KION GROUP AG KGX (XETR) | ★★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
54.77 EUR	70.00 EUR	Medium	Narrow	Stable	Standard	Truck Manufacturing

We are initiating coverage on Kion Group with a narrow moat, stable rating; shares look undervalued.

Denise Molina, CFA
Equity Analyst
denise.molina@morningstar.com
+31 20 311 9090

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The primary analyst covering this company does not own its stock.

Research as of 18 Jan 2017
Estimates as of 14 Sep 2016
Pricing data through 06 Feb 2017
Rating updated as of 06 Feb 2017

Currency amounts expressed with "$" are in U.S. dollars (USD) unless otherwise denoted.

Contents

Investment Thesis 18 Jan 2017

As a market leader in forklift manufacturing, Kion is already well positioned to benefit from growing e-commerce. Given this, combined with its recent Dematic acquisition, we think the company will offer attractive long-term revenue growth and increasing returns. Despite rapid growth, e-commerce still accounts for only a small portion of global retail sales, just 8% in the United States and near 14% in China. The low penetration levels suggest a long runway for growth, as we believe forklift sales will naturally follow the expansion of warehouses needed to support an e-commerce supply chain.

Kion and Dematic's respective leading market share positions in forklifts and warehouse automation secure dominance in a complementary product set that could increase the combined company's importance to customers over time. Eventually, we think Kion and Dematic will be able to offer a one-stop software-driven solution that combines the management of forklifts with automation systems. Given that warehouse automation is still in its early stages, we think Kion has an opportunity to gain critical early-mover ground with the addition of Dematic's solutions. This could offer upside to our current revenue growth outlook.

On its own, Kion has been consolidating plants and modernising its own manufacturing facilities, leading to near-term margin improvements and earnings growth acceleration. We think the company previously operated with a bloated cost structure, and current management has done a good job of streamlining the business. Robust volume growth over the longer term should also increase operating efficiencies, boosting the company's longer-term operating income margin and returns on invested capital.

Vital Statistics

Market Cap (EUR Mil)	5,947
52-Week High (EUR)	58.38
52-Week Low (EUR)	40.15
52-Week Total Return %	29.7
YTD Total Return %	3.6
Last Fiscal Year End	31 Dec 2015
5-Yr Forward Revenue CAGR %	14.0
5-Yr Forward EPS CAGR %	19.1
Price/Fair Value	0.78

Valuation Summary and Forecasts

Fiscal Year:	2014	2015	*2016(E)*	*2017(E)*
Price/Earnings	12.9	17.6	*24.9*	*15.6*
EV/EBITDA	8.4	11.6	*10.6*	*6.4*
EV/EBIT	10.5	14.7	*13.4*	*8.1*
Free Cash Flow Yield %	15.0	11.8	*5.2*	*6.5*
Dividend Yield %	1.1	1.2	*1.4*	*1.5*

Financial Summary and Forecasts (EUR Mil)

Fiscal Year:	2014	2015	*2016(E)*	*2017(E)*
Revenue	4,678	5,098	*5,383*	*7,829*
Revenue YoY %	4.1	9.0	*5.6*	*45.4*
EBIT	443	483	*523*	*866*
EBIT YoY %	6.3	9.0	*8.3*	*65.8*
Net Income, Adjusted	243	257	*239*	*383*
Net Income YoY %	37.9	5.9	*-7.1*	*60.1*
Diluted EPS	2.46	2.61	*2.20*	*3.52*
Diluted EPS YoY %	14.2	6.1	*-15.6*	*60.1*
Free Cash Flow	363	317	*-2,434*	*561*
Free Cash Flow YoY %	-9.2	-12.5	*-867.3*	*-123.0*

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

Profile

Kion Group is the largest supplier of forklift trucks in Europe and the second largest in the world after Toyota. The firm is based in Germany, and 80% of its revenue comes from the sales of new trucks and maintenance services on these trucks. The company also offers lease financing to its customers. Twenty percent of group revenue comes from leasing and recycling the end-of-lease trucks into the company's rental and used-truck sales business. One fourth of its revenue comes from servicing trucks.

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Morningstar Analysis

Valuation, Growth and Profitability 18 Jan 2017

Our fair value estimate for Kion Group is EUR 70 per share. Our valuation is based on a discounted cash flow model with a 10-year explicit forecast period and 8.8% weighted average cost of capital. Earlier this year, the company announced a $2.1 billion ($3.25 billion including acquired debt) deal with warehouse automation system manufacturer Dematic. The deal is expected to close in fourth-quarter 2016. As we do not expect any regulatory hurdles, we have modeled the acquisition in from 2017 onwards.

We assume that Kion's forklift sales grow by midsingle digits for the next several years, with increasing global e-commerce takeup and warehouse modernisation in emerging markets as the main growth drivers. According to the U.S. Census Bureau, e-commerce has been growing by mid-double-digit rates since 2009 and today accounts for just 8% of all retail sales in the US. Similarly, Europe's e-commerce sector has been growing strongly, and low e-commerce penetration elsewhere suggests a long runway for growth. In China, e-commerce penetration is 12%, and in Japan it is just 5%.

We expect the Dematic division to grow at low-double-digit rates, with similar drivers to forklifts, but also benefiting from increasing demand from companies wanting to automate supply chains. Deploying automation systems to manage the flow of raw materials and finished goods offers many benefits, including decreasing turnaround time and extracting cost savings. Software can offer traceability, remote monitoring, and system flexibility, while automating sorting and storage systems can eliminate manual labor.

We expect group operating income margins to increase from 9.5% in 2015 to 13.5% in 2021. Strong volume growth, an ongoing manufacturing footprint optimisation program, and an increasing portion of software-driven revenue should all improve the company's operating margins.

Given the strong expected growth in volumes, we also model in a capacity increase in 2020 and 2021, with capital expenditure/sales rising to 4% from 3.5% in the previous years. Our capital expenditure and R&D assumptions both increase following the Dematic acquisition to accommodate new product development and manufacturing.

Scenario Analysis

Our bear- and bull-case scenarios for Kion Group contrast market environments where demand for the company's forklifts benefits from integration with Dematic's systems against markets in which the Dematic business takes off, but the forklift business experiences lacklustre demand from slower global economic growth.

Our bull-case scenario reflects potential revenue synergies and suggests a fair value estimate of EUR 84 per share. Our long-term revenue growth forecast for the forklift business increases from midsingle digits to high single digits. The company has not yet outlined revenue synergies. Although the end markets and customer bases might be the same, warehouse system purchases tend to be made as separate decisions from purchasing forklifts, because of differences in timing. Warehouse systems affect the inner structure of the warehouse and therefore are purchased when a warehouse is first built or goes through a major overhaul. Only later does a company purchase forklifts. Integrated software and automation could tie these two elements together in future, giving rise to revenue synergies for Kion and Dematic.

In our bear-case scenario, we model in sluggish forklift demand from a weaker global economic environment, with forklift truck sales growing at low single digits. Group revenue growth would also be in the low single digits, with an operating income margin 300 basis points lower than our base scenario due to lower volume expectations. Our fair value estimate in this scenario would be EUR 42 per share.

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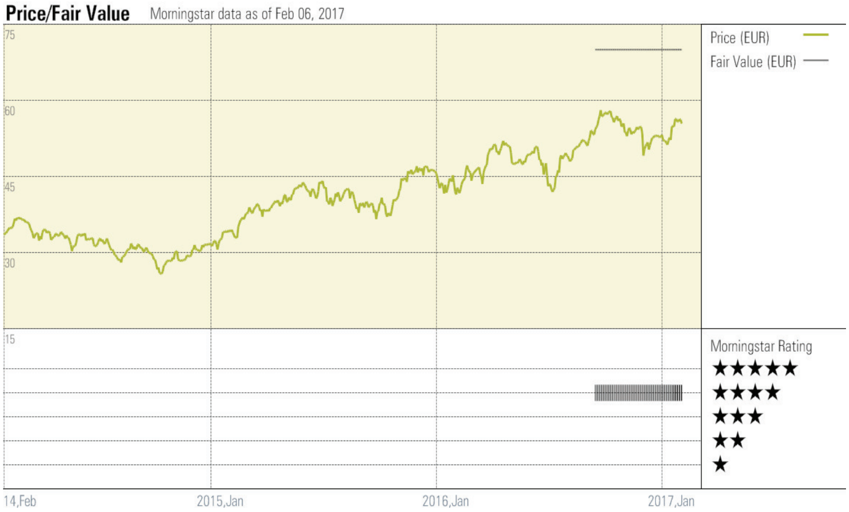
Price/Fair Value Morningstar data as of Feb 06, 2017



Economic Moat

We believe that switching costs underpin Kion Group's narrow economic moat, as a high level of reliance on customisation, financing, and service agreements supports customer stickiness. The Dematic acquisition will also bring similarly moaty qualities, as products tend to be tightly integrated with customer supply-chain processes and generate significant service revenue.

Kion also manufactures Linde forklifts, one of the oldest and arguably most premier brands, driven by a technology that its competitors have yet to perfectly copy. Excluding Dematic, we believe Linde Material Handling contributes two thirds of company revenue and 80% of operating income, while the Still brand and other businesses make up the remainder.

Of the more than 1 million forklifts sold in the world per year, 15% are sold by the Kion Group. Globally, the firm has held the number-two market share position since at least 2003. In Europe, the world's third-largest forklift market, it is the number-one manufacturer.

Market shares are remarkably stable at the higher end of the forklift market, with the number-one, number-two and number-three positions held respectively by Toyota, Kion, and Jungheinrich for more than a decade. We estimate that these three combined accounted for 45% of the industry's global unit sales in 2015. In Europe, Kion dominates with 35% market share, followed by Jungheinrich at 22%. Europe accounts for 83% of Kion on a stand-alone basis and 68% when combined with its recent acquisition of Dematic.

The market share stability stems primarily from two sources: maintenance contracts and customisation. Customers often take maintenance contracts and mainly purchase original spare parts. Service revenue (maintenance and spare parts) makes up around 25% of Kion Group's revenue. Service revenue yields high operating income margins of around 20%, or double the group level. Kion's business model creates a natural base of demand for service contracts, as it offers finance lease contracts that come with obligatory service contracts, both lasting five years on average. On a group level, about half of Kion Group's new trucks are sold with financing contracts. Although financing agreements do ensure a regular flow of service contracts, service agreements are not limited to finance customers. At least three fourths of the Kion's forklifts in Western Europe are serviced by the company itself.

Kion is able to achieve this high rate of service attachment because company software is needed to perform vehicle diagnostics, and many of Kion's forklift trucks contain a high proportion of proprietary spare parts. For example, its Linde brand manufactures a line of premium trucks that use hydrostatic drives. The drive eliminates the need for brakes, gear shifts, and a transmission, but all of the parts are proprietary. This drive was invented in 1960 and offers two key advantages. First, eliminating the brakes enables precision handling, allowing the truck operator to move in 1-millimetre increments. Depressing the truck's pedals compresses hydraulic fluid that, when forced through a closed loop in the drive, turns the wheels forward or backward, depending on which pedal is depressed. With no pressure on the pedals, the fluid and truck do not move.

Second, the elimination of the other traditional components, such as the gear shift and transmission, means fewer components wear or break down, enabling longer times in between servicing. Kion has used third-party testing to prove that its hydrostatic drive forklifts save operational time and energy. When unloading 15 road trucks, a Linde truck takes 1.7 hours less using the Linde hydrostatic drive than with a competitor's more conventional forklift truck. The total cost of ownership could be as much as 20% lower for the Linde trucks, owing to saved time and energy, as well as fewer spare parts.

Kion and other premium forklift manufacturers deliver new forklifts on a made-to-order basis from its customers. The choices to customise a Linde forklift to accommodate the variety of warehouse configurations and products, as well as operator preferences, can include up to 6,000 different options, more than some of its competitors. For example, a wheelbase could be made lower or a standing platform made slightly shorter to accommodate tight spaces. Its customers are spread across multiple industries, with logistics as the largest (18% of 2015 revenue) followed by food (11%), metals (11%), automotive (9%), and chemicals (8%). This customisation increases customer stickiness, as replacement models would have to be tweaked and trialed to make sure that loading and unloading time efficiencies were not compromised by the switch to a new vendor. When existing customers are ready to replace or upgrade their forklifts, Kion already knows what specifications can offer the greatest efficiencies.

Driver preferences are also important. Drivers who spend hours a day in the trucks become accustomed to ergonomic and comfort features of certain brands, such as lower levels of noise or vibration, adjustable seats, lumbar cushions, or extra foot space, which minimise fatiguing effects and long-term discomfort.

Kion's key intangible asset is the Linde Material Handling brand. Linde and Jungheinrich started making forklifts in Europe around the same time, in the middle of the 20th century, but Linde managed to secure a 10%-plus market share lead over its closest competitor by offering better technology and a wider variety of trucks, as well as securing exclusive contracts with dealers in major markets. Jungheinrich focused primarily on indoor electric forklifts, which naturally limits its market share, as warehouses require both indoor and outdoor forklifts, not just for loading and unloading deliveries, but also for transport between buildings.

Kion spends about 2.5% of its revenue on research and development, about 50 basis points more than Jungheinrich. Close work with customers can have a multiplicative effect on R&D, giving the company greater insight into future needs that a competitor would struggle to attain. Aside from the hydrostatic drive, Linde has introduced other firsts in the industry, such as using fuel cells and lithium-ion batteries to power its forklifts.

To distribute its products, Kion uses a mix of third-party-dealer exclusive contracts, its own direct salesforce, and dealers who also offer competitor products. In its core market of Europe, it relies mainly on exclusive dealership arrangements and direct sales.

Kion's recent acquisition, Dematic, offers supply-chain automation: automated storage, conveyor, palletising, and picker systems. Its clients include Fedex, Amazon, Tesco, and Wal-Mart. Dematic has a number-one market share position in the U.S. and is number three in Europe and globally. Its products are integrated with its customers' warehouses, creating sticky relationships. It also derives around 25% of its sales from service revenue.

We think Kion also has a cost advantage in Europe, where its sales and service network cannot be easily replicated by a new entrant.

Moat Trend

We think Kion Group has a stable trend rating but see clear potential drivers for increasing switching costs strengthening Kion's moat. These are not yet material or visible; therefore, we have opted for a stable trend for the moment. In 2014, Kion Group introduced a new fleet-management software system. We do not think sales of the software or penetration of its customer base is material yet, but we will be looking for progress in this new product group.

Additionally, with the acquisition of Dematic, Kion has an opportunity to integrate its forklifts (likely favouring its driverless forklift line) with Dematic's systems to offer software-driven one-stop solutions. However, we would not expect these sales to become possible immediately, given the time necessary to integrate the products. We also think takeup would be very gradual, as switching to a new warehouse automation system is a large, expensive project that comes from new builds or major upgrades, and warehouse automation systems therefore enjoy much longer sales cycles than forklifts alone.

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Bulls Say/Bears Say

Bulls Say

- Kion and Dematic's respective leading market share positions and complementary products should increase both market share and the combined company's importance to customers.
- With Dematic, Kion is ideally positioned to benefit from a structural shift to greater warehouse automation, offering a mid-single-digit revenue growth rate opportunity for the next several years.
- On its own, Kion has been consolidating plants and modernising its own manufacturing facilities, leading to near-term margin improvements and earnings growth acceleration.

Bears Say

- Structural shifts towards greater automation in warehouse management open the door for possible market share shifts if competitors are able to come up with superior systems.
- Warehouse systems and forklifts are purchased at two different stages, making it more challenging to gain revenue synergies from offering both products.
- Differences in Kion and Dematic's products and geographic focus will make it difficult to extract significant cost synergies, particularly in its manufacturing footprint.

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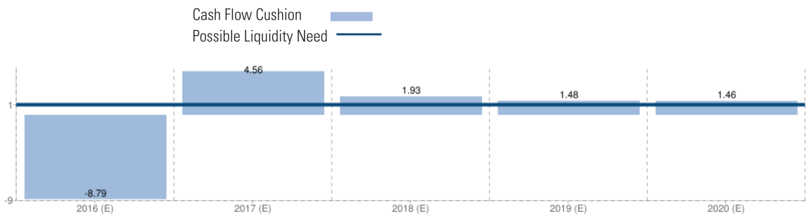
Five Year Adjusted Cash Flow Forecast (EUR Mil)

	2016(E)	2017(E)	2018(E)	2019(E)	2020(E)
Cash and Equivalents (beginning of period)	103	937	224	49	107
Adjusted Available Cash Flow	-2,017	512	336	365	316
Total Cash Available before Debt Service	-1,914	1,449	560	414	423
Principal Payments	—	—	—	—	—
Interest Payments	-218	-318	-291	-279	-289
Other Cash Obligations and Commitments	—	—	—	—	—
Total Cash Obligations and Commitments	-218	-318	-291	-279	-289

Cumulative Annual Cash Flow Cushion



Adjusted Cash Flow Summary

	EUR Millions	% of Commitments
Beginning Cash Balance	103	7.4
Sum of 5-Year Adjusted Free Cash Flow	-488	-35.0
Sum of Cash and 5-Year Cash Generation	-384	-27.6
Revolver Availability	—	—
Asset Adjusted Borrowings (Repayment)	—	—
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments	-384	-27.6
Sum of 5-Year Cash Commitments	-1,394	—

Financial Health

We think Kion's balance sheet leaves little room for further leverage, but expect the company's strong cash flow generation to lead to a less risky level of debt by 2018. In our model, the Dematic merger increases the company's net debt/EBITDA to 4 from below 1 in 2015. We forecast the metric to drop below 2 by the end of 2018. Interest coverage also deteriorates with the merger, declining from 3 in 2015 to 2 in 2016. We forecast an increase to 4 by 2018. During our explicit 10-year forecast period, we expect annual free cash flow of EUR 400 million-EUR 800 million. This should enable the company to quickly reduce some of the EUR 3 billion debt that it assumed for the acquisition.

Enterprise Risk

Kion Group's acquisition of Dematic presents operational risks that could diminish the expected future value of the acquisition. The Dematic takeover is a sizeable one, adding 40% to Kion's revenue base. It also increases Kion's exposure to the Americas, in the U.S., from 5% to 20% and leads it down a new product path with the expansion into automated warehouse management systems. If executed well, the Dematic acquisition makes a lot of sense. The product portfolios and geographic exposure of the two companies complement each other and offer opportunity for increased growth. However, as with any acquisition, in order for Kion to reap the benefits, it will need to overcome cultural and operational differences and, importantly, foster cooperation on research and development. We have factored in an increase in research and development spend to support efforts to integrate and develop the two product lines.

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Management & Ownership

Management Activity

Name	Position	Shares Held	Report Date*	InsiderActivity
NA	NA	NA	NA	NA

*Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

Fund Ownership

Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Oddo Avenir Europe	1.09	3.17	—	31 Dec 2016
DWS Investa	0.92	1.43	—	31 Dec 2016
DWS Deutschland	0.89	0.87	—	31 Dec 2016
Fondak	0.79	2.46	—	30 Nov 2016
DWS Aktien Strategie Deutschland	0.78	1.59	—	31 Dec 2016
Concentrated Holders				
H & A PRIME VALUES Equity	0.01	5.08	0	30 Nov 2016
Oona Solutions Glanmore Property Euro	—	4.62	—	31 Oct 2016
Sycomore Eurocap	0.16	3.94	—	29 Feb 2016
Lux-Pension 100%	0.02	3.90	3	30 Sep 2016
Top 25 S	—	3.83	2	30 Sep 2016

Institutional Transactions

Top 5 Buyers	% of Shares Held	% of Fund Assets	Shares Bought/ Sold (k)	Portfolio Date
Groupama Asset Management	0.28	1.40	307	30 Sep 2016
Janus Capital Management LLC	0.24	0.49	266	31 Dec 2016
Rouvier Associés	0.14	1.63	101	31 Dec 2016
Swedbank Robur Fonder AB	0.09	0.52	98	31 Jan 2017
BlackRock Advisors LLC	0.09	0.54	93	31 Dec 2016
Top 5 Sellers				
BNP Paribas Investment Partners Lux	0.01	0.50	-699	31 Dec 2016
BNP Paribas Asset Management	0.20	0.45	-393	31 Dec 2016
Robeco Investment Management, Inc.	0.03	0.42	-373	31 Dec 2016
Fundlogic SAS	0.06	0.70	-151	31 Jul 2016
AXA Investment Managers Paris	0.63	1.23	-82	31 Oct 2016

Management 18 Jan 2017

Founded by Carl von Linde, the famous German scientist and entrepreneur, the company became officially part of the Linde Group (industrial gases) in 1929. The company was sold to a private equity consortium in 2006 and rebranded as Kion Group. The private equity owners sold a 25% stake to Weichai Power, a state-owned Chinese automotive and equipment manufacturer, in 2012 and then sold an additional stake with Kion's IPO in 2013. Under Chinese accounting rules, Weichai was able to consolidate Kion when it became its largest shareholder in 2014. Today, Weichai Power owns 40.2% of the company's shares, with nearly 60% of Kion shares held in free float. Weichai has signed an agreement not to increase its stake to 50% or more before June 2018. The benefits to further increasing its stake are not obvious, with Weichai already benefiting from consolidation and having no clear market overlap with Kion.

We do not view the Weichai ownership stake as a risk to the Kion Group from a corporate governance or capital-allocation standpoint. Weichai manufactures heavy-duty engines used in, for example, buses, trucks, and ships. The company's relationship with Kion has a modest influence on three areas. First, Weichai holds three of the 16 seats on the Kion supervisory board. Second, Kion pays an annual fee of EUR 125,000 to Weichai as a consulting fee. Weichai supports Kion in getting access to Chinese customers, such as ensuring that Kion is included as a bidder on major contracts. Third, Weichai manufactures heavy-duty engines, one of which Kion uses for its economy Baoli line of models. Weichai had to bid for this engine contract in a competitive process.

Kion's current CEO, Gordon Riske, has been with the company since 2007 and at the helm as CEO since 2008. His experience prior to that includes near 20 years at Kuka, a German robotics company. Under Riske's stewardship, the company has been consolidating and modernising its manufacturing footprint, improving gross margins by 400 basis points from 2010 to 2014. This also increased the company's returns on invested capital. We think the Dematic acquisition was a smart move to position the company for future growth and changing customer demand. Both companies service the same end markets and have complementary geographic leadership positions. Their products combined have the potential to offer customers end-to-end warehouse management systems.

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Analyst Notes

Investors Should Focus on Kion's Opportunity With Dematic; Shares Undervalued 27 Oct 2016

Kion Group's nine-month 2016 results imply lower forklift volume growth versus the industry, but we think for the right reasons, with the company demurring from chasing high-volume, low-value orders. The company posted year-over-year margin improvements while still increasing its top line by midsingle digits. We think Kion and its competitive positioning should be viewed not in the context of the results, but in the broader opportunity offered by its transformative Dematic acquisition (due to close before year-end.) Combined, the two companies will work closely with their customers' distribution footprints, ultimately offering seamless end-to-end customised warehouse automation systems. We maintain our narrow moat rating and our EUR 70 per share fair value estimate, which offers attractive upside to the share price. Our valuation includes the Dematic acquisition, which we do not believe the average consensus figures have yet fully incorporated.

Revenue and orders grew by 5% and 6%, respectively, in line with our expectations. Kion's products are priced at a premium within the forklift industry, which posted 6% growth in unit orders, implying that Kion's volume grew slower than the market. We believe that Kion declined to bid on high-volume, but lower-margin, projects during the year in Europe, particularly for supermarket customers, and in Asia where pricing pressure at the low end seems to be increasing. We view the company's focus on the higher end of the market as a positive. This is the segment that will pay for customised solutions, likely including a combined Kion and Dematic product offering. Staying away from lower-value projects also enables Kion to be more profitable than its closest competitor, Jungheinrich. In the first nine months, Kion increased its EBIT margin by 40 basis points to 9.5%, nearly 200 basis points above Jungheinrich's. Next month, the company will hold a capital markets day that should offer a better picture of Dematic.

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Morningstar Analyst Forecasts

Financial Summary and Forecasts

Fiscal Year Ends in December

Growth (% YoY)	3-Year Hist. CAGR	2013	2014	2015	*2016* (Forecast)	*2017* (Forecast)	*5-Year Proj. CAGR*
Revenue	*2.6*	-4.9	4.1	9.0	*5.6*	*45.4*	*14.0*
EBIT	*5.7*	2.0	6.3	9.0	*8.3*	*65.8*	*22.2*
EBITDA	*5.0*	-0.3	4.9	10.6	*8.2*	*66.3*	*21.3*
Net Income	*44.0*	104.3	37.9	5.9	*-7.1*	*60.1*	*21.4*
Diluted EPS	*24.0*	57.5	14.2	6.1	*-15.6*	*60.1*	*19.1*
Earnings Before Interest, after Tax	*1.8*	10.9	-26.2	29.0	*-0.3*	*58.4*	*19.6*
Free Cash Flow	*-20.9*	-37.7	-9.2	-12.5	*-867.3*	*-123.0*	*8.8*

Profitability	3-Year Hist. Avg	2013	2014	2015	*2016*	*2017*	*5-Year Proj. Avg*
Operating Margin %	*9.4*	9.3	9.5	9.5	*9.7*	*11.1*	*11.9*
EBITDA Margin %	*11.9*	11.8	11.9	12.0	*12.3*	*14.1*	*14.8*
Net Margin %	*4.7*	3.9	5.2	5.1	*4.4*	*4.9*	*5.7*
Free Cash Flow Margin %	*7.6*	8.9	7.8	6.2	*-45.2*	*7.2*	*-4.5*
ROIC %	*33.9*	29.7	31.0	41.0	*21.0*	*22.9*	*24.7*
Adjusted ROIC %	*13.4*	12.2	12.4	15.7	*10.0*	*11.9*	*13.2*
Return on Assets %	*2.9*	2.3	2.9	3.5	*2.4*	*3.5*	*4.7*
Return on Equity %	*11.9*	12.2	10.9	12.5	*9.2*	*13.7*	*15.4*

Leverage	3-Year Hist. Avg	2013	2014	2015	*2016*	*2017*	*5-Year Proj. Avg*
Debt/Capital	*0.35*	0.43	0.36	0.27	*0.60*	*0.50*	*0.46*
Total Debt/EBITDA	*1.67*	2.27	1.64	1.10	*5.54*	*2.43*	*2.55*
EBITDA/Interest Expense	*3.14*	1.97	3.20	4.26	*3.05*	*3.47*	*4.34*

Valuation Summary and Forecasts

	2014	2015	*2016(E)*	*2017(E)*
Price/Fair Value	—	—	—	—
Price/Earnings	12.9	17.6	*24.9*	*15.6*
EV/EBITDA	8.4	11.6	*10.6*	*6.4*
EV/EBIT	10.5	14.7	*13.4*	*8.1*
Free Cash Flow Yield %	15.0	11.8	*5.2*	*6.5*
Dividend Yield %	1.1	1.2	*1.4*	*1.5*

Key Valuation Drivers

Cost of Equity %	9.0
Pre-Tax Cost of Debt %	10.0
Weighted Average Cost of Capital %	8.8
Long-Run Tax Rate %	33.0
Stage II EBI Growth Rate %	7.0
Stage II Investment Rate %	20.0
Perpetuity Year	15

Additional estimates and scenarios available for download at http://select.morningstar.com.

Discounted Cash Flow Valuation

	EUR Mil	Firm Value (%)	Per Share Value
Present Value Stage I	969	10.1	8.92
Present Value Stage II	2,199	22.9	20.24
Present Value Stage III	6,451	67.1	59.36
Total Firm Value	**9,619**	**100.0**	**88.52**
Cash and Equivalents	216	—	1.99
Debt	-677	—	-6.23
Preferred Stock	—	—	—
Other Adjustments	-1,968	—	-18.11
Equity Value	**7,191**	**—**	**66.18**
Projected Diluted Shares	109		
Fair Value per Share (EUR)	**70.00**		

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.

KION GROUP AG KGX (XETR) | ★★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
54.77 EUR	70.00 EUR	Medium	Narrow	Stable	Standard	Truck Manufacturing

Morningstar Analyst Forecasts

Income Statement (EUR Mil)
Fiscal Year Ends in December

				Forecast	
	2013	2014	2015	*2016*	*2017*
Revenue	**4,495**	**4,678**	**5,098**	***5,383***	***7,829***
Cost of Goods Sold	3,255	3,337	3,602	*3,768*	*5,402*
Gross Profit	**1,239**	**1,341**	**1,496**	***1,615***	***2,427***
Selling, General & Administrative Expenses	674	687	784	*807*	*1,174*
Research & Development	114	126	143	*145*	*235*
Other Operating Expense (Income)	-77	-26	-44	*-1*	*-85*
Depreciation & Amortization (if reported separately)	112	111	130	*141*	*236*
Operating Income (ex charges)	**417**	**443**	**483**	***523***	***866***
Restructuring & Other Cash Charges	13	57	33	*40*	*50*
Impairment Charges (if reported separately)	—	—	—	—	—
Other Non-Cash (Income)/Charges	30	39	27	*26*	—
Operating Income (incl charges)	**374**	**347**	**423**	***457***	***816***
Interest Expense	268	173	144	*218*	*318*
Interest Income	49	84	51	*57*	*40*
Pre-Tax Income	**155**	**258**	**330**	***296***	***539***
Income Tax Expense	16	80	109	*98*	*178*
Other After-Tax Cash Gains (Losses)	—	—	—	—	—
Other After-Tax Non-Cash Gains (Losses)	—	—	—	—	—
(Minority Interest)	0	-2	-4	*-3*	*-12*
(Preferred Dividends)	—	—	—	—	—
Net Income	**138**	**177**	**217**	***195***	***349***
Weighted Average Diluted Shares Outstanding	82	99	99	*109*	*109*
Diluted Earnings Per Share	**1.69**	**1.79**	**2.20**	***1.79***	***3.21***
Adjusted Net Income	176	243	257	*239*	*383*
Diluted Earnings Per Share (Adjusted)	**2.15**	**2.46**	**2.61**	***2.20***	***3.52***
Dividends Per Common Share	—	0.35	0.55	*0.77*	*0.80*
EBITDA	**486**	**458**	**553**	***597***	***1,053***
Adjusted EBITDA	**529**	**554**	**613**	***663***	***1,103***

KION GROUP AG KGX (XETR) | ★★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
54.77 EUR	70.00 EUR	Medium	Narrow	Stable	Standard	Truck Manufacturing

Morningstar Analyst Forecasts

Balance Sheet (EUR Mil)

Fiscal Year Ends in December				Forecast	
	2013	2014	2015	*2016*	*2017*
Cash and Equivalents	219	99	103	*937*	*224*
Investments	115	168	113	*113*	*113*
Accounts Receivable	559	598	671	*708*	*858*
Inventory	512	529	554	*579*	*740*
Deferred Tax Assets (Current)	15	7	8	*8*	*8*
Other Short Term Assets	171	203	182	*182*	*182*
Current Assets	**1,591**	**1,604**	**1,630**	***2,527***	***2,125***
Net Property Plant, and Equipment	499	494	509	*1,444*	*1,522*
Goodwill	1,495	1,497	1,548	*2,545*	*2,545*
Other Intangibles	934	916	904	*1,699*	*1,619*
Deferred Tax Assets (Long-Term)	296	358	349	*349*	*349*
Other Long-Term Operating Assets	1,022	1,111	1,350	*1,350*	*1,350*
Long-Term Non-Operating Assets	190	149	150	*150*	*150*
Total Assets	**6,027**	**6,128**	**6,440**	***10,063***	***9,660***
Accounts Payable	551	565	575	*601*	*936*
Short-Term Debt	228	263	119	*119*	*119*
Deferred Tax Liabilities (Current)	28	31	80	*80*	*80*
Other Short-Term Liabilities	901	934	958	*958*	*958*
Current Liabilities	**1,707**	**1,793**	**1,732**	***1,758***	***2,093***
Long-Term Debt	971	647	557	*3,557*	*2,557*
Deferred Tax Liabilities (Long-Term)	309	321	303	*303*	*303*
Other Long-Term Operating Liabilities	1,432	1,721	2,000	*2,000*	*2,000*
Long-Term Non-Operating Liabilities	—	—	—	*26*	*26*
Total Liabilities	**4,419**	**4,482**	**4,592**	***7,644***	***6,979***
Preferred Stock	—	—	—	—	—
Common Stock	99	99	99	*99*	*99*
Additional Paid-in Capital	2,223	1,996	1,997	*2,456*	*2,456*
Retained Earnings (Deficit)	-525	-148	11	*122*	*384*
(Treasury Stock)	—	—	—	—	—
Other Equity	-192	-305	-266	*-266*	*-266*
Shareholder's Equity	**1,605**	**1,642**	**1,841**	***2,412***	***2,674***
Minority Interest	5	5	8	*8*	*8*
Total Equity	**1,610**	**1,647**	**1,849**	***2,419***	***2,681***

KION GROUP AG KGX (XETR) | ★★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
54.77 EUR	70.00 EUR	Medium	Narrow	Stable	Standard	Truck Manufacturing

Morningstar Analyst Forecasts

Cash Flow (EUR Mil)

Fiscal Year Ends in December				*Forecast*	
	2013	2014	2015	*2016*	*2017*
Net Income	138	177	217	*198*	*361*
Depreciation	68	70	71	*81*	*157*
Amortization	44	42	60	*60*	*80*
Stock-Based Compensation	—	—	—	—	—
Impairment of Goodwill	—	—	—	—	—
Impairment of Other Intangibles	—	—	—	—	—
Deferred Taxes	—	-17	23	—	—
Other Non-Cash Adjustments	30	39	27	*26*	—
(Increase) Decrease in Accounts Receivable	67	-40	-72	*-38*	*-150*
(Increase) Decrease in Inventory	38	-17	-24	*-26*	*-161*
Change in Other Short-Term Assets	-13	303	343	*142*	—
Increase (Decrease) in Accounts Payable	-96	14	10	*27*	*335*
Change in Other Short-Term Liabilities	60	33	24	—	—
Cash From Operations	**336**	**604**	**678**	***471***	***621***
(Capital Expenditures)	-126	-133	-143	*-161*	*-235*
Net (Acquisitions), Asset Sales, and Disposals	-15	-176	-294	*-2,848*	—
Net Sales (Purchases) of Investments	—	5	77	—	—
Other Investing Cash Flows	8	7	14	—	—
Cash From Investing	**-134**	**-298**	**-345**	***-3,009***	***-235***
Common Stock Issuance (or Repurchase)	736	1	0	*459*	—
Common Stock (Dividends)	—	-35	-54	*-84*	*-87*
Short-Term Debt Issuance (or Retirement)	—	—	—	—	—
Long-Term Debt Issuance (or Retirement)	-1,106	-301	-224	*3,000*	*-1,000*
Other Financing Cash Flows	-169	-94	-51	*-3*	*-12*
Cash From Financing	**-539**	**-428**	**-329**	***3,372***	***-1,099***
Exchange Rates, Discontinued Ops, etc. (net)	-7	2	1	—	—
Net Change in Cash	**-343**	**-120**	**4**	***834***	***-713***

KION GROUP AG KGX (XETR) | ★★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
54.77 EUR	70.00 EUR	Medium	Narrow	Stable	Standard	Truck Manufacturing

Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis

		Price/Earnings			EV/EBITDA			Price/Free Cash Flow			Price/Book			Price/Sales		
Company/Ticker	Price/Fair Value	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)
Komatsu Ltd 6301 JPN	1.56	14.4	13.0	25.7	8.0	6.9	11.3	15.5	11.8	12.9	1.5	1.2	1.7	1.1	1.0	1.5
Caterpillar Inc CAT USA	1.39	14.6	NM	32.3	12.2	35.1	19.1	10.4	28.1	25.7	2.7	4.1	4.3	0.9	1.5	1.6
Average		14.5	13.0	29.0	10.1	21.0	15.2	13.0	20.0	19.3	2.1	2.7	3.0	1.0	1.3	1.6
KION GROUP AG KGX DE	**0.78**	**17.6**	**24.9**	**15.6**	**11.6**	**10.6**	**6.4**	**8.5**	**19.2**	**15.4**	**2.5**	**2.5**	**2.2**	**0.9**	**1.1**	**0.8**

Returns Analysis

		ROIC %			Adjusted ROIC %			Return on Equity %			Return on Assets %			Dividend Yield %		
Company/Ticker	Last Historical Year Total Assets (Mil)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)
Komatsu Ltd 6301 JPN	— JPY	8.0	7.0	5.4	8.1	7.1	5.5	10.6	9.0	6.4	5.7	5.1	3.8	2.5	3.0	1.6
Caterpillar Inc CAT USA	— USD	12.3	4.8	11.7	16.2	6.5	16.1	9.6	-3.8	9.5	3.0	-1.1	2.7	4.4	3.3	3.4
Average		10.2	5.9	8.6	12.2	6.8	10.8	10.1	2.6	8.0	4.4	2.0	3.3	3.5	3.2	2.5
KION GROUP AG KGX DE	**6,440** EUR	**41.0**	**21.0**	**22.9**	**15.7**	**10.0**	**11.9**	**12.5**	**9.2**	**13.7**	**3.5**	**2.4**	**3.5**	**1.2**	**1.4**	**1.5**

Growth Analysis

		Revenue Growth %			EBIT Growth %			EPS Growth %			Free Cash Flow Growth %			Dividend/Share Growth %		
Company/Ticker	Last Historical Year Revenue (Mil)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)	2015	2016(E)	2017(E)
Komatsu Ltd 6301 JPN	1,978,676 JPY	1.3	-6.3	-5.9	0.2	-13.0	-26.6	-3.1	-9.7	-26.1	14.2	4.4	23.4	—	—	-24.1
Caterpillar Inc CAT USA	44,147 USD	-15.3	-19.0	-2.2	-22.7	-81.3	305.7	-27.3	-102.5	-2,624.1	-30.9	-17.5	-2.7	11.5	2.3	—
Average		-7.0	-12.7	-4.1	-11.3	-47.2	139.6	-15.2	-56.1	-1,325.1	-8.4	-6.6	10.4	11.5	2.3	-24.1
KION GROUP AG KGX DE	**5,098** EUR	**9.0**	**5.6**	**45.4**	**9.0**	**8.3**	**65.8**	**6.1**	**-15.6**	**60.1**	**-12.5**	**-867.3**	**-123.0**	**57.7**	**40.1**	**4.3**

KION GROUP AG KGX (XETR) | ★★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
54.77 EUR	70.00 EUR	Medium	Narrow	Stable	Standard	Truck Manufacturing

Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Profitability Analysis

Company/Ticker	Last Historical Year Net Income (Mil)	Gross Margin % 2015	2016(E)	2017(E)	EBITDA Margin % 2015	2016(E)	2017(E)	Operating Margin % 2015	2016(E)	2017(E)	Net Margin % 2015	2016(E)	2017(E)	Free Cash Flow Margin % 2015	2016(E)	2017(E)
Komatsu Ltd 6301 JPN	154,759 JPY	34.4	35.1	32.6	17.5	17.5	15.0	12.3	11.4	8.9	7.8	7.5	5.9	7.3	8.3	11.7
Caterpillar Inc CAT USA	2,758 USD	28.5	26.9	28.3	13.2	6.8	12.8	8.3	1.9	7.9	6.3	-0.2	4.9	8.6	5.4	6.1
Average		31.5	31.0	30.5	15.4	12.2	13.9	10.3	6.7	8.4	7.1	3.7	5.4	8.0	6.9	8.9
KION GROUP AG KGX DE	**257** EUR	**29.4**	**30.0**	**31.0**	**12.0**	**12.3**	**14.1**	**9.5**	**9.7**	**11.1**	**5.1**	**4.4**	**4.9**	**10.5**	**5.8**	**4.9**

Leverage Analysis

Company/Ticker	Last Historical Year Total Debt (Mil)	Debt/Equity % 2015	2016(E)	2017(E)	Debt/Total Cap % 2015	2016(E)	2017(E)	EBITDA/Interest Exp. 2015	2016(E)	2017(E)	Total Debt/EBITDA 2015	2016(E)	2017(E)	Assets/Equity 2015	2016(E)	2017(E)
Komatsu Ltd 6301 JPN	589,129 JPY	38.5	30.2	26.2	27.8	23.2	20.7	37.0	36.9	35.7	1.7	1.4	1.6	1.8	1.7	1.7
Caterpillar Inc CAT USA	9,044 USD	60.8	67.7	70.9	37.8	40.4	41.5	10.6	4.4	8.4	1.6	3.7	2.0	3.3	3.5	3.6
Average		49.7	49.0	48.6	32.8	31.8	31.1	23.8	20.7	22.1	1.7	2.6	1.8	2.6	2.6	2.7
KION GROUP AG KGX DE	**677** EUR	**36.7**	**152.5**	**100.1**	**26.9**	**60.4**	**50.0**	**4.3**	**3.0**	**3.5**	**1.1**	**5.5**	**2.4**	**3.5**	**4.2**	**3.6**

Liquidity Analysis

Company/Ticker	Market Cap (Mil)	Cash per Share 2015	2016(E)	2017(E)	Current Ratio 2015	2016(E)	2017(E)	Quick Ratio 2015	2016(E)	2017(E)	Cash/Short-Term Debt 2015	2016(E)	2017(E)	Payout Ratio % 2015	2016(E)	2017(E)
Komatsu Ltd 6301 JPN	2,644,111 JPY	111.99	112.59	236.84	1.89	1.98	2.06	1.12	1.21	1.31	0.34	0.43	1.01	35.6	39.8	41.9
Caterpillar Inc CAT USA	54,576 USD	8.99	10.75	11.06	1.55	1.50	1.52	0.81	0.86	0.89	593.33	697.75	730.43	117.6	-337.6	147.8
Average		60.49	61.67	123.95	1.72	1.74	1.79	0.97	1.04	1.10	296.84	349.09	365.72	76.6	-148.9	94.9
KION GROUP AG KGX DE	**5,947** EUR	**1.04**	**8.62**	**2.06**	**0.94**	**1.44**	**1.02**	**0.62**	**1.11**	**0.66**	**0.86**	**7.85**	**1.88**	**25.0**	**42.9**	**25.0**

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, in-depth 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 short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term 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 single-point 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.

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 working-capital 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 pres-

Morningstar Research Methodology for Valuing Companies

Economic Moat
Financial Health
Stewardship
Uncertainty
Moat Trend

Morningstar Fair Value

Margin of Safety
Market Pricing

Morningstar Rating™ For Stocks
★★★★★

ent 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 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, 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.

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.

- **Low:** margin of safety for 5-star rating is a 20% discount and for 1-star rating is 25% premium.
- **Medium:** margin of safety for 5-star rating is a 30% discount and for 1-star rating is 35% premium.
- **High:** margin of safety for 5-star rating is a 40% discount and for 1-star rating is 55% premium.
- **Very High:** margin of safety for 5-star rating is a 50% discount and for 1-star rating is 75% premium.
- **Extreme:** Stock's uncertainty exceeds the parameters we have set for assigning the appropriate margin of safety.

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 detail information about our methodology, please go to http://global.morningstar.com/equitydisclosures

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.

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.

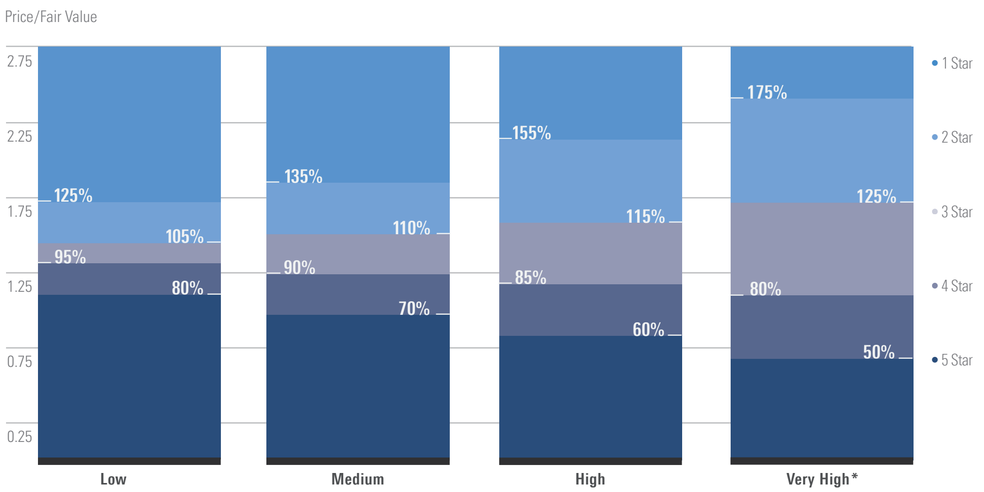
The Morningstar Star Ratings for stocks are defined below:

Five Stars ★★★★★
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.

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

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

Morningstar Research Methodology for Valuing Companies



* Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.

Research Methodology for Valuing Companies

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

One Star ★
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.

Stewardship Rating: Represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

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- **Undervalued:** Last Price is below Morningstar's quantitative fair value estimate.
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- **Overvalued:** Last Price is above Morningstar's quantitative fair value estimate.

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KION GROUP AG KGX (XETR) | ★★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
54.77 EUR	70.00 EUR	Medium	Narrow	Stable	Standard	Truck Manufacturing

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