

2009-2011 Transportation Outlook Series:

Rail and Locomotive Equipment Finance Market



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Preface

Purpose of This Study

The Equipment Leasing and Finance Foundation commissioned a series of reports on the equipment finance outlook within the transportation segment. Global Insight was selected to conduct the research. This, the second of those reports, provides an outlook on locomotives and freight car supply and demand, offers a review of the current situation and an analysis of future trends, and provides insight into those aspects of the leasing and financing industry affecting and affected by this market.

In preparing this report Global Insight utilized its pre-existing expertise in analyzing and forecasting sales of rolling stock. In addition, broad knowledge of the macroeconomic environment and of the various markets crucial to the rail industry provided a foundation for the report.

Primary and Secondary Information Sources

Information used in this outlook comes from several sources:

- United States Census Bureau
- United States Energy Information Administration
- United States Federal Reserve Board
- United States Department of Transportation Publications
- Information provided by the Association of American Railroads
- Various industry publications including Monitor, Xander Media Group Inc.
- Reports and analysis from media sources
- Earnings call records and SEC filings
- Congressional testimony records
- Interviews with ELFA members

Executive Summary

- In general, the railroads, and the industries associated with them, are relatively stable. The railroad industry is at its healthiest, and this will be good for railcar demand in the long run.
- The current economic slowdown has impacted the shippers and the industries that demand and produce the goods shipped in railcars, reducing demand overall and for certain kinds of car.
- The incentives for railcar users to replace their current equipment come from a few sources: the aging and gradual failure of the current fleet, the desire to replace the current generation of railroad equipment with newer, better technology, and the desire to increase capacity.
- Increased rail velocity has created a large inventory of parked locomotives and railcars, which hurt both manufacturers and lessors.
- As an already efficient and relatively environmentally-friendly (on a ton-mile basis) industry, rail prefers to stay ahead of new environmental regulations rather than find itself forced into compliance in less efficient ways.
- Older locomotives are being upgraded and newer ones will be fitted with computers in an effort to reduce fuel costs. Rail yards are phasing in the use of genset locomotives, which have variable power output and conserve fuel.
- New equipment prices, as a function of the materials that compose them, are currently at record highs. This reduces the willingness for companies to make purchases.
- Credit availability is relatively good for rail due to legal protections for rail equipment lessors and due to the underlying stability of the industry. On the other hand, this keeps yields for lessors lower.
- As scrap values increase, lease fleets dispose of the older cars, and this has been keeping utilization

rates high even as the number of cars leased out has fallen.

- The industry has few risks to residuals, and aside from the rise and fall in demand for commodities causing changes in demand for the often specialized railcar types that transport them, any fears center on regulation of the industry.
- In order to reduce risk, the overall trend is toward full service leases and shorter leases. This has the potential to shift liability to lessors or to dissuade financiers.
- The U.S. economy performed better than expected during the first half of 2008. The fiscal stimulus package provided some relief against soaring food and energy prices, but the relief merely postpones a decline in real GDP as high inflation and falling employment continue to loom over the horizon. Not until mid-2009 does the economy begin a sustainable recovery.
- Box car demand has been waning since 2005 and is not expected to reverse course until 2010 when traditional box car commodities markets rebound. Loadings are expected to decline by 6.6% and 1.5% in 2008 and 2009, respectively. Beyond 2009, demand will recover with growth at 2.6%, 3.0%, 1.2%, and 0.8% during 2010-13, respectively.
- Covered hopper loadings are projected to grow by 1.8% in 2008 followed by a decline of 1.0% in 2009. Beyond 2009, traffic is slated to expand by 1.3% in 2010, 2.1% in 2011, 2.0% in 2012, and 1.8% in 2013.
- Supported by strong coal and steel industries, the future of gondola traffic remains bright. Traffic could increase by as much as 2.6% in 2008. Beyond that are increases of 0.3% in 2009, 1.5% in 2010, 1.4% in 2011, 0.9% in 2012, and 0.8% in 2013.

- New open-top hopper deliveries are expected to increase from 6,381 units in 2007 to 6,753 in 2008 before falling to 5,723 units in 2009. Beyond 2009, the rebound in key commodities markets (i.e. construction materials, metallic ore, and non-metallic minerals) and additional coal-fired capacity will spur another equipment buying cycle.
- Conventional flat car traffic is expected to decline by 13.6% in 2008 and 2.8% in 2009. Weak housing markets in both the U.S. and Canada coupled with depressed light vehicle sales herald a bleak near term outlook. Traffic should regain momentum beginning in 2010, advancing by 5.4% in 2010, 6.1% in 2011, 1.2% in 2012, and 0.8% in 2013.
- There have been a total of 1,621 intermodal flat cars ordered in 2008; none of which was during the second quarter. Carbuilders reported a mid-year backlog of 542 units, the smallest backlog since the first quarter of 1997.
- Total tank car loadings are slated to grow by 3.1% in 2008 and 2.6% in 2009 amidst weakness in the domestic market. As the economy recovers beyond 2009, tank car traffic, including ethanol, is expected to rise by 1.7% in 2010, 1.9% in 2011, 2.6% in 2012, and 3.1% in 2013. Ethanol tank cars will taper off beyond 2009 while the rest of the tank car market expands.

Freight Car Leasing and Financing Trends

Overall, the leasing and financing industry are interested in a few things: the need of railcar lessees to replace cars; the need of railcar lessees to get new cars; the ability for companies to obtain financing; and the residual value of equipment at the end of the lease. All of these are affected by the current macroeconomic environment, the health of the railroads and a few industries that have historically been especially important to rail, and these factors will be covered in detail in the next sections of the report.

Current Conditions

The railroad industry as a whole is at its healthiest. A newfound ability to raise rates and record levels of efficiency and service have combined favorably with the devastation in the trucking industry, its primary competitor. Whether this health will benefit the leasing and financing side of the rail industry is the question to be answered. In the long run, the growth that will undoubtedly take place will lead to increased demand for rolling stock, much of which will be leased. In the short run, the technologically driven increases in average velocity that are helping the railroads achieve profitability can actually reduce the need for additional cars, although it does provide an incentive for companies to update their current fleets.

The rail industry as a whole is notable for its stability and consistency. Change is measured in decades or even centuries rather than in months and quarters; surprise and risk-taking are not features of the rail industry. With that in mind, changes that will benefit the whole industry are occurring, and while there are always risks, nobody expects America to replace its reliance on roads and trucks with tracks and trains overnight. Equipment stays in use for decades, so that even operating leases tend to be long term arrangements by the standards of other industries, changing standards and regulations can always pose a risk, and changing needs can present opportunities, but these will continue to be relatively evolutionary adjustments.

Locomotives

Because maintaining and putting a broken down locomotive back into service can require large investment, railroads view locomotives as part of their infrastructure, and as such, there is a preference for ownership or at least a lease structure that provides the railroads with maximum control over these essential assets. The seven Class I railroads that make up two-thirds of the rail miles are essentially the only market for high horsepower locomotives; the 33 regional railroads and the 323 local railroads use the smaller locomotives. The freight railroad industry uses approximately 30,000 locomotives, and the average lifespan of the standard locomotive is about 30 years. As reported by the Association of American Railroads (AAR), approximately 1,000 locomotives are rebuilt or manufactured each year. As the current fleet is reasonably up to date and rail traffic has been flat there have not been massive orders for new equipment. Indeed, current demand for locomotives stems primarily from replacement rather than new orders.

Rail Cars

While the railroads are among the major lessees of railcars, they share that market with shippers and utilities. The industry uses close to 1.3 million cars, with on average 60,000 of them being manufactured or rebuilt each year. Railcar demand and supply cannot be effectively viewed as a single market; instead, one must recognize that different cars serve different purposes and that the fortunes of those cars rise and fall in tandem with the markets and commodities they serve. Details of the key markets and commodities will be covered later in this report, in this section focused on leasing and financing, railcar supplies and demand will be referred to generally, but one must keep in mind that rising inventories of one kind of car will not preclude increased utilization of another type.

Motivations to Replace

The desire for companies leasing rail equipment to replace equipment is closely tied to a couple of factors. If they can increase what they can carry while reducing costs by buying new equipment then they will do so. The railroads spend about 17% of revenue on capital expenditures, several times the average for U.S. manufacturers, so capital spending is not something that people in the industry feel can be avoided. The longterm nature of the equipment means that companies are more than willing to pay more now in return for future gains in productivity over the lifespan of a railcar or locomotive. There have been gradual changes (again, one must keep in mind the long equipment lifespan and evolutionary change in the industry) to both railcars and locomotives over the years. These changes have been a function of regulations imposed by state and federal governments and by the AAR, and are also the result of opportunities to increase efficiency. In the freight car realm, steel cars have been being replaced with aluminum or hybrid steel-aluminum cars for some time, as the addition of lighter metal allows the carrying of heavier loads, which, over the life of the car justify the greater initial expense. Now, aging first generation aluminum cars are being replaced by the second generation.

Where locomotives are concerned, the seven Class I railroads are members of the EPA's voluntary SmartWay Transport program intended to reduce emissions. With the assistance of various state and federal grants, older switching locomotives are gradually being replaced by gensets, locomotives using several truck engines to provide variable power output and reduce fuel consumption as well as emissions. These and other voluntary changes have enabled ton-miles per gallon of fuel to increase from 235 in 1980 to 436, several times the ton-miles per gallon of trucks and an increase in efficiency to shame the automobile industry. Overall, the rail industry would prefer to improve efficiency ahead of regulations, both in order to raise efficiency for their own sake and to avoid being forced to comply with laws in a less cost effective manner.

On the other hand, desire to get new equipment will inevitably be a function of new equipment prices, and those have soared. Rising metal prices have increased the input costs of manufacturing rolling stock, and the successful manufacturers are the ones that have been able to pass those costs along to customers in the form of increased prices. This transfer of costs has been made difficult by the rapid rate of change seen recently in costs and the nature of contracts signed years in advance of the delivery date; but, prices have risen nonetheless. Although the railroads themselves are, unusually, in a position to pay those higher prices, shippers and utilities are struggling with the economic slowdown and are trying to postpone having to pay new equipment prices, which in turn impacts lessors.

Credit Availability

The desire to replace rolling stock is important, but without the ability to finance such an action, agree-

ments cannot be made. The credit crunch and its ripples have rocked almost every aspect of the economy to some degree, but the equipment leasing and financing and rail industries have generally avoided being directly affected. Equipment financing is by its nature secured by assets; because those assets were not affected by a bubble, artificially increasing their price beyond their actual value, there is little risk that equipment finance will find itself in the same unlucky position as the housing mortgage industry. The railroads are generally in a good position financially and have an additional advantage in obtaining financing. Title 11, Section 1168 protects the lessors and financers of rail equipment should the lessee declare bankruptcy; if the lessee defaults on a payment, they have 60 days to either make good or the equipment may be collected. Furthermore, bankruptcy has no effect on the lessor's right to collect on the lease or to collect the equipment. This provision makes it easier to obtain financing for rail equipment than for other equipment that could keep tied up by bankruptcy proceedings.

Unfortunately, the far reaching nature of the credit crunch has affected the markets that use railcars. Forest products are suffering from the lack of demand, and lumber companies in possession of railcars will continue to have difficulty making lease payments until the housing market is restored. Until then, leases are being reconfigured, and banks are keeping a close eye on companies associated with the housing market. Similarly, without new houses being built, the things like furniture that were imported and transported by train to fill them are no longer needed, and intermodal has suffered as a result. The general economic slowdown has reduced the demand for shipping overall. The bright spot is that the increased corn prices have made farmers desperate to get their product to ports, and increased gas prices and the devastation occurring in the trucking industry will leave rail better positioned to compete against other forms of transportation in future.

The stability and reliability of the rail industry, while making it relatively easy for lessees to find financing for equipment, have some disadvantages elsewhere. Because rail equipment constitutes a low risk investment, financing companies looking for safer investments are flocking to the sector. This competition means that pricing for leases and lease financing is good for the lessee but bad for the lessor. Across the board, though, lending standards are tighter, and while that leaves the railroads themselves relatively untouched, it places an additional burden on shippers.

With regards to the rumored fleet sales, this underlying stability is the cause. At least two of the major U.S. rail lease fleets are under "strategic review." Finance companies in desperate need of liquidity after write-offs in the consumer mortgage segment are being forced into selling off profitable and easily priced asset segments, and that means rail leases. Long-term, assetbacked, and free of securitizations with their unknown risks, rail equipment leases are easy to value and in demand. As a result, it is the very strength of these businesses that make it desirable to sell them; they are being sold because they are profitable and are expected to continue to be profitable, not because of any weakness or perceived future weakness.

Utilization

Utilization rates in lease fleets have been dropping, but less than one would expect, thanks to the rising value of scrap. Greenbrier reports utilization at 96.1% in Q3 2008, down from 97% the previous quarter; in April of 2008, CIT reports fleet utilization at 95%, down from a peak of 98 or 99% in 2007. GATX director of investor relations Rhonda S. Johnson said during a 2008 Q2 earnings conference call,

Our utilization is still high at 98% thanks in part to an increase in scrapping. When a car comes off lease or into the shop for repairs we evaluate that car under our economic repair limit model to determine whether to repair or to scrap the car. With scrap prices almost 80% higher than scrap prices at year end more and somewhat younger rail cars are being designated for scrap.¹

Without the increase in scrap prices or the increased number of cars that can profitably be scrapped rather than kept in use, lease fleets would be larger, older, and with much lower utilization rates.

Leasing is subject to a degree of fluctuation as result of the fine line that the railroad industry must try to walk. Joe Lattanzio, then executive vice president for GE Rail's structured finance, said in 2005,

[Railcar leasing is] one big balloon. Squeeze it in some place and the air moves somewhere else...If...a railroad is for whatever reason moving product more slowly, the result can be that the demand for railway cars goes up. The shippers still want to ship so they say they want more cars.²

If volume increases—which alone would increase the demand for railcars, then congestion increases. When

congestion increases, it takes longer on a per railcar basis to get a given amount of material from the origin to the destination. Average velocity decreases, and it takes longer for a car to leave the origin, take the goods to their destination, and return to be loaded up again. As a result, when congestion increases, shippers lease more railcars, because although doing so will not increase the rate at which the goods are moved, it will maintain car-loadings. This in turn further increases congestion. When the railroads become aware of the situation, they limit the number of railcars allowed onto their network, on the basis that having goods stored at the point of origin is preferable to having goods stored in railcars on sidings. Furthermore, rails are using increasingly powerful computer models to organize train schedules. This will eventually reduce the congestion, restore velocity, increase efficiency, and reduce the need for additional railcars in order to maintain the level of car-loadings. Union Pacific estimated some time ago that a 1 mile per hour increase in its system-wide velocity can free 250 locomotives and 5,000 freight cars.³

Greater rail velocity and better technology have caused the number of stationary locomotives to surge, and lessors are suffering as a result. Without any surge in demand and the current fleets in good condition, it is unlikely that the railroads will need to lease the extra equipment necessary to meet extra freight demand. A similar oversupply situation can be seen in the railcar market. As long as railroad velocity remains high, so will the accumulated inventories of parked locomotives and railcars. In the meantime, the excess supply will not prove beneficial to the lessors. Similar increases across the entire system would free up many more cars, and such fluctuations are not uncommon.



Figure 1: From Association of American Railroads (AAR) Railroad Performance Measures

Residuals and Risks

The stability of the rail industry cannot be overemphasized, but there are always risks to lessors. Freight cars can be very specialized, for example different types of coal cars (rapid discharge or rotary coupler gondola) are used in different parts of the country, depending on the method of unloading at the destination or whether the coal must be heated before it can be offloaded. If the power plants for those cars are retrofitted or closed, the need for those specific cars dries up. Tank cars are often very specific to what they carry, with protective coatings inside dependent on how corrosive the load is.

Similarly, the demand for railcars is to a large extent driven by the demand for the goods that they carry. If, as is currently the case, the materials used to construct houses are not being consumed, they do not need to be transported, and the demand for centerbeam cars and other cars that move building materials drops. Inventories of those types will rise, and as a result, the price falls. Railroads carry 70% of new vehicles in the U.S.⁴ Bi-level cars are used to carry pickups and SUVs, while tri-level cars are used to move smaller vehicles. The sudden shift in consumer preference away from light trucks and toward more fuel efficient vehicles means that the composition of railcar fleets must shift. Bi-level freight cars now exceed the number that can be used, and their residual values will drop in much the same way that the residual values of light trucks has fallen.

The lifespan of the cars can also constitute a risk, containers are used for a decade or so, but the railcars that carry them last several times that long. If the shippers and truckers get their way and domestic container sizes are increased, or if the government decides to reduce wear and tear on highways by mandating that containers be smaller in future, the railcars would either become obsolete or require considerable modification, decreasing the value of cars.

Because orders for cars are often made years in advance of the anticipated demand, an industry-wide miscalculation can create a surplus, as has been the case with ethanol. When interest in ethanol surged, equipment lessors put in orders to freight car manufacturers for additional cars, grain hoppers, ethanol tanks, and the cars used to move DDGs. When ethanol capacity came on line slower than expected or proved more troublesome than expected, and as corn prices rose, further slowing the adoption of ethanol, it became apparent that too many cars had been ordered. Not only are there too many unused ethanol related cars in lease fleets, but those numbers will continue to grow as manufacturers run through backlogs.



Figure 2

From Universal Machine Language Equipment Monitor (UMLER), AAR



Regulations always pose a risk to residual values, and in the rail industry, those regulations can come from the government or from the AAR. For example, the AAR has mandated that, by 2018, all freight cars carrying certain chemicals--including cars built prior to the creation of the new standards--must have "thicker shells or jackets, improved shields, and improved top fittings".⁵ Such a ruling reduces the value of any car that will require retrofitting and leaves equipment lessors with the burden performing such retrofits and of buying more expensive cars in future.

There is a reason for such regulations; the vast majority of railroads insurance is paid to protect them from liability in the event that an accident involving hazardous materials should occur. Railroads are required to transport such materials as part of their common carrier obligations, but the liability risks--the possibility that a chlorine tank car could release a cloud of deadly gas in a populated area--mean that Class I railroads are in a "bet the company" position every time they have to do so. Such a disaster would, in addition to rocking the entire railroad industry, send shockwaves that would hit equipment lessors. The railroads have been arguing for some time that liability for such a disaster should be shared, specifically, by the shipper and the party responsible for maintaining the railcars, which in many cases is the lessor. A catastrophe would make owning or leasing railcars that transport hazardous materials an untenable proposition and discourage the current shift towards full service leasing.

Fear of EPA regulations is far less prevalent in the rail industry than the trucking industry. Rail is currently touting itself as the green way of moving goods, based on its comparatively low use of fuel on a ton-mile basis. Rail has also made it a practice to advance its environmental standards itself -- for example, voluntarily joining the EPA SmartWay program as mentioned previously and gradually replacing older switching locomotives with gensets--in order to avoid being forced to by government regulation. Older locomotives are being retrofitted and upgraded to keep operating and fuel costs low. In addition, computers are also being installed in new locomotives to help engineers conserve fuel. Finally, the very nature of rail makes some changes easier. For instance, the next round of EPA rules are forcing truck manufacturers to find somewhere to install an extra dishwasher sized piece of hardware in order to reduce emissions; such space constraints are lower for locomotives.

The entire railroad industry, railroads especially, but also anyone who relies on them for business, lives in fear that the shippers will get their way and persuade the government to re-regulate the railroads. A return to the bad old days before the Staggers Act would harm the entire industry and reduce the future prospects for equipment leasing.

Further, the trucking industry has been advocating for raising trucking weight limits. It is difficult to assess the repercussions of such an action without knowing the exact timing of any change as well as the specifics of the change and how existing infrastructure would be impacted and protected from, for instance, the additional wear and tear from heavier trucks. Superficially, increasing trucking weight limits would have a positive impact on truck performance and would likely divert some traffic away from rail. However, this would not have much bearing on the near or medium term, as any change in weight limits will also require some changes to the current transport system.

Finally, the value of rail equipment is heavily reliant on the value of the materials that it is composed of. The value of new equipment is directly related to the cost to manufacture it, which increases as the prices of metals go up. In addition, higher metal prices also augment the scrap value of old equipment. Only middle aged cars--cars that still have use left in them but which do not compete directly with brand new rolling stock--are relatively unaffected by commodities prices.

Lease Types

The trend in lease types is toward full service, as the shippers who lease railcars do not have the facilities to maintain them. Similarly, as financing becomes more difficult to obtain for those with low credit ratings, the move is toward leases that rely more on the value of the asset and less on financing. The long-term leases used for locomotives are likely to remain, but overall, lessees are shifting toward shorter term leases. Nobody wants to discover that the market has shifted and be stranded with a fleet of railcars that move an unwanted commodity and years remaining on lease. Similarly, lessors cannot count on many of the companies leasing the equipment to be still operating in a decade. As a result, shorter leases can reduce risk for both parties in many cases.

Summary

Overall, the prospects for the railroad industry have never been better. The railroads finally find themselves in the position of being able to increase prices for the first time since the Staggers Act three decades ago, and the result will almost certainly be expansion of rail capacity after decades of reductions while the railroads sought to become efficient after the years of regulation. Similarly, the increases in the prices of the commodities hauled by railroads and the rising costs of fuel to its primary competitors cannot but benefit the industry. Although the AAR and the government both produce regulations without giving significant consideration to the needs of equipment lessors, fear of the effects of regulation is relatively low. The industry is thriving, and its consistent stability makes it a low risk investment, which, in the current atmosphere of risk aversion,

makes financing relatively easy to obtain. Utilization rates of lease fleets will remain lower until the economy's need to ship goods and America's demand for imports is restored, but the rising value of scrap provides a way out for lessors.

Macroeconomic Environment

Outlook and Assumptions

The U.S. economy is far from out of the woods. Performance during the first half of the year was better than once feared. Although domestic demand fell, some of that weakness was passed on to the rest of the world via lower imports, while exports climbed higher. Nevertheless, neither the housing downturn nor the financial crisis is over. Credit conditions are continuing to tighten, with the latest U.S. Federal Reserve (Fed) survey of bank loan officers showing a particularly marked tightening in standards for consumer loans. We continue to expect a post-stimulus-payments hangover that will bring two negative quarters at the turn of the year. As a result, the forecast retains a W-shaped profile, with the two middle quarters of 2008 the strongest. Overall, our GDP growth forecast for 2008 remains at 1.6%, while our 2009 forecast has edged up to 1.0% (from 0.9% in our July 2008) forecast helped by a lower projection for oil prices. Not until mid-2009 does a sustainable recovery emerge as house prices bottom out, the Fed's low-interest-rate medicine becomes more effective, and financial institutions begin to lend more freely.

The fiscal-stimulus package has given consumers some relief from soaring energy and food costs. Nevertheless, revised data indicate that consumer spending was growing more weakly than previously thought before the stimulus payments began in May and that the second-quarter bounce in spending was muted. Spending rose at a 1.5% annual rate in the second quarter, up from only 0.9% in the first. Without the rebates, we believe that spending growth would have slowed even further. We expect a softer 0.6% increase in spending during the third quarter, as the rebate effect starts to fade, followed by a 2.0% decline in spending during the fourth quarter. Even with the rebate boost, we see consumer spending growth slipping to just 1.0% in 2008, from 2.8% in 2007. In 2009, without the rebate boost, we expect spending to rise just 0.4%. Under the pressure from high gasoline prices, light-vehicle sales fall to 14.0 million units in 2008-their worst year since 1993—and we project 2009 to be no better.

Lower commodity prices have reduced our inflation

forecast, although we still anticipate that consumer price inflation will average more than 5% year-on-year (y/y) during the second half of 2008. We still expect to see some of the previous commodity price hikes passing into core inflation (excluding food and energy) over the next few months. Core personal consumption expenditures inflation (now 2.3% y/y) is likely to hover in the 2.3–2.4% range over the rest of 2008 and in 2009. There remains no sign that wage inflation is responding—when workers see higher prices, they do not expect a wage hike, but rather a drop in their standard of living. If the labor market were strengthening, the story might be different, but the unemployment rate is on its way to 6% and employment is falling steadily.

Federal bailouts of several giants in the financial market during the third quarter of 2008 have sent shockwaves down Wall Street and Main Street. The U.S. Treasury, the Federal Reserve, and the Securities and Exchange Commission unveiled new details regarding its proposed program to fundamentally and comprehensively address the root cause of the turmoil by removing distressed assets from the financial system. While the Treasury's request of \$700 billion in funding appears to be enormous and will surely trigger cries of outrage across the country, the ultimate cost to the taxpayer is likely to be much less than \$700 billion. The cost will be determined by how the economy and the housing market perform over the next several years. It would be a reasonable bet that the economy and the housing market will recover by 2010, and the prices of the securities purchased by the Treasury during the latter part of 2008 might actually rise. In that case, the cost to the taxpayers would be minimal, and there may even be a chance that the Treasury could profit from this endeavor. If, on the other hand, the economy continues its slide into a deeper recession, dragging the housing market along with it, the cost to the taxpayers could easily escalate to several hundred billion dollars. The plan is not a magic wand. The economy will likely suffer further short-term deflationary pressure, but the initiative has the potential of accomplishing the broad goals of allowing the financial sector to clean up its books, attract new sources of capital, and move on from the crisis. The Federal Reserve will eventually ease interest rates lower by 25 or 50 basis points, but that is not of crucial importance right now. What is critical to restoring confidence in the banking system and the avoidance of a more severe credit crunch is the passage of a rescue plan by Congress.

Economic Growth

The decline in real GDP that we feared for the first half of the year has been avoided—but we believe it has merely been postponed. We continue to expect a post-stimulus-payments hangover that will bring two negative quarters at the turn of the year. As a result, the forecast retains a W-shaped profile, with the two middle quarters of 2008 the strongest. Not until mid-2009 does a sustainable recovery emerge as house prices bottom out, the Fed's low-interest-rate medicine becomes more effective, and financial institutions begin to lend more freely.

Housing remains a major drag on growth. The excess supply of homes for sale-expressed as a monthly selling rate—seems to be peaking, but is still very high. And although the latest financial market convulsion, involving Fannie Mae and Freddie Mac, was calmed by the Treasury Department's promise (now written into law) to support the state-sponsored mortgage lenders with public funds if necessary, the episode leaves the housing market facing more headwinds. With Fannie and Freddie constrained in their lending, mortgage rates will be higher than before. We expect housing starts to hit bottom only in the fourth quarter of 2008, at just 823,000 units (annual rate), and to improve only very gradually during 2009. House price declines have accelerated, and we expect the Office of Federal Housing Enterprise Oversight house price index to drop 9.5% from the first quarter of 2008 to the first quarter of 2009.

While there is a lot of handwringing about inflation these days, the inflation picture is less bad now than during the prior two recessionary cycles, especially visà-vis core inflation. In the current cycle, while headline consumer price index (CPI) inflation should breach 5%, core CPI inflation has been very tame. Both measures of inflation will probably edge up in the coming months, but such an upward movement is likely to be temporary, given the growing slack in the economy. This relatively benign picture is all the more remarkable, given the huge recent increases in the prices of oil, food, and other commodities.

Labor Markets

June 2008 payrolls were almost identical to yearearlier levels, but will hereafter show negative year-onyear comparisons until late 2009. Payroll employment this year will average 0.1% above the level in 2007,

with almost an identical average in 2009. Recovery in late 2009 will recoup the year's first-half losses. Two years of job stagnation and a growing labor force means only one thing-a rising unemployment rate. The jobless rate will likely keep climbing for another year, to 6.1%, matching the highs of mid-2003. The hiring recovery in 2010–12 will resemble the 2004–07 gains, averaging 2.2 million per year. The unemployment rate retreats from late 2009 to 2013 before settling around 4.8%. The finance industry is a ticking time bomb with large layoffs announced, but few layoffs implemented in the employment data—the job numbers could get much worse or could be much worse than published figures suggest. Nevertheless, the unemployment rate ticking down does not imply that the weakness is over. Job numbers for teenagers have been very erratic and should revert to more normal behavior when school resumes.

Inflation

With the latest commodity-price surge in retreat, continued labor-market weakness, and waning inflation expectations, the near-term inflation outlook has improved since our July 2008 forecast. We currently expect headline consumer price index (CPI) inflation of 5.5% year-on-year (y/y) in the fourth quarter of 2008, compared with the 6.7% rate in the July forecast. Year-on-year CPI inflation will reach a cyclical low of 1.1% in the first quarter of 2009.

Sliding energy costs bring some relief to headline inflation, which will average 5.0% y/y in the second half of 2008, but the prospect of the West coming to loggerheads with Russia over Georgia complicates an already tense confrontation with Iran regarding its nuclear program. Resurgent oil prices could be the result. While the first half of the hurricane season has passed with no major hits to oil and gas installations in the Gulf of Mexico, the most active part of the season is now upon us. The prospect of a major strike would drive energy prices higher.

Despite the recent break from the commodity-price surge, we expect to see some of the previous price hikes pass into the core-inflation measures in the coming months. Core personal consumption expenditure inflation—the Federal Reserve's preferred inflation gauge will rise to 2.4% y/y by the second quarter of 2009 before falling back to the top of the 1.5–2.0% tolerance band by the beginning of 2011.

Exchange Rates

The Federal Reserve (Fed) has become more concerned about the currency's weakness, and growth around the world is weakening. Both of these factors have helped to produce a bounce in the dollar in recent weeks. Although we think the dollar has passed its low point against the euro, sterling, and the Canadian dollar, we are not yet convinced that this marks the start of a sustained dollar uptrend. We think that would require the Fed to start hiking interest rates, which we do not anticipate this year. The U.S. dollar fell about 10% yearon-year against major currencies in 2007 and should drop another 4% during 2008, which would imply some renewed easing in the greenback from current levels. We assume end-2008 values of US\$1.58/euro, 104 yen/dollar, and C\$0.99/dollar. The Chinese renminbi should continue to rise, and we assume a 7.1% appreciation against the dollar over the next 12 months.

Robust global growth, along with a weakening dollar, has been supporting U.S. export growth. Nevertheless, global growth now appears under threat, as the evidence from Europe and Japan shows rising signs of recession. Of course, to some extent, this reflects the fact that the United States has been growing at the expense of the rest of the world. If Europe and Japan do fall into recession, then export growth will suffer. Exports should rise 8.4% this year before easing to 7.6% growth in 2009. With U.S. interest rates bottoming out, we think that the dollar is also bottoming out against the euro, sterling, and Canadian dollar, but not the yen and renminbi just yet.

Economic Policy

The good news at this juncture is that world economic growth has downshifted enough to induce a large downward correction in commodity prices. This has already pushed the TIPS (Treasury inflation-protected securities) spreads—which measure overall inflation compensation—down to near 2.2%, the lowest level since February 2008. Recent and pending declines in gasoline prices should be evident in September and October. These developments should provide the Federal Open Market Committee with a little more breathing room on policy as autumn approaches—a period fraught with further uncertainty, as the effects of the economic-stimulus rebates wear off and credit standards continue to tighten into record territory.

Under these circumstances, we believe that the U.S.

Federal Reserve (Fed) will be in a position to hold interest rates steady well into 2009—longer than what the markets currently expect. In fact, the Fed may have room to reduce rates in fall 2008, if necessary. The timing of the recent break in commodity prices could, therefore, prove to be providential for the Fed's ability to provide more support for the economy if needed.

External Sector

This is a banner year for exports, as the United States enjoys the most favorable combination of robust foreign growth and a weak dollar. The inflation-adjusted trade deficit (GDP basis) will narrow by \$150 billion in 2008 to \$397 billion and falls another \$115 billion in 2009 before the improvement stalls. In nominal dollars, the story is different. The nominal trade shortfall will widen almost \$40 billion this year in large measure because of surging oil prices-the higher oil-import bill hides a massive improvement in the non-oil trade gap. The nominal-trade deficit moves sideways from early 2009 to early 2011, but begins to widen again toward the end of the forecast period on higher oil prices and slower export gains. The current-account shortfall more closely follows the nominal deficit, with large oil import volumes at high prices hiding the underlying improvement, excluding oil.

Outlook for Key Freight Car Markets and Commodities

Freight car markets are as diverse as the commodity markets they serve. With few exceptions, exports remain a bright spot for many of the freight car markets. Domestic demand is stunted by low levels of consumer and business confidence, soaring energy and energy prices, and a grim employment environment. The fortunes of several markets impacted by turmoil in the construction market are not expected to reverse until 2010.

Agricultural Commodities

Calendar year production of corn, wheat, sorghum, oats, barley, and soybeans rose 14.8% in 2007 and is slated to decline by 4.8% this year. Looking further out, crop production rises 8.8% in 2009, 0.3% in 2010, 1.0% in 2011, 0.8% in 2012, and 1.6% in 2013.

On a crop year basis domestic demand for corn slips slightly in 2008 and then advances by 2.1% in 2009,

3.4% in 2010 and 2.0% per year through 2013. Exports of corn are slated to decline 22.5% this year to 1,937 million bushels and then advance 2.9% in 2009 to 1,993 million bushels. Exports are then pegged at 2,062 million bushels in 2010, 2,076 million in 2011, 2,067 million in 2012, and 2,015 million in 2013.

Domestic demand for wheat is forecast to increase 16.7% in 2008 to 1,279 million bushels and then come in at 1,290 million bushels in 2009, 1,277 million in 2010, 1,299 million in 2011, 1,291 million in 2012, and 1,297 million in 2013. Wheat exports are slated to 22.7% in 2008 to 986 million bushels and then advance to 1,002 million bushels in 2009, 1,034 million in 2010, 1,031 million in 2011, 1,056 million in 2012, and 1,087 million in 2013.

Soybean demand is estimated at 2,042 million bushels in crop year 2008, an increase of 5.6%. Demand then advances 8.2% over the next five years reaching 2,074 million bushels in 2009, 2,096 million in 2010, 2150 million in 2011, 2,190 million in 2012, and 2,210 million in 2013. Soybean exports are set to advance by 4.0% this year to 1,118 million bushels and then decline to 1,059 million bushels in 2009, 1,022 million in 2010, 1,013 million in 2011, 1,010 million in 2012, and 995 million in 2013.









Distillers Grains

Production rose 49.3% in 2007 (marketing year) to 21.1 million tons, with domestic use, 19.7 million tons, +51.0% and net exports, 1.34 million tons, +27.5%. DDG production is slated to expand by 38.3% this year and 6.2% in 2009, before declining 5.1% in 2010. Production then advances 1.8% in 2011, 7.8% in 2012, and 6.9% in 2013. By 2013 domestic use will total 29.1 million tons. Over the six years from 2008-13 (marketing years) domestic use of DDGs expands 47%. Exports are pegged at over 6.0 million tons in both 2008 and 2009 versus 1.3 million tons in 2007. Exports are slated to retreat to 2.6 million tons in 2010 and 2.4 million tons in 2011 before advancing to 3.9 million tons in 2012 and 5.4 million tons in 2013. Global Insight expects the next generation ethanol from cellulosic feed stalks (straw, corn stalks, switch grass ... and other non food inputs to start coming on rapidly. This second generation ethanol will not produce DDG so their impact on the market will diminish.



Coal

Output in the **East** is now heavily buttressed by the export sector, leading to our estimate that production from this region will grow almost 4% this year. In spite of our expectations that exports will rise even further in 2009, growth will taper off to just over 1% in the east as scrubber installations draw power-plant use away from low-sulfur Central Appalachian coals.

Production from the **Interior** jumped dramatically in the second quarter, in part reflecting not only the FGD installations that have already been completed, but also the ones coming on-line in the next six months or so where early stockpiling of coal from this region has already begun. Production gains should be close to 3.5% this year and next as demand for FGD coals continues.

Production in the **West** will rise modestly this year, although strong fourth-quarter 2007 production from this region skews the comparison and makes 2008 output appear smaller than it actually is. In reality, we expect greater use of Powder River Basin (PRB) and Western Bituminous coals in the East and Midwest as power companies in those regions search for a replacement for the export-bound Appalachian coals. We are forecasting noticeable 2.5% growth for the West in 2009, based on the kind of aggressive pricing we have been seeing out of the PRB, a policy that should offset some losses in Western Bituminous coals as well as shifts to higher-sulfur coals at newly scrubbed units.

U.S. exports continue to soar, as we now expect them to reach close to 100 million tons this year and to surpass that threshold in 2009. Data available through June 2008 shows a 55% gain above 2007 shipments for both metallurgical (met) and steam coals. Moreover, preliminary June data have reflected another large increase in East Coast shipments. Continuing supply problems among global producers coupled with the still-weak U.S. dollar have rendered U.S. coal both met and steam, highly desirable in international markets. Global Insight expects this situation to persist on the steam side through the middle of next year, and even then decline only slowly, as some of the global producers raise output. In the met market, we anticipate much the same picture, with a slight but temporary decline in mid-to-late 2009 as major developing countries in the international economy moderately slow their frenetic pace. Coal exports totaled 59.2 million tons in 2007, an increase of 19.4%. Exports are projected to reach 97.1 million tons this year and 102.1 million tons in 2009, increases of 64.0% and 5.1%, respectively.

In spite of running 6% behind the pace in 2007, imported coal has exhibited some strength in recent months. Global Insight anticipates that 2008 imports will fall 3-4 million tons short of 2007's 36.3 million ton level, and the recently filed NS rail suit against Drummond for insufficient imports (from Colombia) is indicative of this situation. Nevertheless, import volumes should not be much lower than what we are projecting, as coal buyers attempt to leverage between the international and domestic low-sulfur-coal markets, each of which have exhibited enormous volatility in both supply and pricing. Coal imports totaled 36.3 million tons in 2007, an increase of just 0.3% following their 18.6% jump in 2006. Imports are projected 32.7 million tons in 2008, a drop of 9.9% and 32.8 million tons in 2009, an increase of 0.3%.

U.S. coal production is forecast to rise 1.9% this year to 1167.2 million tons and 2.2% in 2009 to 1192.3 million tons. Looking further out production rises 1.3% in 2010, 2.0% in 2011, and 2.1% in 2012-13. Beyond the anticipated performance of the economy and the demand for coal in key overseas markets, coal production in the years ahead reflects anticipated net additions to coal fired capacity totaling almost 11,000 megawatts.





Nonmetallic Minerals

U.S. production of nonmetallic minerals fell 15.5% in 2007 and is slated to drop 13.3% this year and another 2.7% in 2009. Better days do lie ahead with growth projected at 2.7% in 2010, 5.3% in 2011, 5.9% in 2012, and 4.7% in 2013. Construction activity is the driving force when it comes to nonmetallic minerals. Following a 5.6% decline in 2007 construction activity is slated to drop 7.2% this year and 6.4% in 2009, before turning the corner and advancing by 5.3% in 2010, 7.4% in 2011, 4.4% in 2012, and 2.3% in 2013. Residential construction tumbled 18.1% in 2007 and appears headed for 21.7% drop in 2008, and an 8.0% decline in 2009. Spending then turns the corner and advances 1.7% in 2010, 15.2% in 2011, 5.2% in 2012, and 1.9% in 2013, as new home construction finally stages a comeback. The nonresidential construction sector expanded by 12.7% in 2007 but growth will slow to 9.9% this year. Declines of 7.3% in 2009 and 4.7% in 2010 are anticipated. Thereafter nonresidential building expands by 1.7% in 2011, 5.4% in 2012, and 3.3% in 2013. Public construction expanded by 3.8% in 2007 but a slowdown in revenues will result in declines of 1.3% this year and 2.2% in 2009. Public construction activity then expands by 0.8% in 2010, 1.0% in 2011, 1.1% in 2012, and 1.7% in 2013. Canadian construction activity is slated to expand by 1.7% in 2008, 2.0% in 2009, 2.5% in 2010-11, and 3.0% in 2012-13, suggesting that Canadian railroads will experience stronger movements of crushed stone, sand and gravel.

Weakness in industrial sector activity in both the U.S. and Canada will limit rail movements of industrial sands, clays and other nonmetallic minerals over the near-term. Beyond next year, CanAm industrial sector activity is slated to expand by 2.5%-3.0% per year which will bolster rail movements of industrial nonmetallic minerals.



Manufactured Goods

Rail movements of U.S. manufactured goods have faltered and will remain sluggish well into next year. Consumer confidence recently fell to its lowest level since May of 1980 and consumers are pulling in their horns. The consumer is feeling the pinch of sky-high energy prices, surging food costs and a deteriorating employment landscape. Corporate America has also become more conservative in the face of faltering final demand. The one bright spot as far as manufacturing goes is exports, but export traffic tends to gravitate towards containers not box cars. Traditional manufacturing is slated to decline by 2.0% this year and another 1.0% in 2009. Durable goods production will exhibit the most weakness dropping 3.9% this year and another 2.4% in 2010. Looking further out manufacturing activity expands by 3.4% in 2010, 3.6% in 2011, 2.76% in 2012, and 2.1% in 2013.



Lumber and Wood Products

The slump in new home construction has taken a toll on rail car utilization and there will be little in the way of improvement until 2010. The U.S. housing market is not expected to exhibit much of the way of forward momentum until 2010. Housing starts in the U.S. peaked at 2.073 million units in 2005 and then retreated to 1.812 million units in 2006 and 1.341 million units in 2007. Indications are now that housing starts will fall to a mere 940,000 this year. Beyond this year, housing starts advance to 986 million units in 2009, 1.325 million units in 2010, 1.662 million units in 2011, 1.679 million units in 2012, and 1.680 million units in 2013. Logging activity is slated to decline by 3.8% this year and 10.5% in 2009. Logging then expands by 5.9% in 2010 and 5.2% in 2011 before stabilizing during 2012-13. Production of lumber and wood products appears headed for a 12.8% drop in 2008 followed by a 9.4% decline in 2009. Production then reverses direction and advances by 11.0% in 2010, 9.6% in 2011, and 2.5% per year through 2012-13.





Paper & Products

U.S. production of paper and products declined 1.7% in 2007 and will decline an additional 1.6% in 2008 and 0.8% in 2009. The softness in consumer and business spending and manufacturing activity has taken a toll on packaging materials and printing and writing paper. Signs of life will emerge as we move through 2009, but the paper industry will not show meaningful improvement until 2010 when output rises by 1.6%. Thereafter with the economy continuing to move forward paper production rises by 2.2% in 2011-12, and 2.0% in 2013.



Chemicals

Demand in North America should remain flat, as the current economic turmoil in the United States has hampered any growth in orders from manufacturing and other key client industries. Exports, though, have seen healthy double-digit increases in 2006 and 2007, boosted by a weak dollar and a continued strong demand for chemicals abroad. Exports should remain a bright over the near-term offsetting weakness on the domestic front, and bolstering rail movements of various chemicals and chemical products. The petrochemicals segment should see the strongest real sales growth in 2008, expected above 1%, despite cautious consumer spending, which will continue to negatively affect key local petrochemical markets, including home goods, autos, and general consumer products. The demand for fertilizers and pesticides should continue to decrease, after two major increases in 2003 and 2004 as biofuels production started booming. Poor prospects are expected in specialty chemicals as well, despite some strong performance on the exports market. U.S. production of chemicals and products increased 1.5% in 2007 but should slip by 0.6% this year before edging up by 0.4% in 2009. Thereafter, rising domestic demand will join a still solid export market allowing chemical industry output to advance by 2.4% in 2010, 3.6% in 2011, and 3.9% in 2012-13.

U.S. Chemical Industry Output



Ethanol

Concerns about the future of the ethanol industry have been raised. Given the volatility in input costs (corn, natural gas) and in ethanol prices and resulting margins, the industry has had a dose of reality. Certainly the loose money that had been flowing into ethanol plant development has slowed considerably. Also, the cost to install a plant has increased considerably and the firms that build them still have significant delays trying to finish the construction. Corn prices have since subsided but the industry and investors are still concerned. Another factor looming over the ethanol industry was the mid-west flood and the potential for policy makers to reduce the mandate for renewable fuels due to food vs. fuel issues. At this point Washington has maintained the existing ethanol target levels but the market was concerned about this for much of the summer.

Ethanol production is pegged at 6,485.5 million gallons in 2007, 9,346.5 million in 2008, 11,713.4 million in 2009, 12,236.3 in 2010, 12,293.3 million in 2011, 13,098.0 in 2012, and 14,098.0 million in 2013. Growth rates over this period: 2007, +32.8%; 2008, +44.1%; 2009, +25.3%; 2010, +4.5%; 2011, +0.5%; 2012, +6.5%; and 2013, +10.5%.



Plastic Pellets

Weakness in the economy and housing, light vehicle, and consumer spending in particular have taken a toll on the plastics and plastic products industry and the transportation of plastic products. U.S. production of resins appears headed for a 3.1% decline this year and a scant 0.7% rise in 2009. Looking further out resin production does turn the corner rising 2.3% in 2010, 2.6% in 2011, 2.3% in 2012, and 2.0% in 2013. Production of plastic products, which are made from plastic pellets, are slated to decline 2.9% in 2008 and 1.9% in 2009 before advancing 3.0% in 2010, 3.4% in 2011, 2.9% in 2012, and 2.4% in 2013.



Cement

Residential construction, a major driver of cement demand, (although not as important as nonresidential and public construction), declined 18.1% in 2007 and could fall by as much as 21.7% in 2008 and 8.0% in 2009. Looking further out, residential construction is slated to turn the corner advancing 17.7% in 2010, 15.2% in 2011, 5.2% in 2012, and 1.9% in 2012. The nonresidential construction sector expanded by 12.7% in 2007 but growth will slow to 9.9% this year. Declines of 7.3% in 2009 and 4.7% in 2010 are anticipated. Thereafter nonresidential building expands by 1.7% in 2011, 5.4% in 2012, and 3.3% in 2013. Public construction expanded by 3.8% in 2007 but a slowdown in revenues will result in declines of 1.3% this year and 2.2% in 2009. Public construction activity then expands by 0.8% in 2010, 1.0% in 2011, 1.1% in 2012, and 1.7% in 2013.

U.S. cement production declined by 0.8% in 2007 and is slated to fall by 10.2% this year and 8.5% in 2009. Production then rises by **2.4% in 2010, 6.4% in 2011, 5.5% in 2012 and 3.8% in 2013.**



Steel Mill Products

The United States is in a mild recession, and most steel-consuming sectors, including light vehicles, consumer durables, capital goods and construction are either shrinking or will be shortly. However strong demand for steel in emerging markets such as China, Brazil and Eastern Europe are keeping foreign steel out of the U.S. market and domestic producers are benefiting. As a result U.S. iron and steel production could advance 1.5%-2.0% this year even as the economy and key steel-buying markets falter. With nonresidential construction joining the list of weak steel buying markets next year we are projecting a decline in iron and steel production of 2.5%. Looking further out once the economy gets back on track, iron and steel production increases by 1.2% in 2010, 2.2% in 2011, 2.0% in 2012, and 1.8% in 2013.



Motor Vehicles and Parts

The slump in light vehicle sales and production has dampened rail movements of cars, light trucks and motor vehicle parts, and there is little reason to expect a quick turnaround. North American light vehicle production is slated to decline 13.0% this year to 13.08 million units and then edge off to 12.89 million units in 2009. Production then rises 5.4% in 2010 to 13.59 million units, 3.7% in 2011 to 14.09 million units, 4.3% in 2012 to 14.70 million units, and 2.0% in 2013 to 14.99 million units. U.S. production of motor vehicle parts is slated to decline 9.9% this year and 8.2% in 2010 before advancing by 2.1% in 2011, 8.6% in 2012, and 5.0% in 2013.

U.S. Light Vehicle Sales







Steel Scrap

Scrap supply is tight. Generation is mediocre as auto production falls and other factory activity is lukewarm. Exports of ferrous scrap are extremely high. The winter slowdown was not as deep as normal, and tonnage data through April show a large upward movement. Obsolete tonnage will continue to rise as high prices draw out junk, but factory and auto grades will remain tight. Scrap demand remains very high in the United States. Electric-furnace (EF) steel production is near capacity despite a weakening economy. Recent ore price increases make scrap attractive, and steel prices are so high that furnaces are trying to run near full capacity.

Container Traffic

U.S. foreign trade remains the driving force behind incoming and outgoing container flows. U.S. imports of non-oil merchandise imports grew by 2.1% in 2007 but are slated to decline by 1.9% this year and 0.2% in 2009 as consumer and business sector weakness take their toll. Looking further out with the economy back on track, imports stage a comeback advancing by 7.2% in 2010-11, 6.1% in 2012, and 4.4% in 2013. U.S. exports have been a relative bright spot for the U.S. economy expanding 7.5% in 2007 and heading for increases of 8.0%-8.5% both this year and next. Beyond this year, exports advance by 8.6% in 2010, 7.5% in 2011, and 6.7% in 2012-13.



North American container imports inched up by 0.7% in 2007 and could fall by as much as 6.4% this year to 21.12 million before inching up by 2.4% in 2009. North American container imports are slated to rise from 21.63 million in 2009 to 27.72 million in 2013, an increase of 28.2%. North American container exports rose 15.6% in 2007 and should rise another 18.4% this year to 14.45 million. Beyond this year export traffic should continue to gain ground rising 5.5% in 2009 and almost 4.5% per year through 2013.

Weakness in import traffic over the near-term suggests that port congestion will not be a problem as we enter the peak shipping season.

During 2007, U.S. container traffic dominates North America accounting for 87% of imports and 80% of exports. U.S. container imports slipped 0.6% in 2007 to 19.58 million TEUs from 19.7 million in 2006. We now expect container imports to decline by 8.2% this year and then edge up by 1.7% in 2009 reflecting the weak dollar, a battered consumer, and an increasingly cautious corporate sector. Looking further out, with the U.S. economy back on track U.S. container imports are slated to advance by 7.8% in 2010, 6.4% in 2011, 5.7% in 2012, and 5.6% in 2012. By 2013 U.S. container imports will total 23.40 million. U.S. container exports rose by 16.4% in 2007 and with a weak dollar and generally favorable rest-of-world growth prospects, exports should continue to gain ground. Container exports growth is projected at 22.6% in 2008, 5.7% in 2009, 4.7% in 2010, 4.4% in 2011, 4.2% in 2012, and 4.0% in 2013. U.S. container exports will reach 14.89 million by 2013.



The Outlook for Freight Car Deliveries

Overall Freight Car Outlook

Disappearing Backlog

Carbuilders delivered 14,802 new freight cars in the second quarter of this year bringing the first half total to 29,035 units. Second quarter orders were reported at 12,142 units bringing the first half total to 21,906 units. Versus a year ago first half deliveries and orders were down 12.8% and 3.7%, respectively. With deliveries outpacing orders, the order backlog declined to 61,573 units at the end of the second quarter down from a first quarter total of 65,223 units. The backlog of tank cars (primarily ethanol-carrying equipment) and mid-sized covered hoppers totaled 41,478 units or 67.4% of the business on the books at mid-year. Indications are that 990 cars disappeared from the backlog during the second quarter bringing the yearto-date total to 7,158 units. We are assuming that these cars represent order corrections, adjustments and/or cancellations.







Tough Road Ahead

Production of ethanol-carrying tank cars has been ramped up and the demand for mid-sized covered hoppers and coal cars has held up. The conventional flat car and intermodal equipment markets can only be characterized as anemic at best. Lastly, the box car market remains dead as a doornail which is not surprising given the weakness in key box car commodities including lumber, auto parts, paper, and consumer goods.

We believe the rail equipment business has some rough road ahead. Global Insight is not optimistic about near-term expectations for the U.S. economy

which does not bode well for the launch of new equipment acquisition programs. Key drivers of rail traffic including consumer spending, manufacturing activity, construction, and light vehicle sales and production, are all looking more the worse for wear not only over the balance of this year but through much of 2009 as well. New equipment will continue to carry a hefty price tag. Rolling stock prices rose 13.2% in 2004, 17.4% in 2005, 7.0% in 2006, and 6.0% in 2007. New equipment prices held steady early on this year but surged ahead once again as steel, aluminum and energy prices moved higher. Raw material prices are expected to give up some ground and some relief has already been seen on the energy price front. Still, the bottom line...freight car prices will remain high even as the demand for new equipment softens.



Lackluster Rail in North America

The U.S. economy is slated to expand at a lackluster 1.6% this year, compared to 2.0% in 2007, and an even weaker 1.0% in 2009. The economy is now expected to slip in the negative column in Q4 2008 and Q1 2009. The Canadian and Mexican economies will feel the drag from anemic U.S. growth. The Canadian economy grew by 2.7% in 2007 but growth is now pegged at 1.2% this year and 2.1% in 2009. Canadian industrial output is forecast to drop by 3.1% this year and then rise by 2.4% in 2009. The Mexican economy grew by 3.2% in 2007 and GDP growth is now pegged at 2.5% this year and 2.9% in 2009.

As we have said time and time again, the rail car business and GDP growth do not move in lock step... but with such anemic GDP growth on tap it takes a great leap of faith to be optimistic about the near-term prospects for freight car demand. A weak economy generally translates into lackluster rail traffic, although healthy coal, grain and export-oriented traffic have cushioned the blow this year. Still rail traffic is expected to limp along as we move through the rest of 2008 and well into 2009, which implies that much of the rail fleet will remain under-utilized which does not bode well for investment in new equipment. Order backlogs will keep production of new equipment at fairly healthy levels, but new orders are likely to be more reflective of prevailing economic conditions.

U.S. Rail traffic has proven stronger than anticipated this year supported by gains in agricultural products, coal, and chemicals for export. Gains on these fronts will offset weakness in forest product, metallic ores and metals, forest products, motor vehicles and equipment, nonmetallic minerals, and incoming container traffic. However, the second half of 2008 will bring with it additional weakness in industrial commodity, consumer products, motor vehicle and parts and construction related traffic, and that weakness will spill over into 2009. Coal production, which is slated to expand by 1.9% this year, should grow by an additional 2.2% in 2009 bolstering overall U.S. railroad carload traffic.

Traditional manufacturing is slated to decline by 2.0% in 2008 and then slip another 1.0% in 2009. U.S. Light vehicle sales are pegged at roughly 14.0 million units this year and next, down from 16.1 million units in 2007. U.S. light vehicle production is slated to decline 15.5% this year and another 3.0% in 2009. Construction activity declines by 7.2% this year and another 6.4% in 2009, which does not bode well for rail movements of building materials. Sluggish consumer spending on durable goods and equipment capital spending both this year and next and a decline in nonresidential construction in 2009 suggests continued near-term weakness for metals and metal products traffic. Following a decline of 1.9% in 2008 the demand for imported goods will remain subdued in 2009 suggesting no bounce back in incoming container traffic. Production of major crops is expected to rebound following a decline in 2008 and domestic demand and exports of agricultural commodities should gain additional ground. Rail movements of ethanol and DDGs should continue to exhibit strength. Another bright spot, we expect U.S. exports to gain additional ground as well.

We now expect U.S. railroad carload traffic to decline about 0.2% this year and 0.7% in 2009. Canadian carload traffic is slated to drop 3.1% this year and then edge up by 0.6% in 2009. On the intermodal traffic front, North American container loadings are slated to finish 2008 -1.5% and then advance 2.6% in 2009. NAFTA trailer loadings are set to decline 2.1% this year and 0.4% in 2009.

Beyond 2009

Looking further out, with the economy turning the corner in a meaningful way, the U.S. and Canadian railroads should get their fair share of the traffic pie. Our outlook assumes a healthy rebound in U.S. industrial sector activity, housing and construction, light vehicle sales and production, and consumer spending, and continued strength in U.S. exports and domestic demand for coal and agricultural commodities.

We assume that the U.S. economy gets back on track, with GDP growth accelerating to 2.9% in 2010, 3.1% in 2011, 2.8% in 2012, and 2.5% in 2013. Over the 2010-13 period, the consumer returns to the market place and Corporate America steps up its activities and capital spending programs. Both housing and light vehicles stage a comeback, nonresidential and public construction rebound, and manufacturing once again gathers forward momentum.

U.S. Production of major crops rises almost 1% per year supported largely by modest growth in domestic demand. Ethanol production grows roughly 9.0% per year while DDG output advances 6.5%-7.0% annually. Some new coal-fired generating capacity is slated to come on stream during the four years from 2010-13 and coal production is slated to rise by almost 2.0% per year.

Growth in traditional manufacturing averages almost 3.0% per year from 2010 through 2013 bolstered by rising domestic demand and healthy exports. U.S. light vehicle production jumps from 8.59 million units in 2009 to 10.36 million units by 2013. The associated movements of materials, components, intermediate goods, and finished goods that accompany the manufacturing process will play no small role in the anticipated snap back in rail equipment utilization. The recovery on tap for construction should also benefit the nation's railroads bolstering movements of building materials, including crushed stone sand and gravel, dimension stone, cement and concrete, bricks and masonry products, structural steel, and lumber and wood products. Residential construction expands by 17.7% in 2010, 15.2% in 2011, 5.2% in 2012, and 1.9% in 2013. Nonresidential and public construction join the party after declining 2.6% in 2010, expanding by 1.4% in 2011, 3.7% in 2012, and 2.7% in 2013. Lastly, with

non-oil merchandise import growth accelerating from a 0.9% decline in 2009 to increases of 7.2% in 2010-11, 6.1% in 2012, and 4.4% in 2013 rail movements of incoming containers will bounce back.

Growth in the Canadian economy and its industrial sector is pegged at roughly 2.5% per year from 2010-13. Growth in key rail-oriented sectors of the Canadian economy are slated to expand as follows; agriculture, +2.2%; mining, +1.7%; manufacturing, +1.7%; construction +2.3%; and goods exports, +5.2%. Growth in the Mexican economy and its industrial sector is set at 3.9% and 3.4% per year through 2013, respectively.

U.S. railroad carload traffic is now expected to expand by 1.9% in 2010, 2.3% in 2011, 1.6% in 2012, and 1.4% in 2013. Growth in Canadian carload traffic is pegged at 1.2% in 2010, 1.6% in 2011, 0.4% in 2012, and 0.8% in 2011. North American rail movements of containers are slated to advance 7.5% in 2010, 6.6% in 2011, 5.8% in 2012, and 5.2% in 2013. Rail trailer loadings are forecast to rise by about 3.5% per year from 2010-13, as we assume that major trucking companies will continue to increase their use of rail intermodal services. Rail service has improved making it more attractive to trucking companies and they will once again face a shortage of qualified drivers once the economy gets back on track.









Railroad Renaissance

U.S. Railroads are enjoying something of a renaissance on the performance, pricing, revenue and capital spending fronts, which bodes well for freight car demand. Fleets, and miles of track, and labor have been rationalized and the industry as a whole has been able to do more with less. The carrying capacity of the fleet has continued to grow and ton-miles per car rose 20% over the past decade. Despite the current softness in the economy and key rail markets, traffic remains at or very near record levels. Railroads have been able to pass along higher operating costs in the form of rate hikes where in the past the kind of slowdown we are experiencing on the traffic front would have spelled disaster for rail revenues and overall financial performance.



After a string of lackluster years, U.S. railroad operating revenues turned the corner in 2004 as rail traffic staged a comeback, the railroads launched major efforts to reign in costs, and the pricing climate developed a favorable tilt. Over the four years from 2004 through 2007, operating revenues surged ahead by 49% reaching \$54.6 billion in 2007 and setting the stage for a long-awaited rebound in capital spending.



U.S. railroad capital spending struggled for about a decade. Signs of life on the CAPEX front started to emerge during 2005, but spending on equipment, infrastructure, and technology really hit its stride in 2006 surging ahead by 32.3% to \$8.45 billion and advancing another 8.3% in 2007 to \$9.16 billion. Spending on infrastructure rose from \$4.56 billion in 2003 to \$6.94 billion in 2007, an increase of 52.2%. Railroad outlays for new equipment bottomed out at \$1.026 billion in 2005 and then rose 43.3% in 2006 to \$1.470 billion and 50.5% in 2007 to \$2.213 billion.



Mid-way through 2008 U.S. railroads have been able to use their pricing power to pass through surging diesel fuel costs. BNSF reported a first half increase in revenues of 16.7% even as carload traffic edged up +2.8% and intermodal traffic fell -7.4%. CSX reported revenue growth of 13.5% even as carload and intermodal traffic fell 3.1% and 2.3%, respectively. NS saw revenues rise by 13.8% during the first half, despite declines of 2.1% in carloads and 2.3% in intermodal. Lastly, UP reported revenue growth of 11.9% despite showing no growth in carload traffic and a decline of 4.8% in intermodal loadings.

Canadian railroads have generally not done as well as their U.S. counterparts. For Canadian National revenues rose only 6.5% in 2006 and -0.4% in 2007. Midway through 2008 revenues were only +1.5% as carloads fell 3.3% and traffic rose 6.5%. Canadian Pacific reported increases in operating revenues of 4.5% in 2006 and 2.7% in 2007. Through the first half of 2008 revenue were +2.3% versus a year ago on a -1.5% decline in carload traffic and a 1.4% increase in intermodal.

The rail industry remains under intense pressure to improve productivity, efficiency, and service reliability. The industry has made great strides in that direction but clearly more work needs to be done. Railroading requires hefty investments in infrastructure such as track, signals, communication and information technology, locomotives, freight cars, maintenance of way equipment, and technology, research, development and implementation. With their improved financial health, railroads should be in a position to fund the kind of investments needed to instill confidence in shippers and major trucking companies who use rail intermodal services that service improvements will continue.

Global Insight estimates that after an increase of 10.4% in 2007 capital spending among the six major North American railroads (BNSF, CSX, NC, UP, CN and CP) will advance by about 5.0% both this year and next. Operating revenues should advance 10%-12% this year, but the quality of these revenues will leave much to be desired as they reflect the pass through of costs as carload and intermodal traffic limp along. With diesel fuel costs easing, rate hikes will be less painful next year but traffic will remain weak. With this as a backdrop we are not expecting much improvement on the revenue front in 2009. Looking further out as traffic growth accelerates, railroads will be able to initiate rate increases that go beyond the pass through of costs and translate down to the bottom line. With this as a backdrop capital spending is slated to rise by 6.0% in 2010, 6.5%-7.0% in 2011-12, and 5.0%-5.5% in 2013.





Freight Car Outlook by Type

Box Cars

Nobody is buying box cars. Through mid-year carbuilders reported receiving 0 orders for new box cars and only 560 new cars were ordered during 2007. There has yet to be a box car delivered during 2008 and only 222 were installed into the fleet during 2007. The same 400 cars have been sitting in the order backlog since the third quarter of 2007.

Box car traffic turned south beginning in 2005 and there is little reason to expect a bounce back until 2010.





Traditional box car commodities, including lumber and wood products and other building materials, auto parts, paper, and consumer goods have been weak and will remain so. The U.S. economy is in trouble and housing and construction, light vehicle sales and production, consumer spending, manufacturing activity and paper and packaging demand will remain under the gun well into 2009. We estimate that box car loadings declined by almost 14% over the three years from 2005-07 and will decline another 6.6% this year and 1.5% in 2009. With this as a backdrop there will be little incentive to investment in new equipment and box car demand will remain anemic at best.

Looking further out, we do expect the economy to turn the corner as 2009 wears on and for it to once again hit its stride beginning in 2010. Housing and construction, light vehicle, manufacturing activity, consumer spending and paper product demand and production stage a solid comeback over the 2010-13 period. With this as a backdrop, we expect box car traffic to advance by 2.6% in 2010, 3.0% in 2011, 1.2% in 2012, and 0.8% in 2013. Expanding traffic will eventually trigger renewed interest in the box car market. With traffic on the rise once again the pressure to replace the older/ smaller units in the fleet with new state-of-the-art equipment will once again bubble to the surface. According to data from the UMLER files approximately 64% of the box car fleet and 60% of the refrigerated car fleet have been in service for more than 25 years. Scrapping and replacing some of these older/smaller cars will provide the stimulus for the next round of box car buying.

Box car deliveries are put at 141 units this year and 336 units in 2009. Thereafter deliveries improve to 1,874 units in 2010, 3,886 units in 2011, 3,973 units in 2012, and 3,660 units in 2013.



North American Box Car Fleet: 64% of the Cars Are Over 25 Years Old



Refrigerated Box Cars: 60% of the Fleet Is Over 25 Years Old





Covered Hoppers

Following a bounce in Q4 2007 to 7,350 units, covered hopper orders fell back to 2,266 units in Q1 2008 and then jumped to 5,830 units in Q2 of this year. Deliveries in Q2 2008 came in at 4,060 units bringing the year-to-date total to 8,085 units. With orders outpacing deliveries, the order backlog rose to 18,762 units at the end of the second quarter.





The expansion of ethanol production capacity continues to bolstered demand for covered hoppers with carrying capacity in excess of 6,000 cubic feet. These cars which come with large gravity gates are designed specifically to transport DDGS the production of which has been expanding at a healthy pace. Carbuilders delivered 8,005 covered hoppers over 5,500 c/f in 2007 and reported an order backlog of 8,568 units at the end of the year. New orders slipped to 637 units in Q4 2007 and 395 units in Q1 2008 and then rebounded to 1,497 units in Q2 2008. With only 734 over 5,500 c/f units delivered during the second quarter, the order backlog expanded to 6,951 units. The demand for covered hoppers 3,500-5,500 c/f slowed as we moved through 2007 (3,589 cars ordered through the third quarter) and then bounced back in the fourth quarter as 6,081 new cars were ordered. For the year as a whole, 8,122 mid-sized covered hoppers were delivered up from 7,776 units in 2006. Following their strong surge late in 2007 new orders fell to 1,584 units in the first quarter of 2008 and then rebounded to 4,123 units in Q2 of this year pushing the first half order total to 5,557 units Carbuilders reported delivery of 2,228 cars in the second quarter bringing the yearto-date total to 4,138 units. With orders stronger than deliveries the order backlog expanded to 11,508 units, suggesting that new car deliveries will remain healthy over the near term.

The demand for small covered hoppers, under-3,500 c/f has slowed to a crawl as the slump in housing deepened and the expansions in nonresidential and public construction activity began to lose their forward momentum. Deliveries fell to 4,313 units in 2007 from 6,077 units in 2006. New orders fell to 1,828 units from 3,753 units in 2006. The year-end order backlog was down to 1,828 units. Carbuilders reported orders for only 287 cars for the first quarter of this year and 210 in the second quarter. Deliveries came in at 1,098 units in the second quarter bringing the year-to-date total to 1,818 units. With deliveries far outpacing orders the second quarter order backlog fell to 303 units. Global Insight expects small covered hoppers to remain the weak sister of the market over the near-term.

Deliveries of mid-size and jumbo covered hoppers should remain at lofty levels over the near-term, given the business on the books at mid-year. At the same time, no major falloff in near-term mid-size and jumbo covered hopper traffic is anticipated. Still deliveries of jumbo covered hoppers are expected to drop below their exceptionally strong 2007 level of 8,005 units. For mid-sized covered hoppers 2008 deliveries should easily exceed their 2007 total before backing off in 2009. The lingering slump in construction will take a toll on small covered hopper demand over the near-term with a sharp decline in deliveries expected in both 2008 and 2009.

Looking further out, the demand for and production of key commodities, including grain, DDGs, cement, dry chemicals, and plastic pellets will be strong enough to trigger a rebound in new equipment demand as the pressures mount to expand capacity and replace older/ smaller units in the fleet. According to our estimates, covered hopper loadings declined by 0.5% in 2007. Global Insight is projecting an increase of 1.8% in traffic this year followed by a decline of 1.0% in 2009. Beyond next year, traffic expands by 1.3% in 2010, 2.1% in 2011, 2.0% in 2012, and 1.8% in 2013. At the beginning of this year 43.4% of the North American covered hopper fleet had been in service for 25 years or more and the average age of the fleet was approaching 20 years.





North American Covered Hopper Fleet: Over 43% of the Cars Are Over 25 Years Old

Covered hopper deliveries are set at 15,928 units this year, versus 20,440 units in 2007, and then decline to 13,423 units in 2009. Looking further out, new car deliveries are pegged at 15,578 units in 2010, 18,040 units in 2011, 17,496 units in 2012, and 17,001 units in 2013.

Deliveries of covered hoppers over 5,500 c/f are pegged at 5,036 units this year down from 8,005 units in 2007. Beyond this year new car installations are estimated at 5,369 units in 2009, 6,231 units in 2010, 7,216 units in 2011, 6,999 units in 2012, and 6,375 units in 2013.

Deliveries of mid-sized covered hoppers are slated to rise to 8,948 units this year from 8,122 units in 2007

and then come in at 7,248 units in 2009, 7,789 units in 2010, 7,216 units in 2011, 6,124 units in 2012, and 5,950 units in 2013.

The demand for small covered hoppers is pegged at 1,945 units this year down from 4,313 units in 2007, and then fall to 805 units in 2008. Under 3,500 c/f covered hoppers deliveries then advance to 1,558 units in 2010, 3,608 units in 2011, 4,374 units in 2012, and 4,675 units in 2013.





Gondolas

Carbuilders reported orders for 1,933 gondolas in Q2 2008 (977 GB steel, 220 GT steel, and 736 GT Aluminum) down from 2,972 gondolas in Q1. Year-to-date orders for gondolas totaled 4,906 units. Deliveries were reported at 1,992 units in the second quarter bringing the year-to-date total to 3,479 units. With deliveries slightly stronger than orders the second quarter order backlog slipped to 4,416 units from 4,503 in Q1 2008.

The near-term high watermark for gondola deliveries should be 2006-07. However, the demand for new equipment should remain strong by historical standards as traffic prospects remain generally bright. The gondola fleet will have to be expanded to accommodate





anticipated traffic levels and pressure will mount to modernize the fleet.

Gondola traffic has been a pleasant surprise bolstered by stronger coal and steel industry activities. There is nothing in the cards to suggest that gondola traffic will experience a major fall off over the near-term, and over the long-pull the prospects for coal, scrap steel, steel mill products and building materials remain bright.

We estimate that gondola traffic edged off by 0.8% in 2007 and could increase by as much as 2.6% this year will support from coal and steel industry activity. Traffic is slated to edge up by 0.3% or so in 2009 as further increases in coal traffic offset weakness in steel and construction industry activity. Looking further out, the traffic outlook brightens and the prospects for gondola orders and deliveries improve as well. Traffic is slated to rise by 1.5% in 2010, 1.4% in 2011, 0.9% in 2012, and 0.8% in 2013. A cyclical recovery in nonresidential construction and expanding coal production and steel industry activity will provide the support. With traffic on the rise, there will be pressure to expand capacity and replace the older/smaller obsolete units in the fleet. At the beginning of this year, 42% of the gondola fleet had been in service for more than 25 years (GT fleet,

29% and equipped gondola fleet, 57%) and the average age of the fleet is approaching 20 years.





Gondola deliveries should total 6,742 units this year and then retreat to 5,902 units in 2009. Looking further out, gondola deliveries are pegged at 7,199 units in 2010, 8,309 units in 2011, 8,527 units in 2012, and 8,411 units in 2013.



Open-Top Hoppers

Open-top hoppers orders accelerated to 2,612 units during the second quarter of 2008 bringing the yearto-date total to 3,242 units and the mid-year order backlog to 6,072 units. With coal prospects somewhat brighter and new capacity coming on stream, the nearterm prospects for open-top hoppers has brightened a bit.





According to our estimates open-top hopper traffic declined 2.7% in 2007 and will slip an additional 1.1% this year as weakness in construction material movements offset gains in coal and iron ore traffic. Coal remains king accounting for upwards of 60% of total open-top hopper carloads, followed by nonmetallic minerals and crushed stone, sand and gravel, about 20%, and metallic ores 10%-15%. Looking further out, coal production will gain ground through 2013 providing steady support. Construction activity and hopper movements of related commodities will not regain their forward momentum until 2010. Metallic ore demand is also expected to slip in 2009 and then gain modest ground thereafter. The bottom line...open-top hopper traffic will stabilize in 2009 and then increase by 1.6% in 2010, 1.8% in 2011, 1.4% in 2012, and 1.2% in 2013.



The relative softness in near-term traffic will take some of the urgency out of investing in new carrying capacity. With traffic gaining ground beyond 2009 and new coal-fired capacity coming on stream, the pressure to upgrade capacity by replacing the older/smaller units that are still in the fleet with larger state-of-the art equipment will begin to mount once again and another equipment buying cycle will emerge. At the beginning of 2008, 47% of the open-top hopper fleet had been in service for more than 25 years, and the average age of the fleet topped 20 years. The scraping and replacement of these older/smaller cars will provide the lift to the open-hopper market in the years ahead.



New car deliveries are now slated to increase to 6,753 units in 2008 from 6,381 units in 2007. Deliveries then retreat to 5,723 units in 2009. Deliveries are then slated to advance to 6,589 units in 2010, 6,824 units in 2011, 6,979 units in 2012, and 6,768 units in 2013.



Conventional Flat Cars

Carbuilders reported receiving 0 orders 0 for conventional flat cars during Q2 of 2008 and a total of 883 cars were ordered through the first half. For all of 2007 only 1,150 new cars were ordered down from 3,102 units in 2006. Deliveries through June totaled 1,130 units and the mid-year order backlog was reported at 1,411 units.





The near-term prospects for conventional flat cars leave a lot to be desired. The housing sector in the U.S. will not really turn the corner until 2010 and the much smaller Canadian market is slated to decline throughout the forecast period. As a result, near-term lumber traffic will remain depressed. Light vehicle sales are also expected to remain depressed until 2010 which does not bode well for auto rack traffic. Flat car movements of steel mill products should more than hold their own this year but will lose ground in 2010. We estimate that conventional flat car traffic declined 6.4% in 2007 and will drop 13.6% this year and 2.8% in 2009. With this as a backdrop there is little reason to expect anything other than weak demand for new equipment.

The housing, light vehicle, steel and other flat car commodities should gain considerable ground beginning in 2010 as the economy gets back on track. Conventional flat car traffic is slated to advance by 5.4% in 2010, 6.1% in 2011, 1.2% in 2012, and 0.8% in 2013. Once traffic regains its forward momentum the pressure to replace the older/smaller units in the fleet (34% of the cars in the special service and other flat car fleet have been in service for over 25 years...85% of the small general service flat car fleet has been in service for over 25 years) will reach the point where there is a meaningful a snap back in orders for conventional equipment. With SUVs and light trucks falling out of



North American Conventional Flat Car Fleet: 35% Are Over 25 Years Old



favor, cars will once again be in the spotlight suggesting a switch back from bi-level autorack carriers to trilevels. Lumber traffic is expected to continue to migrate from box cars providing additional support.



Global Insight puts conventional flat car deliveries at 1,951 units in 2008, 1,220 units in 2009, 2,716 units in 2010, 4,917 units in 2011, 4,891 units in 2012, and 4,881 units in 2013.



Intermodal Flat Cars

There were no intermodal cars/platforms ordered during the second quarter of 2008 and only 1,621 units ordered thus far this year. Carbuilders delivered 1,469 units through June and reported a mid-year order backlog of only 542 units the smallest backlog since the first quarter of 1997. In the face of lackluster traffic railroads have idled equipment, and orders for over 5,300 new cars/platforms have been cancelled. Adding insult to injury the near-term prospects for intermodal traffic leave much to be desired.





With roughly 49,000 platforms delivered from 2003-2007 there should be more than enough capacity on hand to handle anticipated near-term traffic levels suggesting that the demand for new equipment will remain anemic through next year. Once the U.S. economy gets back on track container imports and their movement by rail will gain considerable ground through 2013. With container imports advancing steadily and equipment utilization rates improving, the pressure to add capacity to the intermodal fleet will mount and eventually triggering another buying cycle. We are also anticipating gains on the trailer front. Rail service has improved and will continue to do so as the railroads continue to aggressively invest in infrastructure, equipment and technology. With economic growth considerably stronger over the 2010-13 period than in 2008-09 trucking are expected to once again turn to the railroads to handle their long-haul movements of trailers.

North American rail movements of containers slowed to a crawl in 2007 and appear headed for a 1.5%-2.0% decline this year. Container loadings are forecast to advance by 2.5% in 2009, but the risk to this forecast is clearly on the downside. Looking further out growth should accelerate to 7.5% in 2010, 6.6% in 2011, 5.8% in 2012 and 5.2% in 2013. Rail movements of contain-

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ers dropped almost 10% in 2007 and should decline by 2.0%-2.5% this year before stabilizing during 2009. Over the four years from 2010-13, solid growth in the economy will translate into healthy growth in motor carrier traffic. At the same time as job opportunities improve we expect the driver shortage to raise its ugly head once again which will once again put pressure on major trucking companies to increase their use of rail services.



Global Insight expects intermodal equipment deliveries to fall from 3,937 units in 2007 to 2,015 units in 2008 and a token 797 units in 2009. With traffic gaining ground at a healthy pace once again the demand for new equipment should improve to 7,242 units in 2010, 12,061 units in 2011, 13,155 units in 2012, and 10,383 units in 2013.



Tank Cars

Tank car orders rebounded sharply in the fourth quarter to 11,561 units, propelled forward by another round of ethanol equipment buying, pushing the full year order total to 24,215 units building on the 36,292 units ordered in 2006. New orders fell to a revised 1,391 units in Q1 2008 and then advanced to 1,767 units in the second quarter. New car deliveries totaled 11,468 units through June, an annual rate of 22,936 units, as ethanol car production has been ramped up faster than we had anticipated. Carbuilders had delivered 21,433 units in 2007. Ethanol remains the straw that stirs the drink when it comes to tank car production. At the end of Q2 2008 the total tank car order backlog stood at 29,970 units, the lions share of which are ethanol carrying units.





The ethanol industry has been building a critical mass of carrying capacity to handle scheduled production levels. Recently however some of the bloom has come off of the rose, which has raised concerns about the demand for ethanol-carrying tank cars. Given the volatility in input cost (corn, natural gas) and in ethanol prices and resulting margins the ethanol industry has had a dose of reality. The money that had been flowing into ethanol plant development has slowed considerably. At the same time, the cost to install a plant has increased considerably and the firms that build them still have significant delays trying to finish the construction. Corn prices have since subsided but the industry and investors are still concerned. Another factor looming over the ethanol industry was the mid-west flood and the potential for policy makers to reduce the mandate for renewable fuels due to food vs. fuel issues. At this point Washington has maintained the existing ethanol target levels but the market was concerned about this for much of the summer

We have assumed that once the critical mass of carrying capacity has been reached new additions to the ethanol tank car fleet will taper off. Over the near-term the ethanol industry will be increasing production and additional carrying capacity will be needed to handle the volume. Looking further out we expect next generation ethanol from cellulosic feed stalks (straw, corn stalks, switch grass ... and other non food inputs to start coming on rapidly, at or near existing plants or perhaps further west into the Dakotas. Unless a pipeline makes tank cars obsolete, investment in ethanol tank cars will continue. Still, we may well see some order cancellations and/or the delivery of some of the ethanol tank cars stretched out.

The near-term prospects for the rest of the tank car business are not as bright as domestic demand for key tank car commodities reflect an economy that is not exactly hitting on all cylinders.

We estimate that total tank car loadings increased by 4.3% in 2007 but growth will slow to about 3.1% this year and 2.6% in 2009 as weakness in domestic nonethanol traffic offsets gains on the ethanol and exportrelated traffic fronts. With this as a backdrop we expect the demand for non-ethanol tank cars to limp along well into next year. However with a return of better domestic economic conditions, we will see renewed strength in a number of key tank car commodities. Tank car traffic, including ethanol shipments, is slated to rise by 1.7% in 2010, 1.9% in 2011, 2.6% in 2012, and 3.1% in 2013. As traffic grows, the pressure to





expand, upgrade and modernize the tank car fleet will intensify. At the beginning of 2007 almost 29% of the tank car fleet had been in service for over 25 years.

A total 21,433 tank cars were delivered in 2007 and Global Insight now expects deliveries to reach 21,026 units in 2008 and 17,173 units in 2009 as non-ethanol demand falters. Deliveries are then put at 16,276 units in 2010, 12,412 units in 2011, 11,782 units in 2012, and 11,598 units in 2013. During this period ethanol tank car deliveries will begin to taper off while the rest of the tank car market expands.



Conclusion

Although the near term economic outlook leaves much to be desired, the railroad industry is at its healthiest. Soaring fuel costs, which have devastated its main competitors, greater efficiency, and higher commodities prices have left railroads in a better position to increase prices and pass through rising costs. Because it serves such a wide range of markets, overall rail traffic remains fairly consistent. Gains in the agricultural and coal markets, for example, almost compensate for the softness in consumer goods markets caused by general economic distress and the sharp declines in construction-related markets. On the equipment side, improved efficiency has sidelined a number of railcars and locomotives, but on the whole, utilization rates have not dropped by as much as one would expect, owing to the rising value of scrap. The rail industry is thriving. Its stability makes it a low risk investment; its ability, and willingness, to change ahead of AAR and federal regulations means that fears of such rules are less prevalent in the rail industry compared with the trucking industry, for instance.

The economy is expected to experience a sustained recovery in 2010. A revived housing market, brighter employment conditions, and steadier prices combine to revitalize consumer and business sentiment, and normal buying patterns will resume. Markets that had been declining in the shorter term including manufactured goods, lumber and wood products, paper, and plastic pellets markets will enjoy a reversal of fortune and, in doing so, will alter the outlook for the freight cars that carry their products. The price of oil, however, is expected to remain high. Fortunately for the industry, as traffic growth accelerates, railroads will be able to initiate rate increases that not only pass through the costs, but also filter through to the bottom line.

Endnotes

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Appendix

Table 1

Freight Car Deliveries, 2007-13

(000 units)

	2007	2008	2009	2010	2011	2012	2013
Box Cars	222	141	336	1874	3886	3973	3660
Covered Hoppers	20440	15928	13423	15578	18040	17496	17001
Over 5,500 C/F	8005	5035	5369	6231	7216	6999	6375
3,500-5,500 C/F	8122	8948	7248	7789	7216	6124	5950
Under 3,500 C/F	4313	1945	805	1558	3608	4374	4675
Flat Cars	5565	3965	2017	9958	16979	18046	15264
Conventional	1628	1951	1220	2716	4917	4891	4881
Non-Articulated Intermodal	7	240	80	797	1447	1579	1194
Articulated Intermodal	3930	1775	717	6445	10614	11576	9189
Open-Top Hoppers	6381	6753	5723	6589	6824	6979	6768
Steel	1117	3647	2003	988	512	523	508
Aluminum	5264	3106	3720	5600	6312	6456	6261
Gondolas	9115	6742	5902	7199	8309	8527	8411
GB	2415	1692	1180	846	976	981	967
GT-Steel	1200	1402	885	234	249	256	252
GT-Aluminum	5500	3648	3836	6119	7083	7291	7191
Tank Cars	21433	21026	17173	16276	12412	11782	11528
Other	0	0	0	0	0	0	0
Total	63155	54556	44575	57474	66450	66804	62633

Forecast begins in 2008

Note: Components may not add to totals due to rounding.

Table 2 U.S. Economic Forecast Summary

	2007	2008	2009	2010	2011	2012	2013
Real GDP - % Chg.	2.0	1.6	1.0	2.9	3.1	2.8	2.5
Industrial Output - % Chg.	1.7	0.0	0.4	2.9	3.0	2.3	1.9
Light Vehicle Sales Mil.	16.1	14.0	14.0	15.0	15.8	16.5	16.9
Housing Starts Mil.	1.3	0.9	1.0	1.3	1.6	1.7	1.7
Consumer Spending - % Chg.	2.8	1.0	0.4	2.6	3.0	2.8	2.4
Business Invest % Chg.	4.9	3.7	-1.5	2.5	5.9	6.2	3.9
Crude Oil WTI - \$/BBL	72.2	120.8	130.5	121.5	120.9	123.4	126.4
CPI, All Urban - % Chg.	2.9	4.8	3.0	1.6	1.9	2.3	2.1
PPI, Finish. Goods - % Chg.	3.9	8.0	3.3	0.4	1.0	1.6	1.4
Fed. Funds Rate - %	5.0	2.3	2.4	4.3	4.7	4.7	4.7
3-Month T-Bill Rate - %	4.4	1.8	2.4	4.2	4.6	4.6	4.6
10-Yr. T-Note Yield - %	4.6	3.8	3.9	5.2	5.4	5.4	5.4
Exchange Rate - Major	0.767	0.702	0.699	0.715	0.723	0.722	0.721
Trading Partners							
Canadian GDP - % Change	2.7	1.2	2.1	2.5	2.6	2.6	2.5
Canadian IP - % Change	0.3	-3.1	2.4	2.0	2.9	2.4	2.2
Mexican GDP - % Change	3.2	2.5	2.9	3.6	3.9	3.9	4.0
Mexican IP - % Change	1.9	1.3	2.5	3.4	3.5	3.4	3.4

Note: Forecasts begin in 2008.

Source: Global Insight

About the Study's Authors:

Global Insight provides the most comprehensive economic, financial, and political coverage of countries, regions, and industries available from any source covering over 200 countries and more than 170 industries using a unique combination of expertise, models, data, and software within a common analytical framework to support planning and decision making.

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