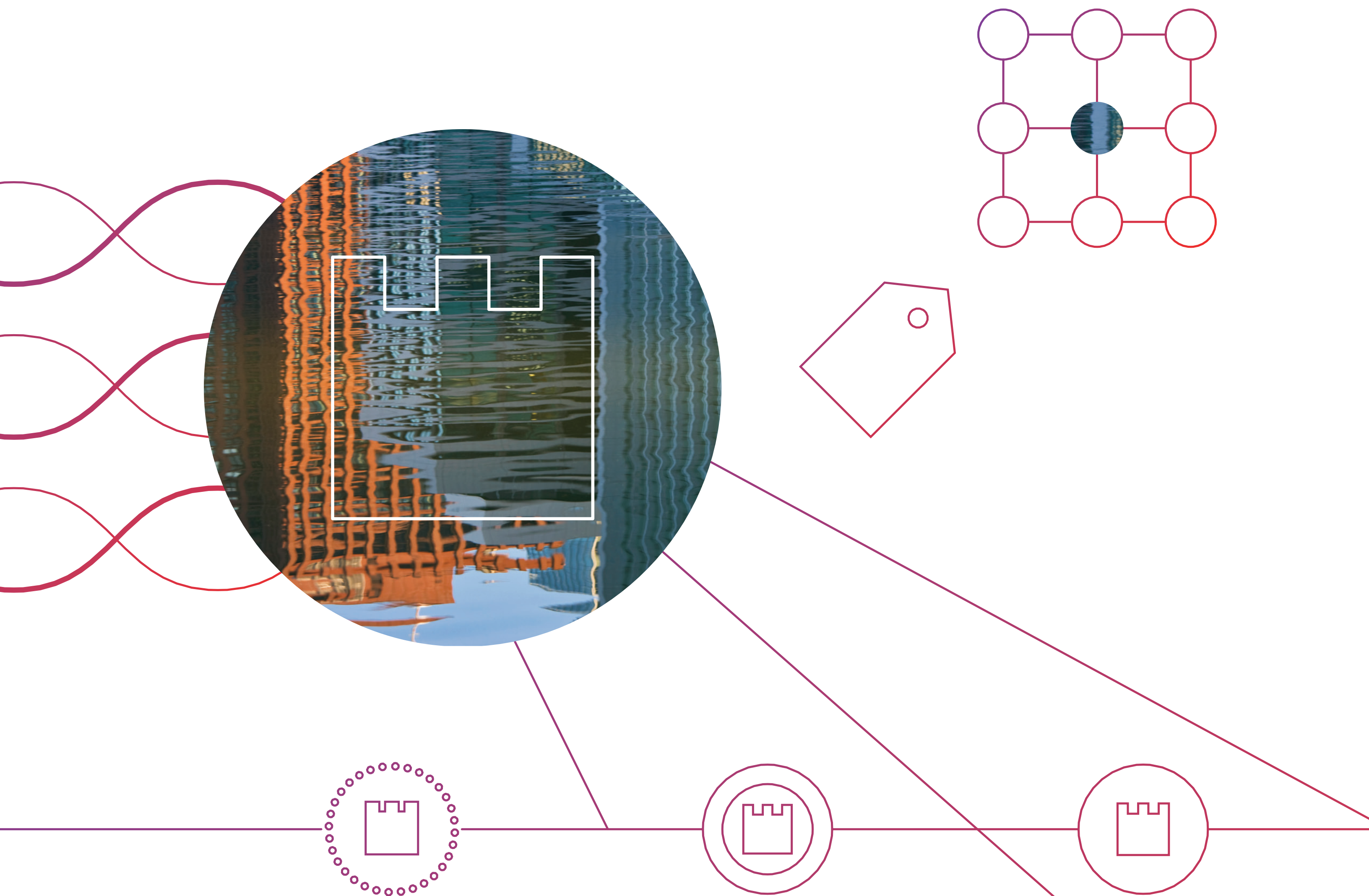
MORNINGSTAR Indexes

Equity investing with a moat focus



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Equity investing with a moat focus

When the Morningstar Wide Moat Focus Index launched in 2007, the term *smart beta* had yet to enter the investment lexicon, factor-based indexing was new, and passive strategies with active goals had yet to proliferate. The moat focus index approach traced its origins to the world of active management, where it would aim for above-market returns by building concentrated portfolios of competitively advantaged companies with attractive share prices.

Within the index universe, the moat focus methodology remains unique. Though the moat focus targets high-quality companies at good prices, rather than defining corporate quality through backward-looking quantitative measures like return on equity or balance sheet strength, it uses the concept of economic moat, or sustainable competitive advantage, as determined by the Morningstar Equity Research team. Instead of screening on traditional value metrics like price/book, the indexes rely on valuation, which compares a company's share price with Morningstar analysts' estimate of the business' intrinsic value. Embedding forward-looking, analyst-driven insights in an index format is far from typical.

The methodology, which has been broadened and globalized over the years to create several moat focus indexes, has been tested by a variety of market environments. It has weathered up and down markets. It has ridden out cycles in housing and commodities. It has endured regimes led by both growth and value. This stands in contrast to the many investment strategies launched on the back of stellar back-tests, academic theories, or compelling narratives.

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Undoubtedly, the index methodology requires due diligence from investors. What exactly is a moat? How do Morningstar equity analysts determine moat ratings and estimate intrinsic value? Which benchmark construction rules frame the moat and valuation-based approach? "High-quality companies at good prices" may be a familiar and simple-sounding investment approach. But by channeling Morningstar Equity Research in an index format, the moat focus index methodology harnesses a tremendous reservoir of intellectual capital.

What makes a moat?

In a famous 1999 *Fortune* article, legendary investor Warren Buffett wrote, "The key to investing is… determining the competitive advantage of any given company and, above all, the durability of that advantage. The products or services that have wide, sustainable moats around them are the ones that deliver rewards to investors." Just as moats were dug around medieval castles to keep enemies at bay, economic moats protect the high returns on capital enjoyed by the world's most successful companies.

With gratitude to Buffett, Morningstar has developed the economic moat concept into a comprehensive framework that can be applied consistently across a broad, global list of companies. Morningstar Equity Research defines a company with an economic moat as one with a structural competitive advantage that allows it to sustain economic profits over a long period of time. Economic profits are defined as returns on invested capital over and above a firm's weighted average cost of capital.

Companies with sustainable competitive advantages are rare, which is proof that capitalism works. High profits attract competition, which tends to reduce profitability over time. Microeconomics tells us that in a perfectly competitive market, rivals will eventually compete away any excess profits earned by a successful business.

But through history, certain companies have been able to earn high returns on capital for extended periods. Such companies withstand the relentless onslaught of competition and often become wealth-compounding machines.

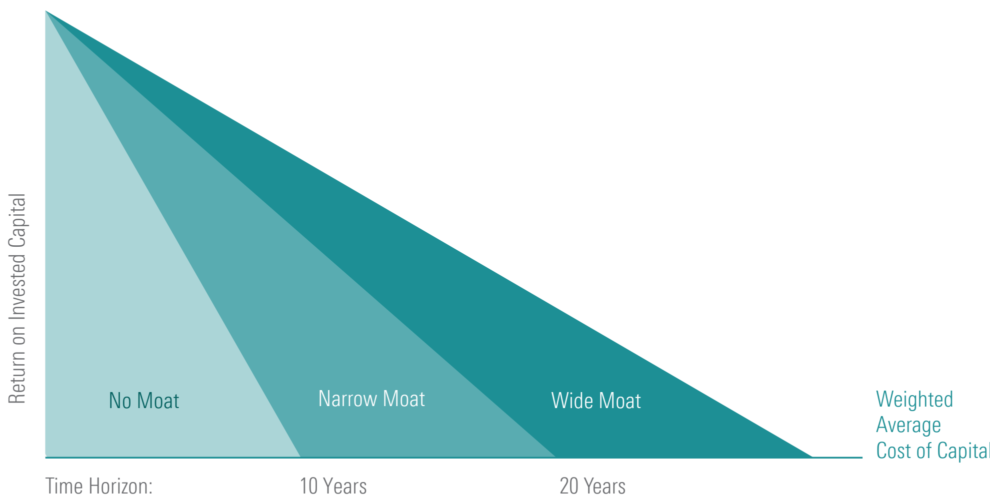
Each of the more than 1,500 companies under Morningstar's equity research coverage receives an economic moat rating of either wide, narrow, or none.

Economic moats

Companies with a narrow moat should, more likely than not, generate profits above their cost of capital for at least the next 10 years. Wide-moat companies should, with near certainty, deliver economic profits for at least 10 years, with economic profits more likely than not to persist for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value should be, all else equal. On the other side of the coin, no-moat companies will likely see their normalized returns gravitate toward their cost of capital more quickly.

Moats add instrinsic value

Return on investment capital (ROIC) will diminish to weighted average cost of capital (WACC) over time. Companies with the widest moats have the potential to create value for longer periods of time.



Source: Morningstar

Sources of moat

Morningstar has identified five major sources of competitive advantage:

1. Intangible assets

Morningstar recognizes four major forms of competitive advantage from intangibles: brands, patents, proprietary technology, and regulation. Each of these forms helps increase pricing power, typically by limiting competition or prompting customers to pay a higher price for a perceived benefit.

2. Switching costs

Switching costs are inconveniences or expenses a customer incurs to change from one product or service to another. Customers typically won't change providers unless the value proposition of doing so more than offsets the implicit costs. Price is not the only determinant of switching costs, as risk, hassle, distraction, psychology, and inertia can also come into play.

3. Network effect

The network effect occurs when the value of a good or service increases for both new and existing users as more customers use that good or service, often creating a virtuous circle that allows the strong to get stronger. A network effect as a moat source can be present only if the firm can properly monetize the network, which is not a given for many services and industries. Also, value must increase for all parties in a network—not just buyers or shoppers, but also suppliers and developers. Finally, the network's value proposition must increase as network usage rises via more users, more usage per customer, or both.

4. Cost advantage

Firms that can provide goods or services at a lower cost have an advantage because they can undercut their rivals on price. Alternatively, they may sell their products or services at the same prices as rivals but achieve a fatter profit margin. Cost advantage by itself is uncommon; rather, it typically exists in combination with another moat source. Many cost advantage moats are in combination with intangible assets, with brands and scale often working together.

5. Efficient scale

This dynamic typically applies to firms that serve a market of limited size, in which potential competitors have little incentive to enter because doing so would lower the industry's returns below the cost of capital. Morningstar has identified eight characteristics of efficient scale markets: mature demand, excess capacity, commodity products, inelastic demand, high sunk costs, significant barriers to entry, credible deterrence, and historical precedent. Efficient scale markets support only one or a few competitors, limiting rivalry.

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Many companies benefit from more than one moat source, and the sources are not distributed evenly among Morningstar's coverage. Intangible assets are the most common source of competitive advantage. Few markets are conducive to efficient scale characteristics, so it's among the rarest moat sources.

Determining a moat

When assigning moat ratings, Morningstar equity analysts first consider the five qualitative factors outlined above. But quantitative evidence of a moat, namely, a company's ability to earn excess returns on invested capital, is also considered. The magnitude of economic profits is far less important than the expected duration of those profits.

A moat committee of about 20 experienced analysts spanning sectors and geographies oversees the assignment of moat ratings and vets analyst views to ensure the methodology is applied consistently.

The importance of valuation

Even the highest-quality company could turn out to be a value-destructive investment if it's purchased at an excessive price. Thus, Morningstar subscribes to a long-term valuation-driven investment approach, which weighs a business' intrinsic value relative to its market price. While price and value can become disconnected in the short term, they should converge over the long term.

At the heart of Morningstar's valuation methodology is a detailed projection of a company's future cash flows, as provided by equity analysts via fundamental analysis. Analysts create custom industry and company assumptions to inform forecasts expressed by our globally standardized, proprietary discounted cash flow models. Analysts use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process.

Morningstar believes that analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (mines, for example), or companies expected to generate negative earnings over the next few years. We don't dismiss multiples altogether, but rather use them as supporting cross-checks for our DCF-based fair value estimates. While a DCF model isn't the best valuation method in all cases, we firmly believe it is the optimal tool to express our long-term assessments of a firm's competitive advantage (or lack thereof) and its impact on cash flows well into the future.

Estimated fair value

Our economic moat analysis and fair value estimates are inextricably linked. Economic profits for companies with wide moats should persist longer than economic profit for narrow-moat firms. In turn, economic profits for no-moat firms should prove less persistent yet, if they even exist in the first place. The Morningstar DCF model is divided into three distinct stages:

Stage I: Explicit forecasts

In this stage, which can last five or 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in working capital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes, or EBI, and net new investment to derive our annual free cash flow forecast.

Stage II: Value of the moat

The second stage of our model reflects how long economic profits should persist before a company's returns on new invested capital, or RONIC, fall to its cost of capital. During Stage II, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year for companies with no economic moat to 10–15 years or more for wide-moat companies. During this period, we forecast cash flows using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average RONIC, and the number of years until perpetuity, when new invested capital no longer delivers economic profits.

Stage III: Perpetuity

Once a company's marginal return on invested capital hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated weighted average cost of capital. We sometimes refer to Stage III as the *capitalism* works phase because by the time it kicks in, we assume competitive pressures have eroded the potential for newly invested capital to deliver economic profits.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our cash flow projections for stages I, II, and III to arrive at a present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term, market value weights.

Combining economics moats and valuation through index construction

Economic moat ratings and fair value estimates represent the moat focus indexes' key inputs. Then, index construction rules concerning constituent count, weighting, and rebalancing and reconstitution determine portfolio composition and ongoing implementation of the strategy.

Eligibility

Securities for moat focus indexes are selected from a Morningstar equity index representing the equivalent geographic segment. The parent index includes large-, mid-, and small-cap stocks and excludes several classes of securities, such as listed funds and limited partnerships.

To be eligible, securities must meet the following criteria:

- Company is assigned a wide or narrow moat (in some cases) by a Morningstar analyst.
- Company is assigned a fair value estimate by a Morningstar analyst.
- Company is not under review at time of stock assignment.

Selection

At each reconstitution, the securities representing the lowest current market price/fair value estimate are selected from the list of eligible securities for inclusion.

The number of constituents varies for different indexes in the series and can fluctuate as a result of turnover buffers and the indexes' staggered rebalancing approach.

Index weighting

Each index consists of two portfolio sleeves that target the same number of securities. Index constituents are equally weighted within their subportfolio, affording all stocks an opportunity to contribute to returns and assuring that performance is not overwhelmed by a small group.

Sector weightings can deviate considerably from market weight. But to reduce the impact of unintended sector bets, loose constraints exist. The Morningstar Equity Research approach is bottom-up and stock-specific. To capture the analysts' stock-selection prowess, the indexes' sector weights are constrained so that securities from a single economic sector cannot in aggregate consume more than 40% of index weight, or 10 percentage points higher than market weight. So, if the healthcare sector represents 32% of market weight, the index may devote 42% of weight to healthcare stocks in aggregate.

Rebalancing/reconstitution

All indexes must balance turnover against their desired exposure. Morningstar's moat focus indexes strike this balance by resetting membership twice per year, but on a staggered quarterly schedule. The indexes consist of two subportfolios holding the same number of securities. One portfolio reconstitutes (that is, selects securities) in December and June. The other portfolio reconstitutes in March and September. In June and December, the two sub-portfolios are reset to equal weight of the overall index. Consequently, about half of the total index membership is reset each quarter.

Under this system, the moat focus indexes resemble the manner in which an active fund manager gradually builds and unwinds positions. It also allows the indexes to benefit from positive share price momentum ("let winners run") and reduces exposure to negative momentum ("catching falling knives."). It also minimizes the potential market impact of trading and facilitates higher capacity.

Buffering rules

As another way to minimize turnover, current holdings can remain in the indexes as long as they are within a reasonable range of the most attractively priced moat-rated stocks based on price/fair value ratios at the time of reconstitution.

A style all its own

Investors often ask: Are moat focus indexes a value or growth strategy? The combination of moats and valuation has typically resulted in a portfolio situated in the large-core segment of the Morningstar Style Box. But in some market environments, the indexes tilt toward the value side of the market, and other times they tilt toward growth. The portfolio can migrate depending on where in the market Morningstar Equity Research is finding underappreciated, high-quality equity opportunities on a company-by-company basis. This versatility has allowed the strategy to deliver alpha in a variety of market environments.

Given the multiple inputs to the strategy, investors also wonder: What has been the key driver of excess returns? Is it the inclusion of companies with moats, the inclusion of a valuation screen, or the equal-weighting approach? Performance attribution over time has shown that excess returns for the oldest member of the family have come from the combination of all of these inputs. The valuation and economic moat overlays, as well as the equal-weighting scheme, have each contributed to the market-beating track record.

Nor does factor attribution help explain the moat focus track record. Exposure to factors like momentum, quality, and value has waxed and waned over time. While the indexes' lower average market capitalization has contributed, their negative exposure to momentum has held them back.

The moat focus indexes combine fundamental inputs with disciplined portfolio construction to target stocks with durable competitive advantages and attractive valuations as opposed to placing bets on sectors, factors, or regions. The moat focus index approach won't outperform all the time, but it has shown that it pays to be selective over the long term.

About Morningstar Indexes

Morningstar Indexes was built to keep up with the evolving needs of investors—and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers and advisors in navigating investment opportunities across major asset classes, styles and strategies. From traditional benchmarks and unique IP-driven indexes, to index design, calculation and distribution services, our solutions span an investment landscape as diverse as investors themselves.

For more information, visit indexes.morningstar.com, or contact us at indexes@morningstar.com