

Credit Analysis

Moody's Global Corporate Finance

February 2008

MAN AG

Munich, Germany

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Ratings & Contacts

Category	Moody's Rating
Outlook	Stable
Senior unsecured	A3/P-2

Key Indicators^[1]

	2006	2005
EBITA Margin %	8.3%	4.8%
EBIT / Interest Expense	9.7x	9.8x
FCF / Debt	48.9%	91.5%
Debt / EBITDA	1.3x	1.9x
Financial Services Assets as a % of Total Group Assets	12.2%	10.5%

[1] based on Moody's standard adjustments

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This Credit Analysis provides an in-depth discussion of credit rating(s) for MAN AG and should be read in conjunction with Moody's most recent Credit Opinion and rating information available on Moody's website. [Click here to link.](#)



Moody's Investors Service

MAN AG

Corporate Profile

Headquartered in Munich, Germany, MAN AG ("MAN" or "the company", rated A3/Prime-2/stable outlook) is a diversified transport-related engineering group operating on a global scale. In 2007, the company achieved sales of €15.5 billion, with most of its revenues being generated in Europe.

Figure 1

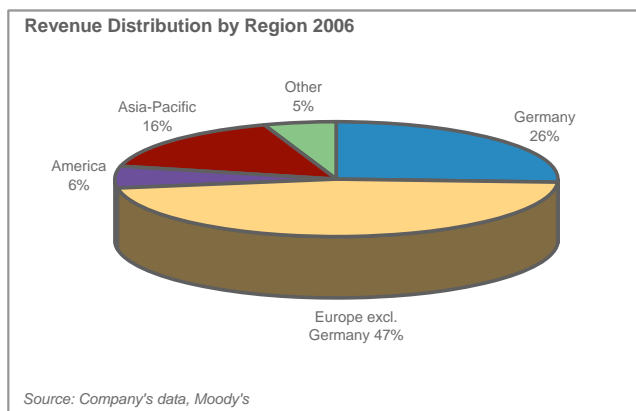
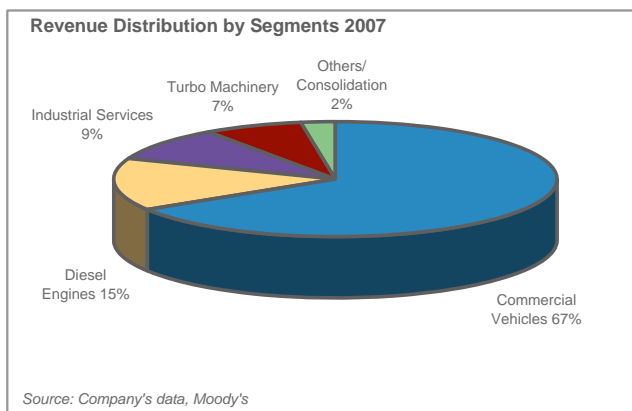


Figure 2



MAN focuses on four divisions, holding a leading market position in each segment:

- Commercial Vehicles: Trucks (7.5t-60t), Buses, Engines and Services
- Diesel Engines: 2-Stroke Engines, 4-Stroke Engines, Turbochargers and Services
- Turbo Machinery: Compressors, Turbines, Reactors and Services
- Industrial Services: Projects, Services and Service Platform

Other activities include MAN's Financial Services unit (MFI) and RENK, a 76%-owned company that supplies drive applications.

Figure 3

Operational Highlights 2007

Segments	% of Group Revenues	yoy Revenue Growth %	Operating Margin %	Historical Trend	Outlook
Commercial Vehicles*	66%	14%	10.0%	Strong	Strong (peak of cyclical upswing in 2008)
Diesel Engines	15%	21%	14.4%	Strong	High order backlog
Industrial Services	9%	5%	12.4%	Moderate	After good 2007, stable profitability levels expected
Turbo Machinery	7%	22%	9.4%	Strong	High order backlog, good margin development

Source: Company data, Moody's

Operating Margin as reported by the company

* Commercial Vehicles including Financial Services but excluding non-recurring sales of leased vehicles held by MAN Finance

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Rating Rationale

The A3/P-2 rating is based on the following factors: (i) MAN's strong market position in its four core segments: Commercial Vehicles, Diesel Engines, Turbo Machinery and Industrial Services; (ii) strengthened operating performance and financial flexibility in recent years supported by a strong cyclical upswing in the European truck market, the disposal of several non-core, partially unprofitable businesses and remarkable efficiency improvements in all divisions that are expected to continue; (iii) the company's strong financial position with substantial free cash flow generation and an industrial net cash position; and (iv) MAN's strong liquidity profile with sizable amounts of cash reserves readily available and wide headroom under its committed credit facilities.

However, the rating also takes into account (i) the cyclical nature of MAN's key markets, especially for commercial vehicles and buses; and (ii) the fact that the diversified group structure only partly mitigates the volatility of profits and cash flows of single divisions, with the Commercial Vehicle division generating the dominant part of MAN's Group's revenues and profits. The Commercial Vehicle division holds a strong market position in the Western European truck market but still lacks geographical diversification and scale compared to its competitors AB Volvo and Daimler's truck unit.

Rating Drivers

MAN has constantly improved its profitability on the back of a strong cyclical upswing and portfolio realignment as well as cost reductions and efficiency improvements

MAN AG is competing on a global scale with global competitors and benefits from a diversified group structure. However, Moody's notes that the company remains strongly exposed to the high-labour-cost country Germany where, as of 31 December 2007, approximately 57% of its total 55,086 headcount was employed. The strong recovery recorded in the Commercial Vehicles division, where ongoing restructuring and productivity-enhancing measures are effected, is in Moody's view one of the key factors impacting earnings performance. Other factors include the benefits of a cyclical upswing, the streamlining of its portfolio and cost-efficiency initiatives in all of the company's segments.

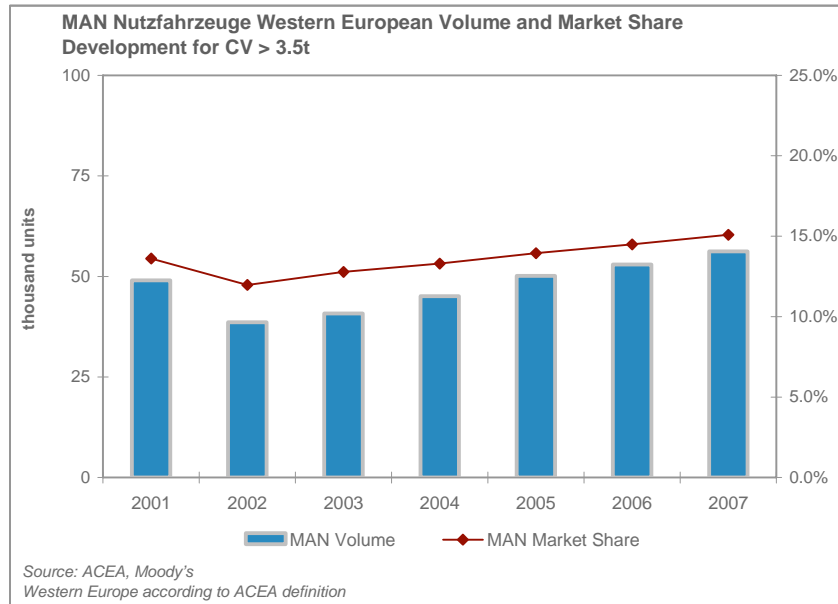
Commercial Vehicles (CV) division (66% of group revenues, 60% of group operating profit in 2007) is key driver of future operational profitability

MAN Nutzfahrzeuge is one of Europe's leading manufacturers of commercial vehicles in the segment from 7.5 tons to 60 tons for any application. In addition, its product range includes buses and coaches, car engines, axles and components as well as associated services. Production plants are located in Germany, Austria, Poland and India, while activities are backed by an international sales and service network.

With sales of €10 billion in 2007, MAN Nutzfahrzeuge is the largest division within MAN AG and continues to be the key earnings driver and cash flow generator for the group. In 2007, MAN delivered 93,260 trucks and 7,349 buses, surpassing 2006's deliveries of 79,822 trucks and 7,338 buses by 15%.

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Figure 4



Moody's recognises MAN's strengthened market position in Western Europe where it held a market share of 16.1% in 2007, up from 15.2% in 2004, for trucks above 6 tons - thereby continuing the trend of market share gains in Europe that began in 2002. In Moody's view, this is mainly the result of MAN's successful product introductions based on technological leadership and honoured by various awards leading to strong brand value and brand recognition. Thus, Moody's believes that further market share gains in Europe will be challenging but feasible. Apart from the targeted market share gains in Europe, the company seeks to achieve higher unit sales by extending sales in Russia, India, China, Southern Africa and the Middle East. In the bus unit, the focus is more on revenue- and earnings stabilisation to prevent a further decline in profitability levels. Additional investments in the dealer and service network and higher penetration of the Eastern European markets represent the key drivers for successfully executing these ambitious targets.

The cyclical upswing and cost-reduction initiatives have helped to improve profitability margins

Profitability improvements over the past few years have been mainly spurred by the strong cyclical upswing in the European truck market. Key drivers for the cyclical upswing have been, in Moody's view, the increasing demand from Central and Eastern European countries and a substantial demand backlog.

In addition to the volume effect, MAN has been quite successful in recent years in improving profitability levels and is today well positioned relative to its competitors. The historically heavy dependency on a high-cost labour country, Germany, has been improved by increasing reliance on temporary workers and shift to low-cost labour countries.

Moody's acknowledges the recent developments in flexibility resulting from the implementation of working time accounts and the increasing employment of temporary workers targeted to adapt the cost structure to volatility in demand. At the same time, we view a successful implementation of the announced €150 million structural improvement programme (2008-2010) as crucial for maintaining flexibility over a downcycle. The programme will focus on further efficiency improvements in production, the optimisation of parts logistics and the restructuring of the underperforming bus unit.

However, Moody's cautions that as a result of its dependency on the Western European market, MAN's profitability potential remains limited compared to its competitors operating on a global scale (e.g. Volvo or Daimler's truck division).

MAN AG

We nevertheless view the company's initiative of increasing its size and global reach beyond its core market of Western Europe – mainly to Central and Eastern Europe (Russia and Poland), China and India - as favourable for its rating if it leads to profitable geographical diversification.

Major challenge: restructuring of the underperforming bus unit...

MAN's underperforming Bus Unit has been a large burden on profitability levels for some years - an industry-wide characteristic. Therefore we view a successful execution of the announced restructuring as a key factor for further profitability improvements. Moody's recognises management's recent efforts to increase cost efficiency and profitability levels by relocating production to low-cost countries including Poland and Turkey as well as standardising and streamlining its product range.

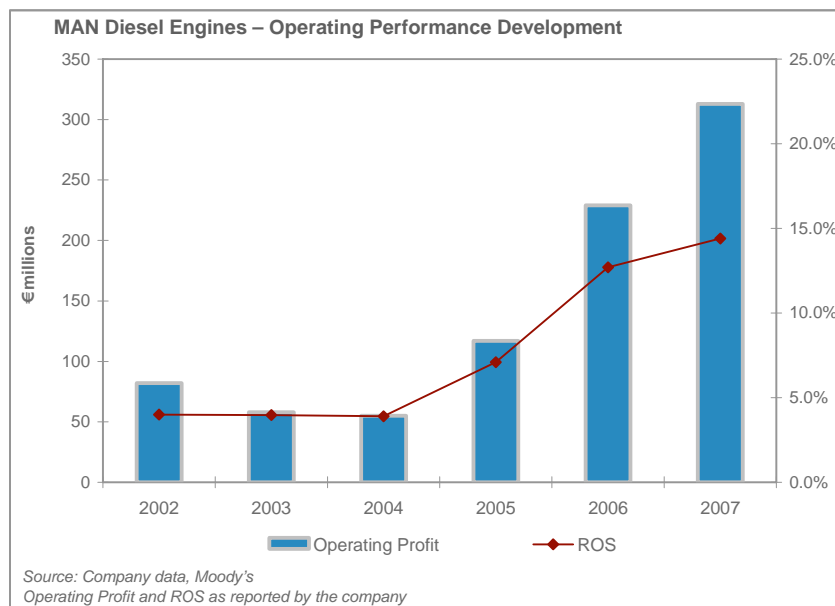
Diesel Engines

(15% of group revenues, 18% of group operating profit in 2007)

MAN's Diesel Engines supplies 2-stroke and 4-stroke diesel engines for maritime and stationary application. The division enjoys dominant market shares with a long track record of technology leadership, a stable base of after-sales earnings and a global footprint, supporting profitability through the cycle. In the 2-stroke segment, MAN Diesel Engines is the dominant market player with a 90% market share driven by a strong licensing business and after-sales earnings, with Wärtsilä and Mitsubishi being the main competitors. In the 4-stroke segment, the company competes against Wärtsilä, Caterpillar, Cummins and Daihatsu and benefits from a stable 34% market share.

In addition, a full order book ensures visibility of own production over the next three years. In 2007, Diesel Engines reached sales of €2.2 billion.

Figure 5



Profitability has increased substantially in recent years as demonstrated in Figure 5, primarily driven by price and volume increases. Moody's expects future growth to come mainly from its licence and sub-contracting business in the 2-stroke segment and a strong after-sales business. Stricter emission regulations should boost after-sales business and help to maintain its technology leadership in the area of environmental friendly technologies. In addition, Moody's expects the 4-stroke business, which has had a diluting impact on earnings in the past, to stabilise going forward.

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Industrial Services (9% of group revenues, 10% of group operating profit in 2007)

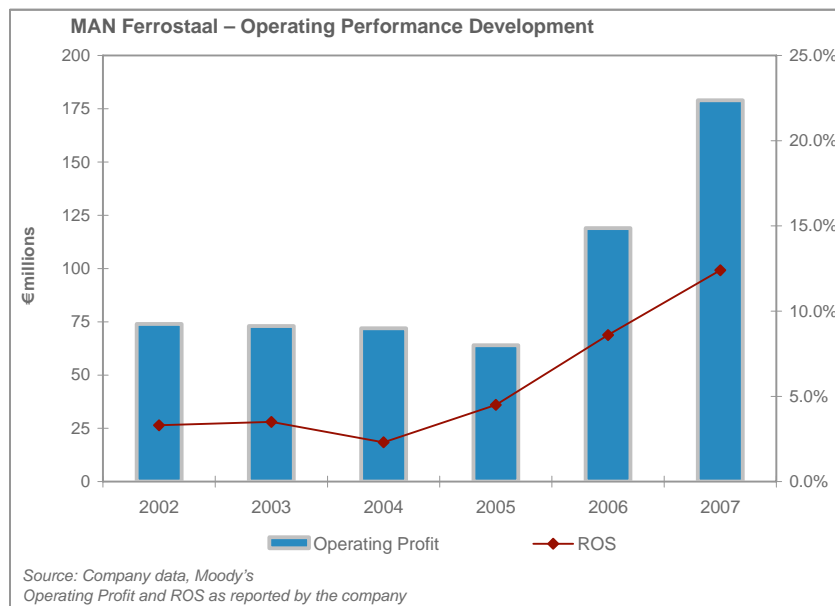
MAN Ferrostaal operates as a global supplier of industrial services and systems for external companies as well as for MAN AG. The division, while being organised in two distinct business units (Projects and Services), generates predictable services sales and manages its project risk tightly. In 2007, MAN Ferrostaal achieved sales of €1.4 billion.

Within its Projects division, MAN acts as a general contractor for project development, financing and management of large-scale industrial plants. Turnkey plants are primarily built for the petrochemicals (mainly methanol), power, metallurgy, renewable energies (solar power, biofuels) and oil and gas industries. In individual cases, the company takes a stake in the plant's equity.

Major projects include the construction of the first solar thermal power plant together with Fresnel reflectors in Spain and the building of methanol plants in Trinidad, where MAN Ferrostaal has not only acted as the general contractor since the 1990s but is also an investor.

The Services division provides sales and services for the printing, food processing and packaging industries, the automotive industry, naval industry and is a sales and service partner for European defence system contractors. It generated strong earnings in 2007 exceeding the 8% ROS target again as in 2006 already (see Figure 6).

Figure 6



In Moody's view, MAN Ferrostaal follows a disciplined risk management approach, underpinned by its 75-year history of never making a loss. We expect the company to preserve its prudent and conservative risk approach going forward.

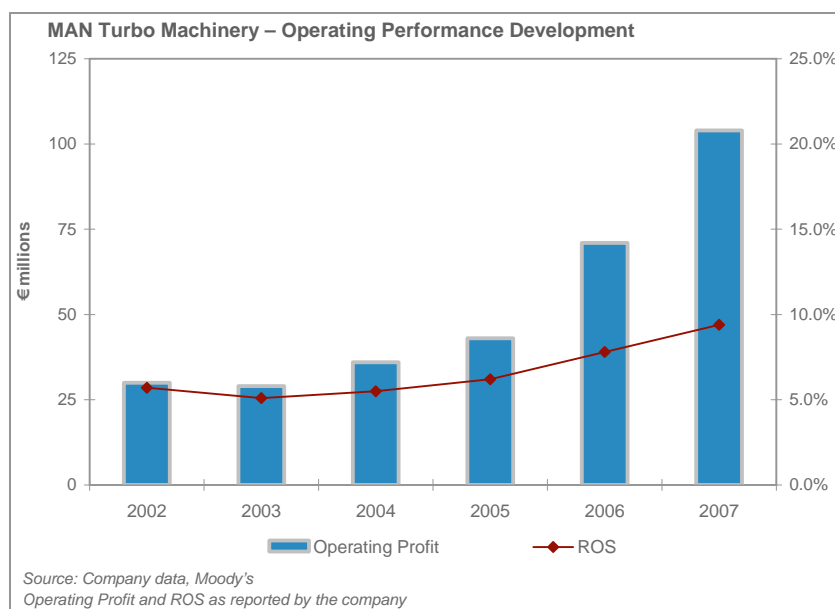
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Turbo Machinery (7% of group revenues, 6% of group operating profit in 2007)

MAN Turbo offers the transportation and compression of all types of gases for industrial applications, including the oil and gas industry and the process industry (e.g. power-generating sector). Turbo Machinery combines technological leadership with a stable after-sales business, reflected in a strong market position behind competitors Siemens and GE. Other competitors include Dresser-Rand and Ebara-Elliott. In its largest segment, Basic Industries, MAN Turbo Machinery is the market leader, while holding a relevant market position in the Oil & Gas segment, the Power Generation Steam and Power Generation Gas segment. Moody's notes that the operations of the two market leaders, Siemens and GE, belong to even larger industrial conglomerates with a strong financial background and the ability to better withstand intensified price pressure.

At the same time, Moody's recognises MAN's expansion of its stable and more profitable Service business as favourable, leading to higher and stable profitability levels as depicted in Figure 7.

Figure 7



In 2007, revenues amounted to €1.1 billion.

Financial Services

The MAN Financial Services (MFI) division offers customised financing solutions to customers acquiring MAN capital equipment, thereby supporting the Commercial Vehicles division. The penetration rate for commercial vehicles in Germany currently stands at 25% and we expect future organic growth mainly to come from higher penetration rates in its existing markets. Moody's recognises that MFI is prudently managed, with strong asset quality, profitability and capital adequacy.

RENK (76% ownership stake)

RENK is active in the market for drive applications, primarily power transmissions for tracked vehicles, standard slide bearings, clutches and couplings as well as naval craft gears, industrial gear units and testing systems. Moody's views RENK as well positioned within its market niche, being one of the market leaders in power transmission engineering.

The unit generated sales of €430 million in 2007.

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Financial Risk Factors

Liquidity Profile

The company's exposure to the cyclical European truck industry requires a solid level of financial flexibility. MAN's ratings benefit from a strong liquidity profile with cash and cash equivalents amounting to around €1.3 billion for the 12 months ending 30 September 2007 and currently more than €2.0 billion headroom under its committed credit facilities. None of its credit facilities contain financial covenants, rating triggers, collateral or any other kind of security (except corporate guarantees) and a MAC has only been assigned at signing.

Financial Profile

Moody's recognises MAN's solid financial position, which is underpinned by strong free cash flow generation of approximately €1.0-1.5 billion p.a. and an industrial net cash position of €1.1 billion.

Figure 8

Cash Flow and Free Cash Flow Generation 2005/2006 (Industrial Business)

	FYE 2006	FYE 2005
CFO as reported	1,194	1,576
Working capital outflow/ (inflow) as reported	354	665
Changes in other operating assets & liabilities as reported	-26	76
CFO before working capital changes	866	835
Two-third of lease rental expense reclassified	7	7
Other Adjustments	251	383
FFO per MFM	1,124	1,225
Dividends paid as reported	-203	-159
RCF per MFM	921	1,066
RCF per MFM	921	1,066
Working capital outflow/ (inflow) as reported	354	665
RCF post WC per MFM	1,275	1,731
Capital expenditure as adjusted*	-354	-265
Changes in other operating assets & liabilities as reported	-26	76
FCF as per MFM	895	1,542

* Represents the cash outflow for purchases of property, plant & equipment and intangible assets, excluding leasing assets

Source: Company data, Moody's Financial Metrics

However, the adjusted debt load has historically been large as shown in Figure 9, driven by a substantial amount of unfunded German pension obligations and operating leases. In 2007, MAN AG set up its own pension fund "MAN Pensionfonds AG" with a current volume of around €350 million

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Figure 9

Financial Debt 2005/2006 (Industrial Business)

€ million	FYE 2006	FYE 2005
Debt as reported in the Balance Sheet	1,661	588
Pensions	893	1,304
Operating leases (note 1)	350	417
Other (note 2)	-1,072	-623
Debt per MFM	1,832	1,686
Cash & Cash Equivalents	1,147	1,181
Net Debt per MFM	685	505

Note 1: The lease adjustment is 6x annual lease payment.

Note 2: Other adjustments are related to guarantees and intra-company financing.

Source: Company data, Moody's Financial Metrics

M&A risk remains high for the entire MAN AG

At the beginning of 2007, MAN withdrew its hostile bid for Scania after being rejected by its rival. However, MAN still favours an alliance with Scania in order to improve its competitive position in the global truck market, making an agreement in Moody's view more likely over the short-to-medium term. MAN now has control over approximately 17% of Scania's voting rights.

In order to increase the scale of its other core segments, e.g. MAN Turbo Machinery or MAN Ferrostaal, the group will focus on external growth. Moody's expects those acquisitions to be of smaller scale.

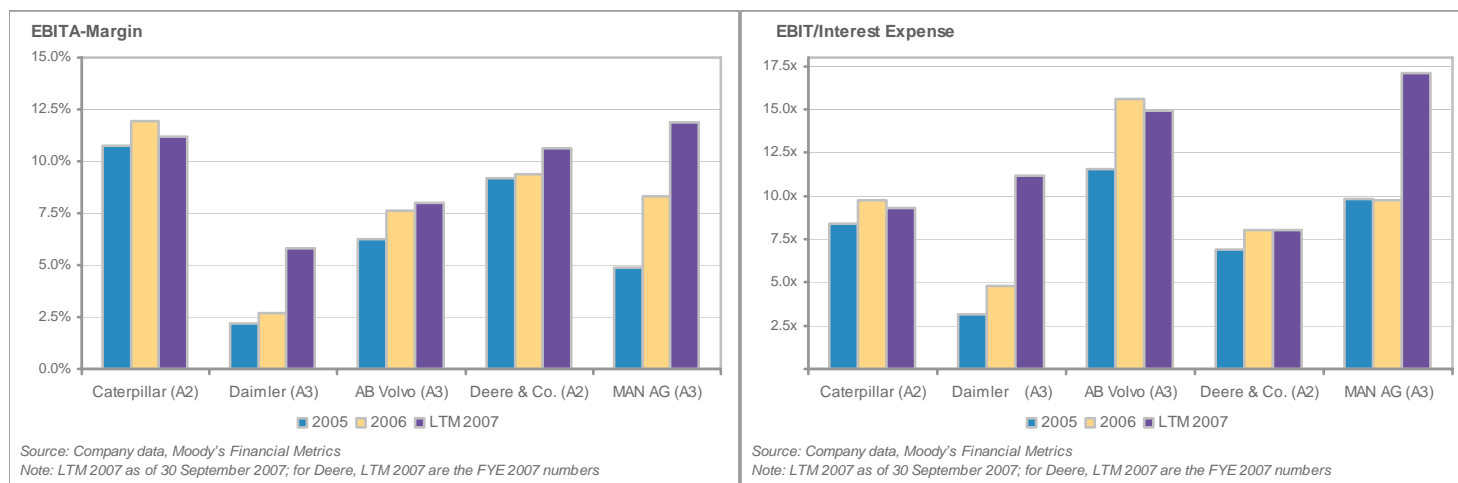
Moody's cautions that MAN's current A3 rating does not take into account any transforming acquisitions and their potential impact on MAN's credit metrics.

Peer Comparison

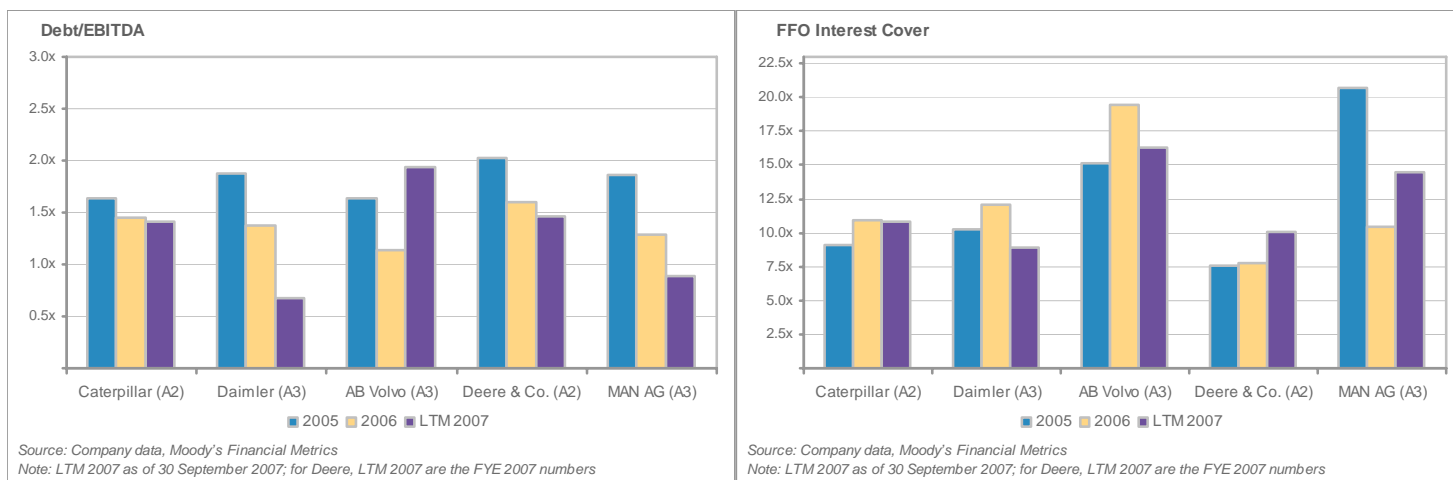
While MAN is strongly positioned within the A3 rating category, profitability levels still lack proof of sustainability through the cycle

MAN has improved its competitiveness vis-à-vis its A rated peers in the truck and construction equipment business - Volvo, Paccar (DAF) and Caterpillar. This has mainly been driven by the strong recovery in the truck market but also supported by highly effective cost-reduction measures and a successful streamlining of its operations.

Figure 10– Credit Metrics Comparison



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In terms of credit metrics, MAN is currently slightly better positioned than some of its main competitors. However, profitability levels have been weaker in the past and lack evidence of sustainability through the cycle. From a leverage perspective, Moody's acknowledges the substantial debt reductions in the past two years but cautions that current debt levels should not exceed Debt/EBITDA of around 2.0x in a downturn.

Compared to Volvo or Daimler's truck unit, MAN's commercial vehicles unit still lacks global reach and the sheer size necessary to offset cyclical downswings in the European truck market. However, Moody's believes that MAN's growth objectives will help to expand its global footprint. While MAN's diversified portfolio structure dilutes a peer comparison with global truck manufacturers to some extent, the product and segmental diversification of its other core segments are a supportive factor for MAN's rating.

This, together with our expectation of MAN's ability to maintain metrics commensurate with the A3 rating category going forward, underpins the current rating.

Rating Outlook

The **stable outlook reflects** (i) Moody's expectation that MAN AG will continue to reduce costs in order to improve its profitability levels and become more resilient to a potential cyclical downswing in its key markets; (ii) a successful and profitable expansion in growth markets in Eastern Europe (Poland, Russia), India and China, thereby extending its global footprint in trucks; and (iii) a further strengthening of its after-sales service network in all business divisions that profit from higher margins.

On the other hand, the stable outlook also takes into account (iv) the substantial capital expenditure requirements for its global growth opportunities including its R&D requirements to comply with emission regulations and keep its technological leadership positions in several areas and divisions; and (v) a successful restructuring of the underperforming bus unit.

What Could Drive the Rating Up

A rating upgrade in the longer term is likely if the company:

- Achieves an average EBIT margin (based on Moody's adjustments) above 7.5% through the cycle;
- Maintains leverage at levels no more than 1.5x Debt/EBITDA at the low point of the cycle; and
- Further profitably diversifies its businesses by geography.

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What Could Drive the Rating Down

While Moody's does not expect it, significant pressure on the ratings could evolve from:

- Failure to achieve an EBIT margin of around 6% through a business cycle;
- Failure to generate free cash flows over such period; and/or
- An increase in Debt/EBITDA above 2.0x.

Moody's Related Research

Analysis

- AB Volvo, April 2007 (102488)
- Daimler AG, November 2007 (105763)
- Fiat S.p.A., September 2007 (104700)
- Volkswagen AG, November 2007 (105763)
- Siemens, February 2007 (102272)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

MAN AG

Report Number: 107488

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