INTRODUCTION

Official GDP statistics for the third quarter of 2003 have vindicated Global Insight’s belief in the long-awaited economic resurgence. The third quarter kicked off the second half of 2003 with growth averaging 7.2%. The tax rebate checks mailed out during the quarter seem to have been immediately spent, as August retail sales were up 1.2% from July, and September sales clocked in with 7.5% year-over-year growth.

What to expect now: employment gains will be modest in the fourth quarter of 2003, but this growth will pick up somewhat in 2004, expanding at a rate of more than 1%, which will slowly reduce the unemployment rate. Real GDP will expand by 4.2% in 2004, and 3.7% in 2005, as the US economy achieves its potential rate of expansion for the first time since 2000. This expansion will, at last, end the ‘jobless recovery’, with payroll growth of 1.3% in 2004 and 1.7% in 2005.

ANALYSIS

In 2004, U.S. employment is expected to recoup the losses experienced over the previous three years. These losses totaled a net 2,380,000 jobs. These job gains, however, will not return in the same sectors where they were lost. Many of these sectors, such as manufacturing and information, have seen these jobs moved overseas due to outsourcing. The average annual wage of jobs in the sectors which lost jobs during the 2001-2003 period, $43,629, will not be matched by the average wage of jobs in the growing sectors between now and 2005, $35,855. Thus job gains will come in sectors whose wages average only 82% of those in the sectors hit hard by the recession. This gap reflects the higher than average wages paid in the declining manufacturing sectors. Over the 2001-2003 period, annual wages lost in the declining sectors totals $182 billion. This is $26 billion greater than the annual wages we project will be earned in the advancing sectors. To be sure, the economy as a whole will experience wage gains of $269 billion in the 2004 expansion.

The table below examines the composition of wages in the ten sectors that lost the most jobs during the downturn and the ten sectors which will lead the jobs recovery.

<table>
<thead>
<tr>
<th>Quality Vs. Quantity: Analysis of Top Ten Sectors</th>
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<tbody>
<tr>
<td>Total Jobs Lost (2001Q1 to 2003Q2)</td>
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<tr>
<td>Average Wage of Job Lost</td>
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<tr>
<td>Total Jobs Gained (2003Q3 to 2005Q4)</td>
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<tr>
<td>Average Wage of Jobs Gained</td>
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**Analysis: Declining Sectors**

The Manufacturing sector has been the hardest hit in terms of lost jobs and wages. Indeed, many of these jobs are not expected to return during the recovery. The Non-durables sector is expected to continue to lose jobs throughout the forecast period while expected job gains in Durables Manufacturing will be minimal.

Durables Manufacturing lost 1,675,000 jobs from the first quarter of 2001 to the second quarter of 2003. These jobs, which pay an average of $45,300 annually will continue to decline year-over-year until early 2005 when auto plants such as Toyota’s truck manufacturing plant in San Antonio, TX are expected to begin production. A trend in auto production that continues with Toyota’s new Texas plant is the shift in location from the traditional Great Lakes region (Detroit, MI, Ann Arbor, MI) to new plants in the South (San Antonio, Jackson, MS), moving closer to potential consumers. Boeing, which is planning a new jet, the 7E7, to compete with the best Airbus has to offer, is considering sites in Brownsville, TX, Charleston, SC, Kinston, NC, and Savannah, GA in addition to Seattle, WA and Wichita, KS, where the company already has a stronghold.

In the case of Non-durables Manufacturing, production plants are moving to Mexico and Asia to take advantage of inexpensive labor. In the U.S., non-durables jobs pay an average of $40,560 annually. The sector lost nearly 732,000 jobs from the beginning of 2001 to mid-2003. Apparel, Textiles and Food production have been hardest hit by the job losses. In the past two years, Levi Strauss, which operated plants in El Paso and San Antonio Texas, closed all manufacturing facilities in the U.S., opting to purchase products through independent contractors based overseas. Fertilizer and chemicals producers, primarily based along the Gulf Coast, have been forced to shutter operations due to the high cost of natural gas.

<table>
<thead>
<tr>
<th>Employment Sector</th>
<th>Total Job Losses</th>
<th>Wage Per Job</th>
</tr>
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<tbody>
<tr>
<td>Durable Manufacturing</td>
<td>-1,675,219</td>
<td>$45,292.62</td>
</tr>
<tr>
<td>Non-durable Manufacturing</td>
<td>-731,452</td>
<td>$40,558.12</td>
</tr>
<tr>
<td>Administration and Support Services</td>
<td>-360,919</td>
<td>$26,178.13</td>
</tr>
<tr>
<td>Information</td>
<td>-358,352</td>
<td>$56,003.40</td>
</tr>
<tr>
<td>Transportation &amp; Warehouse</td>
<td>-256,072</td>
<td>$38,590.43</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>-247,957</td>
<td>$24,263.79</td>
</tr>
<tr>
<td>Professional, Scientific &amp; Tech.</td>
<td>-191,282</td>
<td>$63,196.60</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>-138,953</td>
<td>$50,600.46</td>
</tr>
<tr>
<td>Fed. Government</td>
<td>-103,863</td>
<td>$48,099.67</td>
</tr>
<tr>
<td>Management Of Companies</td>
<td>-80,856</td>
<td>$68,805.46</td>
</tr>
</tbody>
</table>

The bursting of the high-tech “bubble” in 2000-2001 saw a number of high-paying jobs evaporate. Internet companies saw their Wall Street valuations plummet as they failed to show much if any profits, despite all the hype. Communications
providers and equipment makers were weighed down by overcapacity, and mergers and downsizing became necessary for their survival. Information sector employment declined by more than 358,300 jobs, between the first quarter of 2001 to the second quarter of 2003. The hardest hit metros during the downturn were San Jose, CA, Boston, MA, Denver, CO, and Dallas, TX. Some of these lost jobs, which average a $56,000 annual wage, are expected to return at a rate of 3,500 jobs per quarter over the coming ten months. However, many information technology jobs are now occupied by workers in other countries, such as India. The trend of outsourcing jobs to lower wage countries has long affected the manufacturing industries. In the new century higher wage jobs, in areas as diverse as health, architecture, and legal services will also experience competition from abroad.

Due to all of the mergers that have recently taken place, companies have been able to downsize their management size as well as that of their production, causing steep job losses in the Management of Companies and Enterprises sector. Although these losses pale in comparison to those of manufacturing losses, they represent a considerable loss in income, with an average annual wage of $68,800. This sector lost nearly 81,000 jobs from the period beginning in the first quarter of 2001 through the second quarter of 2003. Only 42,500 jobs, total, are expected to be added in Management of Companies and Enterprises from the third quarter of 2003 through the end of 2005.

Transportation and Warehousing, which includes the airline industry, have lost more than 256,000 jobs since the beginning of 2001. Average annual wage per job in the sector was nearly $38,600. The adverse circumstances that have battered the airline business forced many of the nation’s airlines into or near bankruptcy. These included: a broad downturn in high-profit-margin business travel that set in with the general economic slowdown beginning in 2001, the shock of the terrorist attacks on September 11, geopolitical jitters, particularly the long run-up to the war in Iraq and its aftermath, and the SARS outbreak. Traditional "hub and spoke" airlines are finding their cost structures make them vulnerable to the competition provided by point-to-point discount carriers, such as Dallas, TX-based Southwest. United Airlines of Chicago, IL, Fort Worth, TX-based American Airlines, Continental, based in Houston, TX, and US Airways, with hubs in Philadelphia, Pittsburgh, PA and Charlotte, NC, were all forced to cut back on service routes, and lay off staff.

This downturn was notable in its breadth, across regions, across sectors, and across occupations. Almost all regions, states, and metro areas suffered declines. And the job losses and layoffs, as they occurred in the new high technology sectors, and in finance, affected many in high-wage, technical, and professional occupations.

**Analysis: Advancing Sectors**

Compared to the wages of the jobs lost in 2001-2003, wages of those employment sectors forecast to add jobs is somewhat lower. The top 10 sectors expected to add nearly 3.9 million jobs through 2005. These new jobs will have an average annual wage of just under $35,100, considerably lower than the average wage of those jobs lost by the top 10 sectors to lose jobs between 2001 and 2003.
### TOP 10 JOBS GAINED (2003Q3 to 2005Q4)

<table>
<thead>
<tr>
<th>Employment Sector</th>
<th>Total Jobs Gained</th>
<th>Wage Per Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration and Support</td>
<td>845,281</td>
<td>$26,178.13</td>
</tr>
<tr>
<td>Health Care &amp; Social Assistance</td>
<td>738,397</td>
<td>$37,409.99</td>
</tr>
<tr>
<td>Accommodation &amp; Food</td>
<td>477,242</td>
<td>$14,744.86</td>
</tr>
<tr>
<td>Professional, Scientific &amp; Tech.</td>
<td>422,056</td>
<td>$63,196.60</td>
</tr>
<tr>
<td>Construction</td>
<td>332,701</td>
<td>$41,576.80</td>
</tr>
<tr>
<td>Other Services</td>
<td>292,005</td>
<td>$26,559.55</td>
</tr>
<tr>
<td>State Gov't</td>
<td>229,289</td>
<td>$33,228.40</td>
</tr>
<tr>
<td>Transportation &amp; Warehouse</td>
<td>202,143</td>
<td>$38,590.43</td>
</tr>
<tr>
<td>Finance &amp; Insurance</td>
<td>183,432</td>
<td>$64,517.41</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>154,678</td>
<td>$24,263.79</td>
</tr>
</tbody>
</table>

Employment growth in Administration and Support services is expected to far outreach total U.S. employment growth over the next two years. Job gains are expected to tally more than 845,000 jobs through 2005, and average wages in Administration and Support services are $26,200 annually per job.

Another big job gainer with relatively low wages is the Accommodation and Food services sector. This sector, part of the Leisure and Hospitality NAICS supersector, accounts for the employment in the travel and tourism industries. Over 477,000 jobs are expected to be added from the third quarter of 2003 to the fourth quarter of 2005. Large tourist destinations, such as Los Angeles, CA, New York, NY, Las Vegas, NV, Orlando, FL, and Miami, FL, will benefit from the growth in employment in Accommodation and Food Services. The expected pick-up in business travel will also spur growth in Accommodation and Food Service employment. Wages in this sector, however, are the lowest of the top 10 employment gainers, with an average wage of slightly over $14,700 annually per job. Increased travel will also bring rise to retail trade employment. Accommodation and Food services is expected to add nearly 155,000 jobs through 2005.

However, these relatively low wage sectors will benefit from wage gains in 2004 and 2005. Administration and support service jobs will experience average wage gains of 5.1%, and Accommodation and Food service gains will be 2.6%, over the next year.

Health Care and Social Assistance is expected to average the second largest gain (738,397 jobs) over the forecast duration. The rising elderly population and national nursing shortage will continue to increase opportunities and incentives for those prospective health care workers. Many metros in the southern part of the nation (for example, Phoenix, AZ and Tampa, FL) are expected to record strong health care employment growth between now and 2005Q4.

Finance and Insurance, which increased by 117,800 jobs from 2001Q1 to 2003Q2, is expected to continue its burgeoning during the forecast period. Uncertainty in the
stock market and the slow economy caused many finance firms to restrict the sector’s growth starting in 2001. Expect metros like Boston (with FleetBoston Financial and Fidelity Investments) and New York City (with Citigroup Corp., Chase Manhattan and Morgan Stanley Dean Witter) to help financial activities growth bloom in 2004 and 2005. From 2003Q3 to 2005Q4, Finance and Insurance is projected to expand by 183,000 jobs. The average annual wage of jobs in this sector is $64,520.

Professional, Scientific, and Technical Services, paying just under $63,200 annually, lost 191,000 jobs from the first quarter of 2001 through the second quarter of 2003. This sector is expected to gain more jobs through 2005 than it previously lost. The Professional, Scientific, and Technical sector is part of the professional and business services NAICS super-sector, encompassing accounting, architectural, computer systems design, management consulting, scientific research and development and advertising. The Washington, DC and Boston, MA metros have seen a growth in the number of these companies operating locally.

Overall, employment gains will be significant over the next two years. The employment losses of the recession will be regained by the end of 2004, and 2005 will see an additional expansion of over 2 million jobs. The downturn was remarkably broad-based by historical standards, with similar declines across the US. The jobs recovery will also be broad-based, though the Southern states of Florida and Georgia, and the Mountain states of Nevada and Arizona will lead the nation. The industrial Midwestern states, which have lost manufacturing jobs since 2000, will see the smallest gains, but do nevertheless recover much of the job loss by 2005. The distribution of gains over the next two years is illustrated in the map below.
HOUSING

This business cycle has been a unique one in U.S. economic history, marked by a sharp decline in business spending despite strong demand for goods and services from households. Nowhere was this dichotomy more striking than in the market for housing. In previous recessions, the housing sector, since it was representative of discretionary consumer spending, had behaved pro-cyclically. That is, it had slumped in sync with the general economy, and often to a sharper degree. Construction jobs also behaved pro-cyclically.

During the 1974-1975 recession, housing starts fell from over 2 million in 1973 to 1.16 million in 1975, and construction payrolls over that period declined by 11.9%. In 1978, housing starts again exceeded 2 million units, but with the 1980-1982 recession they declined to 1.1 million by 1982, and construction jobs fell by 6.5%, following losses of over 5% in the prior two years. Even in the relatively mild 1990-1991 recession, starts fell from 1.4 million in 1989 to 1.0 million 1991, and construction jobs by 9.2%.

Thus, in the recent recession, economic forecasters generally feared that real estate markets would contract, perhaps suddenly and sharply, as consumer confidence fell in tandem with the protracted weakness in labor markets. But in 2001 and 2002, housing starts actually increased, exceeding 1.7 million units for the first time since 1986. As for construction payrolls, we do expect them to increase during the recovery period, but at a modest rate of 2%. This contrasts sharply with the recovery period in past recessions, when jobs in the sector rebounded swiftly. Job growth in construction exceeded 10% in 1977 and 1978, again in 1983 and 1984, and 3.8% growth in 1993 was followed by 6.6% growth in 1994.

The robust health of the housing sector has been a real blessing for the US economy this decade. Without its continued ascendancy, GDP and income growth would have been far weaker, the recession deeper and more protracted. But this very buoyancy forces us to be more modest than usual in our anticipation of the strength of the economic recovery. In the past, the slump in housing starts during the recession has generated a pent-up demand for new housing from new or existing households forced to postpone purchases during the downturn. In 2003 and 2004, this source of demand is not present. The residential real estate market, after propping up the economy for so long, will now actually be a drag on economic growth. Housing production has been so strong that vacancy rates are rising, particularly in the multifamily market, and production levels are projected to fall in 2004. Mortgage interest rates reached record lows earlier this year, largely in response to record low short-term interest rates engineered by the Federal Reserve Board as an economic stimulus. This factor will cease to aid the housing market now; indeed, going forward interest rates will begin to rise.

TRANSPORTATION AND INFRASTRUCTURE

Another source of employment in the construction trades is general investment in transportation systems and infrastructure. Infrastructure investment plays a
prominent role in determining the level of economic activity, and hence in income
and jobs. As such, government investment in this area can play a significant role in
enabling the economy to recover strongly from a recession, and in replacing or
offsetting sluggish demand from the private sector. Certainly U.S. federal
government spending, particularly on defense and homeland security, has helped to
moderate the severity of the recent recession. At the state and local level,
infrastructure projects, buoyed by bond financing that is independent of the current
fiscal cash shortages, assisted aggregate demand and also helped to ease some of
the pain of the recession. New Jersey, for example, is one of the few states that have
not lost jobs on net since 2001. Part of the reason is the stimulus provided by a large
school construction program.

As state governments came under intense budget pressure beginning in 2001, areas
of concern included the economic effects of reduced spending on transportation and
other infrastructure projects. This spending is vitally important in maintaining the
competitiveness of state and metro economies as business locations. Indeed, the
level and quality of infrastructure provided in an area is always considered in
corporate site selection evaluation, in addition to the state and local tax burden.

Infrastructure spending also sustains a healthy economy and strong economic
growth over the long term by aiding an economy’s production function. As with
investment in machinery and equipment, providing efficient transportation and
infrastructure directly improves the ability of the economy to produce goods and
services. Real efficiencies and resource savings are achieved when goods and people
can move swiftly from producers to consumers, from market to market, from state to
state. These enhancements, to the extent that they make workers more productive,
directly increase wage levels in the economy.

Amongst the various components of vital transportation infrastructure are ports,
airports, roads, railways, and waterways. There is considerable competition among
U.S. Atlantic ports and between U.S. and Canadian ports to attract the newest
generation of deep draft container vessels. These mammoth cargo ships require
deeper channels, greater than 45 feet deep, and have put a premium on dredging
operations in New York/ New Jersey and Philadelphia to remain competitive.

Airport facilities have also become a critical factor in the evaluation of business site
location decisions, particularly in the aftermath of 9-11 and the increased time cost
of air travel. Easy access to flights for executive, managerial, and sales travel, as
well as access to airfreight services are significant competitive advantages, because
they reduce the costs of doing business. Many regions find significant bottlenecks
and delays at airports due to the lack of airport development and expansion despite
the dramatic long-term increase in air travel, from business as well as personal
travel.

The capacity to handle the shipping volume associated with business growth is
another necessary condition for business expansion in a region. Highway
infrastructure continues to be a considerable factor, as evidenced by the dramatic
developments that spring up along interstate highway interchanges. These serve as
access points to the global distribution network. Metro area transportation
infrastructure acts as a vital gateway between the nation’s non-urban areas and the
global economy. The concentration of transportation infrastructure in metro areas
lowers transportation costs, lowering the cost of production inputs and ultimately
providing goods and services to final customers at a lower price.
The average worker now spends about an hour a day in a car commuting to and from work. This time lost, more than 10% of a typical workday, represents a real resource opportunity cost, diminishing productivity across the U.S. Given current trends, in labor force growth and in modest highway and transit construction, this wasted time is certain to increase. Investments in highway and mass transit facilities that reduce this time spent commuting directly increase productivity.

Shortly after the 9-11 disaster, many economists identified rebuilding the transportation infrastructure as a key factor for Downtown Manhattan as it sought to maintain its preeminence as a financial center. A major event then, will be the November 23 reopening of the PATH link to New Jersey, at a temporary station at the World Trade Center site. Also in the Northeastern U.S., inter-city rail travel has been enhanced by the introduction of high-speed trains by Amtrak. But competitively short travel times are well above the capability of the new equipment. Upgrading of the tracks is required to achieve significant efficiencies and time savings.

The development of multi-modal facilities is a crucial investment that can enhance efficiency in the movement of goods across regions and countries. The link to overseas markets requires the integration of shipping, rail, highway, and air transport systems. Recent examples of ongoing projects that will yield these benefits are the Alameda Corridor in Los Angeles, the Louisiana Transportation Center near Baton Rouge, and the Memphis Super Terminal.

The continued restructuring of the economy during the 20th century, from manufacturing to services, now towards an "intangibles" economy in the 21st, requires a reallocation of the labor force across occupations, and also across geographies. Within metro areas this requires mobility of the workforce; the ability to smoothly commute across metropolitan regions as job locations shift. The development and maintenance of an efficient metropolitan transportation infrastructure is a necessary ingredient in order for the U.S. economy to continue to grow at its potential.

CONCLUSION

This report has highlighted the wage gap, of almost 18%, between jobs lost and jobs gained in this business cycle. Now that a robust expansion of the economy, with benefits flowing across sectors, workers, and metro areas, is finally upon us, it is time to turn our attention to investments that will assure continued vitality for the US. Significant shifts are occurring as we transition from the old economy, to the new, new economy. Intangibles will become of greater and greater importance in the composition of our output of goods and services. In this century, the education and training of the workforce becomes of paramount importance. Increasing skill levels will lead directly to higher productivity and thence to higher wages.

The foundation of US economic growth is the ability of its metro area economies to generate an environment in which business and labor can productively provide services and goods to the nation and the world. Investment in training, education, and infrastructure will better enable us to increase productivity, wage levels, and long term growth.