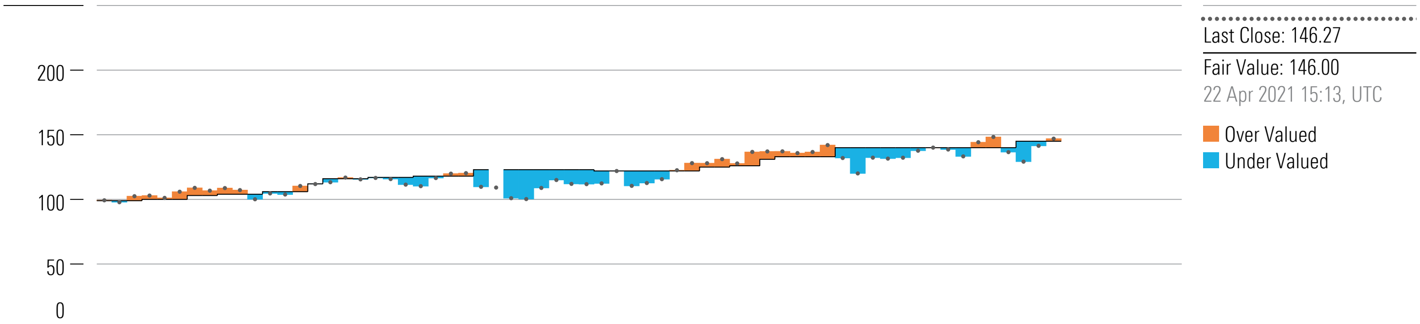
Morningstar Equity Analyst Report | Report as of 22 Apr 2021 15:18, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ

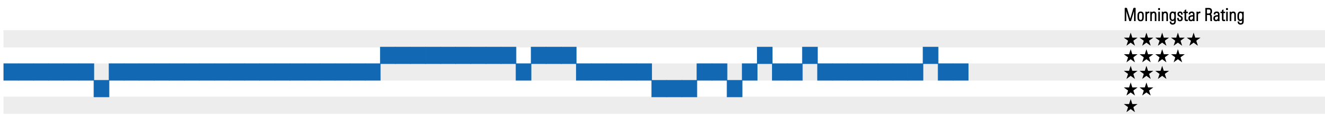
PepsiCo Inc PEP ★★★ 22 Apr 2021 15:17, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation
146.27 USD 22 Apr 2021	146.00 USD 22 Apr 2021 15:13, UTC	1.00	203.07 USD Bil 21 Apr 2021	Wide	Stable	Low	Exemplary

Price vs. Fair Value



	2016	2017	2018	2019	2020	YTD	
	0.99	1.02	0.91	1.03	1.06	1.00	Price/Fair Value
	7.68	17.64	-4.88	27.14	11.45	-0.20	Total Return %



Total Return % as of 21 Apr 2021. Last Close as of 22 Apr 2021. Fair Value as of 22 Apr 2021 15:13, UTC.

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Important Disclosure

Investments in System Capacity and Go-To-Market Capabilities Shoring Up Pepsi's Growth Profile

Business Strategy & Outlook Nicholas Johnson, CFA, Equity Analyst, 22 Apr 2021

For many consumers, the Pepsi trademark elicits images of cola containers and curated ads extolling the brand's taste superiority versus Coke. While PepsiCo is still a beverage behemoth, its exploits now extend beyond this industry, with Frito-Lay and Quaker products accounting for over half of sales and over 65% of profits, by our estimate. A diversified portfolio across snacks and beverages is the crux of many of the company's competitive advantages, in our view. Though management missteps have stymied performance in the past, the confluence of better execution and benefits inherent to its integrated business model has allowed Pepsi to reaccelerate profitable growth, and we see plenty of room to run.

After years of sluggish sales growth and underinvestment, Pepsi has committed to reinvigorating its top line. To that end, significant investments have been made in manufacturing capacity (for example, production lines to meet demand for reformulated packaging), system capacity (route optimization and sales technology), and productivity (harmonization and automation). We view these investments as prudent and believe they will allow the company to strengthen key trademarks such as Mountain Dew and Gatorade, deepen its presence in growth markets like sub-Saharan Africa, while also yielding enough cost savings to reinvest and widen profits. Recent strategic pivots within the energy category (such as the acquisition of Rockstar and Mountain Dew line extensions) should also underpin growth

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Sector	Industry
Consumer Defensive	Beverages - Non-Alcoholic

Business Description

PepsiCo is one of the largest food and beverage companies globally. It makes, markets, and sells a slew of brands across the beverage and snack categories, including Pepsi, Mountain Dew, Gatorade, Doritos, Lays, and Ruffles. The firm uses a largely integrated go-to-market model, though it does leverage third-party bottlers, contract manufacturers, and distributors in certain markets. In addition to company-owned trademarks, Pepsi manufactures and distributes other brands through partnerships and joint ventures with companies such as Starbucks. The firm segments its operations into five primary geographies, with North America (comprising Frito-Lay North America, Quaker Foods North America, and North America beverages) constituting over 60% of consolidated revenue.

and margins.

Pepsi’s growth trajectory is not without risk, as the company faces secular headwinds such as shifts in consumer behavior. Additionally, shifting go-to-market dynamics, such as online commerce that encourages real-time price comparisons and obviates the extent of Pepsi’s retail distribution advantage, allow for more nimble and aggressive competition. Still, we believe that structural dynamics emanating from Pepsi’s scale, the cachet of its brands, and the breadth of its portfolio, which support its wide moat, should enable the company to maintain and augment its competitive positioning.

Bulls Say Nicholas Johnson, CFA, Equity Analyst, 22 Apr 2021

- In still beverages, a category facing fewer secular challenges, particularly in the U.S., Pepsi is a much more formidable competitor to Coca-Cola.
- Pepsi’s global dominance in salty snacks may be underappreciated; with volume share more than 10 times that of the next-largest competitor, the firm benefits from unparalleled unit economics and go-to-market optionality.
- The firm’s consolidated beverage and snack distribution operations, combined with its direct store delivery capabilities, allow for better execution in merchandising.

Bears Say Nicholas Johnson, CFA, Equity Analyst, 22 Apr 2021

- In most beverage categories globally, Pepsi is still a distant number two to Coke.
- A corollary of Pepsi’s less focused product portfolio is inherently less operating leverage in its business model.
- The firm has been aiming to reinvigorate its North America beverage business for quite some time, and while it’s been reasonably successful on the top line, getting the business back to midteens margins will be a challenge.

Economic Moat Nicholas Johnson, CFA, Equity Analyst, 22 Apr 2021

We believe several structural dynamics, centered on cost advantages and intangible assets, have solidified PepsiCo's competitive positioning and secured it a wide economic moat. At a high level, we see characteristics of the snack and beverage categories where Pepsi competes, and its positioning within these categories, that should allow the company to continue to glean economic profits. While the firm's integrated business models across food and beverages have pros and cons, we think the combination of diversity, synergy, and flexibility that they facilitate will allow Pepsi to maintain its standing even as its core categories face secular headwinds.

Scale is usually the epicenter of the cost advantage moat source when it appears in the snack food and beverage spaces, and we believe both industries are conducive to scale efficiencies. The primary beverage and snack categories where Pepsi competes, carbonated soft drinks and salty snacks, are

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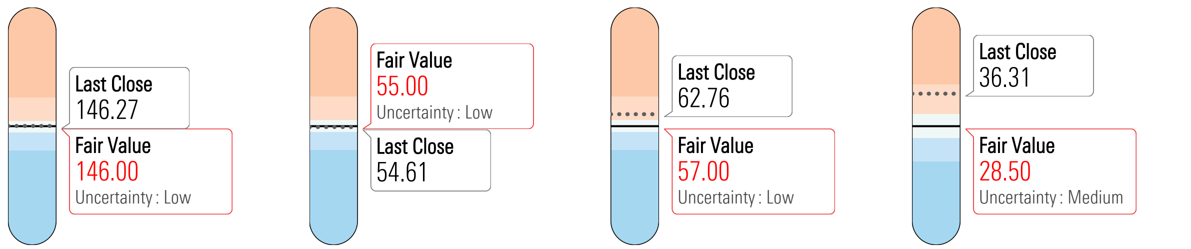
Competitors



	PepsiCo Inc PEP	Coca-Cola Co KO	General Mills Inc GIS	Keurig Dr Pepper Inc KDP
Economic Moat	Wide	Wide	Narrow	Narrow
Moat Trend	Stable	Stable	Negative	Negative
Currency	USD	USD	USD	USD
Fair Value	146.00 22 Apr 2021 15:13, UTC	55.00 24 Feb 2021 20:16, UTC	57.00 4 Jan 2021 15:58, UTC	28.50 1 Mar 2021 19:58, UTC
1-Star Price	182.50	68.75	71.25	38.48
5-Star Price	116.80	44.00	45.60	19.95
Assessment	Fairly Valued 21 Apr 2021	Fairly Valued 21 Apr 2021	Over Valued 21 Apr 2021	Over Valued 21 Apr 2021
Morningstar Rating	★★★22 Apr 2021 15:17, UTC	★★★21 Apr 2021 21:19, UTC	★★21 Apr 2021 21:19, UTC	★★21 Apr 2021 21:19, UTC
Analyst	Nicholas Johnson, Equity Analyst	Nicholas Johnson, Equity Analyst	Rebecca Scheuneman, Equity Analyst	Nicholas Johnson, Equity Analyst
Capital Allocation	Exemplary	Exemplary	Standard	Standard
Price/Fair Value	1.00	0.99	1.10	1.27
Price/Sales	2.86	7.06	2.09	4.44
Price/Book	14.56	11.57	4.31	2.14
Price/Earning	27.22	32.70	15.23	39.04
Dividend Yield	2.78%	3.02%	3.22%	1.65%
Market Cap	203.07 Bil	235.42 Bil	38.28 Bil	51.10 Bil
52-Week Range	126.53—148.77	43.20—54.93	53.96—66.14	25.55—36.45
Investment Style	Large Core	Large Core	Large Value	Large Core

highly consolidated, with the top three players controlling anywhere from 40%-70% of global volume, according to Euromonitor. Concurrently, the taste sensitivity of each player's core consumer is belied by the relative similarity across ingredient formulations. This means that even as market share vacillates at the margin, category leaders can typically maintain volume within a range that is suitable for cost leverage.

Pepsi enjoys leading production volume in many of its categories, which allows for favorable unit economics in manufacturing processes. The efficiency of the firm's beverage business is less pronounced relative to snacks, given the higher capital intensity; beverages have more-involved production lines because of the various infrastructure requirements, such as piping, tubing, and filters, in addition to less streamlined packaging. Still, we believe the cost structures of the company's two core operations compare favorably with those of most peers, due to Pepsi's ability to better leverage fixed costs and reduce variable costs through procurement advantages. In beverages, we see Pepsi's unit

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cases per manufacturing facility and cost of goods sold per unit case as evidence of the firm's top-tier capacity utilization and procurement, respectively. The firm materially trails Coca-Cola in these two metrics (by factors of 3 in both respects), owing to the latter's structurally lower-cost position in the supply chain (focusing primarily on beverage concentrates in lieu of finished drink manufacturing) as well as its more streamlined raw material procurement. Still, Pepsi is superior in these regards to established peers like Keurig Dr Pepper and other competitors. While a dearth of available data inhibits us from explicitly estimating similar metrics to elucidate Pepsi's relative positioning on the cost curve in the snack industry, we believe the firm is far better positioned than peers. With Pepsi's leading unit share, combined with the relative similarity across basic ingredient composition and manufacturing processes, we would be shocked if any snack competitor were able to achieve better productivity or procurement leverage than Pepsi.

The breadth of the firm's portfolio, spanning a variety of snacks and beverages, also begets synergies in distribution that support its cost advantage, in our view. Unlike Coca-Cola, Pepsi owns a large portion of its distribution apparatus, whether it be bottling plants and warehouses or delivery trucks. While the value/volume profile of certain snacks can make distribution less economically desirable, Pepsi is able to increase its distribution route density by filling trucks with both beverage and snack stock-keeping units, leading to economies of scope as the firm spreads distribution costs across a greater number of products. In some cases where large customers are ordering products that span the gamut of Pepsi's portfolio, the firm leverages third-party distributors to streamline this delivery, in light of the greater SKU complexity and dispersion of its various manufacturing facilities. We believe this also yields superior economics for Pepsi, and while the utilization of third-party distributors is replicable, our view is that the company's ability to do this comes from the breadth of its product portfolio and the accompanying volume, which make it worthwhile for these distributors to service Pepsi's customers on terms that are economically palatable to both sides. These are structural characteristics, and it would be difficult for upstarts to replicate similar pecuniary benefits, in our view.

Brand resonance is the most salient avenue through which the intangible assets moat source manifests itself in the consumer packaged goods space, and we believe Pepsi's categories boast characteristics that are conducive to brand development. These include relatively conspicuous consumption in various on-trade contexts and heightened taste sensitivity among a large cohort of consumers. Additionally, private-label penetration in many beverage and snack categories is relatively low--between low single digits and low double digits on a volume basis. These numbers are even lower on a value basis, given the price disparities of these SKUs vis-a-vis branded products.

Against this backdrop, we see Pepsi's stable of trademarks as among the most iconic and enduring in the world. The firm consistently appears in surveys highlighting the most favored brands among fast-moving CPG wares (with a strong CSD brand in Pepsi and a number-one sports drink in Gatorade, for

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example), and we believe the company's leadership across its categories evinces this sentiment. In beverages, the firm's global nonalcoholic ready-to-drink volume share of roughly 7% is only one third of Coke's, but is still almost double that of the next closest competitor (Nestle, due to its water portfolio), according to Euromonitor. In global CSDs, Pepsi's market share of close to 20% is again less than half of Coca-Cola's, but close to 5 times that of the next-largest player (Keurig Dr Pepper). In snacks, Frito-Lay products boast pre-eminent status in corn/tortilla chips and other extruded snack categories, as well as potato chips, with volume share in the mid-30s and mid-40s respectively, according to Euromonitor. The firm is number one in these snack categories by an even larger margin in the U.S.

While we view Pepsi's sustained elevated market share across industries as a core tenet supporting its intangible assets, we also believe the firm's pricing history represents demonstrably strong evidence. The dynamic and channel-specific nature of retail pricing, particularly exacerbated by the prevalence of behavioral algorithms in online commerce and the ability of consumers to compare prices in real time, makes general statements about relative pricing difficult. Still, we believe the firm has been a price leader in many of its categories. Pepsi has historically garnered outsize top-line gains from the combination of discrete pricing actions and mix shifts, in the mid- to high-single-digit range in some of its most penetrated markets in the Americas, which we find impressive. Even in beverages, where the firm's relative positioning is much weaker, there are a few markets--in Latin America, for example--where Pepsi boasts material price premiums (as high as 40%) above Coca-Cola.

A natural corollary of brand appeal is the supply chain entrenchment and relationships with retailers that it facilitates. The categories in which Pepsi competes constitute approximately a third of total food and grocery sales in the U.S., based on Euromonitor retail data. Owing to its category leadership across snacks and beverages, Pepsi is often viewed as a strategic partner by retailers, helping to incubate strategies to increase overall category value. Pepsi and its retail customers also share data centered on consumer insights. We think that in an era where competitive differentiation is increasingly driven by technology-enabled analytics and algorithms, the data feedback loop that these retail relationships engender will serve to perpetuate Pepsi's advantage.

We view Pepsi's distribution apparatus as another core pillar supporting the firm's intangible asset moat source, whether it is company-controlled direct store delivery or customer warehouse systems (depending on the nature of the product and its responsiveness to in-store merchandising), or even its ability to deploy third-party distributors in an economically viable way. The firm's distribution reach encompasses over 200 countries, and this apparatus has been refined over decades, making the company more equipped to strategically and tactically deploy the appropriate go-to-market approach that will extract the best possible economics from its businesses. Unlike the alcoholic beverage industry, there are no laws mandating distribution to customers through an intermediary, which makes the nonalcoholic industry more susceptible to secular shifts in distribution and fulfilment. In general, and particularly for snack consumption situations where immediacy of need is low, digitization and the concomitant growth in the e-commerce channel have disrupted shopping paradigms, both in the ways CPG firms deliver their wares and the ways consumers make purchasing decisions. However, we see various normative trends that will ensure distribution prowess and retail relationships remain pertinent to competitive dynamics in both the snack and beverage spaces. Chief among these is consumers' penchant for social consumption, which makes on-premise food and beverage consumption a staple in many public communal settings. This type of social behavior is much less likely to be disrupted by e-commerce, in our view. Also, we believe there will be a plethora of scenarios, where purchases are impromptu and the immediacy of the need is high, that will continue to be conducive to physical purchases. We think the resiliency of convenience store and supermarket share of grocery purchases supports our views in this regard.

There are mutually reinforcing dynamics at play in the firm's intangible assets, in our view. The breadth of its distribution network (which we believe is tied to the broad appeal of its brands) makes Pepsi a choice partner of smaller beverage and snack companies. In the realm of product development, the prospect of being able to scale distribution of the final product quickly and broadly makes other companies willing to embark on joint ventures with Pepsi. Such codevelopment and distribution initiatives can be seen in Pepsi's partnership with Starbucks for ready-to-drink coffee and its Lipton partnership with Unilever. Partnerships like this further diversify Pepsi's brand portfolio and increase the avenues through which the company can monetize its innovation. In addition to the synergistic relationship among intangible assets, these partnerships improve Pepsi's capacity utilization and distribution density, thus bolstering its cost advantage.

We believe intangible assets represent Pepsi's primary moat source, with cost advantages secondary, which is the converse of our view of wide-moat Coca-Cola. Though geographic and portfolio-related idiosyncrasies make generalities difficult to make for the two behemoths, we believe that, in the aggregate, the confluence of brand strength and retailer relationships is more important to Pepsi's economic rent generation. The premise for this argument lies in the two firms' relative marketing spending, with Pepsi spending appreciably less as a percentage of revenue (midsingle digits) than Coca-Cola (low double digits). Some may argue that Coke's more robust market share in beverages is evidence of a stronger intangible asset. However, we think a brand-predicated moat is not best reflected in popularity (for which market share is the best proxy), but in the ability to parlay popularity into profitability and excess returns on capital. We think Coke's relatively higher marketing spending reflects the firm's choice to leverage superior margins emanating from its scale efficiencies to reinforce its brands and maintain market share. While the absolute spending levels by the firms are similar, we believe Pepsi has been able to leverage the breadth of its portfolio across both snacks and beverages, and the inherent promotional synergies that accompany this breadth, to achieve a similar level of brand

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recognition and channel entrenchment as Coca-Cola, but to do so in a much more efficient way in terms of relative advertising dollars. Moreover, we see no demonstrable evidence that Coke's higher relative spending has been more productive. In our view, these realities lend credence to our contention that Pepsi's intangible assets have been a stronger contributor to its competitive advantage.

We believe the characteristics we have outlined are self-perpetuating and mutually reinforcing. These structural dynamics, in our view, are highly unlikely to be replicated by a new entrant in a way that fundamentally alters Pepsi's competitive positioning, and we believe the firm's edge is more likely than not to persist over the next 20 years. In conjunction with returns on invested capital (averaging in the high teens historically and over the course of our explicit forecast) well in excess of the firm's cost of capital, we believe these support a wide moat rating.

Fair Value and Profit Drivers Nicholas Johnson, CFA, Equity Analyst, 22 Apr 2021

We’re raising our fair value estimate for Pepsi to $146 from $145 due to time value. The firm’s snack portfolio continues to perform well as the pandemic lingers, and near-term weakness in on-premises sales (affecting the beverage business disproportionately), as well as heightened supply chain costs, should moderate throughout 2021. 2020 performance belied the volatile operating environment, and solid first-quarter results have confirmed that we should expect more of the same in 2021. Longer term, its trajectory should remain supported by innovation, revenue growth management, and investments in system capacity/efficiency. Our valuation implies a 2021 adjusted earnings multiple of 24.

We envision snack foods, roughly 55% of revenue, growing faster than beverages and increasing as a proportion of the total mix. We see particularly auspicious results for the Frito-Lay brands, which have greater international brand equity than signature Pepsi beverages, with the latter afflicted by huge share disparities in most international markets relative to Coke. We also expect stellar growth from “better-for-you” snack brands like Smartfood and Off The Eaten Path.

From a division perspective, we forecast price/mix contributing the preponderance of revenue growth except in Asia and Africa, where we expect more unit growth as lower per capita consumption and recent acquisitions (like Pioneer) support volume gains. Latin America, a predominantly snack business where the firm boasts dominant share and per capita consumption of its products is high, should be particularly conducive to price/mix growth (roughly 6% on average in our projection). All in, we model a five-year top-line CAGR of 4.2%.

We model gross and operating margins widening to 55.7% and 16.9%, respectively, in 2025, versus 54.5% and 14.3% in 2020. Margins were hit in 2020 as Pepsi booked charges for merger integration and system implementation associated with its productivity initiatives, in addition to incremental strategic investments. Still, we believe harmonization of systems, technology-fueled analytics, and optimization of

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the supply chain and manufacturing apparatus will allow for margin expansion while reinvesting appropriately for growth. The margin improvements will be buttressed by continued growth in the U.S. ready-to-drink coffee market, which the firm is exposed to through its joint venture with Starbucks (via Nestle), as well as growing exploits in the high-margin energy category.

Risk and Uncertainty Nicholas Johnson, CFA, Equity Analyst, 22 Apr 2021

Various dynamics, many of which are related to environmental, social, or governance issues, introduce risk to Pepsi's competitive positioning. One of the most salient, from our vantage point, is consumers' increasing penchant for more natural food and drinks. As much as Pepsi has pivoted its portfolio and its messaging, it still has to battle the stigma that accompanies processed food and drink companies due to increased social awareness of the potential health implications. There are structural impediments to these dynamics in developing and emerging countries, but Pepsi is disproportionately exposed to markets like the U.S. where these sentiments seem unabated.

More stringent environmental regulation also represents a risk. For example, some states in the U.S. have bottle deposit return systems in place, which charge consumers deposits that are refundable, as an incentive mechanism to reduce waste. Many legislatures are seeking to place more of the financial burden for these types of policies on producers like Pepsi. To the extent that more cumbersome laws and proposals come to fruition, there could be a nontrivial impact on the firm's business model.

Finally, the increasingly viral nature of the media creates omnipresent ESG risk in the form of potential brand degradation, which is quite acute for most corporations, in our view. We believe these risks become near existential for the most consumer-oriented firms that rely on brand resonance most heavily. Anything that is not consistent with the zeitgeist, which can manifest in anything from a misguided marketing campaign to disregard for human capital, gives rise to the possibility that a company's business model will be disrupted. While the diversity of Pepsi's portfolio and the vast resources at its disposal should help the firm navigate these risks, we do not think any entity is completely immune to them.

Capital Allocation Nicholas Johnson, CFA, Equity Analyst, 22 Feb 2021

We rate capital allocation at PepsiCo as Exemplary. Its track record is not beyond reproach, but ultimately, we believe the firm stacks up well against the three analytical pillars of our rating. The balance sheet is sound, and we have no qualms about its financial health going forward. While there are puts and takes informing our view on its investments, we believe that the net effect of its organic and inorganic moves have been economically accretive and take a particularly constructive view of recent strategic initiatives. Lastly, while the firm's distributions skew more to share repurchases than we'd like to see, we still believe they're appropriate, and not anomalous relative to industry peers.

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Regarding investments, since merging with Frito-Lay in 1965, PepsiCo has demonstrated a proclivity for expanding its portfolio in ways that allow it to ride various secular tailwinds, illustrated by its purchases of Tropicana and Naked Juice, for example. Even its Quaker Foods acquisition, whose significance has waned as the business has been beleaguered by category headwinds in cereals and robust competition, allowed the company to attain control of Gatorade. Gatorade remains the number-one sports drink globally, with particularly strong performance recently, and competes in a favorable category.

Former CEO Indra Nooyi was well regarded--appropriately so, in our opinion--for her ability to read the consumer ethos and pivot the company’s portfolio accordingly. However, there were a series of execution missteps and underinvestment, particularly in the beverage business, that stymied momentum, in our view. Nooyi stepped down after 12 years at the helm in October 2018 and was replaced by Ramon Laguarta. A Pepsi veteran, having been with the company for over two decades, Laguarta has been key to a number of strategic initiatives particularly in the European business. For example, he was instrumental in the acquisition of Russian dairy and juice company Wimm-Bill-Dann. This strategic move significantly augmented the company’s financial position in Russia, which has grown to become Pepsi’s third most important market behind the U.S. and Mexico.

We believe Laguarta and his team have thus far been prudent in their approach to portfolio expansion, paying premiums for businesses with torrid growth prospects and secular tailwinds, such as SodaStream, while picking up bargains that allow for footprint expansion in areas where the company is underpenetrated, such as Pioneer Foods in Africa. We have a particularly favorable view of SodaStream, a maker and distributor of sparkling water machines. It dovetails well with the consumer zeitgeist, in our opinion, as consumers look for consumption mechanisms with reduced packaging footprints, as well as more choice and customizability. In 2020, the firm reinvigorated its strategy for energy drinks, a high-growth and inherently profitable category that skews to favorable channels like convenience. Specifically, it consummated its acquisition of Rockstar Energy, a long-time partner brand that was distributed through Pepsi's system, and also entered into an exclusive distribution agreement with Bang, a disruptive energy player that gained market share in recent years. While the latter arrangement has gone sour and is currently in arbitration, we believe Rockstar, in conjunction with more leeway to parlay Mountain Dew into the energy category (the previous Rockstar agreement was more restrictive on this front), should allow Pepsi to migrate from the energy periphery and compete more aggressively. The firm has also been casting several nets into the e-commerce pond through Frito-Lay, not only collaborating with retailers, but also launching various iterations of direct-to-consumer platforms. We see fulsome promise in the latter initiatives especially, given the greater autonomy over consumer data/analytics as well as the long-term profit implications of disintermediation.

Pepsi has been robust on the capital return front, with over a decade of dividend increases and share buybacks of $2 billion-$3 billion over the past five years. We expect dividend increases to continue to the tune of 5% on average over the course of our explicit forecast and envision the firm buying back roughly $1 billion worth of stock annually. Share repurchases should only be accretive when executed at prices below our estimates of intrinsic value, in our view, and while management's annual commitments to buybacks strike us as too indiscriminate, we don't believe these cash outlays come at the expense of necessary internal reinvestment.

Analyst Notes Archive

Not Much to Dislike in Pepsi's Q1; Comps Remain Tough, but Enough Portfolio Optionality for Growth Nicholas Johnson, CFA, Equity Analyst, 15 Apr 2021

With headline performance in 2020 that belied the disruption across the broader economy, investors were seemingly less enamored with wide-moat PepsiCo's value proposition heading into its first-quarter earnings print (as shares have been under pressure in recent months). Still, the firm continued its streak of impressive performance (with top- and bottom-line results ahead of FactSet consensus), dispelling--at least for now--the notion that its growth will be challenged in 2021. To be sure, comps will be toughest in the quarters ahead, but we expect the diversification in the business to allow the firm to maintain its growth algorithm irrespective of how consumer behavior evolves throughout the year. We don't plan to materially change our $145 fair value estimate outside of time value adjustments, and while current trading levels no longer present a compelling margin of safety, we'd be happy buyers on any further pullbacks.

Revenue of $14.8 billion represented a 6.8% year-over-year increase. Though 5 points of this bump was due to recent strategic acquisitions (chiefly Be & Cheery in China, Pioneer in Africa, and Rockstar in the U.S.), over 2% organic growth is still commendable given tough comps faced from March 2020 pantry loading. In snack foods, Frito Lay remained vibrant, and Quaker brands in the U.S. continued to benefit from elevated at-home occasions (specifically around breakfast and side dishes). Beverages had several bright spots, with the North America business up 1.5% organically. Energy remains a key strategic focus in this unit, revolving around Rockstar and Mountain Dew (with its Bang partnership likely sitting ignominiously on the sidelines). The firm signed NBA superstar LeBron James as the marquee ambassador for its new Mountain Dew energy drink (Rise); this is no small feat, and likely required a nontrivial financial commitment, but signals to us management's determination to compete more aggressively in this high growth, high margin category.

Pepsi Firing on All Cylinders Heading Into 2021; Shares Might Be Getting Attractive Nicholas Johnson, CFA, Equity Analyst, 11 Feb 2021

Since the onset of the pandemic, wide-moat PepsiCo's results have consistently belied the tumult in the global economy, and the company closed 2020 in similar fashion. Beyond solid fourth-quarter results (ahead on revenue and in-line earnings relative to FactSet consensus), management issued guidance

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Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation
146.27 USD 22 Apr 2021	146.00 USD 22 Apr 2021 15:13, UTC	1.00	203.07 USD Bil 21 Apr 2021	Wide	Stable	Low	Exemplary

consistent with its long-term growth algorithm (mid-single-digit organic top-line growth and high-single-digit earnings growth), which we consider particularly laudable. While there should be countervailing forces in the firm's trajectory over the next couple of years, with businesses like Quaker currently growing at unsustainable levels due to COVID-19, we believe PepsiCo's portfolio breadth and system investments give it tons of optionality in executing its growth and margin aspirations. We'll likely raise our $140 fair value estimate modestly after rolling our model, and with the shares down slightly after the report, attractive entry points could be emerging. We'd recommend quality-oriented investors keep an eye out.

Revenue was $22.5 billion, up 8.8% year over year. While this was skewed upward by acquisitions like Pioneer, the organic performance, at 5.7%, was strikingly resilient. It was business as usual for snack food, up 5%, as the Frito-Lay and Quaker brands continue to benefit from elevated at-home meal preparation and incremental snacking occasions. The beverage business posted 6% growth globally, fueled by a 5.5% uptick in the North America segment. When juxtaposed with the North America business of its chief rival, Coca-Cola (down 3% organically), Pepsi's performance looks particularly impressive. While this is largely due to Coke's disproportionate representation in on-premises channels, we also believe PepsiCo CEO Ramon Laguarta and team have done a tremendous job augmenting the growth profile of marquee U.S. beverage brands while carving out brand equity in secularly advantaged categories (like Bubly in sparkling water).

The Beyond Meat-Pepsi Joint Venture Has Strategic Merit, but the Stock Reaction Is Likely Overdone Rebecca Scheuneman, CFA, Equity Analyst, 26 Jan 2021

No-moat Beyond Meat and wide-moat PepsiCo have announced the formation of a joint venture called The Planet Partnership to develop snacks and beverages made from plant-based protein. This is Beyond's first expansion outside of plant-based meats, indicating that its total addressable market is likely larger than investors initially envisioned. The shares are responding accordingly, surging 20%, pushing the stock into 2-star territory. We maintain our $146 fair value estimate until we hear more details from the firms, including the timing and nature of product launches, so we can gauge the potential market opportunity.

If the venture is limited to the types of products already in Pepsi's lineup, the Beyond Meat stock movement is likely an overreaction, as plant-based Frappuccino, Muscle Milk, and Matador jerky would likely not generate the $300 million in annual revenue needed to justify it. If the venture expands to other dairy and meat-based products outside of Pepsi's current portfolio, the market opportunity will be larger, but so will execution risks as the firms move further away from their traditional areas of expertise. Additionally, while Pepsi has had several successful partnerships, not all its deals have panned out well. For example, its distribution agreement with Bang, a disruptive energy drink company, recently went sour and is currently in arbitration. Still, the formality of the JV structure and the favorable secular backdrop could make this a more fruitful endeavor for both firms.

We view the partnership with Pepsi as a judicious approach to leveraging Beyond's plant-based protein expertise and Pepsi's marketing and distribution muscle in order to meet consumers' growing appetite for sustainable products. The move supports our Exemplary rating of Beyond's capital allocation strategies, as the firm has a strong track record of prudently investing resources in high-return projects while maintaining a strong balance sheet.

PepsiCo and Coca-Cola Saw Diverging Fortunes in 2020; We Expect Convergence as 2021 Progresses Nicholas Johnson, CFA, Equity Analyst, 25 Jan 2021

Ahead of earnings season, we thought it'd be useful to reflect on the past year for the two soft drink titans we cover as well as provide our early 2021 prognosis. Regarding valuation, we believe the unique backdrop that allowed PepsiCo to deftly navigate 2020 is fully reflected in its stock price, trading in line with our $140 fair value estimate. Conversely, we see a compelling margin of safety in Coca-Cola's stock relative to our $54 fair value estimate--investor concerns around recent adverse tax judgements are misguided, in our view, and the commercial backdrop should be more favorable in 2021.

The two most salient differences between the two firms--portfolio composition and geographic footprint--will prove decisive for anyone looking to reconcile their divergent performances in 2020. For Coke, the coronavirus pandemic morphed its historic strengths (beverage portfolio and material non-U.S. exposure) into glaring weaknesses. Increases in off-premises consumption could not mask the on-premises decline, and when combined the off-premises skew to more commoditized categories, the result was a significant revenue drop (we forecast 8.5% organically). Still, margins were resilient (down an estimated 13%), and while the firm will still be leveraged to mobility trends and the viability of foodservice in 2021, we expect the confluence of weak comps, vaccination efforts, and innovation (like Topo Chico Hard Seltzer) will lead to a bounce-back year for Big Red.

For Pepsi, its stalwart snack portfolio (which benefited from new consumption occasions spurred by COVID-19) and preeminent North America exposure (60% of normalized sales) allowed it to post enviable 2020 organic growth (estimated over 4%) in line with its long-term algorithm and belying what was expected to be a tumultuous year. The firm will soon have to navigate more normalized consumer behavior, and we expect the beverage business--with its own set of idiosyncratic challenges--to return to focus in 2021.

Business as Usual for Snacks, but Beverage Portfolio Surprises to the Upside in Pepsi's Q3 Nicholas Johnson, CFA, Equity Analyst, 1 Oct 2020

With wide-moat PepsiCo's stock rallying in the days leading up to its third-quarter earnings print, it seemed like investors were becoming increasingly enamored by the prospects of: 1) continued growth

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in snacks, 2) recovery in beverages, and 3) moderating coronavirus-related costs. The firm delivered on almost all fronts, culminating in top- and bottom-line beats relative to CapIQ consensus. Management's full-year guidance (4% organic growth and core EPS of $5.50) was a smidge ahead of our expectations though not meaningful enough to alter our $140 fair value estimate, leaving the shares fully valued in our view.

Revenue came in at $18.1 billion, reflecting year-over-year growth of 5.3%. With the coronavirus increasing the frequency of various snacking occasions, the robust 6% organic growth in the snack and food portfolio came as no surprise, but the 3% increase in beverages was stronger than we anticipated, due to the confluence of strength in the off-trade and less precipitous declines in food service. We were particularly pleased with the North America beverage business (up 3% organically), and with commentary regarding improvement in the U.S. convenience channel. Better leveraging scale and portfolio scope to win more placements in this channel was a key rationale of the firm's recent moves in the energy category, namely the Rockstar acquisition and the Bang distribution agreement. As mobility improves, we expect stakeholders within this channel to become less focused on survival and more focused on growth, which should allow Pepsi more latitude to execute against its initiatives.

Core operating margin was resilient, down only 40 basis points to 16.8%. Margins this year have largely been a function of direct COVID-19 costs as well as other corollaries of the crisis and their impacts on strategic investments (like advertising). Profitability will likely be volatile in the near term, but we still see plenty of room for margin expansion longer term.

Pepsi's Snack Business Allowing It to Adroitly Navigate Uncertain Marketplace; Shares Fully Valued

Nicholas Johnson, CFA, Equity Analyst, 13 Jul 2020

With the second quarter widely expected to be the ugliest for most beverage companies, we think investors had relatively facile expectations heading into wide-moat PepsiCo's earnings print and were primarily looking to gauge how the resilience of the snacking business (55% of sales) would offset weakness in soft drinks. The results were comforting in this regard (top- and bottom-line beats relative to CapIQ consensus), and management alluded to a sequential recovery from COVID-19 disruption during the third quarter. We plan to tweak our near-term estimates modestly, but our $140 fair value estimate will not change, and the shares look fully valued to us. Sentiment around wide-moat Coca-Cola's stock has been less constructive due to its pure-play beverage exposure, but despite a more precarious near-term outlook, we still see a more compelling long-term risk/reward opportunity in Big Red's shares.

Sales came in at $15.9 billion for the quarter, a 3% year-over-year decline. Organic revenue, however, was roughly flat, an impressive feat reflecting a booming snack business (up 5% globally with brands like Tostitos and Cheetos growing double-digits) juxtaposed against weak beverage performance (down 7%, with on-premises restrictions more than offsetting strong traditional retail sales). Headline Latin

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America revenue (a 17% decline) reflected currency headwinds and belied the region's relatively healthy organic sales (which were flat). A predominantly snack food business, Pepsi's Latin American operations are well suited for this environment due to less on-premises exposure and more containment-induced consumption occasions (whether for breakfast, snacking, dinner, or the like). Nevertheless, we'll keep a close eye on how this business holds up, given the socioeconomic realities of the region (which have been exacerbated by COVID-19) and fundamentally different go-to-market dynamics.

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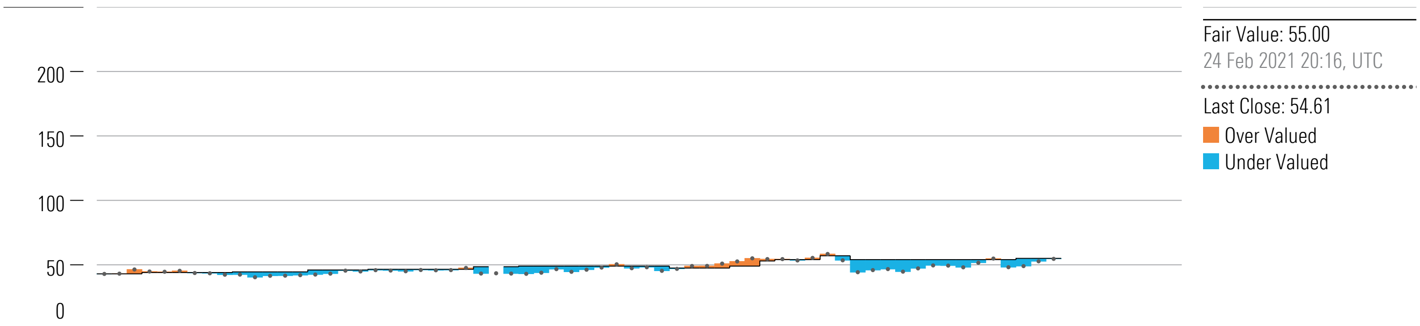
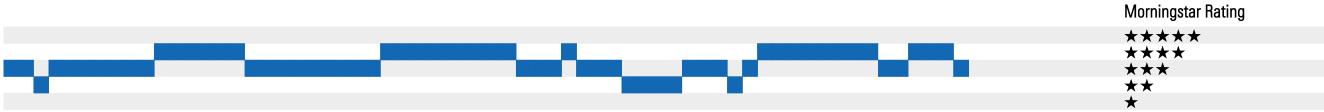
Competitors Price vs. Fair Value

Coca-Cola Co KO



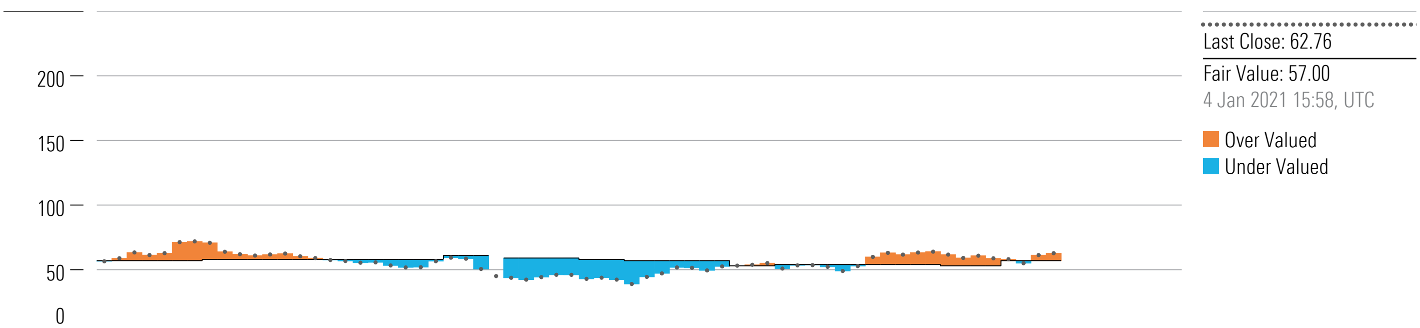
	2016	2017	2018	2019	2020	YTD
Price/Fair Value	0.93	0.99	0.97	1.03	1.02	0.99
Total Return %	-0.23	14.23	6.60	20.27	2.04	0.35

Morningstar Rating



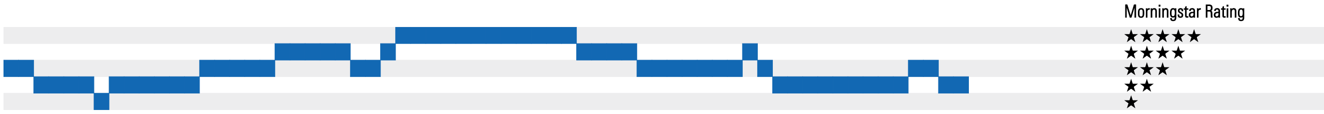
Total Return % as of 21 Apr 2021. Last Close as of 21 Apr 2021. Fair Value as of 24 Feb 2021 20:16, UTC.

General Mills Inc GIS



	2016	2017	2018	2019	2020	YTD
Price/Fair Value	1.07	0.97	0.68	0.99	1.11	1.10
Total Return %	10.35	-0.87	-31.02	42.58	13.48	8.47

Morningstar Rating



Total Return % as of 21 Apr 2021. Last Close as of 21 Apr 2021. Fair Value as of 4 Jan 2021 15:58, UTC.

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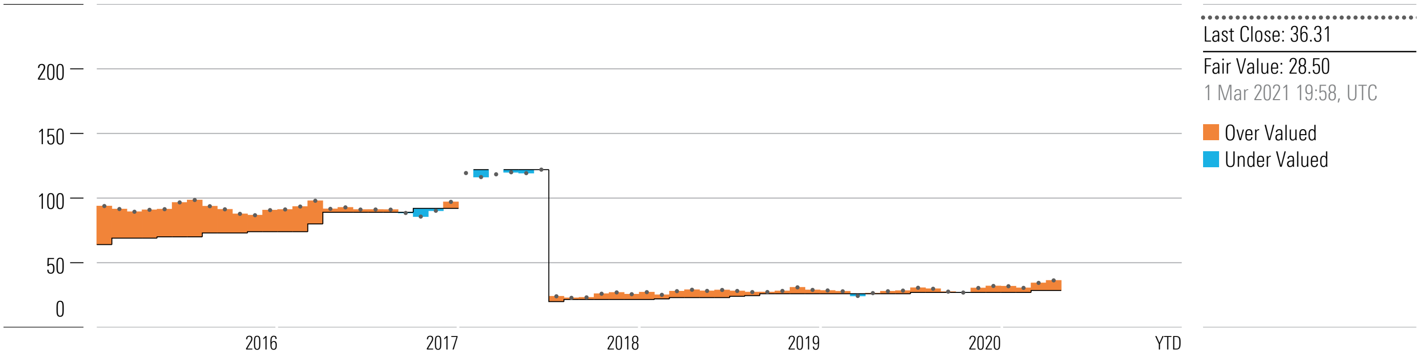
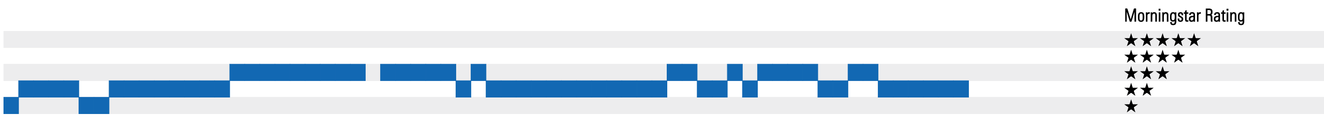
Keurig Dr Pepper Inc KDP



	2016	2017	2018	2019	2020	YTD	
	1.23	1.06	1.19	1.11	1.19	1.27	Price/Fair Value
	-0.44	9.61	34.06	15.25	12.61	14.41	Total Return %



Total Return % as of 21 Apr 2021. Last Close as of 21 Apr 2021. Fair Value as of 1 Mar 2021 19:58, UTC.

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Morningstar Historical Summary

Financials as of 31 Mar 2021

Fiscal Year, ends 31 Dec	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	TTM
Revenue (USD Mil)	66,504	65,492	66,415	66,683	63,056	62,799	63,525	64,661	67,161	70,372	14,820	71,311
Revenue Growth %	15.0	-1.5	1.4	0.4	-5.4	-0.4	1.2	1.8	3.9	4.8	6.8	4.6
EBITDA (USD Mil)	12,427	11,892	12,465	12,291	10,828	12,263	13,122	12,807	12,679	12,745	2,992	13,203
EBITDA Margin %	18.7	18.2	18.8	18.4	17.2	19.5	20.7	19.8	18.9	18.1	20.2	18.5
Operating Income (USD Mil)	9,633	9,112	9,705	9,581	9,712	9,804	10,276	10,110	10,291	10,080	2,312	10,468
Operating Margin %	14.5	13.9	14.6	14.4	15.4	15.6	16.2	15.6	15.3	14.3	15.6	14.7
Net Income (USD Mil)	6,443	6,178	6,740	6,513	5,452	6,329	4,857	12,515	7,314	7,120	1,714	7,496
Net Margin %	9.7	9.4	10.1	9.8	8.6	10.1	7.6	19.4	10.9	10.1	11.6	10.5
Diluted Shares Outstanding (Mil)	1,597	1,575	1,560	1,527	1,485	1,452	1,438	1,425	1,407	1,392	1,387	1,390
Diluted Earnings Per Share (USD)	4.03	3.92	4.32	4.27	3.67	4.36	3.38	8.78	5.20	5.12	1.24	5.40
Dividends Per Share (USD)	2.03	2.13	2.24	2.53	2.76	2.96	3.17	3.59	3.79	4.02	1.02	4.09

Valuation as of 31 Mar 2021

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Recent Qtr	TTM
Price/Sales	1.6	1.6	2.0	2.2	2.3	2.5	2.7	2.4	2.9	3.0	2.8	2.8
Price/Earnings	16.6	17.5	19.5	20.9	29.7	22.9	24.8	31.7	15.6	29.3	27.6	27.6
Price/Cash Flow	12.5	12.7	12.9	14.9	14.1	14.7	17.9	18.3	19.8	19.3	18.6	18.6
Dividend Yield %	3.05	3.11	2.7	2.68	2.76	2.83	2.64	3.25	2.77	2.71	2.89	2.89
Price/Book	4.4	4.7	5.7	6.1	10.8	11.9	12.9	15.1	13.5	15.2	14.5	14.5
EV/EBITDA	10.2	10.7	11.8	13.1	15.3	13.9	14.6	13.8	17.1	18.8	0.0	0.0

Operating Performance / Profitability as of 31 Mar 2021

Fiscal Year, ends 31 Dec	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	TTM
ROA %	9.1	8.4	8.9	8.8	7.8	8.8	6.3	15.9	9.4	8.3	1.9	8.5
ROE %	30.9	28.8	29.0	31.2	37.2	55.1	44.3	98.7	49.9	50.4	12.5	54.7
ROIC %	15.0	13.8	14.1	14.2	13.4	15.6	11.0	27.6	17.1	15.2	3.3	14.9
Asset Turnover	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.2	0.8

Financial Leverage

Fiscal Year, ends 31 Dec	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Recent Qtr	TTM
Debt/Capital %	50.0	51.4	50.1	57.7	71.0	73.0	75.6	66.1	66.4	75.0	73.7	—
Equity/Assets %	28.2	29.8	31.3	24.7	17.1	15.0	13.6	18.7	18.8	14.5	15.3	—
Total Debt/EBITDA	2.2	2.4	2.4	2.4	3.1	3.0	3.0	2.5	2.6	3.5	14.6	—
EBITDA/Interest Expense	14.5	13.2	13.7	13.5	11.2	9.1	11.4	10.5	13.6	11.3	11.6	12.0

Morningstar Analyst Historical/Forecast Summary as of 22 Feb 2021

Financials

			Estimates		
Fiscal Year, ends 31 Dec	2019	2020	2021	2022	2023
Revenue (USD Mil)	67,161	70,372	74,406	77,381	80,377
Revenue Growth %	3.9	4.8	5.7	4.0	3.9
EBITDA (USD Mil)	12,942	12,983	14,617	15,519	16,320
EBITDA Margin %	19.3	18.5	19.6	20.1	20.3
Operating Income (USD Mil)	10,291	10,080	11,381	12,311	13,169
Operating Margin %	15.3	14.3	15.3	15.9	16.4
Net Income (USD Mil)	7,775	7,688	8,392	8,888	9,520
Net Margin %	11.6	10.9	11.3	11.5	11.8
Diluted Shares Outstanding (Mil)	1,407	1,392	1,388	1,384	1,378
Diluted Earnings Per Share(USD)	5.53	5.52	6.05	6.42	6.91
Dividends Per Share(USD)	3.82	4.02	4.25	4.46	4.68

Forward Valuation

			Estimates		
	2019	2020	2021	2022	2023
Price/Sales	2.8	2.9	2.7	2.6	2.5
Price/Earnings	24.7	26.9	24.3	22.9	21.3
Price/Cash Flow	35.1	32.1	27.3	27.6	23.2
Dividend Yield %	2.80	2.71	2.89	3.03	3.18
Price/Book	—	—	—	—	—
EV/EBITDA	16.8	18.4	16.4	15.5	14.7

Research Methodology for Valuing Companies

Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, indepth competitive advantage analysis, and a variety of other analytical tools to augment this process. Moreover, we think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (e.g., mines), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss shortterm market-price movements), but we believe these negatives are mitigated by deep analysis and our longterm approach.

Morningstar's equity research group ("we," "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's fair value, (3) our uncertainty around that fair value estimate and (4) the current market price. This process ultimately culminates in our singlepoint star rating.

1. Economic Moat

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of our fair value estimates. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, no-moat companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

When considering a company's moat, we also assess whether there is a substantial threat of value destruction, stemming from risks related to ESG, industry disruption, financial health, or other idiosyncratic issues. In this context, a risk is considered potentially value destructive if its occurrence would eliminate a firm's economic profit on a cumulative or midcycle basis. If we deem the probability of occurrence sufficiently high, we would not characterize the company as possessing an economic moat.

To assess the sustainability of excess profits, analysts perform ongoing assessments of the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

2. Estimated Fair Value

Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Our model is divided into three distinct stages:

Stage I: Explicit Forecast

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

Stage II: Fade

The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested ("RONIC")—to decline (or rise) to its cost of capital. During the Stage II period, 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, cash flows are forecast using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average return on new invested capital (RONIC), and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until a perpetuity value is calculated. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm's cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

Stage III: Perpetuity

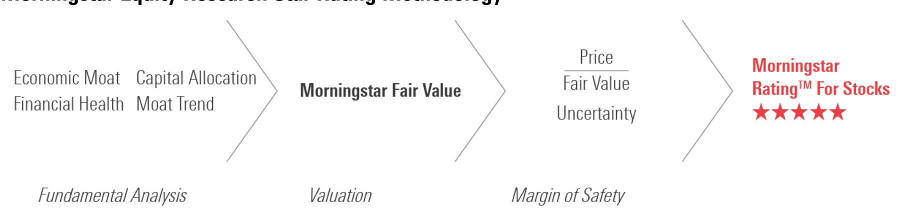
Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total 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.

3. Uncertainty Around That Fair Value Estimate

Morningstar's Uncertainty Rating captures a range of likely potential intrinsic values for a company and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts' ability to

Morningstar Equity Research Star Rating Methodology



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Research Methodology for Valuing Companies

bound the estimated value of the shares in a company around the Fair Value Estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, exposure to material ESG risks, and other company-specific factors.

Analysts consider at least two scenarios in addition to their base case: a bull case and a bear case. Assumptions are chosen such that the analyst believes there is a 25% probability that the company will perform better than the bull case, and a 25% probability that the company will perform worse than the bear case. The distance between the bull and bear cases is an important indicator of the uncertainty underlying the fair value estimate. In cases where there is less than a 25% probability of an event, but where the event could result in a material decline in value, analysts may adjust the uncertainty rating to reflect the increased risk. Analysts may also make a fair value adjustment to reflect the impact of this event.

Our recommended margin of safety widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the estimated value of the equity, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the uncertainty rating provides guidance in portfolio construction based on risk tolerance.

Our uncertainty ratings for our qualitative analysis are low, medium, high, very high, and extreme.

	Margin of Safety	
Qualitative Analysis Uncertainty Ratings	★★★★★Rating	★Rating
Low	20% Discount	25% Premium
Medium	30% Discount	35% Premium
High	40% Discount	55% Premium
Very High	50% Discount	75% Premium
Extreme	75% Discount	300% Premium

4. Market Price

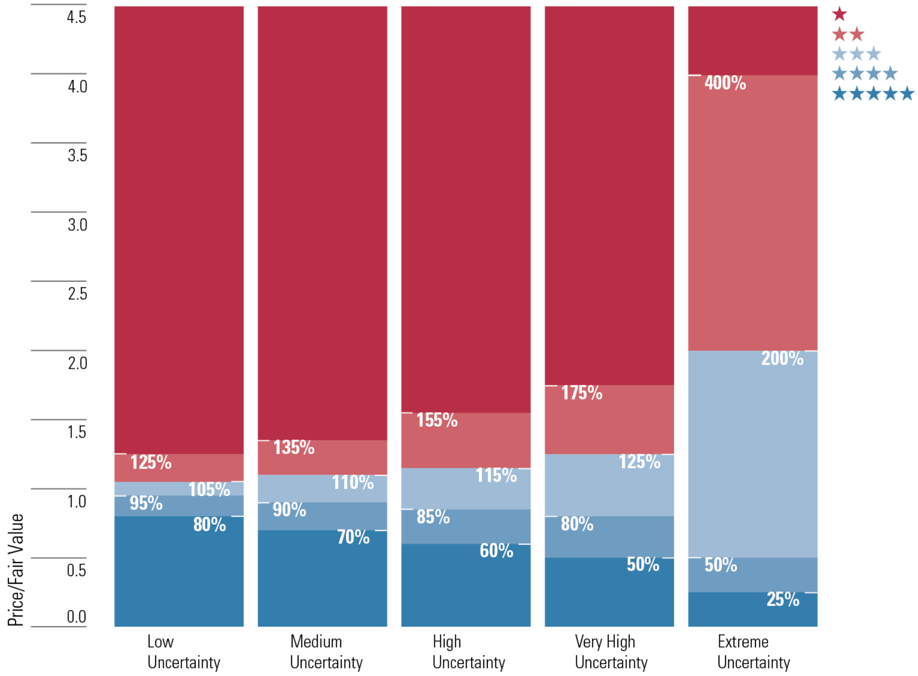
The market prices used in this analysis and noted in the report come from exchange on which the stock is listed which we believe is a reliable source.

For more details about our methodology, please go to https://shareholders.morningstar.com.

Morningstar Star Rating for Stocks

Once we determine the fair value estimate of a stock, we compare it with the stock's current market price on a daily basis, and the star rating is automatically re-calculated at the market close on every day the market on which the stock is listed is open. Our analysts keep close tabs on the companies they follow, and, based on thorough and ongoing analysis, raise or lower their fair value estimates as warranted.

Morningstar Equity Research Star Rating Methodology



Please note, there is no predefined distribution of stars. That is, the percentage of stocks that earn 5 stars can fluctuate daily, so the star ratings, in the aggregate, can serve as a gauge of the broader market's valuation. When there are many 5-star stocks, the stock market as a whole is more undervalued, in our opinion, than when very few companies garner our highest rating.

We expect that if our base-case assumptions are true the market price will converge on our fair value estimate over time generally within three years (although it is impossible to predict the exact time frame in which market prices may adjust).

Our star ratings are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors.

The Morningstar Star Ratings for stocks are defined below:

★★★★★ We believe appreciation beyond a fair risk adjusted return is highly likely over a multiyear time frame. Scenario analysis developed by our analysts indicates that the current market price represents an excessively pessimistic outlook, limiting downside risk and maximizing upside potential.

★★★★ We believe appreciation beyond a fair risk-adjusted return is likely.

★★★ Indicates our belief that investors are likely to receive a fair risk-adjusted return (approximately cost of equity).

★★ We believe investors are likely to receive a less than fair risk-adjusted return.

★ Indicates a high probability of undesirable risk-adjusted returns from the current market price over a multiyear time frame, based on our analysis. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

Other Definitions

Last Price: Price of the stock as of the close of the market of the last trading day before date of the report.

Capital Allocation Rating: Our Capital Allocation (or Stewardship) Rating represents our assessment of the quality of management's capital allocation, with particular emphasis on the firm's balance sheet, investments, and shareholder distributions. Analysts consider companies' investment strategy and valuation, balance sheet management, and dividend and share buyback policies. Corporate governance factors are only considered if they are likely to materially impact shareholder value, though either the balance sheet, investment, or shareholder distributions. Analysts assign one of three ratings: "Exem-

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plary", "Standard", or "Poor". Analysts judge Capital Allocation from an equity holder's perspective. Ratings are determined on a forward looking and absolute basis. The Standard rating is most common as most managers will exhibit neither exceptionally strong nor poor capital allocation.

Capital Allocation (or Stewardship) analysis published prior to Dec. 9, 2020, was determined using a different process. Beyond investment strategy, financial leverage, and dividend and share buyback policies, analysts also considered execution, compensation, related party transactions, and accounting practices in the rating.

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