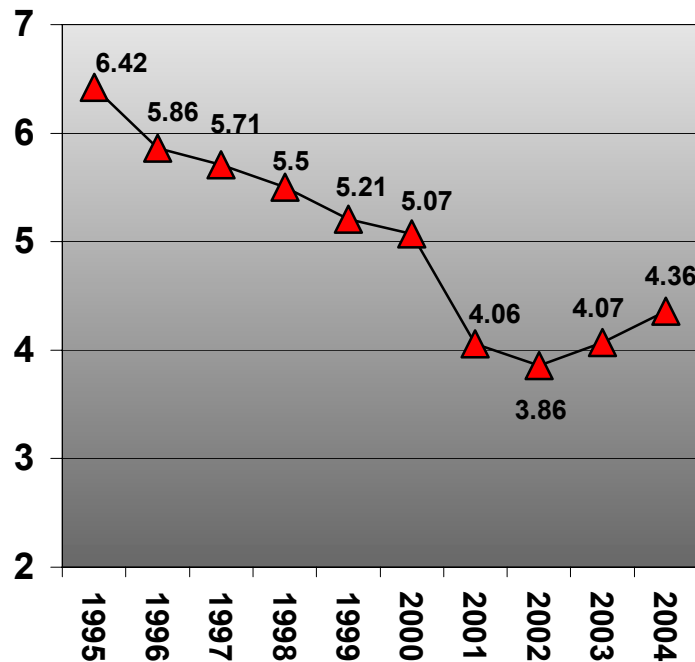


**INDEPENDENT EQUIPMENT COMPANY
2004 OUTLOOK FOR USED EQUIPMENT MARKETS
GREAT EXPECTATIONS**

by Carl Chrappa, A.S.A., I.F.A.

Independent Equipment Company annually compiles and rates secondary market outlooks for selected categories of equipment which are commonly financed by leasing and asset-based lending companies. Overall, the outlook for used equipment markets in 2004 can be best described as "improving." This year's average outlook rating showed a 7.1 percent improvement over last year's, which itself showed a 5.4 percent improvement over 2002's 13-year record low. For 2004, the (14) equipment types surveyed scored an average rating of 4.36 -- not satisfactory. By way of comparison, the average rating in 2003 was 4.07 -- not satisfactory. See the chart below for previous years' average ratings, which in 2002 was 3.86 (not satisfactory); in 2001 was 4.06 (below satisfactory); in 2000 was 5.07 (satisfactory); in 1999 was 5.21; in 1998 5.50; in 1997 5.71; in 1996 5.86; and in 1995 6.42.

SECONDARY MARKET OUTLOOK



Over the past decade, IEC views 1995 as a peak year for used equipment markets, with 1996 the start of a slow decline which IEC believes bottomed in 2002. 2004 is expected to be a year in which most equipment markets will continue to improve. The year is also expected to be one during which the economy will finally return to health after a year of peaks and valleys. A consensus of 54 leading economists recently published by The Wall Street Journal predicted that GDP for 2004 would expand at average quarterly rates ranging from 4.49 percent in the first quarter to 3.93 percent in the final quarter of the year. These findings were quite similar to another survey of economists from 47 of the Nation's leading financial institutions and consulting firms conducted by Blue Chip Financial Forecasts. Specifically, according to the results of that survey, GDP for 2004 is expected to increase at average quarterly rates ranging from 4.5 percent for the first quarter to 3.9 percent in the fourth quarter of 2004.

Most economists also believe that the unemployment rate during 2004 will likely fall from mid-year 2003's 6.4 percent to about 5.4 percent, which would translate into the creation of more than 1.7 million new jobs during the year.

In addition, economists believe that for 2004 businesses will lend significant support to the economy by investing in more new equipment and hiring more employees, thus, picking up some of the load carried by households who in the third quarter of last year increased their spending at a stunning 6.9 percent annual rate. However, consumers will be aided by approximately \$150 billion in fiscal stimulus which is already in the pipeline, much of which is expected to be realized in the first half of the year. This, taken in combination with expectations that after-tax corporate profits will continue to rise by approximately 15 percent in 2004, lead most forecasters to believe that 2004 will be a year in which the U.S. economy finally gets on track.

Based on the foregoing, and on first-hand knowledge of equipment secondary markets, IEC has compiled the following outlook for selected equipment types which are frequently financed by leasing and asset-based lending companies. For comparative purposes, a rating is given to each equipment type that is reflective of the expected secondary market conditions compared to historical norms. These ratings range from 10 (outstanding) to 5 (satisfactory) to 1 (very poor).

2004 USED EQUIPMENT OUTLOOK

Automotive (5) - 2003 for the automotive industry started weak but finished strong. At year end, automakers posted stronger than expected sales and have now become hopeful they will be able to raise prices and/or lower discounts without having a detrimental effect on sales. The strongest segment remains high-end sport utility vehicles and pickup trucks. Near the end of 2003 cash incentives fell an average of \$200 and the number of customers receiving discounted loans likewise fell six percentage points to 52 percent. Final sales for 2003 reached 16.3 million -- about 50,000 higher than projected earlier in the year. This is about 2.8 percent below 2002's total sales of 16.8 million, which itself was a 2% drop from 2001's total of 17.2 million new cars and light trucks. This is in comparison to 1999's record total sales of

approximately 17.4 million units. Experts had been estimating sales for 2004 to be approximately 16.5 million units, however, due to the very pronounced pickup in the U.S. economy, and the "affordability index" now standing at its best in 25 years, this number has been revised upward to about 17.1 million units. Additionally, GM has issued its industry forecast for 2004 which is for just under 17 million units -- an increase of about 400,000 units from its previous forecast.

2003 was a landmark year, wherein General Motors lost 0.4% of market share, while Ford and DaimlerChrysler gained 1.5% and 0.7% of market share, respectively. Overall lease penetration for 2003 hovered around 20 percent, which represents a significant decline from 1999's 32 percent. Leasing in 2004 is forecast to remain at around 20 percent of all financings. This drop is believed to lead to a lower the number of late model cars that will be available for sale over the next five years. Consequently, it is expected that prices should firm for these cars as the market comes into better balance.

Used vehicle sales for the year fell approximately one percent to about 19.7 million units. Overall, prices for the average used car fell 1.3 percent in 2003 compared to a decline of 6.0 percent in 2002. Average residual values have fallen every year since 1997. For example, in 1997 the average residual value for a 36-month lease was 50.8% of sticker price, while today it stands at 41.7%. For 2004, this number is expected to increase slightly to 42.5%. As a way of supporting residual values, dealer 'certified sales' continue to grow year-over-year, achieving over 1.4 million units, a 15 percent increase over 2002. However, the number of certified cars available for sale may flatten as more consumers have been selecting zero or low percent financing over the past two years, thus cutting the number of leased vehicles available for resale in the certified sales program.

Other issues the industry is dealing with include various safety standards, the Clean Air Act, and vicarious liability, which has led several auto rental and major vendor lease finance companies to exit several markets in the Northeast. Overall, however, the outlook for 2004 for the automotive industry remains cautiously optimistic. For comparative purposes, this category rated a 4 in 2003.

Truck/Trailer (5) - 2003 was a mixed year for the tuck/trailer industry, wherein new truck sales fell slightly year-over-year, while sales of used equipment picked up smartly. Class 8 production fell about 2.2 percent to 142,500 units, compared to 2002's 146,000 units. This compares with 2001's production which totaled approximately 140,000. The 2003 sales decline was mainly attributable to buyers' reluctance to purchase trucks equipped with new "clean" (EPA) engines. However, industry experts are predicting a sharp upturn in the sale of new heavy-duty tractors in 2004, with estimates ranging anywhere from increases of 20 percent to 45. Reasons for the sharp increase are related to replacement cycles, wherein operators want to stay ahead of the much more stringent emission rules for the 2007 model year, and the availability of increased depreciation allowances. The NTEA has predicted sales in 2004 will increase for Class 5 trucks by 6.7 percent; Class 6 by 2.7 percent; Class 7 by 25.7 percent; and Class 8 by 44.5 percent, with continuous growth into 2005! Some additional demand will be

developed because of the revised HOS (Hours-of-Duty) rule, which became effective as of January 4, 2004. This represents the first revision in such rules in over 60 years. The rule calls for a maximum time of 14 hours on duty per day, with at least 10 hours of consecutive off-duty time. Shippers have stated that it would cause a loss in productivity of 2 percent to as much as 19 percent. This would cause shippers to push for rate increases, such as the recent 1.9 percent increase enacted by UPS. Furthermore, the HOS rule will put pressure on hiring new drivers, which could lead to higher wages. For example, over the past five years, the owner-operator population has dwindled from 360,000 to 175,000. All of these circumstances lead forecasters to predict a sharp upswing in the sale of new truck/tractors during the new 2004 period. Furthermore, because of emerging EPA rules and buyers' initial reluctance to purchase such trucks, IEC feels there will be a significant opportunity for leasing companies to offer leases to the industry. Currently, about 21.5 percent of all commercial trucks are rented or leased. This trend is expected to increase rapidly as operators desire to shift the risk of technology ("clean" engines) to lessors.

Meanwhile, new trailer sales increased by about 25 percent in 2003 to approximately 165,000 units. This compares to 2002's production total of 131,000; 143,000 in 2001; 260,000 in 2000; and 306,000 in 1999. Forecasters believe 2004 will show trailer sales increasing by 25 percent to 30 percent, bringing sales into the area of 210,000 units, which approaches the long-term average of around 220,000 units per year.

The supply of Class 8 trucks five-years-old or less has been declining since peaking in 2000 at 943,000, then falling to 781,000 in 2003. This has put some balance back into the secondary market. Thus, used truck prices increased by approximately 8.5 percent over those achieved in 2002, while prices for 3-year-old Class 8 truck/tractors increased by just over 20 percent compared to those achieved in early 2002. Most of this increase was achieved thanks to a lack of operator enthusiasm for purchasing new trucks equipped with the "clean" engines. Additionally, used truck values may increase even more over the near-term, as "clean" engines are expected to add over \$5,000 to the cost of a new truck, thus, "pulling" used truck prices along. Presently, there is a shortage of used 4- and 5-year-old heavy-duty trucks, and late model medium-duty trucks costing less than \$20,000. Meanwhile, demand for used trailers is expected to be as good as 2003, with prices of 53-foot dry van trailers commanding higher prices than 48-foot and 45-foot alternatives. In addition, flats and tankers will also be in demand. For comparative purposes, the used truck/trailer market was rated a 4 in 2003.

Aircraft (3)

The airline industry improved in 2003, but continued to operate in a near survival mode. The industry remains severely challenged, with most airlines in poor financial condition. In a year where Air Canada was added to the list of bankrupt companies, U.S. Airways emerged from bankruptcy, and Midway Airlines called it quits for good. The ICAO predicted the world's airlines would lose only about \$5.0 bn. for 2003. This is a significant "improvement" from the industry's losses of \$11.7 bn. in 2002, and \$13.0 bn. in 2001. Profitability is expected to finally return in 2004, but at a mere \$1.5 bn. Meanwhile, the number of aircraft parked continues to hover over 2,000, which is about

13 percent of the entire fleet. This number peaked in September, when 2,240 aircraft were listed as "stored." However, since that time this number has decreased somewhat as aircraft have been moved out of storage and placed back into service by some carriers.

Long term prospects are improving, according to Boeing, which has projected for the next 20 years some \$1.9 trillion in purchases will be made worldwide of more than 24,000 new airliners. Of these purchases, only 4 percent of the deliveries will be for Boeing 747's and larger aircraft; with 22 percent for intermediate-sized aircraft; and the majority of new aircraft -- about 74 percent (18,000 overall) will be for small and large regional jets, and single-aisle aircraft. This reinforces the industry's latest push for "point-to-point" low fare service. This year, Delta started Song, and United started Ted in support of the point-to-point business plan. Boeing's recent 2004 outlook calls for an adjustment to their earlier prediction from 275!300 to 275!290. This compares with deliveries of 281 in 2003; 381 in 2002; and 527 in 2001. Thus, 2004 deliveries are expected to total 53 percent of 2001's.

Currently, the market is still glutted with aircraft, with many carriers now renegotiating existing leases. There is an ample supply of older, wide-body aircraft that can be leased for under \$100K per month, and sometimes much lower than that. In addition, U.S. majors have retired hundreds of older narrow-bodies, which have not been re-leased or purchased now that new start-ups can afford to purchase new equipment at discounted prices with vendor support packages. Lease rates are starting to stabilize for narrow bodies, and may improve somewhat over the next year. In general, lease rate multipliers have fallen below the traditional 1 percent benchmark, even after considering already greatly-reduced equipment values.

The cargo market has stabilized and is expected to improve on the back of the global economy, dampened somewhat by a drop in airlift support for Iraq. The freighter market has experienced many older narrow body retirements while newer wide bodies are being added. The wide body, which comprised only 16 percent of the fleet in 1990, currently totals 44 percent of the fleet. The mixed market has also affected cargo conversions, which are expected to stay relatively flat, falling by five units to 46 in 2004.

The regional jet market seems to be one of the few bright spots in the airline industry, as illustrated by the solid demand for CRJs and ERJs. However, the same is not true for the turbo prop market segment, which encountered only 23 new orders in 2003, mostly for 50- to 70-seat equipment from repeat customers. The worst segment hit remains the 19-seat segment, which is now virtually non-existent. Meanwhile, the business jet segment has dropped by around 30 percent, and single-piston deliveries have remained about the same, but billings have fallen over 30 percent, thanks to soft market conditions. Also, the engine market has stabilized to where some lease rates now are within 10 percent of pre-9/11 rates. However, CAEP 6 could adversely impact engine values due to restrictions on CO₂ and NO_x exhaust, and related penalties associated with as-of-yet to be fixed outputs. Experts now expect the engine spares industry, of which 25 percent of the equipment is currently leased, to rapidly expand to 50 percent leased level in the not too distant future. This could present an opportunity

to lessors with expertise in this area.

Lastly, it is expected that the aircraft values should finally stabilize in 2004, as drops in equipment value either stop or fall into the single-digit category. In general, average "narrow bodies" in 2002 dropped in value from 15 to 45 percent, then 9 to 18 percent in 2003; while wide body aircraft values dropped 15 to 30 percent in 2002, and only 4 to 12 percent in 2003. The trend is obvious and should be welcomed by the industry. Thus, although 2003 showed a slight improvement over 2002, 2004 is expected to be better as conditions for the industry finally stabilize. For comparative purposes, the used aircraft market rated a 3 in 2003.

Telecommunications (3) - Over-capacity and a continued lack of demand led to yet another lackluster year for the telecommunications equipment industry in 2003. Part of the industry's ongoing problem lies in the fact that between 1997 and 2001, U.S. and European telecom companies spent more than \$4 trillion on equipment. Then the internet bubble burst and the global economy entered a recession and accumulated debt began putting companies out of business. For example, in 2000, ten publicly-traded telecommunications companies filed for Chapter 11; while in 2001 the number jumped to 33; in 2002 33; and in 2003 the number dropped to 13. Since 2000, over 650,000 jobs have been lost in the U.S. telecommunications industry. This sector posted a 43.5 percent default rate in 2002 versus 23.9 percent in 2001 -- boosted by WorldCom's spectacular bankruptcy in July of that year. This caused a ripple effect wherein investment in telecommunications infrastructure collapsed from \$118 bn. in 2000 to just \$47 bn. in 2003. Thus, current telecom equipment capex is only approximately 40 percent of three years ago. In addition, one-half of the nation's fiber optic plants are closed, and over three-quarters of fiber optic employees have been laid off. Meanwhile, market capitalization in the telecom industry has fallen by \$2 trillion. The top five capex leaders include: Verizon/ Verizon Wireless, SBC, Cingular (BellSouth and SBC), BellSouth/AT&T Wireless and MCI (formerly WorldCom). Overall spending by North American carriers -- including wireless -- is expected to reach \$49.4 bn. in 2004. Slightly more than half of that total will go to the purchase of new network gear.

In 2003, as reaction to a collapse within the industry, the FCC issued the most comprehensive overhaul of the nation's telephone rate regulations in more than six years. The ruling decided to broadly exempt bell companies from having to provide their rivals with low-cost access to crucial elements of their new high-speed internet networks and equipment. However, the FCC left in force rules that require the regional bell operating companies (RBOC's) to offer other elements of their local telephone networks to competitors at discounted prices. Thus, the ruling may finally turn the residential local phone market into a competitive environment like long distance. With new companies just gaining momentum in the past couple of years, the Bells still control 92 percent of the market. However, the Bells will not have to lease their DSL lines. This could lead to problems impacting smaller, struggling broadband companies.

Due to the ongoing industry slowdown in the U.S., it is believed that China's share of the global telecommunications gear market will climb to nearly 50 percent by next year as it continues to spend more on wireless networks. Meanwhile, the evolution of CDMA-3G

and GSM may take considerably longer than initially planned. In spite of this, Japanese research has begun field trials on signal transmissions for 4G wireless communications, which promises cell phones the capability of transmitting data at speeds as fast as an optical fiber network. Standards for this service are expected to be ready by 2010. Finally, researchers have significantly reduced the amount of power and space needed by operators of fiber optic networks by developing a new optical recovery clock used by telephone, cable television, and other users of fiber optic technology. The advantage of this technology is, unlike the current model, it is entirely optical, meaning that it doesn't need electricity to operate. The new clock potentially can measure up to 80 wave lengths at once, while the current model measures only one at a time. The savings here are obvious.

Used telecommunications equipment prices appeared to bottom around mid-year 2003. Low demand, and over-supply of equipment have kept prices at very low levels for nearly all equipment components and backbone, including switches, hubs, routers, multiplexers. During the year, a significant amount of equipment was absorbed by the "grey market." Additionally, prices were more stable for used office systems equipment (PBX, key systems, etc...). In this market, the tier one manufacturers include: Nortel, Avaya (formerly AT&T and Lucent), and Toshiba. Tier two includes: Siemens (Siemens/Rolm), and Fujitsu. Other manufacturers, such as Iwatsu America, Comdial, NEC Corp., NEX Computing Solutions, Panasonic (a unit of Matsushita Electric Corp. America), etc., are classed as tier three niche sellers. For 2004, it is expected that the market will improve slightly over the year. The best resale values will be achieved by resellers who specialize in brand name equipment. For comparative purposes, the used telecommunications equipment market was rated a 3 in 2003.

Medical (5) - The medical equipment marketplace remains healthy with sales activity holding up in both the primary and secondary market sectors. Overall, used equipment sales gradually improved during 2003 and are expected to enjoy further improvement in 2004. In the new equipment markets, the trend to digital imaging systems is expected to accelerate and, while the effects of the new medicare act are yet to be seen, many in the business indicate they expect the anticipated higher reimbursement levels to have a positive impact on equipment acquisitions. This said, it must be noted that the rate of change in equipment innovation continues to accelerate and lessors are cautioned that residual values will decrease at a faster rate, over time, than in the past. The medical equipment market remains quite competitive and discounting is still critical to maintaining sales volume levels. Current trends include higher field strength MRIs, increased use of multi modality equipment hybrids (such as PET-CT), faster CTs, and more extensive use of contrast agents to enhance imaging. In the ultrasound market, portable units are gaining acceptance. The fluoroscopy market is considered to be mature with most new systems being installed as replacement units. Medical facilities are requiring fewer fluoro units as imaging studies are assumed by other modalities (such as CT, MR, and US). However, new applications for fluoro are taking up some of the slack. The secondary market in the U.S. for conventional, single slice CTs continues to deteriorate with some units still being placed in smaller, lower volume, standalone imaging clinics. For comparative purposes, the used medical equipment market was rated a 5 in 2003.

Computers (5) - 2003 brought the computer equipment industry welcomed revenue growth of 8.0 percent over 2002, with the growth concentrated in notebooks (+16%) while desktop computers continued their slide, losing 12 percent. Printer sales revenues increased by almost 15 percent. Despite widespread agreement that the IT sector's days of double digit growth are ending, expectations for 2004 include domestic growth of 12.5 percent in PC shipments to 59.5 million units, with purchases by business finally providing a significant portion of the growth, unlike 2001-2003. As summed up by Harry Goldstein in IEEE Spectrum, "Overall, the IT market is maturing its way to sustainable, albeit unspectacular, growth."

For 2003, worldwide PC shipments increased by 11.4 percent over 2002 to 152.6 million, while lower prices caused revenues to stay at the same level as the year before at just over \$175 billion. For 2004, shipments are expected to continue to increase by 11.4 percent, while revenues increase by a mere four percent. Dell once again achieved the greatest sales growth by not only increasing sales in the U.S., but by a 32% increase in shipments to five strategic non-U.S. markets: China, France, Germany, Japan, and UK. With Dell's 8600 Inspiron Notebook selling for only \$200 more (\$1700) than its 8300 Desktop (\$1500), Dell is in excellent position to benefit from the growing tendency to replace desktop computers with notebooks. Gateway is advertising an entry level desktop without monitor starting at \$399. Low-end PCs today are more powerful than those of just two years ago. Meanwhile, worldwide sales of servers increased in the third quarter of 2003 by 1.9 percent, after declining for nine consecutive quarters. HP surrendered its traditional first place in this market to IBM.

Looking ahead, Intel predicts 65% increase in sales of its Itanium II processor, with predecessor Montecito (64-bit, 24 Mbytes of Level 3 Cache memory & two cores, each with multithreading) to debut in 2005. Other new products include the multifunction monitor - for computer, video and (HD)TV, the four-in-one display, with Philips and Samsung releasing high profile models; and the Media Center, with a Microsoft operating system, that records TV, plays DVD, burns & plays CD, and displays digital photos.

Meanwhile, 2003 brought no surprises to the used computer industry. As expected, the prices of technology drop while the features on new units increase. The consumer continued to receive more speed, more features, and increased capacity for fewer dollars. This, of course, had a negative effect on the secondary market. Prices reached an all time low of \$.15 to \$.20 per MHZ in the desktop arena while dropping in the notebook arena to \$.35 per MHZ. The increased activity in the new equipment market has had an adverse effect on the secondary market by creating an over abundance of product in the low end Pentium III area. This has added to the erosion of pricing. The peripheral market has fared no better. Two and three year old monitors have little or no value. The demand for 15" monitor has vanished while the prices for 17" range from \$25 to \$40 per unit. New Flat screen LCD monitors have dropped in price by up to 50 percent, which has resulted in an increase in demand for these new units. This has again had an adverse effect on the secondary market. Printer technology has continued its jump forward. An increase in quality and additional features for a

reduction in price for new units, coupled with the high cost of consumables for used units has almost eliminated the secondary market for printers.

2004 will bring no relief for the secondary market in the computer industry. Technology will continue to provide the consumer lower costs and added features. New software that requires more power and increased storage will eliminate the secondary equipment option for a large number of buyers. The affordability of new LCD monitors and higher quality printing equipment has virtually eliminated any secondary market for this type of equipment. However, all of the foregoing could be characterized as 'business as usual' for this equipment segment. For information purposes, this segment was rated a 5 in 2003.

Semiconductor (4) - Worldwide sales of semiconductors increased smartly during 2003 by 18.9 percent to \$167.2 bn., adding to the small increase achieved in 2002, when sales rose by 1.3 percent to \$141 bn. This compares to a sharp plunge in 2001 when sales fell by 32 percent to \$139 bn. after climbing to record levels of \$204 bn. in 2000. This period has been characterized by the Semiconductor Industry Association (SIA) as the "worst downturn ever." According to experts, the industry expects sales to increase yet again in 2004 by 19.4 percent to \$199.6 bn. Meanwhile, worldwide sales of chip making equipment increased by 8.0 percent in 2003 to \$21.4 bn. This occurring after sharp declines in both 2001 and 2002. The outlook for 2004 is very good, as sales are expected to increase by over 38 percent to about \$30.0 bn. The industry has finally begun expansion based on greatly increased demand from telecom, automotive, consumer, and computer market segments. This demand has caused capacity utilization to increase from 64 percent in 2001 to almost 90 percent at the close of 2003. According to Applied Materials, more than half of its new orders are now for 300mm equipment, and 30 percent for 90nm technology equipment. Top companies driving capex include: Intel, Samsung, Sony, TSMC, Micron, Toshiba, and IBM. After a lull in adding new capacity, there are presently 16 fabs under construction, nine 300mm, and seven 200mm. During 2003, 32 percent of applications required 0.30 μ m line dimensions and greater, while in 2004 this number is expected to drop sharply to 24 percent. Implications to the value of used equipment are obvious.

Meanwhile, global revenue for the EMS market increased by 3 percent in 2003 to \$87.5 bn., and is forecast to increase by 20 percent in 2004, and 10 percent in 2005. This accounts for the sharp turnaround in the used printed circuit board equipment market. Such equipment which was selling for mere pennies on the dollar in 2002 began increasing in value at the end of the first quarter 2003, and continued increasing throughout the year. Currently, used printed circuit board equipment is within 5 percent to 15 percent of its historic value range. It is expected that by the end of 2004, values for such equipment will be at or near historic "norms."

The secondary market for semiconductor equipment started to improve around mid-year 2003. For most of 2002 and early 2003, many used semiconductor tools were selling for 40 to 65 percent of historic "norms." Starting around mid-year, largely on demand from Asia (China, Japan, and Korea,) the market started to turn around. The market had been so glutted that even with the increased demand, much equipment that was held off the market in inventory became listed for sale. This gave the market the supply

it needed and prevented prices from rising sharply. Most of the demand is for equipment in the 0.35 Φ range and below. Current estimates for the size of the used semiconductor equipment market are well over \$1 billion. The Surplus Equipment Consortium/Network (SEC/N) estimates that currently as much as 60 percent of used semiconductor tool sales have been going to China, as they have been putting used tools into new fabs to lower costs. Also, Japanese companies have been purchasing refurbished equipment from the United States.

Semiconductor equipment financings for individual items are expected to increase in 2004. Typical equipment financings range from \$250,000 to \$16 million per item; and from about \$300 million to approximately \$1.0 billion for an entire fab. Lease terms for most equipment currently range from about 2.5 years to 5.5 years, depending on the type of semiconductor tool leased. Additionally, there will be opportunities this year for leasing companies to re-lease equipment from pools which have come to the end of their initial term. These opportunities can be particularly attractive if the right equipment is included in the mix and at the right price. For comparative purposes, this market was rated a 3 in 2003.

Machine Tool (3) - U.S. machine tool consumption plunged yet again in 2003 by 16 percent from 2002. This represents an unprecedented fifth year in a row of double-digit declines in the machine tool market. Machine tool demand is currently a mere 30 percent of its peak in 1997, and there is no certainty that it will ever return to that level. However, the steep discounting that occurred during 2002!when machine tools were being sold at 40 percent to 50 percent of their list prices!slowed dramatically in 2003, and is expected to slow further in 2004, as the industry adjusts itself to deal with a significant capacity overhang. U.S. machine tool consumption in 2003 totaled only \$1.72 billion, compared with \$2.06 billion in 2002, and \$2.67 billion in 2001, and \$4.0 billion in 2000. Not surprisingly, the Midwest region was the top U.S. area of consumption of new machine tools, followed by the Northeast and the South. However, consumption increased the most in the Midwest, followed by the South and the Northeast. During the year, long-stayed manufacturer Ingersoll International filed for Chapter 11 and sold off many of its divisions. Ingersoll had been particularly active in the automotive industry, building large, flexible machining systems for the industry. Globally, the U.S. trailed Germany, Japan, Italy, and China in production of machine tools. To illustrate the current state of affairs, the U.S.' total production last year equalled about 30 percent of Germany's. This trend is certainly not encouraging. In its *Outlook for 2003*, IEC stated that the machine tool market would not recover until the U.S. capacity utilization rate increased over 80 percent. With current capacity utilization hovering around 76 percent, there is no basis to expect that 80 percent will be achieved in 2004. Thus, IEC's outlook for this industry remains glum. In the secondary market, there is demand for late model CNC horizontal turning centers, and vertical and horizontal machining centers. In addition, demand in the metal fabricating segment centers around mechanical/ stamping presses, hydraulic stamping presses, laser cutting machines, press brakes, shears, and forging and heading machines. For 2004, it is expected that used machine tool prices will improve only slightly over the chronic low levels they have endured over the past several years. This is due to a significant number of manufacturers having ceased operations in the U.S. and moved overseas to

lower operating expenses. This has affected the profitability of many used machine tool dealers, many of whom have likewise contracted, consolidated, or ceased operations.

In conclusion, IEC sees no sign of change in the capacity overhang (over-supply) that currently exists in both the primary and secondary markets. However, the current uptick in the domestic and global economy may be enough to cause the primary markets to finally stabilize and improve, while secondary markets, whose values bottomed in 2002, improve slightly. For comparative purposes, the used machine tool market was rated a 3 in 2003.

Construction (5) - 2003 was a good year for the construction industry with growth of about 4.3 percent in terms of total contracts awarded, according to the U.S. Department of Commerce. In terms of construction put-in-place, Commerce expects the final total to be about \$898.2 billion for 2003. For 2004, forecasters expect \$900 billion to be awarded, only a 0.2% increase. The total value of contract awards in the construction industry had been expanding at an annual rate of about one percent over the past few years.

For this year, strong sectors are expected to be multi-family housing, office buildings, hotels and motels, stores and shopping centers, warehouses, and manufacturing. Modest growth is expected in public works (highways, bridges, sewers and water supply) due to tight state and local budgets and uncertainty regarding the timing and level of appropriation by the Congress for a multi-year transportation bill to replace TEA-21 (extension runs out February 2004). Meanwhile, declines in the construction industry are expected in single-family housing, electric utilities, educational buildings and healthcare facilities.

New construction equipment prices, as reported by the Bureau of Labor Statistics, rose an average of 1.5% during 2003, up from 1.3% in 2002. Overall, construction material costs increased under 1% in 2003 due to flat cement prices and depressed steel prices, which mostly offset stronger lumber prices, while labor costs increased at an annual rate of over 4%. Consequently, construction costs escalated by 3.3% in 2003.

According to the Association of Equipment Manufacturers (AEM), unit sales for construction equipment are expected improve across all sectors in 2004 including: earthmoving machinery such as excavators, loaders, trenchers, off-highway haulers, tractors, scrapers, graders and log skidders (+7.2% in 2004, compared to +4.9% in 2003); lifting equipment such as lattice boom and hydraulic cranes, tower cranes, aerial lifts, boom trucks, rough-terrain forklifts and telescopic material handlers (+2.4% in 2004, compared to -7.0% in 2003); bituminous machinery such as cold planers, asphalt pavers, rollers, soil stabilizers and asphalt plants (+7.1% in 2004, compared to -1.5% in 2003); concrete/ aggregate machinery such as crushers, screens, feeders, conveyors, rock drills, batch plants, pavers, etc. (+3.0% in 2004, compared to -7.0% in 2003); light equipment including breakers, saws, trowels, light towers, generators, pumps, vibrators, compactors, etc. (+5.1% in 2004, compared to +1.1% in 2003); attachments and components (+6.4% in 2004, compared to +0.6% in 2003); and miscellaneous (+5.5% in 2004, compared to +0.3 in 2003).

Average used equipment prices at auction remained the same as last year, while the total number of units sold at auction declined by about 13%. This reduction in units available for sale should signal an improvement in the used construction equipment market for 2004 as it appears that the capacity overhang has been worked through and prices should begin to strengthen. Demand is good for late model hydraulic excavators, crawler dozers, loaders, backhoes, and graders. For comparative purposes, the used construction equipment market was rated a 5 in 2003.

Mining (5) - Domestic mining activity experienced a solid year in 2003, somewhat of an improvement over the year before. Analysts continue to view the industry's health by that of the global economy, which is in a recovery mode. Over the past year, the FTSE Mining Index, which includes some of the world's largest miners, has jumped more than 40 percent. However, the global mining industry taken as a whole, has a capitalization of about \$240 billion, which is smaller than that of General Electric. That being said, the industry was stimulated thanks to a surge in industrial production in places like China and South Korea, along with the upturn in the U.S. economy -- boosting demand for metals such as copper and aluminum, that have been in over-supply up until recently. Metals mining analysts seem to be in agreement that the industry is in a recovery mode, and should be in an upswing through 2005. The combination of growth in Asia, and an improving domestic economy, in light of a structural under-investment for about a decade, should drive metals prices, along with related equipment, for the near term. The industry continues to strive to keep the cost of production as far below the market price as possible. Major metals markets include: aluminum, which is used in the manufacture of automobiles, food and beverage cans, aircraft, and the like; copper, which is used for electrical wire, piping, automobiles, and telecommunications equipment; and nickel, which is used in the stainless steel market for applications such as the manufacture of kitchen sinks, and sanitary fixtures, etc. Aluminum is the largest market, producing over 21 million tons last year, followed by copper, which produced over 15.5 million tons; and nickel, which produced 1.2 million metric tons. The outlook for aluminum prices remains solid, as prices are expected to rise to about \$0.85 to \$1.00 per pound; likewise, copper has a solid outlook -- it peaked at \$1.35 per pound in 1995, dropped to \$0.61 in 2001, hit a six-year high in December, 2003, and is expected to remain at over \$1.00 per pound in 2004. Lastly, nickel has experienced very strong demand, particularly from China and also due to the recovering U.S. economy. Nickel had been trading at about \$3.00 per pound a year ago, and is flirting at the \$5.00 per pound level. For 2004, the metal could rise to over \$6.00 per pound.

Demand for most metals strengthened around mid-year, and continued throughout the year, and is expected to carryover through 2004. Demand has been so strong that several mothballed mines have been re-started to bring on additional capacity. The state of the industry can be seen reflected in three of the largest metals manufacturers' producers, including Alcoa -- the largest producer of aluminum, which generated about \$20 bn. of revenue last year; Inco!the world's second largest nickel producer, which had just over \$2 bn. in revenue last year; and Phelps Dodge!the world's second-largest copper producer, which had \$3.7 bn. in revenue last year. It has been estimated a 1 cent per pound change in the price of copper has an impact of about \$20 million on the

company's annual income.

Meanwhile, Inco recently activated a hydro-metallurgical mini pilot plant which seeks to eliminate the melter stage of production. If this technology leap can be developed, it would yield a more efficient use of energy and have a very positive economical and environmental impact.

In precious metals, gold remains very strong, as it broke \$400 in late December 2003 and looks to remain over the \$400 mark for most, if not all of 2004. In addition, markets for platinum and silver have also been lifted on strong industrial and commercial demand.

Finally, coal, the largest bulk commodity mined, is expected to finish 2003 with total production of about 1.091 bn. tons, essentially equalling 2002's production of 1.094 bn. tons. Thanks to the improving economy, the coal market is expected to expand by 1 percent to 2 percent during 2004. This would have a positive impact on the rail as well as the barge industry.

Implications of the preceding on the equipment side of the business are quite positive. Demand remains good for crawler tractors, hydraulic shovels, and rock trucks. Rubber tired front end loaders in good condition continue to have broad appeal, not only in the mining, but also in the construction industry. Improvements in the state of industry have even pulled underground mining equipment to an almost "desirable" status within the industry. In fact, five- to six-year-old continuous miners have been sold for prices two to three times those achieved just three years ago. In addition, the start-up of several mines has led to the sale and lease renewal of about a half-dozen large draglines and shovels. Although the mining market has never been described as ideal, the outlook for this industry nonetheless remains optimistic for 2004. This remains one of the few industries that did not receive punishing setbacks caused by the economy over the past two years. For comparison purposes, the used mining equipment market rated a 5 in 2003.

Rail (4) - The used rail equipment market rebounded nicely in 2003 after bottoming in 2002. Prior to this, market conditions had been deteriorating since a downturn that began in 1999. For 2003, total carloadings increased by 0.1 percent over 2002, while intermodal units originated increased a total of 6.8 percent last year -- up from a total of 4.6 percent in 2002. Meanwhile, railroads' estimated ton miles increased by approximately 1.9 percent from the previous year's record 1.48 trillion ton miles. From an equipment standpoint, 2003 was definitely an improvement. For the year, new car deliveries increased for the first time since 1999, when total deliveries amounted to 74,000, falling to 56,000 in 2000, to 34,000 in 2001, to 17,700 in 2002, before finally increasing to approximately 33,000 in 2003. The current backlog is over 32,000 cars, which is approximately twice last year's level. This bodes well for railcar builders during 2004, where deliveries are expected to increase to approximately 39,000 units.

On the technology front, the industry remains focused on HAL (Heavy Axle-Load) railcars, which have gross weight capacities of 315,000-lbs., compared to current state-

of-the-art 286,000-lbs. Adoption of the heavier cars would spur additional spending in rail construction MOW projects over the next two- to four years.

Meanwhile, railcar lease rates improved over the past year -- in some instances significantly -- but are still low by historical standards. For example, full service one-year lease rates for grain cars increased about 60 percent, aluminum rotary gondola cars increased by 30 percent. While good demand continued for center-beam flatcars, demand for boxcars is mixed, and mill gondola demand is weak.

Rail equipment in the 70-ton capacity category has little or no demand and very little value. Since the rail industry's recovery in mid-year began with such conviction, a spot shortage of locomotives developed. Thus, a marked improvement in day rates has occurred over the past six months and is expected to continue into 2004 -- this, in spite of Tier Zero (clean engine) regulations.

Finally, in the intermodal sector, trailer shipments increased by 1.5 percent and containers increased sharply by 8.5 percent. Several major intermodal railcar purchases were made during 2003 and are likewise expected to be made in 2004 -- mainly related to 53-foot wellcars. This is evidence that the future for the 48-foot domestic container is not bright. Finally, as railroads continue to increase traffic as well as gross car weights, there has been a constant build-up of maintenance-of-way projects. For 2003, Class 1 MOW projects totalled \$3.3 bn., approximately a 10 percent increase from 2002; while 2004 projects are expected to total over \$3.5 bn. Therefore, demand remains good in the MOW market.

Near the end of 2003, because corn and wheat exports soared by over 25 percent in a short period of time, the rail industry experienced significant log-jams and bottlenecks, and even service disruptions throughout the farm belt. This caused a sharp increase in demand for covered hopper railcars. It also caused shippers to have to pay about \$300 per month for a covered hopper car, which is approximately a 100 percent increase over rates charged just six months ago. In addition, on-time arrival guarantees likewise more than doubled to approximately \$250 per car. Thus, it is clear that the railcar and locomotive equipment sector has experienced a revival in 2003, which is expected to continue into 2004. The turnaround which had been expected to occur in 2006 appears to have arrived a little early. It is hoped the U.S. economy will continue to support this early arrival. For comparative purposes, the used rail equipment market segment was rated 4 in 2003.

Marine (5) - Opportunities in the marine sector for 2004 appear to be improving, as ship prices continue to rise, along with the global economy. Recent orders booked for new buildings over the next four years show the dry bulk carrier fleet growing at an annual rate of 2.85 percent, the crude carrier fleet at 1.91 percent, and the container ship fleet at 5.91 percent. 2003 was a year of consolidation and improvement. Overall, fleet prices started improving significantly around mid-year, which coincided with improvements in the global economy. Initially, prices firmed on larger vessels, and are currently filtering down to older, smaller tonnage. New buildings prices for Handymax, Panamax, and Capesize bulk carriers increased by 14 to 16 percent over the past year;

while prices for Panamax, Aframax, and VLCC crude carriers increased by 12 percent, 6 percent, and 2 percent, respectively.

Secondary market prices for marine vessels also improved over the past year, with 15-year-old dry bulk carriers generally selling for about 25 percent of new building cost; crude carriers about 22 percent of cost; and container ships about 35 percent of new building cost. Meanwhile, due the improving global economy, scrap rates increased sharply over the past year to \$230 per LWT in China, and \$260 per LWT in India. This represents price increases of over 30 percent in the past year. Currently, the average tanker is 18.2 years old; bulk carrier 15.2 years; and container ship 10.7 years of age. The entire marine fleet has an average age of 18.8 years. Also, values and charter rates for open-top and covered hopper barges have improved smartly from mid-year lows caused by several notable shipper bankruptcies. In addition, tank barges of any size are in demand, and demand is improving for off-shore vessels, particularly those in the 190-ft.+ length class. Presently, there are approximately three dozen banks in the world each with marine vessel portfolio sizes in excess of one billion dollars. Thus, lessors can expect increased opportunities in 2004 as this equipment segment is expected to improve along with the global economy. For comparative purposes, this sector rated a 4 in 2003.

Container (5) - The market for new ISO (marine) cargo and domestic containers experienced a prosperous year in 2003, as a record of just over two million TEU of dry freight containers were delivered. This compares with around 1.6 million TEU in 2002 and 1.2 million TEU in 2001, and surpasses the previous dry freight record of 1.9 million TEU set in 2000. In 2000, new boxes topped \$1,500 per 20-foot standard unit. Current U.S. quotes range from about \$1,400 to \$1,500 for a new 20-foot container; and \$2,200 for a new 40-foot container; and approximately \$2,400 for a new 40-foot high cube. A prime driver in the recovery is the improving global economy that has pushed the average fleet utilization figure to climb to a very high level, averaging almost 90 percent of lessor's combined fleets. Utilization has not been this high since early to mid-1990's, and is indicative of the recent strength of demand for leased equipment!particularly standard containers. Also, in 2003, intermodal operators ordered 24,000 domestic 53-foot containers, the most popular size for cargo transload from marine containers to domestic equipment at distribution centers on the west coast. These new containers are continuing to arrive from Asia onto the west coast at a rate of 800 to 1,100 units per month. Supply and demand has been affected by the U.S. trade imbalance with Asia, which shows U.S. 'import' containers arriving from Asia exceeding 'exports' by more than two to one. Thus, when a 40-foot marine container or 53-foot domestic box is shipped to the Midwest or the eastern U.S., it may sit for days or weeks awaiting a backhaul. It typically takes 20-25 days to cycle a domestic container from the east coast back to Southern California. Thus, some shippers are faced with a choice of making one-way moves from the U.S. east coast to China, which costs \$800 per TEU, or leaving units in storage, which can amount to over \$1 per day. Currently, there is a strong supply imbalance in Chicago, where there are numerous containers in storage. Meanwhile, in the U.S. there is a trend towards the purchase of 53-foot domestic containers, which are presently being sold new for about \$10,500 for U.S.-built, with those manufactured in China costing about \$8,000 each. Current plans are to increase

the manufacture of domestic containers during 2004. There is a clear indication that the industry is quickly moving away from the 48-foot domestic container.

Finally, the chassis market continues to remain strong, and day rates have increased about 10 percent year-over-year, to range from about \$2.00 to \$2.60, depending on conditions. Currently, 40-foot goosenecks, which sell new for about \$7,000 can be purchased on the secondary market for prices ranging from \$2,500 to \$3,500, depending on condition. This is a clear indicator that the chassis market is strengthening. In fact, the market is becoming so strong that users are now placing chassis into 'term leases' and moving away from pools to ensure they will have a sufficient supply of equipment when they need it.

In the secondary market, prices for used 20-foot dry van containers increased smartly last year due to heavy military requisitions, while prices for 40-foot containers remained flat, but are expected to improve in 2004. In addition, per diem rates, which had fallen 50 percent to 75 percent, have now stabilized and have increased by about 10 percent over the past year. Geographically, there is good demand in the Southeast, Southwest, and West Coast, while demand in the Northeast and Chicago remains soft. For 2004, the used container equipment market is expected to improve once again, primarily due to an improving domestic and global economy. Thus, this market sector has recovered from its cyclical lows and is well on the way to full recovery, which should occur in 2004. For comparison purposes, the used container/chassis market rated a 5 in 2003.

Printing (4) - The printing equipment industry currently presents a bifurcated market. The new equipment market is in the doldrums and manufacturers are hurting due to the continued reluctance of printers to invest in new capital equipment during this period of economic uncertainty. However, the used equipment market is gradually improving and is expected to improve further during 2004, especially for newer, more automated and capable equipment. Despite improving demand, pricing pressures continue to impact the market and used equipment prices remain depressed. Digital and sheet-fed presses are selling better than web equipment and the more "color capable" equipment (6-color, and up) is moving much more quickly and at better margins than less capable systems. Where color is concerned, it seems "the more, the better." With this said, it can be noted that the secondary market for presses with two-color capability is nearly non-existent. Many in the industry indicate that standalone digital printing equipment will continue to become a more popular solution as printers attempt to offer more flexibility to clients and, at the same time, decrease their operating costs by reducing makeready time and setup waste. Currently, demand in the prepress and postpress sectors appears to be holding relatively steady. Needless to say, the printing equipment market remains quite competitive and discounting is still prevalent. For comparative purposes, the used printing equipment market was rated a 4 in 2003.

CONCLUSIONS

As can be seen from the foregoing, the outlook for used equipment markets is forecast to improve in 2004, as the domestic economy finally achieves a solid footing. This positive change in conditions could present lessors and asset-based lenders with spot opportunities in 2004. This is akin to "buying in at the bottom" therefore, the outlook for

2004 is positive, and assuming the economy stays on track, should be improving. Have a happy and prosperous new year!

BIOGRAPHY
CARL C. CHRAPPA, A.S.A., I.F.A.

Carl C. Chrappa is President and CEO of Independent Equipment Company, the nation's oldest equipment management outsourcing firm, headquartered in Clearwater, Florida. He is a registered auctioneer and tested and accredited senior appraiser with over 30 years of equipment experience.

Mr. Chrappa is uniquely qualified, since he regularly trades in used equipment markets, and provides valuation and technical consulting services to companies throughout the world. He is also a member of the ***National Association of Business Economics***, where he serves on the Association's Manufacturing and International Roundtables.

He is a founding and current member of ***The Equipment Leasing Association's Equipment Management Committee***, he also serves on the Board of Directors of the ***Commercial Finance Association, ELA Business Services, Inc.***, and is a past technical director of the ***American Association of Cost Engineers***. He has co-authored a book entitled *A Leasing Company's Guide to Equipment Management* and is the author of several columns devoted to equipment management. He has been interviewed and quoted by such news media as the L.A. Business Times, TheStreet.com, and CNBC MoneyLine. In addition, he is a major content provider to the ELA's web-based Asset Management Central. Mr. Chrappa is a graduate of the University of Massachusetts at Amherst.