

Equities

11 June 2012 | 33 pages

Global Truck Monthly

Slow-Down Apparent in More Regions, Triggering Estimate Cuts

- **Slower Global Growth** — Reducing ests for most truck-related names on account of lower NAFTA build forecast (cut 5% to 285K), weaker emerging mkt growth, and F/X (est full-yr headwind from USD strength +350 bps since Apr 30). Targets reduced for Buy-rated CMI, along w/ Neutral-rated PCAR and ALSN (highest multiple sensitivity).
- **US Customer Mix** — We think a greater tax-induced pre-buy, coupled with higher underlying uncertainty, are factors contributing to recent order weakness. Also, the widening performance gap between small and large carriers apparent in industry rate/load (Figs 2-5) data has further pressured demand, as capital becomes scarcer to finance higher net truck pxs for riskier credits. Over time, we would expect this (plus tighter regulations, etc) leads to further industry consolidation, and less attractive mix.
- **China Truck Slow-Down Matches '05/06 Record Length**— Total heavy truck sales in China fell by 33% yr/yr in May, and were off by 10% sequentially (compared to ~17% normal drop). This marks the 13th month of decline out of the past 14, matching the duration of the '05/06 downturn and exceeding the '08/09 period. Should our (10%) full-year decline estimate hold, it would imply ~25% yr/yr growth in 2H12. Total CV sales for Dongfeng, partner with CMI at its largest equipment JV, were down by 17% yr/yr in May, as growth in bus/van sales (likely supported by recently-passed national school bus standards) were far outweighed by weakness across all truck segments.
- **Monetary/Fiscal Stimulus on the Way in Brazil** — The continued slowdown in the Brazilian economy (May IP down 2.7%, Manufacturing PMI still < 50) has resulted in a sharp cut to CIRA's 2012 GDP growth forecast (lowered 100 bps to 2.3%). This is clear — with additional “noise” related to emissions changeover — in May truck figures, with total production down 41% and registrations lower by 28%. lochpe (large wheel/component maker) recently highlighted weak 2Q conditions, and forecasts a ~25% full-yr decline in the heavy truck market in '12, though renewed subsidies (lower financing rates and longer terms) are expected to help support production in the second half.
- **India Truck Market Trends OEM-Specific** — Tata Motors, the largest Indian truck maker and a key JV partner of CMI, reported a 20% decline in medium/heavy truck sales, but 26% growth in light truck sales in May. While the 7% excise tax charge on trucks continues to impact heavy trucks, weaker economic data (IP turned negative in recent months, May PMI declined sequentially from April) has probably had as much an impact. India's central bank is expected to trim interest rates further next week to help resuscitate economic growth; CIRA economists still expect 7% GDP growth in 2012.
- **German Registrations, Economic Indicators Point Downwards** — A 13% decline in May registrations in Europe's largest market, Germany, along with weak PMI and business confidence (tight historical lead indicator) data in both Germany and the Euro area all lead us to expect softer results for European truck production and registrations in the months ahead. Notably, YTD OEM tire shipments by the largest European manufacturer turned negative in the month of April for the first time since late 2009.

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.













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Data Summary

Ticker	Rating		Target Price		Current Year Earnings Estimates		Next Year Earnings Estimates	
	Old	New	Old	New	Old	New	Old	New
ALSN	2H	2H	US\$26.00	US\$22.00	US\$1.41	US\$1.40	US\$1.89	US\$1.85
CMI	1	1	US\$132.00	US\$120.00	US\$10.70	US\$10.55	US\$12.00	US\$11.75
PCAR	2	2	US\$50.00	US\$42.00	US\$3.55	US\$3.45	US\$3.95	US\$3.85

Monthly Summary Review

Figure 1. Truck Company Summary

		Cummins	PACCAR
DEVELOPED ECONOMIES			
North America	<i>Relevant Product Lines:</i>	Engines (HDT, MDT), Components, Parts (MRO)	Trucks (HDT, MDT), Parts (MRO)
	<i>% of Sales:</i>	30%	50%
	<i>Key Customers:</i>	PACCAR, Daimler, Chrysler	Fleet Owner / Operators
	<i>Market Outlook:</i>		
	<i>Comments:</i>	Strong freight rate environment supportive of ongoing replacement demand in 2012; medium duty share gains; continuing freight recovery positive for high-margin aftermarket sales. Aftermarket represented 28% of total heavy duty sales in 2011.	PCAR recently cut Kenworth production by 10% in North America due to declining orders. MX engine penetration in Kenworth and Peterbilt heavy duty trucks seems to have stabilized, but at 17% is still below the company goal for penetration exceeding 25% in 2012.
Europe	<i>Relevant Product Lines:</i>	Engines (MDT), Components	Trucks (HDT/MDT), Parts
	<i>% of Sales:</i>	5%	35%
	<i>Key Customers:</i>	PACCAR, Volvo, Iveco, Scania	Fleet Owner / Operators
	<i>Market Outlook:</i>	 / 	 / 
	<i>Comments:</i>	CMI benefited from DAF share gains in Europe in 2011, but market outlook is increasingly uncertain, with 2012 soft to start (HD/+16T registrations down 4%, MD/>3.5T down 2%).	PCAR cut its 2012 production forecast by 10% for Europe.
EMERGING MARKETS			
China	<i>Relevant Product Lines:</i>	Engines (HDT, MDT), Components	Engines
	<i>% of Sales:</i>	7%	3%
	<i>Key Customers:</i>	Dongfeng, Foton, Shaanxi, CNHTC (Sinotruk)	Various Bus/Coach Makers; Oil/gas customers
	<i>Market Outlook:</i>	 / 	
	<i>Comments:</i>	Despite a modest decline in volumes, net earnings at DCEC fell by close to 20% (ex. royalty income) in 2011 largely on account of inferior mix and start-up costs related to capacity expansion. We expect overall volumes to recover somewhat in 2012, but expect more 2H-	Stated plans to establish and develop one or two Truck-related joint ventures in coming years.
India	<i>Relevant Product Lines:</i>	Engines (HDT, MDT), Components	Trucks (HDT/MDT), Parts
	<i>% of Sales:</i>	4%	0%
	<i>Key Customers:</i>	Tata Motors	
	<i>Market Outlook:</i>		
	<i>Comments:</i>	HD Truck market remaining strong, supported by robust highway / infrastructure build-out; TCL operation currently running full, and expanding capacity; increased emphasis by Tata on export market to benefit in long-term.	Considering India launch of DAF trucks, either through imports or by constructing an assembly facility. No indication of timing has been provided.
Brazil	<i>Relevant Product Lines:</i>	Engines (MDT), Components	Trucks (HDT/MDT), Parts
	<i>% of Sales:</i>	4%	0% (current presence in non-Mercosur region)
	<i>Key Customers:</i>	MAN, Ford	
	<i>Market Outlook:</i>	 / 	
	<i>Comments:</i>	Full year production expected to decline. Daimler now expects full year sales to be at the low end of its guidance, or down 15% yr/yr.	Construction on DAF truck assembly plant has started, with initial production slated for 2013. Two parts distribution centers planned (plus one in Santiago, Chile). This year launched models for the Andean region, including Chile, Ecuador and Peru.

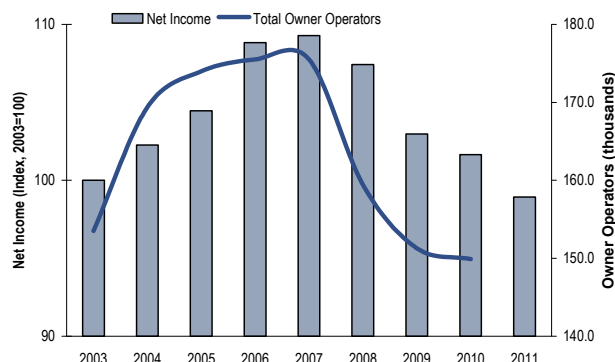
Source: Company Reports, CIRA Estimates.

Note: CMI Sales % represent estimated total of consolidated and unconsolidated sales.

Changing Mix a Contributor to Softer US Data

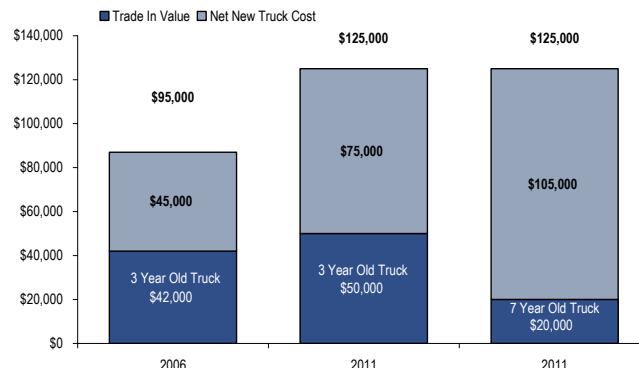
We are tweaking down our 2012 NAFTA heavy truck forecast to 285K (from roughly 300K before) in response to weaker order trends in recent months. In our outlook note in late 2011, written alongside our Transports colleague (Chris Wetherbee), we predicted that the Class 8 tractor fleet dedicated to freight was unlikely to post material growth in 2012, as carriers worked to preserve the well matched supply/demand dynamic that had resulted in a favorable pricing backdrop. As it turns out, the modest actual growth we had been expecting (above underlying replacement estimated to be ~250-260K) may prove to be too optimistic. While there are likely several factors at play, we think one notable contributor to the weaker order pattern has been the challenges faced by smaller – or better said, less well capitalized carriers – (at least the percentage that is buying new vs used trucks) who have had trouble placing orders given escalating new equipment prices, combined with low trucking margins for this segment, clearly evident in the charts below. According to the most recent ATA data, the small truckload (defined as less than \$30 million in annual revenues) carrier tractor fleet was down by roughly 4% year-over-year, and experienced its largest monthly drop since mid-2011. Longer term, we see this as one factor supporting increased industry consolidation, potentially serving as a headwind for OEMs should it result in stronger buyers, seeking more de-contented (or value-oriented) trucks.

Figure 2. Estimated Owner Operator Net Income vs Population



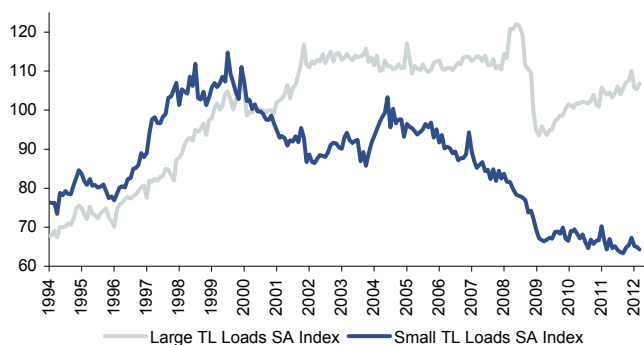
Source: Citi Investment Research and Analysis

Figure 3. Net New Truck Cost Change



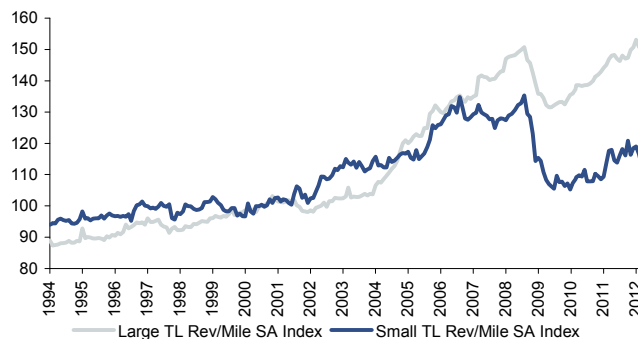
Source: Citi Investment Research and Analysis

Figure 4. TL Loads SA Index



Source: ATA

Figure 5. TL Revenue Per Mile SA Index

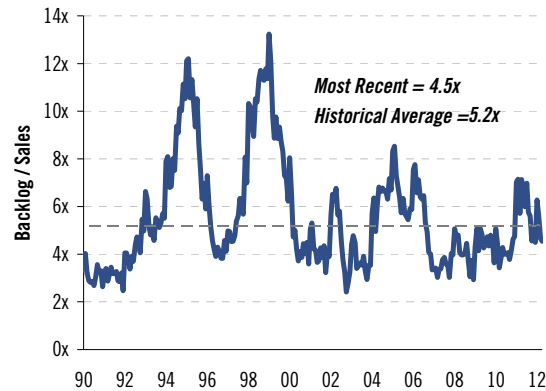


Source: ATA

Allison Transmission: End Market Analysis

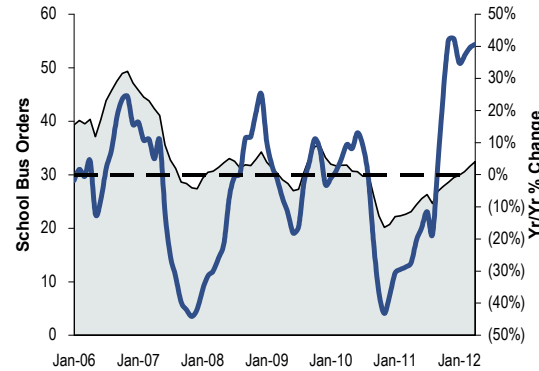
- Given the diversity of Allison's end markets, we have included snap shots below of certain important categories to highlight the directional change each month. As suggested below, many of its end markets remain below mid-cycle demand levels, partly reflective of its relatively high (indirect) exposure to residential construction and state and local government spending, two notable laggards in the current domestic economic recovery. In general, order trends remain on an upward path, though growth in the NAFTA Class 8 straight truck market – one of Allison's largest - was trimmed recently by one industry forecaster (ACT).

Figure 6. North America CL8 Straight Truck Backlog to Build



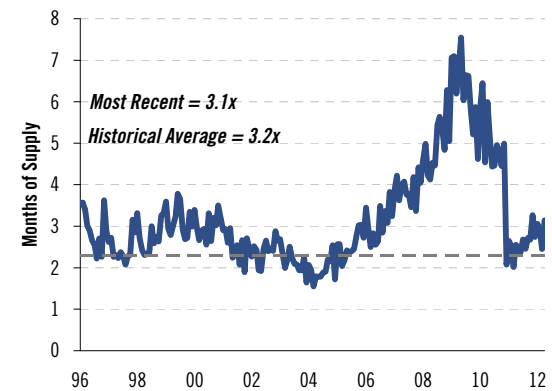
Source: ACT Research

Figure 7. North America School Bus Orders



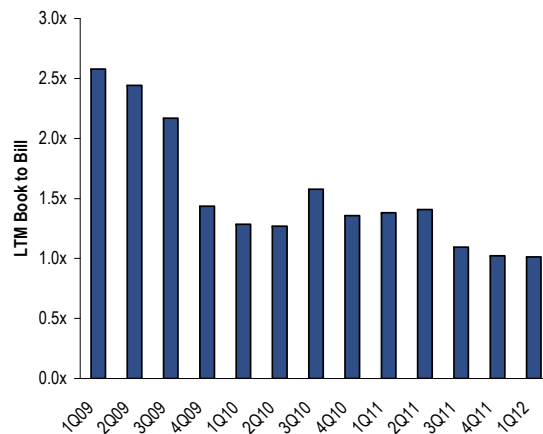
Source: ACT Research

Figure 8. North America Class 5-7 Inventory to Sales



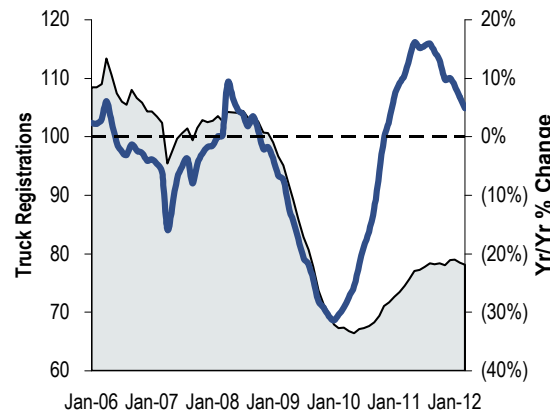
Source: ACT Research

Figure 9. New Flyer Industries LTM Book to Bill



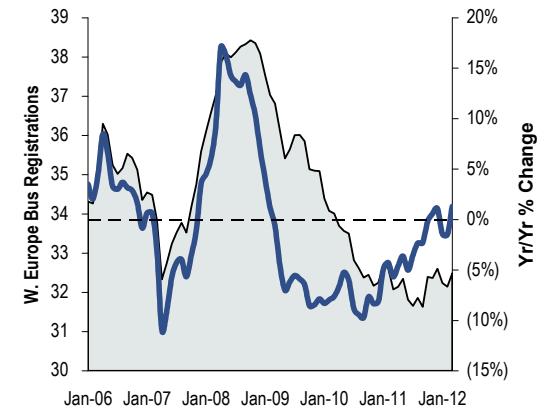
Source: Company Reports

Figure 10. W. Europe Truck (3.5t to 16T) Registrations



Source: ACEA

Figure 11. W. Europe Bus Registrations



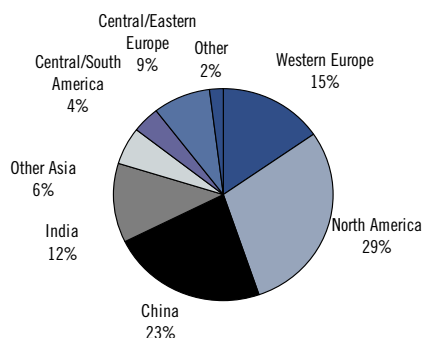
Source: ACEA

Global Market Overview

Similar to other end market categories like construction or general industrial equipment, the global truck market landscape has seen significant change in recent years partly reflective of a divergence in regional economic growth patterns. With the US reaching a cyclical peak in 2006 and Western Europe less than two years later, huge growth in Asian markets over this period has propelled them to the top spots in global unit rankings. The two pie charts below chronicle the shift in global leadership that has occurred over this period. Significant investment in infrastructure and highway expansion, incentives schemes and strong freight growth have all helped China's share of worldwide sales to more than double since 2006, with truck volumes up over 3-fold over this period.

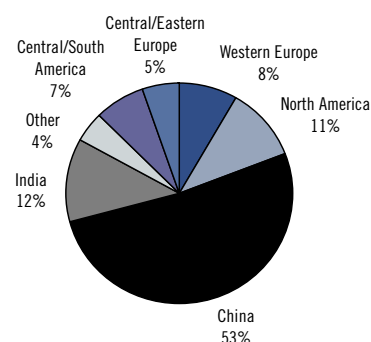
We expect regional patterns to exhibit more unevenness in 2012. We see the North American market benefiting from solid overall trucker fundamentals (especially for well-capitalized operators) and an above-average fleet age. The outlook is cloudier across Western European markets, as CIRA currently projects a recession for the Euro Zone in 2012, and overall financing conditions have become more restrictive. The outlook for key emerging markets has become less favorable in recent months, as Brazil, China and India all face slower rates of economic growth, and some "give back" post emissions-related growth at the end of 2011. That said, China faces arguably the "easiest" set of comps, and with inventory issues becoming less of a headwind, this is expected to drive year-over-year growth as we move to the back half of 2012 (especially should overall economic policy shift towards a more pro-growth stance, as CIRA economists project).

Figure 12. 2006 Global Truck Market Sales, >6 metric tons



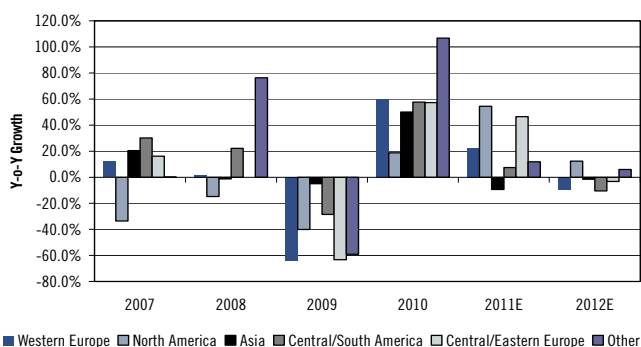
Source: JD Power & Associates

Figure 13. 2011 Global Truck Market Sales, >6 metric tons



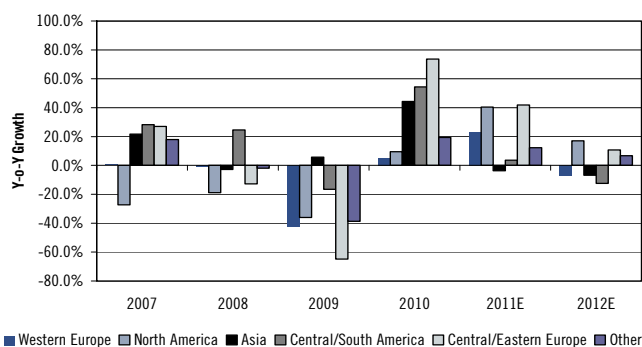
Source: JD Power & Associates

Figure 14. Global Truck Market Assemblies Growth, 2007-2012E: >6mt



Source: JD Power & Associates

Figure 15. Global Truck Market Sales Growth, 2007-2012E: >6mt



Source: JD Power & Associates

Developed Market Indicators

North America: May preliminary Class 8 net orders of 18,000 were down 23% from prior year, and marked the fifth consecutive month of declines. Truck price increases and tax-induced pull forward demand into 2011 are likely partially to blame for the softness. Preliminary May orders are consistent with full year orders of 200K compared to ACT's build forecast of 300K for full year 2012. However, freight indicators did improve during the month, with the Cass freight volume index showing a 2% increase in May, and rail carload growth rising at their fastest rate since February.

Europe: European truck registrations declined 4.7% yr/yr in April, and are likely to fall further in May as heavy duty truck registrations in Germany (the largest European market – and economy) fell by 14% in May. Combined with continued weakness in the manufacturing sector in the core of Europe (Eurozone business confidence declined further in May, as did the German business climate), and difficult credit conditions, the Europe truck market is still facing strong headwinds.

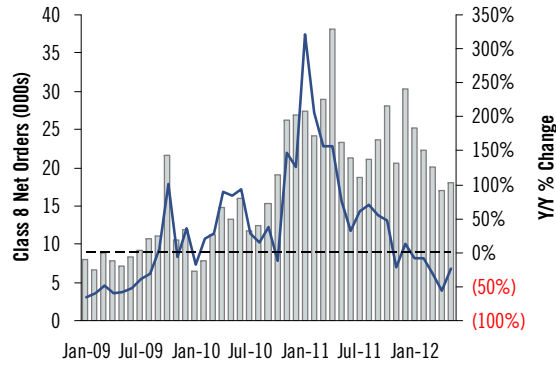
Figure 16. Developed Economies: Truck Market Summary

	Latest Reading	Latest	Previous	Δ	LTM	Previous	Δ
NORTH AMERICA							
Truck Sales							
Class 8 Sales (Units)	April-12	23,446	24,512	NM	268,675	262,710	2.3%
Class 8 Sales (Y/Y %)	April-12	34.1%	32.1%	206 bps	56.7%	58.1%	(139 bps)
Class 5-7 Sales (Units)	April-12	13,744	16,988	NM	162,375	161,330	0.6%
Class 5-7 Sales (Y/Y %)	April-12	8.2%	18.0%	(978 bps)	23.3%	26.6%	(331 bps)
Net Orders							
Class 8 Orders (Units)	May-12	18,000	17,105	NM	266,403	271,740	(2.0%)
Class 8 Orders (Y/Y %)	May-12	(22.9%)	(55.1%)	3223 bps	(1.1%)	4.8%	(592 bps)
Class 5-7 Orders (Units)	May-12	13,100	15,337	NM	165,379	166,228	(0.5%)
Class 5-7 Orders (Y/Y %)	May-12	(6.1%)	(8.0%)	193 bps	6.7%	11.7%	(503 bps)
Supply Environment (HDT)							
Class 8 Book-to-Bill	April-12	0.73x	0.82x	(0.09)			
Class 8 Inventory / Sales	April-12	2.60x	2.42x	0.17			
Class 8 Backlog / Sales	April-12	4.54x	4.67x	(0.13)			
Freight Traffic / Demand Indicators							
CASS Freight Volume Index (1990 = 100)	May-12	113.5	111.5	2.0			
ATA Truck Tonnage Index (2002 = 100)	April-12	118.7	120.0	(1.3)			
Ceridian PCI Index (2002 = 100)	May-12	94.9	94.2	0.7			
Intermodal Railcar Loadings, 4 Week Rolling (Y/Y %)	June-12	7.0%	4.4%	259 bps			
West Coast Ports: Inbound Container Volumes (Y/Y %)	April-12	5.4%	14.1%	(873 bps)			
International Air Cargo: Freight Tonne Kilometers (Y/Y %)	April-12	(4.5%)	0.1%	(460 bps)			
Macro-Economic Indicators							
Industrial Production (SA, 2007 = 100)	April-12	97.4	96.4	1.0%			
Industrial Production (Y/Y %)	April-12	5.2%	3.5%	164 bps			
Manufacturing PMI (SA)	May-12	53.5	54.8	(1.3)			
EUROPE							
Truck Registrations							
EU27+EFTA3 HDT Registrations (Units)	April-12	19,454	20,936	NM	235,093	236,062	(0.4%)
EU27+EFTA3 HDT Registrations (Y/Y %)	April-12	(4.7%)	(8.7%)	399 bps	14.2%	18.6%	(432 bps)
German Truck Registrations, > 16T (Units)	May-12	5,039	5,468	NM	64,979	65,290	(0.5%)
German Truck Registrations, > 16T (Y/Y %)	May-12	(13.6%)	2.2%	(1577 bps)	12.3%	16.8%	(451 bps)
German Truck Registrations, 6-16T (Units)	May-12	2,320	2,334	NM	30,588	30,708	(0.4%)
German Truck Registrations, 6-16T (Y/Y %)	May-12	(11.3%)	(4.3%)	(700 bps)	8.2%	11.3%	(313 bps)
Tire Shipments							
Michelin Heavy-Duty Tire Shipments: OEM (Y/Y %)	April-12	(2.2%)	(2.8%)	60 bps	(0.4%)	72.5%	
Michelin Heavy-Duty Tire Shipments: Replacement (Y/Y %)	April-12	(31.3%)	(26.5%)	(480 bps)	(28.5%)	23.1%	
Freight Traffic							
German On-Highway Freight Traffic (Y/Y %)	April-12	(2.3%)	(2.4%)	10 bps			
Macro-Economic Indicators							
EU Industrial Production (SA, 2005 = 100)	February-12	96.7	97.4	(0.8%)			
EU Industrial Production (Y/Y %)	February-12	(1.3%)	(1.1%)	(12 bps)			
Euro Area Business Climate Indicator (SA, Std. Dev. Pts.)	May-12	(0.77)	(0.51)	(0.26)			
German Industrial Production (SA, 2005 = 100)	April-12	110.0	112.2	(2.0%)			
German Industrial Production (Y/Y %)	April-12	(0.7%)	1.2%	(189 bps)			
German Ifo Business Climate Index (SA)	May-12	106.9	109.9	(3.0)			

Source: Citi Investment Research and Analysis

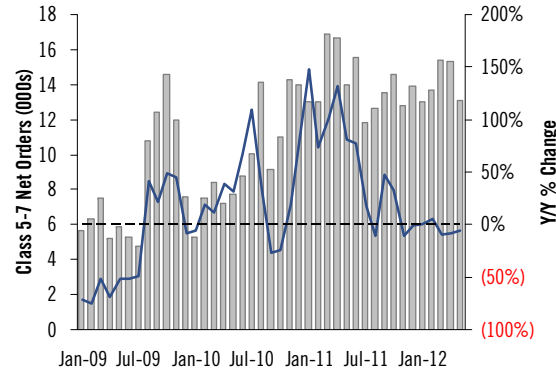
North American Truck Market

Figure 17. Class 8 Truck: Monthly Net Orders



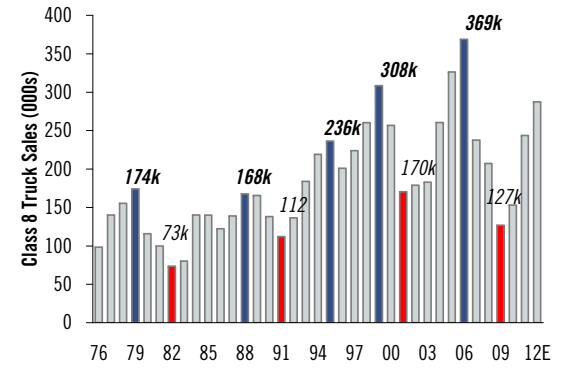
Source: ACT Research, CIRA Estimates

Figure 18. Class 5-7 Truck: Monthly Net Orders



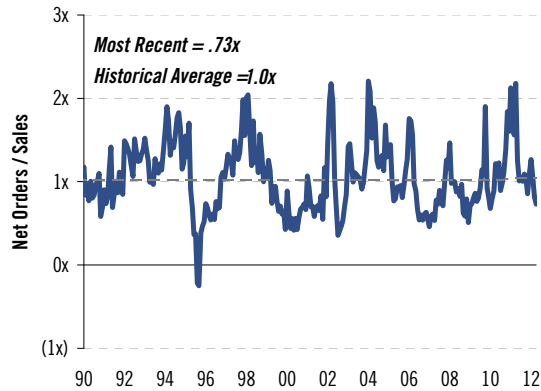
Source: ACT Research, CIRA Estimates

Figure 19. Class 8 Truck: Historical Sales Cycles



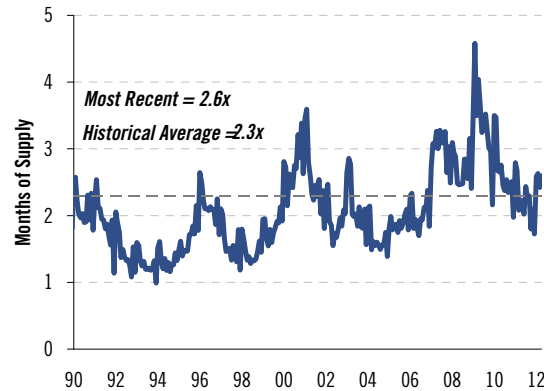
Source: ACT Research, CIRA Estimates

Figure 20. Class 8 Truck: Monthly Book-to-Bill



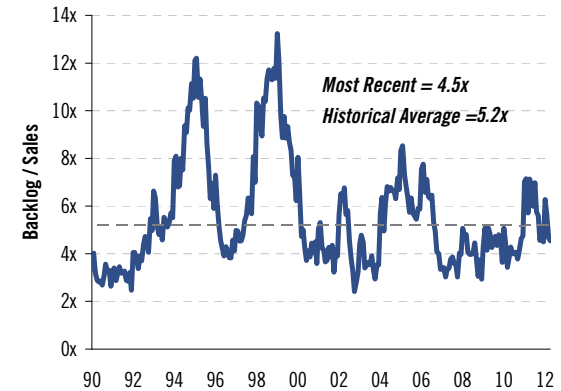
Source: ACT Research, CIRA Estimates

Figure 21. Class 8 Truck: Monthly Inventory / Sales Ratio



Source: ACT Research, CIRA Estimates

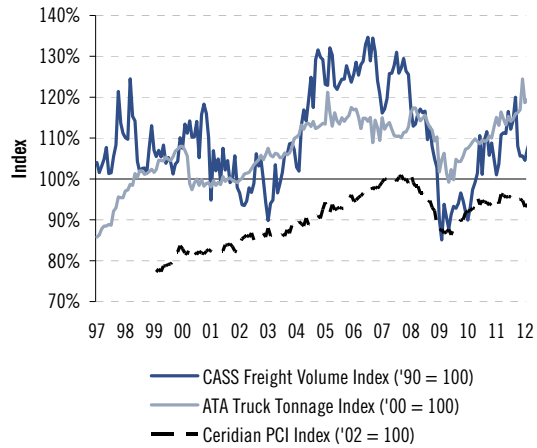
Figure 22. Class 8 Truck: Monthly Backlog / Sales Ratio



Source: ACT Research, CIRA Estimates

North American Truck Market (Continued)

Figure 23. Freight Volume Indices



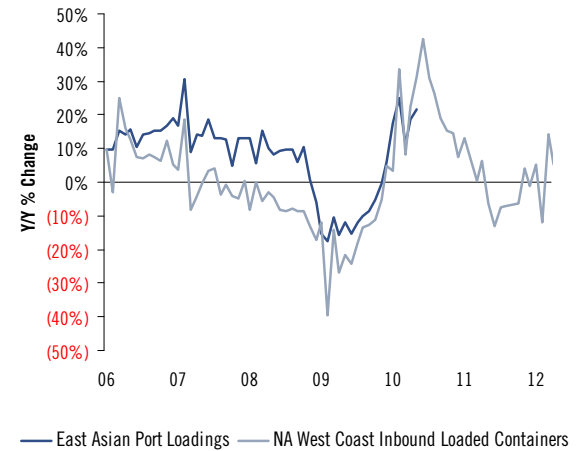
Source: ATA, CASS, Ceridian, CIRA Estimates

Figure 24. Intermodal Rail Traffic



Source: Atlantic Systems, CIRA Estimates

Figure 25. Seaborne Port Container Traffic



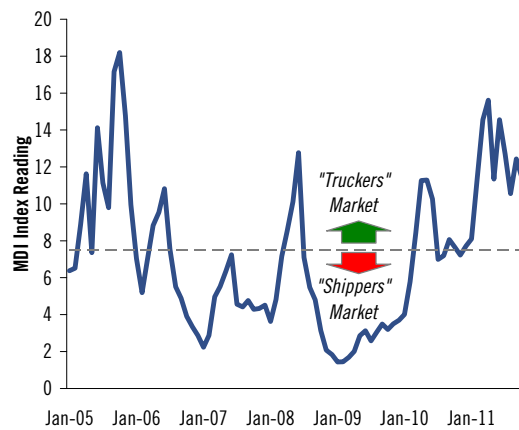
Source: Haver Analytics, CIRA Estimates

Figure 26. International Air Cargo Traffic



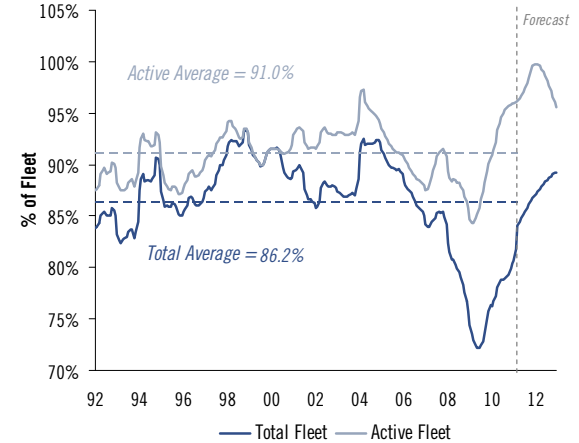
Source: IATA, CIRA Estimates

Figure 27. Internet Truck Stop: Market Demand Indicator



Source: Internet Truck Stop, CIRA Estimates

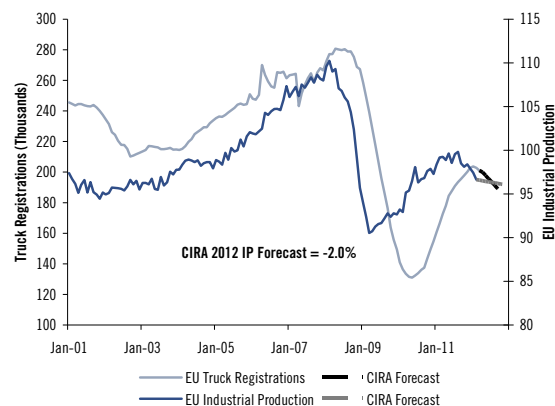
Figure 28. Class 8 Fleet Utilization



Source: FTR Associates, CIRA Estimates

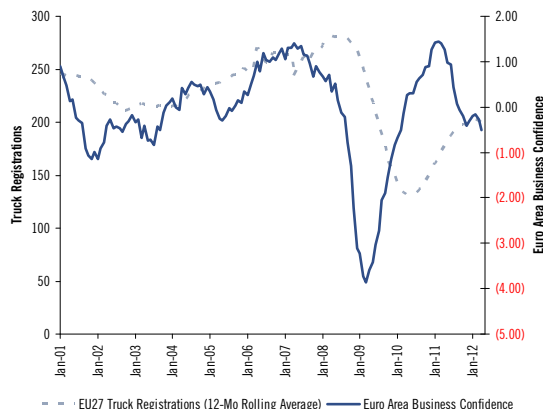
European Truck Market

Figure 29. European Truck Registrations vs. Industrial Production



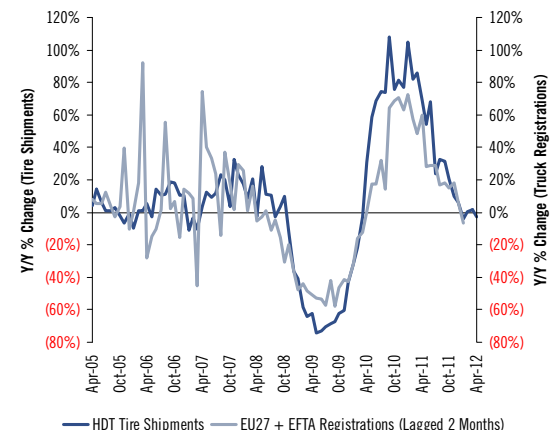
Source: ACEA, EuroStat, CIRA Estimates

Figure 30. European Truck Registrations vs. Business Confidence



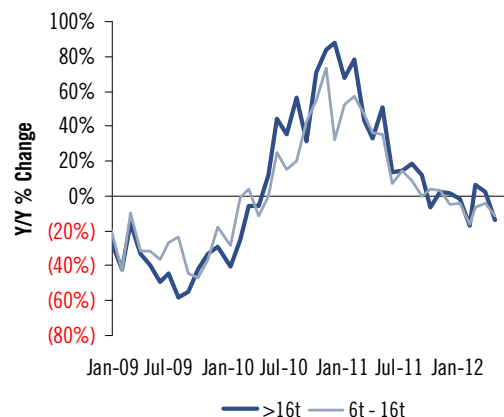
Source: ACEA, EuroStat, CIRA Estimates

Figure 31. European Truck Registrations vs. Tire Shipments



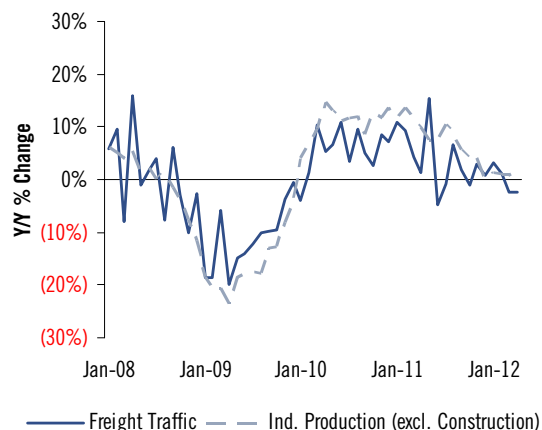
Source: ACEA, Michelin, CIRA Estimates

Figure 32. German Truck Registrations



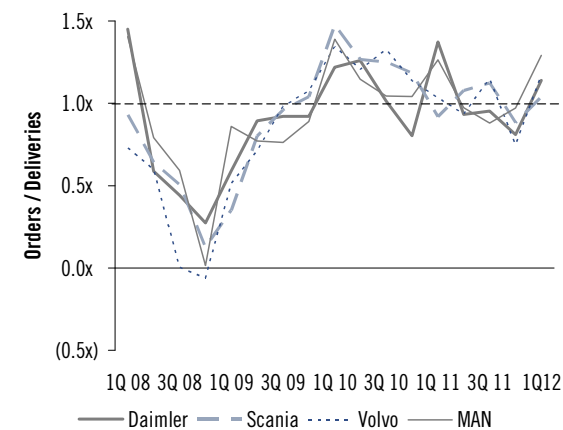
Source: VDA

Figure 33. German Highway Freight Traffic vs. Ind. Prod



Source: Bundesamt für Güterverkehr, Eurostat and CIRA Estimates

Figure 34. European Book-to-Bill by OEM



Source: Company Reports, CIRA Estimates

Emerging Market Indicators

China: Total heavy truck sales in China fell 33% yr/yr in May, and were down 10% sequentially, compared to an 11 year average month-over-month decline of 4%. This marks the 13th drop out of the past 14 months, matching the duration of the '05/06 downturn and exceeding the '08/09 decline. While leading indicators suggest a further slowdown into the Summer, comparisons become easier in June.

India: Tata reported May production down 33% and a sales decline of 20%. Nevertheless, despite softer economic conditions (industrial production declined in March) and higher truck prices, the Society of Indian Automobile Manufacturers is forecasting 2012-13 truck sales growth of 5% to 7%, compared to 18% growth in the last fiscal year.

Brazil: Truck production by declined 41% in May, with YTD production now down 33%. Heavy truck production declined 33% in the month, while CL 5-7 truck production fell 53%. Domestic bus production is down a more modest 5.1% ytd. Manufacturing output remained dampened last month, with PMI below 50 for the second consecutive report. CIRA economists expect the additional cuts to the Selic rate, which combined with a new round of government financing subsidies, should lead to higher truck demand later in the year.

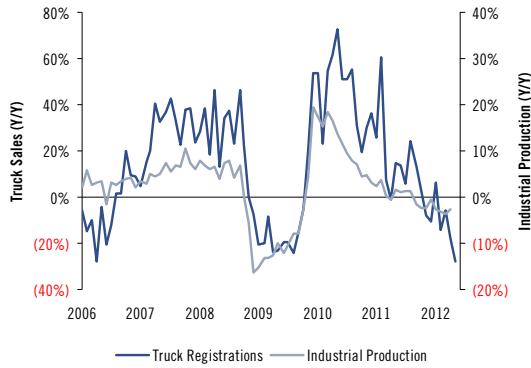
Figure 35. Emerging Markets: Truck Market Summary

	Latest Reading	Latest	Previous	Δ	LTM	Previous	Δ
CHINA							
Truck Sales							
HDT Sales (Units)	May-12	56,044	62,379	NM	723,321	750,313	(3.6%)
HDT Sales (Y/Y %)	May-12	(32.5%)	(41.3%)	876 bps	(28.0%)	(27.0%)	(95 bps)
Market Share by Class							
Standard	May-12	32.9%	36.4%	(343 bps)			
Semi-Tractor Trailer	May-12	25.0%	25.4%	(35 bps)			
Chassis (Specialty Truck)	May-12	42.0%	38.2%	378 bps			
Freight Traffic							
On-Highway Freight Traffic (Y/Y %)	April-12	14.4%	14.6%	(20 bps)			
Macro-Economic Indicators							
Industrial Production (SA, 2005 = 100)	April-12	241.9	246.0	(1.7%)			
Industrial Production (Y/Y %)	April-12	9.3%	11.6%	(231 bps)			
Manufacturing PMI (SA)	May-12	50.4	53.3	(2.9)			
INDIA							
CV Sales							
M/HCV Sales (Units)	March-12	39,951	32,909	NM	348,701	349,216	-0.1%
M/HCV Sales (Y/Y %)	March-12	(1.3%)	5.3%	(661 bps)	8.0%	10.2%	(217 bps)
Sales by Vehicle Type							
Goods (Truck) - Y/Y%	March-12	15.6%	15.6%	(5 bps)			
Passenger (Bus) - Y/Y%	March-12	15.1%	43.6%	(2853 bps)			
Freight Traffic							
TCI Road Freight Index (SA)	March-12	175.0	174.0	0.6%			
TCI Road Freight Index (Y/Y %)	March-12	0.0%	(0.6%)	57 bps			
Macro-Economic Indicators							
Industrial Production (SA, 1993 = 100)	March-12	168.7	175.5	(3.9%)			
Industrial Production (Y/Y %)	March-12	(3.6%)	3.9%	(757 bps)			
Manufacturing PMI (SA)	May-12	54.8	54.9	(0.1)			
BRAZIL							
Truck Registrations							
Truck Registrations (Units)	May-12	10,883	11,113	NM	164,370	168,629	(2.5%)
Truck Registrations (Y/Y %)	May-12	(28.1%)	(17.8%)	(1037 bps)	(2.1%)	1.6%	(371 bps)
Market Share by Class							
Semi-Light	May-12	4.9%	6.5%	(164 bps)			
Light	May-12	23.9%	22.9%	105 bps			
Medium	May-12	10.0%	10.1%	(7 bps)			
Semi-Heavy	May-12	35.0%	35.1%	(9 bps)			
Heavy	May-12	26.2%	25.4%	75 bps			
Freight Traffic							
ABCR Heavy Vehicle Activity Index (SA)	April-12	158.0	162.3	(2.6%)			
ABCR Heavy Vehicle Activity Index (NSA Y/Y %)	April-12	0.9%	6.6%	(565 bps)			
Macro-Economic Indicators							
Industrial Production (SA, 2005 = 100)	April-12	125.8	126.0	(0.2%)			
Industrial Production (Y/Y %)	April-12	(2.7%)	(3.8%)	102 bps			
Manufacturing PMI (SA)	May-12	49.3	49.3	(0.0)			

Source: ANFAVEA, Banco Real, Markit.

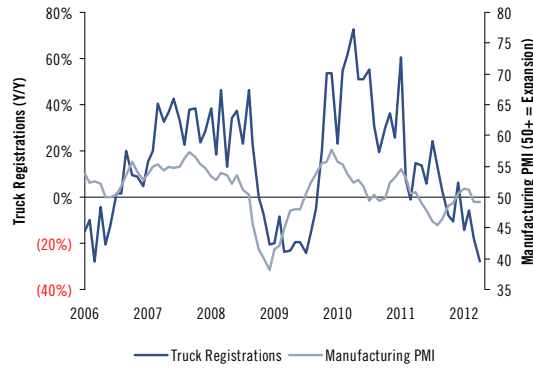
Brazil Truck Market

Figure 36. Truck Registrations vs. Industrial Production



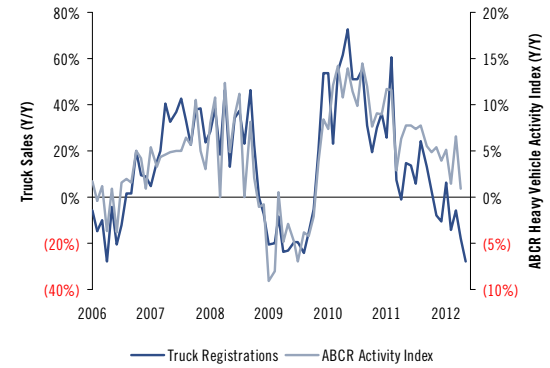
Source: ANFAVEA, IBGE

Figure 37. Truck Registrations vs. PMI



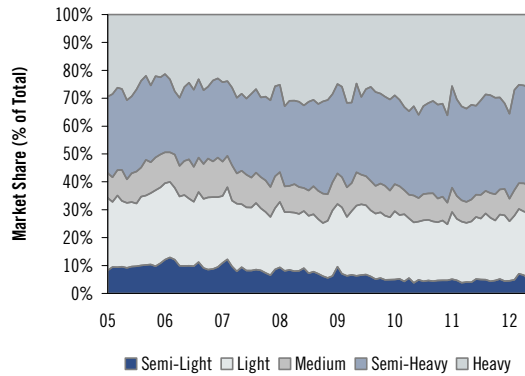
Source: ANFAVEA, Banco Real, Markit

Figure 38. Truck Registrations vs. Heavy Vehicle Traffic



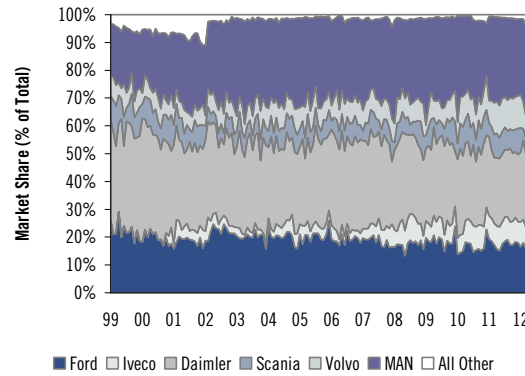
Source: ANFAVEA, ABCR

Figure 39. Truck Registrations: Market Share by Weight



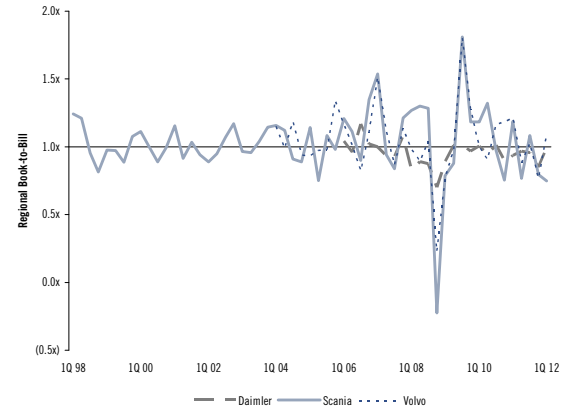
Source: ANFAVEA

Figure 40. Truck Sales: Market Share by OEM



Source: ANFAVEA

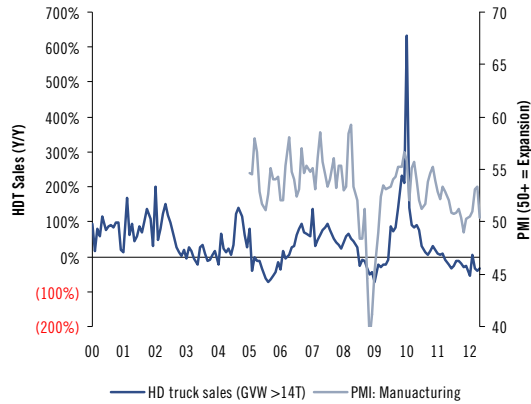
Figure 41. Latin America Book-to-Bill by OEM



Source: Company Reports

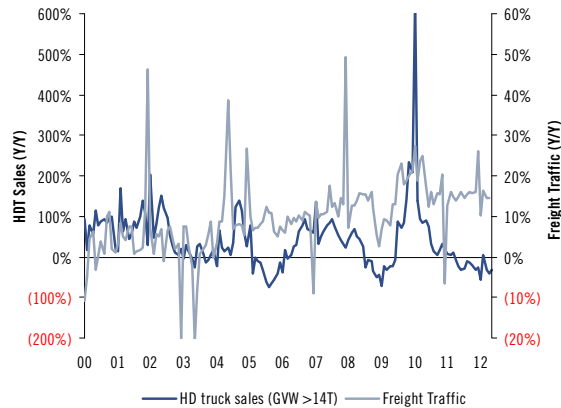
China Truck Market

Figure 42. Truck Sales vs. PMI



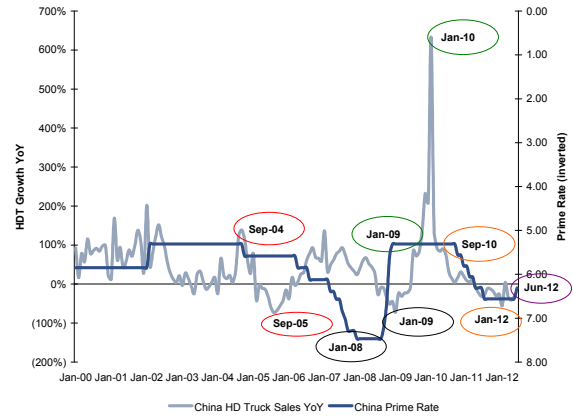
Source: CAAM, China Federation Logistics & Purchasing, CNBS, CIRA Estimates

Figure 43. Truck Sales vs. On-Highway Traffic



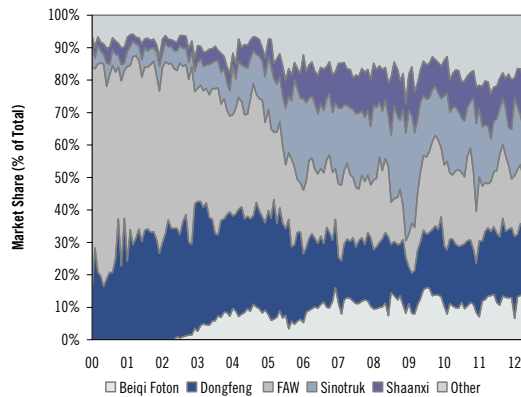
Source: CAAM, CNBS, CIRA Estimates

Figure 44. Truck Sales vs. Prime Rate



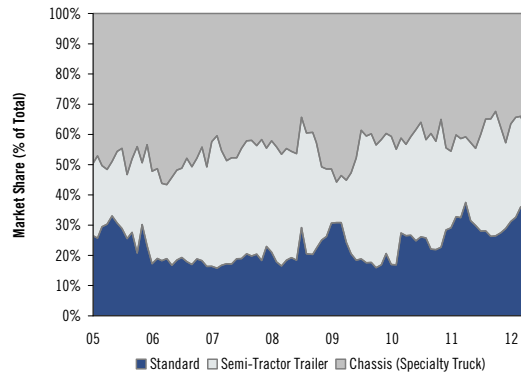
Source: CAAM, People's Bank of China

Figure 45. Truck Sales: Market Share by OEM



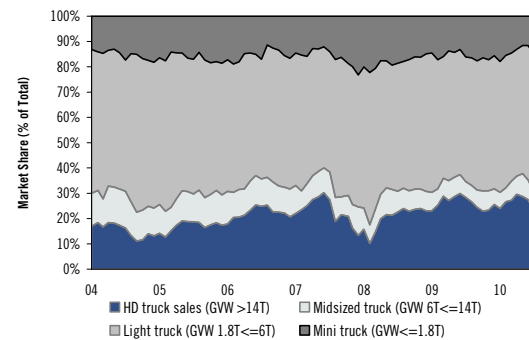
Source: CAAM, CIRA Estimates

Figure 46. Truck Sales: Market Share by Vehicle Type



Source: CAAM, CIRA Estimates
Standard truck (short haul logistics); Semi-tractor trailer (long-haul logistics and import/export); Chassis (specialty truck, including mining and construction)

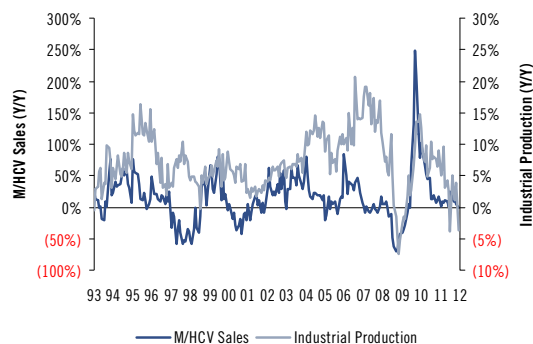
Figure 47. Truck Sales: Market Share by Vehicle Size



Source: CAAM, CIRA Estimates

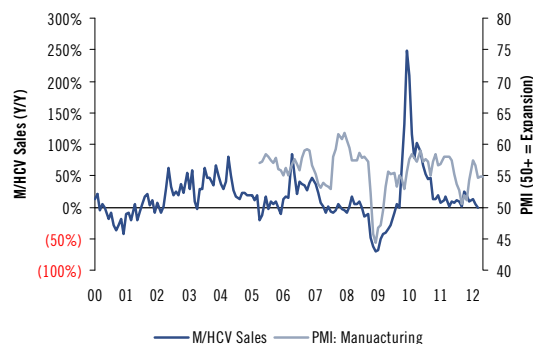
India Truck Market

Figure 48. Truck Sales vs. Industrial Production



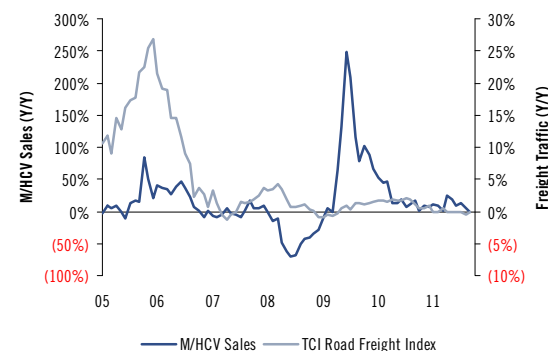
Source: Society of Indian Automobile Manufacturers, CIRA Estimates

Figure 49. Truck Sales vs. PMI



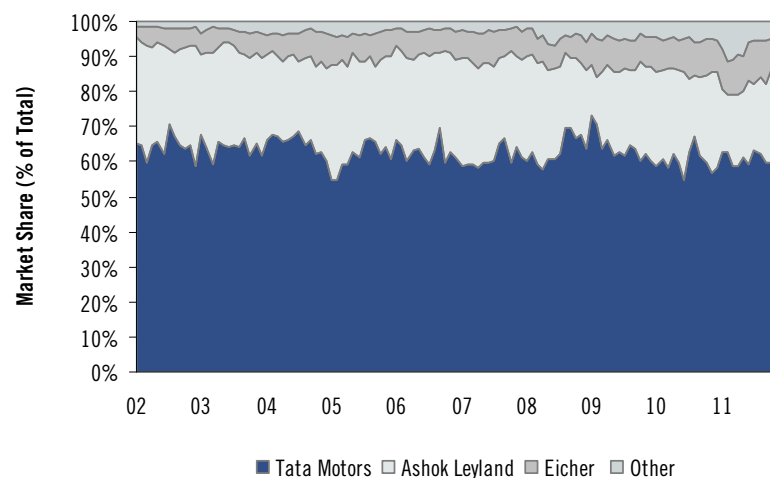
Source: Society of Indian Automobile Manufacturers, CIRA Estimates

Figure 50. Truck Sales vs. On-Highway Traffic



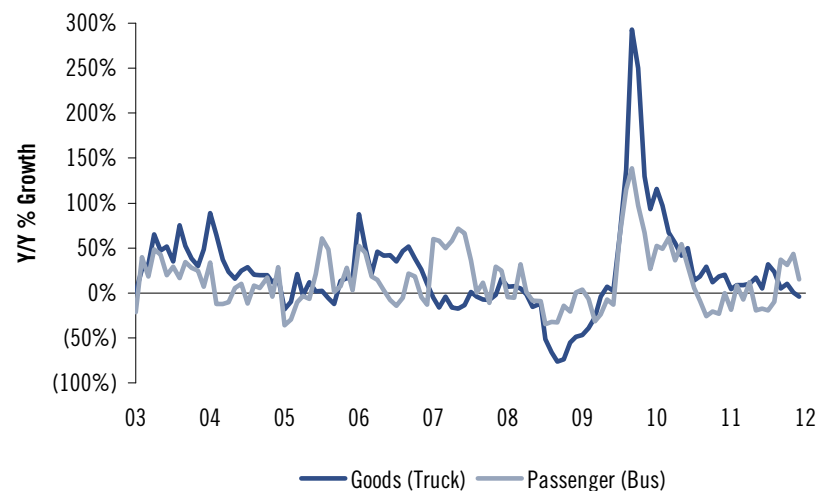
Source: Society of Indian Automobile Manufacturers, CIRA Estimates

Figure 51. Truck Sales: Market Share by OEM



Source: Society of Indian Automobile Manufacturers, CIRA Estimates

Figure 52. Truck Sales: Y/Y % Growth by Vehicle Type



Source: Society of Indian Automobile Manufacturers, CIRA Estimates

Competitive Landscape

Developed Economies

- Paccar and Daimler have taken advantage of Volvo's production cuts and Navistar's production issues so far in 2012 in **heavy duty** trucks. Within the **medium duty** segment, PACCAR and Daimler have gained the greatest share, at the expense of Ford. Within heavy duty **engines** in North America, Cummins has increased its share at the expense of Detroit Diesel (Daimler) and Navistar, though its share gains are set to moderate as the year progresses as Daimler's capacity expansion takes hold. Paccar's in-house engine share has increased to 17% from 14% at the end of 2011. The company expects engine penetration to be above 25% in 2012.

Figure 53. North America: Class 8 Truck Market Share (Retail Sales)

	Apr-12	Mar-12	Δ	2012 YTD	2011	Δ
PACCAR	32.5%	30.6%	192 bps	31.2%	29.0%	216 bps
Navistar	18.5%	16.1%	234 bps	18.7%	21.4%	(272 bps)
Volvo	16.7%	21.3%	(456 bps)	16.2%	17.4%	(119 bps)
Daimler	31.0%	30.7%	37 bps	32.7%	31.2%	144 bps
All Other	1.2%	1.3%	(6 bps)	1.4%	1.1%	30 bps

Source: ACT Research, CIRA Estimates

Figure 54. North America: Class 5-7 Truck Market Share (Retail Sales)

	Apr-12	Mar-12	Δ	2012 YTD	2011	Δ
PACCAR	6.8%	5.2%	163 bps	6.2%	5.1%	108 bps
Navistar	27.0%	26.4%	64 bps	26.4%	26.1%	31 bps
Daimler	20.4%	23.9%	(350 bps)	23.1%	20.1%	302 bps
Ford	24.9%	23.2%	164 bps	23.3%	25.3%	(193 bps)
All Other	20.9%	21.3%	(41 bps)	21.0%	23.4%	(246 bps)

Source: ACT Research, CIRA Estimates

Figure 55. North America: Class 8 Engine Market Share

	Apr-12	Mar-12	Δ	2012 YTD	2011	Δ
Cummins	39.1%	43.4%	(430 bps)	43.5%	39.1%	447 bps
Detroit Diesel	19.3%	15.5%	387 bps	17.9%	20.6%	(273 bps)
Mack	10.4%	11.2%	(81 bps)	9.7%	8.0%	170 bps
Navistar	15.5%	16.6%	(111 bps)	15.1%	16.5%	(137 bps)
PACCAR	5.3%	5.7%	(44 bps)	5.5%	6.1%	(63 bps)
All Other	10.4%	7.6%	281 bps	8.3%	9.7%	(142 bps)

Source: Ward's, CIRA Estimates

- Daimler and Fiat have taken the most share away from MAN YTD in heavy duty trucks in Europe, as the latter company may have been distracted by the Volkswagen takeover talks. All other companies have marginally increased their share. Paccar has been the big winner YTD in medium duty trucks, as Daimler and MAN have lost share so far this year.

Figure 56. EU 27: Heavy-Duty Truck Market Share - >16mt (Registrations)

	Mar-12	Feb-12	Δ	2012 YTD	2011	Δ
PACCAR	16.9%	15.6%	130 bps	15.5%	15.4%	16 bps
Daimler	20.2%	20.7%	(45 bps)	20.3%	19.7%	61 bps
Fiat	7.3%	7.5%	(24 bps)	7.8%	6.9%	86 bps
MAN	16.6%	14.5%	209 bps	15.5%	17.2%	(168 bps)
Renault	9.4%	10.9%	(151 bps)	10.2%	10.0%	16 bps
Scania	12.9%	13.7%	(82 bps)	13.6%	13.4%	11 bps
Volvo	15.4%	15.8%	(38 bps)	15.9%	15.8%	15 bps
All Other	1.4%	1.4%	1 bps	1.2%	1.6%	(38 bps)

Source: ACEA, CIRA Estimates

Figure 57. EU 27: Medium Duty Truck Market Share - 3.5mt to 16mt (Registrations)

	Mar-12	Feb-12	Δ	2012 YTD	2011	Δ
PACCAR	9.4%	8.2%	124 bps	8.6%	6.6%	199 bps
Daimler	27.4%	27.2%	18 bps	27.5%	29.7%	(219 bps)
Fiat	26.1%	26.1%	(0 bps)	26.2%	25.3%	92 bps
MAN	13.3%	13.3%	6 bps	13.2%	15.0%	(187 bps)
Renault	6.4%	8.4%	(197 bps)	7.7%	7.0%	73 bps
Scania	0.0%	0.0%	—	0.0%	0.0%	(1 bps)
Volvo	2.2%	2.6%	(39 bps)	2.4%	2.4%	(4 bps)
All Other	15.1%	14.2%	87 bps	14.5%	14.0%	48 bps

Source: ACEA, CIRA Estimates

Emerging Markets

- Through both its consolidated as well as partially-owned joint venture operations, Cummins has meaningful presence in the three largest truck markets of the emerging world. In Brazil, Cummins supplies all of Ford (17.6% share in 2011) and will remain a supplier to MAN, though its penetration with the European OEM is set to decline in 2012. In the heavy duty market in China, Cummins' key joint venture partner Dongfeng has maintained the meaningful share it gained in 2011, and continues to lead the market with a 21% share. India's largest commercial vehicle maker, Tata Motors, which sources roughly 70% of engines from its Tata Cummins joint venture, has held a fairly tight position at the top of the market, despite the recent entrance by several major US/European-based competitors. On the transmission side, Allison has a growing presence in non-NAFTA regions, with the largest presence currently in China. It is growing in other markets, albeit from a low base, such as Eastern Europe, India and Brazil (where, for example, it supplies both on and off-highway markets like construction and mining). Paccar's official entrance in to the Brazilian truck market is currently set for mid-2013.

Figure 58. Brazil: Truck Market Share (Registrations)

	May-12	Apr-12	Δ	2012 YTD	2011 YTD	Δ
Ford	15.5%	15.3%	27 bps	16.2%	17.0%	(80 bps)
Navistar	0.3%	0.2%	7 bps	0.3%	0.2%	11 bps
Iveco	7.5%	7.4%	6 bps	8.0%	8.3%	(30 bps)
Daimler	25.6%	24.0%	158 bps	25.8%	25.0%	78 bps
Scania	6.3%	6.5%	(14 bps)	6.4%	7.6%	(127 bps)
Volvo	9.8%	8.9%	90 bps	9.6%	10.5%	(83 bps)
MAN	32.5%	33.6%	(115 bps)	31.0%	30.7%	33 bps
All Other	2.6%	4.2%	(158 bps)	2.8%	0.8%	NM

Source: ANFAVEA

Figure 59. China: HD Truck Market Share (Retail Sales)

	Feb-12	Jan-12	Δ	2012 YTD	2011	Δ
Beiqi Foton	13.2%	6.6%	668 bps	11.0%	9.4%	169 bps
Dongfeng	19.3%	25.2%	(594 bps)	21.2%	21.0%	19 bps
FAW	19.9%	18.8%	109 bps	19.6%	18.5%	110 bps
Sinotruk	19.2%	23.9%	(464 bps)	20.7%	19.8%	98 bps
Shaanxi	11.9%	6.2%	575 bps	10.1%	9.6%	44 bps
All Other	16.4%	19.4%	(293 bps)	17.4%	21.8%	(441 bps)

Source: CAM

Figure 60. India: M/HCV Market Share (Retail Sales)

	Mar-12	Feb-12	Δ	2012 YTD	2011	Δ
Tata Motor	55.0%	58.7%	(375 bps)	57.3%	59.5%	(224 bps)
Ashok Leyland	26.0%	24.7%	136 bps	25.5%	22.2%	331 bps
Eicher	11.7%	10.1%	154 bps	10.4%	10.4%	(4 bps)
Navistar	1.3%	1.5%	(23 bps)	1.5%	0.7%	77 bps
All Other	6.0%	4.9%	107 bps	5.3%	7.1%	(180 bps)

Source: Society of Indian Automobile Manufacturers

Economic Backdrop

Developed Economies

The global CIRA economics research team has generally upgraded their forecasts for developed economies since last month. The US economy continues to grow at a modest pace, which is the path it is expected to remain on during the forecast period. Japanese growth in 1Q surprised to the upside, leading to higher estimates for growth this year, at the cost of slightly lower growth in 2013. Reconstruction demand is slowly materializing and consumer spending has surprised to the upside. Despite the positive revision to the GDP forecast in 2012 after flat growth in 1Q, Citi economists continue to expect the Euro Zone to remain in recession due to higher expectation of a Greek exit from the Euro and the headwind created by government austerity measures.

Figure 61. Developed Economies: Economic Dashboard

Developed Economies	Latest Data	Historical			Forecasts					
		Latest	Prior Period	B/W	2012E			2013E		
					Latest	Previous	B/W	Latest	Previous	B/W
GDP Growth										
US	Q112	2.0%	1.6%		2.1%	2.1%		2.1%	2.0%	
Euro Zone	Q112	0.0%	0.7%		(0.6%)	(1.0%)		(1.2%)	(0.2%)	
UK	Q112	0.0%	0.4%		(0.2%)	0.2%	-	0.5%	1.0%	
Japan	Q112	2.6%	(0.6%)		2.6%	2.0%		1.5%	1.6%	
Industrial Production										
US	April-12	5.2%	3.5%		4.1%	3.6%		3.0%	3.2%	
Euro Zone	March-12	(1.9%)	(1.5%)		(2.0%)	(2.2%)		(1.0%)	0.0%	
UK	March-12	(2.6%)	(2.3%)		(1.0%)	(0.9%)		1.3%	1.3%	
Japan	April-12	13.4%	15.9%		4.2%	5.6%		3.3%	3.4%	
Investment										
US - Business	Q112	7.3%	8.2%		5.3%	5.6%		5.5%	5.9%	
Euro Zone - Business Equipment	Q112	(0.9%)	1.3%	-	(3.4%)	(1.6%)		(2.6%)	0.6%	
UK - Total	Q112	0.7%	(1.0%)		(3.9%)	(4.9%)		(8.1%)	(9.5%)	
Japan - Business	Q112	0.4%	4.5%		0.5%	3.6%		3.0%	3.4%	
Supply Indicators										
US - ISM Manufacturing	May-12	53.5	54.8							
Euro Zone - Manufacturing PMI	May-12	45.1	45.9							
UK - Manufacturing PMI	May-12	45.9	50.2							
Japan - Tankan (Large Mfg)	Q112	(4)	(3)							

Source: Citi Investment Research and Analysis

Note: Downward revisions denoted in yellow, upward revisions denoted in green.

Emerging Markets

China's monetary policy was eased further last week, with the 1-year deposit and lending rates cut for the first time since 2008 in reaction to slower near-term growth and easing inflation (evident in May CPI and PPI data). CIRA economists expect one to two more rate cuts in order to ensure growth reaccelerates in the second half of 2012. India is also expected to lower rates at the next central bank meeting on June 18 in response to weakening growth reports. In response to recently soft economic data, CIRA economists in Brazil have lowered their growth forecast for 2012 (to 2.3% from 3.3%) while maintaining their 2013 estimate. In response to this slowdown, they expect additional cuts to Brazil's Selic rate, already at its lowest levels since it began to be used as a policy instrument in 1998.

Figure 62. Emerging Markets Economic Dashboard

Emerging Economies	Latest Data	Historical			Forecasts					
		Latest	Prior Period	B/W	2012E			2013E		
					Latest	Previous	B/W	Latest	Previous	B/W
GDP Growth										
China	Q112	8.1%	8.9%		8.1%	8.4%		8.5%	8.6%	
India	Q112	5.3%	6.1%		7.0%	7.0%		7.5%	7.5%	
Brazil	Q112	0.8%	1.4%		2.3%	3.3%		4.5%	4.5%	
Industrial Production										
China	April-12	9.3%	11.6%		11.5%	11.8%		12.3%	12.1%	
India	March-12	(3.6%)	3.9%		5.0%	5.0%		6.1%	6.1%	
Brazil	April-12	(2.7%)	(3.8%)		0.0%	0.5%		2.8%	2.8%	
Investment										
China - Fixed Capital Formation					8.8%	9.2%		8.7%	8.7%	
India - Fixed Capital Formation	Q112	8.9%	7.2%		6.5%	6.5%		8.0%	8.0%	
Brazil - Fixed Capital Formation	Q112	2.9%	5.7%		3.7%	4.2%		6.5%	6.5%	
Supply Indicators										
China - Manufacturing PMI	May-12	50.4	53.3							
India - Manufacturing PMI	May-12	54.8	54.9							
Brazil - Manufacturing PMI	May-12	49.3	49.3							

Source: Citi Investment Research and Analysis

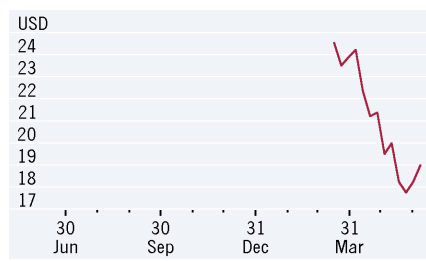
Note: Downward revisions denoted in yellow, upward revisions denoted in green.

Company Focus

- Company Update
- Target Price Change
- Estimate Change

Neutral/High Risk	2H
Price (11 Jun 12)	US\$18.23
Target price	US\$22.00
	<i>from US\$26.00</i>
Expected share price return	20.7%
Expected dividend yield	1.3%
Expected total return	22.0%
Market Cap	US\$3,306M

Price Performance (RIC: ALSN.N, BB: ALSN US)



Allison Transmission Inc. (ALSN) Target Lower on Higher Risk Premium, Peer Multiples

- **Revising Price Target to Reflect Higher Market Risk Premium** — We are reducing Allison's target price to \$22 (from \$26) to reflect the higher market risk premium apparent in peer company multiple compression, which has a disproportionate impact on the stock price given the company's high financial leverage (i.e. percentage of EV). Our target price is based on 8.25x estimated 2012 EBITDA plus the present value of Allison's tax shield (\$760mm assuming 15% discount rate). The target EV/EBITDA multiple represents a discount to ALSN's peer group to reflect the company's relatively larger amount of financial leverage in the capital structure. We have made minor adjustments to our current year estimates, namely on account of slightly lower Class 8 straight truck industry sales (in-line with ACT's June adjustment).

Company Focus

- Company Update
- Target Price Change
- Estimate Change

Buy	1
Price (11 Jun 12)	US\$92.48
Target price	US\$120.00
<i>from US\$132.00</i>	
Expected share price return	29.8%
Expected dividend yield	1.8%
Expected total return	31.6%
Market Cap	US\$17,773M

Price Performance (RIC: CMI.N, BB: CMI US)



Cummins Inc. (CMI)

Slower Global Growth Leads to Estimate Cut; Maintain Buy

- **Conclusion(s)** — We are trimming our EPS estimates for Cummins by \$0.15 / share in 2012, and \$0.25/share in each of 2013 and 2014, based on our slightly lowered expectations for heavy-duty truck builds in the NAFTA region, CIRA's reduced growth estimates for Brazil (which cause us to trim our forecasts for CMI's revenues in that country) and a stronger FX headwind in light of significant weakening in certain major currencies including the Real and Rupee.
- **Price Target Lowered** — In connection with our lower estimates, we are trimming our price target to \$120. We maintain our Buy rating, as we see compelling risk-adjusted upside of over 30% to our target.

Company Focus

- Company Update
- Target Price Change
- Estimate Change

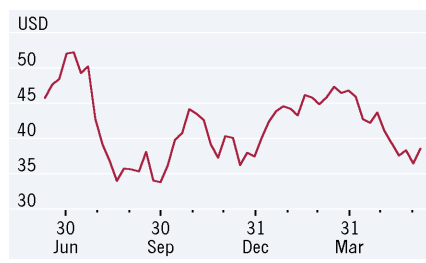
PACCAR Inc. (PCAR)

Soft N.A. Truck Demand Leads To Estimate Cut; Maintain Neutral

- **Revising Price Target / Earnings Estimate to Reflect Weaker N.A. Demand** — We are reducing our earnings estimates for PCAR on account of greater F/X headwinds (in-line with CIRA's updated USD/Euro exchange rate forecast) and slightly lower NAFTA build forecast. In tandem with this, as well as the higher observed market risk premium, we are lowering our price target to \$41. Our target price is based on PCAR's average historical mid-cycle forward multiple relative to the S&P 500.

Neutral	2
Price (11 Jun 12)	US\$37.98
Target price	US\$42.00
<i>from US\$50.00</i>	
Expected share price return	10.6%
Expected dividend yield	2.1%
Expected total return	12.7%
Market Cap	US\$13,547M

Price Performance (RIC: PCAR.O, BB: PCAR US)

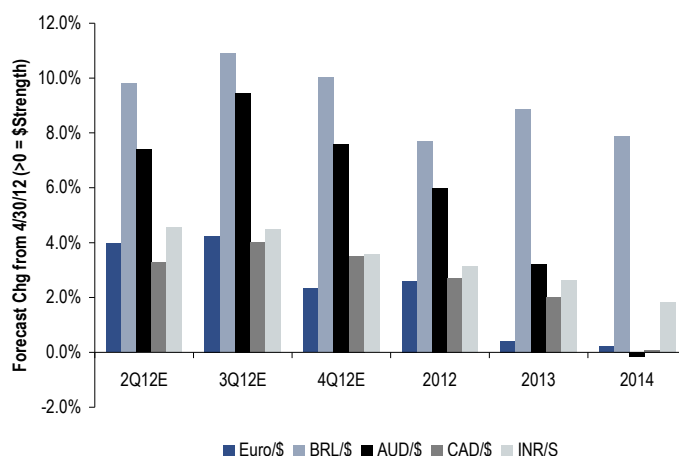


Model Changes

FX Headwinds Rising

Since the end of April, the decline in European confidence, rising speculation on Greece's exit from the Euro and increased debt market worries about Spain and Italy have caused the Euro to slump vs. the dollar. In addition, the rapid downshift in Brazilian economic growth and subsequent cuts to the short-term policy rate by the central bank have led the Brazilian real to decline sharply vs. the dollar. Indian economic confidence has declined and industrial production has turned negative, causing its central bank to cut rates. Lastly, commodity price declines over the past two months have caused the so-called "commodity" currencies of Australia and Canada to also lose value vs. the dollar. Combined, we believe the currency headwinds against US companies is now far stronger than even five weeks ago when most companies last gave guidance.

Figure 63. CIRA FX Forecasts: 4/30/12 vs. Present

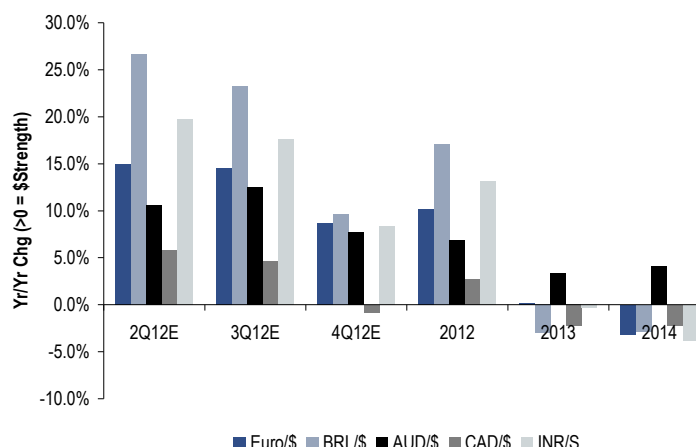


Source: Citi Investment Research and Analysis

Note: Positive reading indicates stronger dollar.

CIRA's economists have since raised their forecasts for the \$/lowered their expectations for foreign currencies during this time period, ranging from a 2% to 8% increase for 2012 alone for those currencies we believe most important for truck-oriented names: the Euro, Brazilian Real, Indian Rupee, and the Australian and Canadian dollars. As a result, the expected headwind for US companies in 2012 is now from 3 to 17% vs. a year ago, with even greater depreciation vs. the dollar occurring during the next two quarters.

Figure 64. FX Rate Change: 2012-14 vs. Prior Year



Source: Citi Investment Research and Analysis
Note: Positive reading indicates \$ strength

We have modified our top-line growth estimates for Cummins and PACCAR companies to reflect these FX forecast changes, with revenue growth trimmed by mid-single digit percentages for each company.

Allison Transmission Inc.

Company description

Allison is the largest manufacturer of fully-automatic transmissions for medium- and heavy-duty commercial vehicles, medium- and heavy tactical U.S. military vehicles and hybrid-propulsion systems for transit buses. Allison transmissions are used in a wide variety of applications, including on-highway trucks (distribution, refuse, construction, fire and emergency), buses (primarily school and transit), motorhomes, off-highway vehicles and equipment (primarily energy and mining) and military vehicles (wheeled and tracked). Roughly 80% of the company's 2011 sales occurred in the US and Canada.

Investment strategy

We rate shares of Allison Transmission Neutral with a \$22 target price. We see benefits from efficiency gains and structural cost improvement being amplified as Allison realizes cyclical upside across certain of its core markets. High cash conversion, combined with management's disciplined focus on de-leveraging, also provide longer-term upside. That said, its high exposure to government spending, a freezing in Energy capex, and the company's levered balance sheet are risks we think could weigh on near-term volumes, and sentiment. Total return potential of 22% to our \$22 target is compelling, but not adequate in our view to justify Buy rating at this time.

Valuation

Our \$22 target price is based on a target Enterprise Value / 2012E EBITDA multiple of 8.25x, plus the present value of the company's tax assets assuming a 15% discount rate. The target Enterprise Value / 2012E EBITDA multiple is a discount to the Premier Company peer group reflecting Allison's levered balance sheet.

Risks

We view the following as some of the primary risks to our earnings forecast and target price:

Government Austerity Measures Could Weigh on Volumes. The company's heavy exposure to spending by government entities could present a risk given overall budgetary pressures on federal, state and local governments. We estimate that roughly 40% of Allison's overall transmission sales in 2011 (excluding parts) were to various levels of government (municipalities, school districts, military, etc.). More importantly, Allison estimates that between 35% and 40% of revenues from its largest division, NAFTA on-highway sales, and all of its hybrid transit bus and military segment revenues are generated by government-funded entities. Given the pressures on government spending, government budget issues may impact Allison's sales volume in the coming years.

High Leverage Could Hamper Allison EPS in Downturn. At mid-year 2012, we forecast Allison will have Net Debt / EBITDA of approximately 3.7x and interest coverage (EBITDA/Interest) of about 4.4x. The leverage is down significantly from its peak of 7.3x in 2009, but still well above the peer average of roughly 1.0x, while coverage is up from the 1.3x trough level at the end of 2008. Though improved from 2008 levels, this high level of financial leverage and the interest payments required to service it could have a negative earnings impact on Allison should the US economy slow, as it did in 2008, as a higher percentage of operating income will be siphoned off by interest payments.

Once High-Flying Energy Market Now Appears Grounded. Following a boom in demand for hydraulic fracturing rigs, which has played an important role for top (and we believe bottom line) growth of Allison, the market now appears to be bogged down with a glut of excess supply. To illustrate the significance of this segment to Allison's growth, we estimate that sales of its 9000 Series transmissions for use on hydraulic fracturing rigs accounted for upwards of 65% of the company's total sales growth between 2009 and 2011. A large amount of additional fracturing capacity was added in 2011, at the same time that natural gas prices continued to move lower (recently breaking through \$2MMBtu). We think a now over-supplied market creates downside risk in 2012 for Energy sales.

Cummins Inc.

Company description

Columbus, Indiana-based Cummins Inc. designs, manufactures, distributes and services diesel and natural gas engines, electric power generation systems and engine-related component products, including filtration, exhaust aftertreatment, fuel systems, controls and air handling systems. Cummins sells its products to original equipment manufacturers (OEMs), distributors and other customers worldwide. The company has long-standing relationships with many of the leading manufacturers in the markets it serves, including PACCAR, Daimler, Chrysler, Volvo, Ford, Komatsu, MAN, Dongfeng Motor, and Tata Motor. Cummins serves its customers through a network of more than 500 company-owned and independent distributor locations and approximately 5,200 dealer locations in more than 190 countries and territories.

Investment strategy

We rate Cummins (CMI) a Buy, with a \$120 price target. We see Cummins' geographic positioning to be the best in the group (with over 30% of sales coming from emerging markets and low relative exposure to Western Europe), enabling it to capture growth opportunities from both cyclical and secular trends in emerging markets. Cummins' power generation sub-segment is best positioned for the longer-term growth opportunities afforded by inadequate (and in some regions, inaccessible) electricity infrastructure in many emerging economies. Cummins is also well-positioned to benefit from the new administration's focus on energy/engine efficiency, as it is the lone integrated provider of diesel engines with a fully-integrated components offering. The more sophisticated engine technology that is required under new regulations drives an opportunity for Cummins to raise prices at the OE level, and also increase share in the aftermarket as technology and capital serve as barriers against non-genuine suppliers. Furthermore, Cummins is well-situated to benefit from tougher standards on heavy-duty trucks in the future, due to its use of SCR technology and its unique subsystems capabilities that would be required for integration of the needed efficiency improvements.

Valuation

Our \$120 price target for Cummins is derived by using a P/E valuation. Though there have been positive developments in new order trends providing increased earnings visibility in Power Generation, and continued strength from the truck, mining and oil and gas end markets, the flattening truck market in North America and recent weakness in emerging markets lead us to value CMI at a discount to its historic average multiple of 12.3x as we move past the mid-point of the current economic cycle. We arrive at our \$120 price target by applying an 11.4x multiple to our estimated 2012 EPS of \$10.55.

Risks

We highlight the following as risks to our target price

- **Credit market contagion driving deeper than anticipated global economic downturn.** Our current earnings forecast and target price are based on the latest economic forecast by Citi economists. Should the global economy materially deviate from this outlook, both our earnings and price target would likely be too high.
- **Further moves toward backward integration.** The North American truck industry has historically used externally sourced engines from independent engine makers like Cummins. Brand loyalty by customers and the high residual value associated with these independent engines sustained their strong market shares despite attempts by manufacturers to increase vertical integration. Recently, however, North American manufacturers are starting to migrate towards the European model of backward integration: Among other moves, Navistar and PACCAR decided to build their own engines in the U.S. and install them in North American heavy-duty trucks.
- **Inherent volatility in end-markets. The primary end-markets into which Cummins sells to are highly cyclical, particularly heavy-duty truck markets worldwide.** Given the company's high degree of fixed cost leverage, a marked downturn in one of these end-markets could result in sharp decline in profitability relative to our outlook.

The above risks could prevent the shares from attaining our target price.

PACCAR Inc.

Company description

Bellevue, Washington based PACCAR is a 100-plus year company, with roots dating back to 1905 when William Pigott, Sr. founded Seattle Car Manufacturing Company. Today, PACCAR is a \$16 billion sales (as of 2011) company with 17,700 employees, operating in various regions around the world, and is led by CEO and Chairman Mark Pigott. The company is a global manufacturer of heavy duty Class 8 commercial trucks, medium duty class 4-7 trucks, and aftermarket truck parts. The company's brands include Kenworth, Peterbilt and DAF brands, which are sold in North America, U.K., Europe, the Middle East, Australia and Africa. PACCAR distributes aftermarket parts to its dealers through a worldwide network of Parts Distribution Centers. Parts and services accounted for 16% of total company sales in 2011. In addition to trucks, PACCAR manufactures winches used in various industrial end-markets. PACCAR Financial Services, which helps facilitate the sale of PACCAR products in many of its geographic markets, represented about 6% of 2011 sales.

Investment strategy

We expect positive, replacement-driven demand growth in North America, but anticipate a decline in European demand due to broader macro headwinds. Our Neutral rating on PCAR reflects our view that the current share price does not offer sufficient risk-adjusted return to compensate for the company's European exposure (>30% of total sales). In addition, the company's expansion in Brazil, and potentially India, may also pressure profit margins starting in 2013.

Valuation

Our \$42.00 price target is based on PCAR's historical mid-cycle forward multiple relative to the S&P 500, or 12.1x 2012 EPS of \$3.45.

Risks

We view the following as the key risks to our forecasts and target price:

Heavy exposure to Europe. The macro outlook for Europe is quickly deteriorating as governments have been ineffective in staving off credit contagion. Based on revenues over the past few years, Europe is one of the largest overall markets for PACCAR. Furthermore, given the highly integrated model, the profit breakdown for PACCAR's Truck business is skewed even greater to Europe. This high degree of exposure to a volatile market heightens the risks associated with Paccar's expected future cash flows, which directly impacts the company's value.

Owner-operator segment feeling the weight from uneven credit and below average rates. PACCAR has significant exposure to the owner-operator segment of the market, which has struggled in the nascent freight market recovery from lower volumes and rates relative to larger truckload carriers. In addition, while credit availability has improved in general, the small business sector continues to face tighter relative lending conditions.

If the impact on the company from any of these factors proves to be greater than we anticipate, the stock will likely have difficulty achieving our target price. However, should they be less than anticipated, the stock could trade above our target price.

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

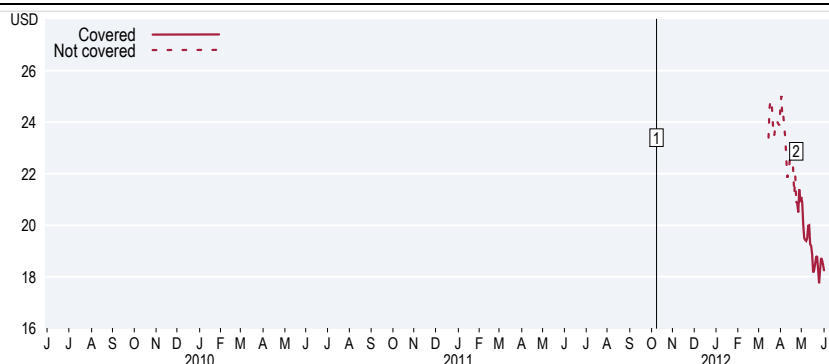
Allison Transmission Inc. (ALSN)

Ratings and Target Price History

Fundamental Research

Analyst: Timothy Thein, CFA

Covered since April 24 2012



	Date	Rating	Target Price	Closing Price
1	8-Oct-11	Stock rating system changed		

* Indicates change

	Date	Rating	Target Price	Closing Price
2	24-Apr-12	*2H	*26.00	20.91

Rating/target price changes above reflect Eastern Standard Time

Allison Transmission Inc. (ALSN)

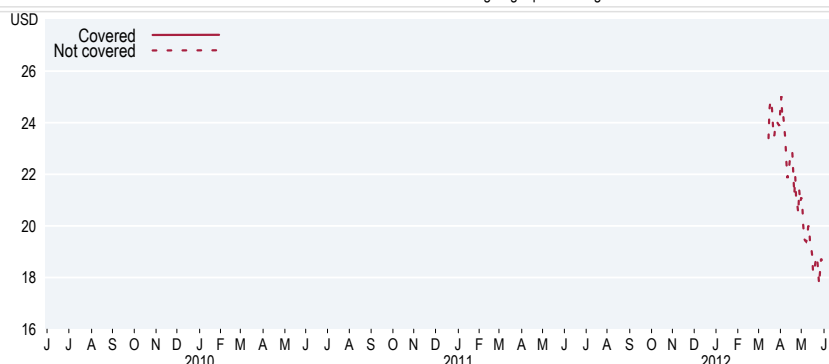
Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Timothy Thein, CFA

Covered since April 24 2012



* Indicates change

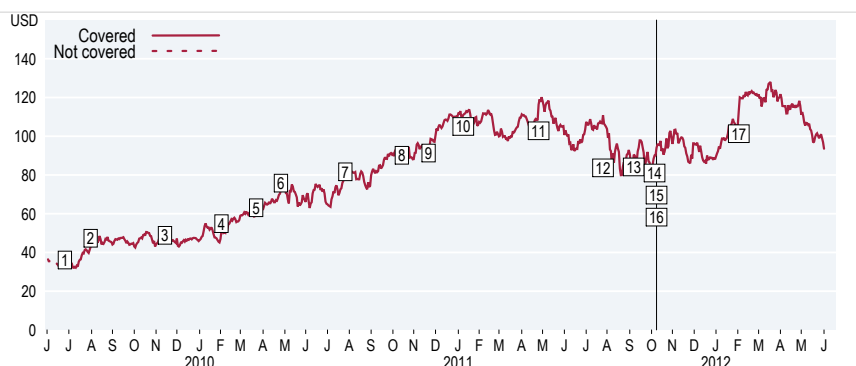
Rating/target price changes above reflect Eastern Standard Time

Cummins Inc. (CMI)

Ratings and Target Price History

Fundamental Research

Analyst: Timothy Thein, CFA
Covered since June 25 2009



	Date	Rating	Target Price	Closing Price
1	25-Jun-09	1M	*40.00	34.26
2	31-Jul-09	1M	*47.00	43.01
3	13-Nov-09	1M	*53.00	46.97
4	2-Feb-10	1M	*58.00	51.09
5	23-Mar-10	1M	*72.00	62.35
6	27-Apr-10	1M	*83.00	72.40

* Indicates change

	Date	Rating	Target Price	Closing Price
7	27-Jul-10	1M	*92.00	79.43
8	14-Oct-10	1M	*107.00	93.76
9	21-Nov-10	1M	*110.00	94.31
10	10-Jan-11	1M	*126.00	111.04
11	26-Apr-11	1M	*135.00	116.39
12	26-Jul-11	1M	*137.00	110.82

	Date	Rating	Target Price	Closing Price
13	7-Sep-11	1M	*115.00	90.50
14	6-Oct-11	1M	*112.00	90.02
15	8-Oct-11	Stock rating system changed		
16	8-Oct-11	*1	112.00	90.17
17	2-Feb-12	1	*132.00	113.31

Rating/target price changes above reflect Eastern Standard Time

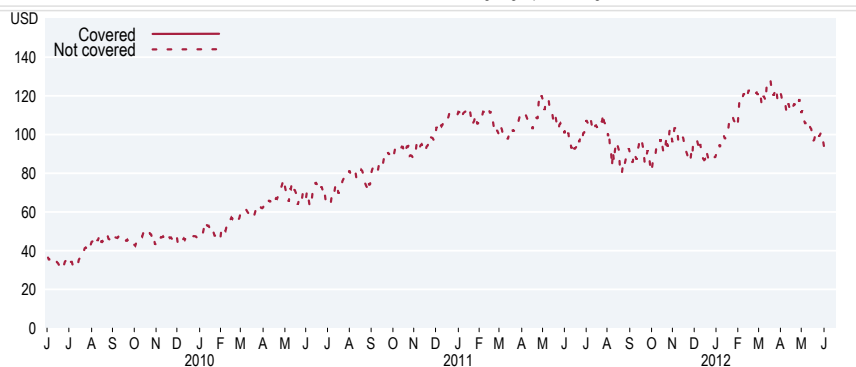
Cummins Inc. (CMI)

Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Timothy Thein, CFA
Covered since June 25 2009



* Indicates change

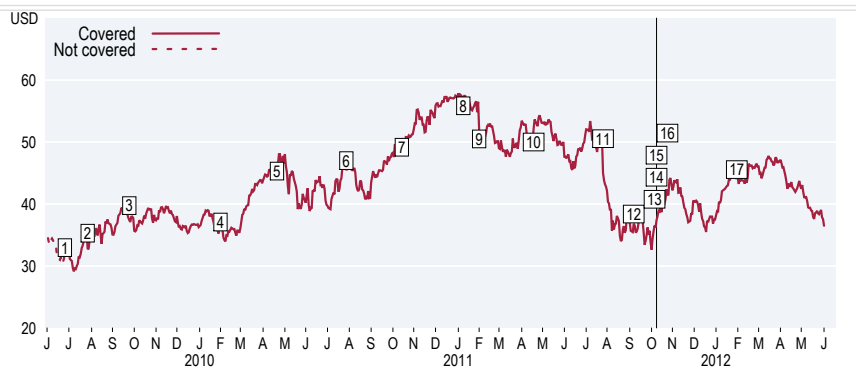
Rating/target price changes above reflect Eastern Standard Time

PACCAR Inc. (PCAR)

Ratings and Target Price History

Fundamental Research

Analyst: Timothy Thein, CFA
Covered since June 25 2009



	Date	Rating	Target Price	Closing Price
1	25-Jun-09	*2M	*34.00	32.23
2	28-Jul-09	2M	*33.00	32.71
3	24-Sep-09	2M	*37.00	37.39
4	31-Jan-10	2M	*38.00	36.03
5	21-Apr-10	2M	*49.00	45.75
6	28-Jul-10	2M	*52.00	45.56

* Indicates change

	Date	Rating	Target Price	Closing Price
7	14-Oct-10	2M	*54.00	50.16
8	10-Jan-11	2M	*60.00	57.27
9	1-Feb-11	2M	*58.00	51.95
10	19-Apr-11	2M	*59.00	52.19
11	26-Jul-11	2M	*50.00	45.02
12	7-Sep-11	2M	*40.00	36.82

	Date	Rating	Target Price	Closing Price
13	6-Oct-11	2M	*38.00	36.52
14	8-Oct-11	Stock rating system changed		
15	8-Oct-11	*2	38.00	36.18
16	25-Oct-11	2	*45.00	41.48
17	31-Jan-12	2	*50.00	44.20

Rating/target price changes above reflect Eastern Standard Time

PACCAR Inc. (PCAR)

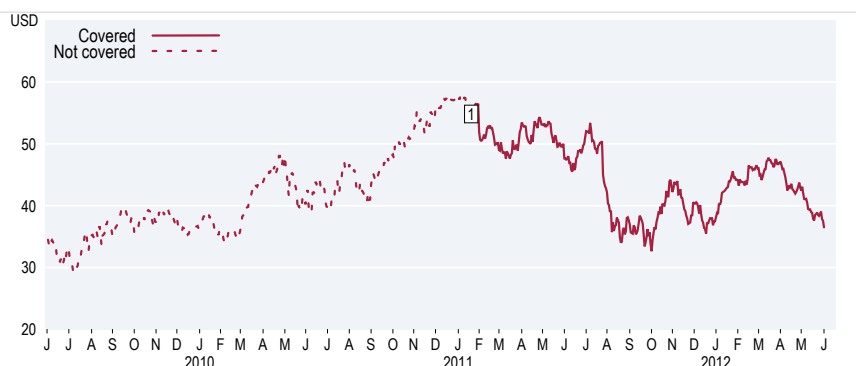
Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Timothy Thein, CFA

Covered since June 25 2009



Date	Rating	Target Price	Closing Price
1 20-Jan-11	*ADD LP	-	55.20

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

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The Firm is a market maker in the publicly traded equity securities of PACCAR Inc..

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Data current as of 31 Mar 2012

	12 Month Rating			Relative Rating		
	Buy	Hold	Sell	Buy	Hold	Sell
Citi Investment Research & Analysis Global Fundamental Coverage	52%	37%	11%	10%	79%	10%
% of companies in each rating category that are investment banking clients	44%	42%	40%	47%	42%	43%

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Risk rating takes into account both price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating assigned.

Investment Ratings: CIRA's investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return ("ETR") and risk. ETR is the sum of the forecast price appreciation (or depreciation) plus the dividend yield for a stock within the next 12 months. The Investment rating definitions are: Buy (1) ETR of 15% or more or 25% or more for High risk stocks; and Sell (3) for negative ETR. Any covered stock not assigned a Buy or a Sell is a Neutral (2). For stocks rated Neutral (2), if an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of CIRA management not to assign a target price and, thus, not derive an ETR. Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and / or trading in the company's securities (e.g. trading suspension). As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis. To satisfy regulatory requirements, we correspond Under Review and Neutral to Hold in our ratings distribution table for our 12-month fundamental rating system. However, we reiterate that we do not consider Under Review to be a recommendation.

Relative three-month ratings: CIRA may also assign a three-month relative call (or rating) to a stock to highlight expected out-performance (most preferred) or under-performance (least preferred) versus the geographic and industry sector over a 3 month period. The relative call may highlight a specific near-term catalyst or event impacting the company or the market that is anticipated to have a short-term price impact on the equity securities of the company. Absent any specific catalyst the analyst(s) will indicate the most and least preferred stocks in the universe of stocks under consideration, explaining the basis for this short-term view. This three-month view may be different from and does not affect a stock's fundamental equity rating, which reflects a longer-term total absolute return expectation. For purposes of NASD/NYSE ratings-distribution-disclosure rules, most preferred calls correspond to a buy recommendation and least preferred calls correspond to a sell recommendation. Any stock not assigned to a most preferred or least preferred call is considered non-relative-rated (NRR). For purposes of NASD/NYSE ratings-distribution-disclosure rules we correspond NRR to Hold in our ratings distribution table for our 3-month relative rating system. However, we reiterate that we do not consider NRR to be a recommendation.

Prior to October 8, 2011, the firm's stock recommendation system included a risk rating and an investment rating. **Risk ratings**, which took into account both price volatility and fundamental criteria, were: Low (L), Medium (M), High (H), and Speculative (S). **Investment Ratings** of Buy, Hold and Sell were a function of CIRA's expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating. Additionally, analysts could have placed covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and/or trading in the company's securities (e.g. trading suspension). Stocks placed "Under Review" were monitored daily by management and as practically possible, the analyst published a note re-establishing a rating and investment thesis. For securities in developed markets (US, UK, Europe, Japan, and Australia/New Zealand), investment ratings were: Buy (1) (expected total return of 10% or more for Low-Risk stocks, 15% or more for Medium-Risk stocks, 20% or more for High-Risk stocks, and 35% or more for Speculative stocks); Hold (2) (0%-10% for Low-Risk stocks, 0%-15% for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return). For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings were: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

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Citigroup Global Markets Inc

Timothy Thein, CFA; Marc Reber, CFA; David Rose, CFA

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The subject company's share price set out on the front page of this Product is quoted as at 11 June 2012 04:00 PM on the issuer's primary market.

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