What Makes a Moat?

Morningstar's Five Sources of Moat

Moat investing is based on a simple concept: Invest in companies with sustainable competitive advantages trading at attractive valuations. One of the first steps of implementing this approach is finding companies with a moat.

A company's moat refers to its ability to maintain the competitive advantages that are expected to help it fend off competition and maintain profitability into the future. Morningstar has identified five sources of moat:

Sources of Moats	Description
Switching Costs	Switching costs give a company pricing power by locking customers into its unique ecosystem. Beyond the expense of moving, they can also be measured by the effort, time, and psychological toll of switching to a competitor.
Intangible Assets	Though not always easy to quantify, intangible assets may include brand recognition, patents, and regulatory licenses. They may prevent competitors from duplicating products or allow a company to charge premium pricing.
Network Effect	A network effect is present when the value of a product or service grows as its user base expands. Each additional customer increases the product's or service's value exponentially.
Cost Advantage	Companies that are able to produce products or services at lower costs than competitors are often able to sell at the same price as competition and gather excess profit, or have the option to undercut competition.
Efficient Scale	In a market limited in size, potential new competitors have little incentive to enter because doing so would lower the industry's returns below the cost of capital.

In this paper, we provide an overview of how these attributes may contribute to a company's moat and highlight companies that showcase these sources of moat.

Switching Costs Lock-In Customers

Switching costs are present when a customer's cost of switching to a new supplier exceeds the value they would enjoy from making the switch. Switching costs endow the incumbent supplier or provider with pricing power that can, in turn, lead to economic profits.

> **Switching Costs:** When it would be too expensive or troublesome to switch away from a company's products, that company often enjoys pricing power.

Not just monetary in nature, switching costs can also be measured by the effort, time, and psychological toll it takes to switch to a competitor.

Switching costs provide a company with the leverage to increase prices and deliver hefty profits over time. They are a key competitive advantage and are evident in a range of industries, from banks, to computer software/hardware, to telecoms, among others.

An Early Example: Gillette Razor Blades – Designed to Create Brand Attachment

King Camp Gillette, the inventor of the first mass produced safety razor, was one of the first entrepreneurs to optimize the switching cost approach to lock in customers. In 1902, Gillette developed and began selling inexpensive razors with disposable blades that he had patented. This ensured Gillette a constant high demand for blades, as customers who considered other blades quickly realized that they would incur the cost of a new razor as well.

Switching Costs in Action

Stryker Corp. (SYK US) is a major player in a number of medical markets. These include medical and surgical equipment, neurovascular products, and orthopedic implants. Since switching costs can be significant for surgeons when it comes to orthopedic implants, this is, according to Morningstar, one of Stryker's "moatiest segments" in support of the company's wide economic moat.

Salesforce.com Inc. (CRM US) is a leader in providing cloud-based solutions that address many aspects of customer acquisition and retention. According to Morningstar, its salesforce automation application is "mission-critical software that helps drive revenue for users." Morningstar notes the high organizational risk of moving away from the platform, as well as the time, expense, and lost productivity associated with the implementation of a new application.

Intangible Assets Raise Hurdles for Competitors

Patents are a legal barrier to entry that protect companies from unauthorized commercial usage of their products by competitors. Similarly, government licenses may raise the entry hurdles for new competitors. Additionally, brand equity can increase a customer's willingness to pay for a product or service. These are examples of what Morningstar refers to as "intangible assets."

> **Intangible Assets:** Patents, brands, regulatory licenses, and other intangible assets can prevent competitors from duplicating a company's products, or can allow the company to charge a significant price premium.

Although not always easy to quantify, intangible assets are one of the primary sources of strong competitive advantages for businesses and a key economic moat source. Intangible assets can include corporate intellectual property, such as patents, trademarks, copyrights, government licenses, and business methodologies that help companies generate economic profits.

Intangible Assets in Action

Starbucks Corp. (SBUX US) is the leading specialty coffee retailer in the U.S. According to Morningstar, Starbucks' wide economic moat comes from its "brand intangible asset that commands premium pricing combined with meaningful scale advantages." Morningstar also believes that "few national/regional restaurant or specialty coffee operators are willing or able to compete with Starbucks' in-store customer experience."

Eli Lilly and Co. (LLY US) is a pharmaceutical company that focuses on neuroscience, endocrinology, oncology, and immunology. Patents are critical in preventing competitors from duplicating its drugs. According to Morningstar, "patents, economies of scale, and a powerful distribution network support Eli Lilly's wide moat. Lilly's patent-protected drugs carry strong pricing power, which enables the firm to generate returns on invested capital in excess of its cost of capital."

Network Effect Grows with Reach

The "network effect" moat source has become increasingly relevant as our world has grown increasingly digital. It describes the phenomenon where the value of a product or service increases as the number of its users grows.

> **Network Effect:** As more people use a company's product or service, the value of that product or service increases for both new and existing users.

The internet is a good example. It originally had few users outside the military and research science spheres, but its expanding user base exploded its reach and impact. More recently, companies like Facebook and Google have been labeled network effect paragons. Morningstar posits that a network effect can help a company to increase its advantages over competitors, and is often an important source of a company's moat.

From Critical Mass to Network Effect

The term "critical mass" is often used in connection with the network effect. In game theory, this means that not all game participants need to be convinced for a strategy to succeed, just a very specific portion of them. If this participation threshold is exceeded, the strategy is likely to succeed of its own accord. The network effect works in similar fashion. If the user base for a product or service reaches a critical mass, the network is likely to expand under its own power. Ultimately, however, a company's ability to monetize a network is also important to consider before network effect can be assigned as a moat source.

Network Effect in Action

Visa (V US) dominates the global electronic payments industry. The company controls approximately half of all credit card transactions and an even higher portion of debit card activity.[1] It is a great example of how the network effect can create a powerful competitive advantage. Morningstar says of Visa: "The brand is accepted by approximately 44 million merchants worldwide, with 3.1 billion cards in circulation. Perhaps most important, 16,800 financial institutions worldwide make up the Visa network."

Alphabet (GOOG US), with a global share of over 80%, leads the online search market. The company's network effect comes primarily from its Google products, which include search, Android, Maps, Gmail, YouTube, and more. In Morningstar's view, "Google has the world's most widely used search engine, and such a large and growing user base has created a network difficult to replicate."

Cost Leadership Provides Market Control

Companies that are able to produce and offer products or services at lower costs than competitors are often able to achieve higher profit margins. Within many industries, cost leaders often exert significant control over market prices, which may give them an advantage over competitors. The cost advantage moat source is the second most frequent source of economic moat ratings, according to Morningstar.

> **Cost Advantage:** Firms with a structural cost advantage can either undercut competitors on price while earning similar margins, or can charge market-level prices while earning relatively high margins.

Cost advantages are often gained through economies of scale, lower distribution and manufacturing costs, and/or access to a low-cost resource base. The increasing level of competition in today's global economy makes this competitive advantage one of the most difficult for companies to maintain. For example, over the past 30 years, the U.S. manufacturing and consumer goods industries have been flattened by punishing price competition from overseas.

Cost Advantage in Action

Walmart Inc. (WMT US) is the largest retailer in the world. According to Morningstar, Walmart's vast size gives it "significant bargaining power as it procures merchandise from suppliers and vendors; as a result, it can offer its customers lower prices than many of its competitors." And, "[w]ith economies of scale and a vast distribution network, which contribute to its cost advantage, we think Walmart is positioned for additional volume gains that reinforce its 'productivity loop,' ultimately driving per-unit costs lower."

Anheuser-Busch InBev SA/NV (BUD US) is the largest brewer in the world. The company's size provides it with huge bargaining power as well as a lower average cost of production. Morningstar states: "Vast global scale and near-monopoly dominance in several Latin American and African markets give AB InBev significant fixed cost leverage and pricing power in procurement."

Efficient Scale Leads to Natural Monopoly

Virtually every company dreams of a market with few competitors. An environment with only a handful of business rivals can become one where "efficient scale" is possible, according to Morningstar.

> **Efficient Scale:** When a company serves a market limited in size, new competitors may not have an incentive to enter. Incumbents generate economic profits, but new entrants would cause returns for all players to fall to a level in line with or below the cost of capital.

Companies that benefit from this dynamic typically operate in a market that may only support one or a few competitors, which limits competitive pressures. Additionally, for efficient scale markets, market entry often requires very high capital costs, which are not justified by the limited profit potential a new competitor might achieve.

Efficient scale commonly applies to companies involved in telecommunications, utilities, railroads, pipelines, and airports. For example, while the U.S. does not have publicly traded airports, they are common in other areas of the world. Few cities can support more than one major airport. The financial incentive may not exist to compete with an existing airport because, due to limited demand, reduced market returns may not justify the initial capital necessary to build another airport.

Efficient Scale in Action

Union Pacific Corp. (UNP US) is the largest public railroad in North America. In addition to cost advantages, perhaps not surprisingly Union Pacific's wide economic moat is also based on efficient scale. According to Morningstar, "UP's rights of way and installed track form a nearly impenetrable barrier to entry." The company's system stretches across the Western U.S., from the Pacific to the Mississippi, and captures about half of the rail volume in the region.

Often a "Narrow" Moat

Though it can be powerful, efficient scale is one of the least common sources of moat among companies with a "wide moat" rating, or companies with sustainable competitive advantages expected to last 20 years or more, according to Morningstar.

Across the five sources of moat, efficient scale is the most likely to drive a "narrow moat" rating from Morningstar, meaning that economic profits are more likely than not to persist ten years into the future but are highly uncertain thereafter. Returns on invested capital for efficient scale companies tend to be only modestly above capital costs, which makes it difficult to have a high degree of conviction that a company will continually generate economic profit 20 years from now.

Dominion Energy Inc. (D US) is an integrated energy company. Its activities include electric generation, natural gas transmission, storage, distribution and gathering pipelines, and electric transmission and distribution lines. Morningstar states that Dominion's Atlantic Coast Pipeline "is an excellent example of the dynamics of the efficient scale moat source" because "once a pipeline is constructed, there is little incentive for competitors to enter a market."

Is the Moat Built to Last?

Companies may demonstrate one or a combination of the five sources of moat. Evaluating a company against these attributes are a key part of how Morningstar's equity research team measures the strength of a company's competitive advantage. Based on this assessment, Morningstar assigns a company one of three economic moat ratings: none, narrow, or wide. In turn, these ratings help inform Morningstar analysts' long-term forecasting decisions, which impact bottom-up fair value estimates.

A wide moat rating is given to a company that is more likely than not to sustain its competitive advantage for at least the next 20 years, while a narrow moat rating means a company is more likely than not to do so for at least 10 years into the future. A company with no moat has either no advantage or one expected to dissipate relatively quickly.

When companies are successful and earning excess profits, they often become targets for competitors, which may pose a threat to its profits. Companies with a wide moat tend to be best equipped to hold off competitors, which may help defend profitability over the long term.

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