# NEW YORK STATE ECONOMIC AND REVENUE REVIEW SFY 2013-14









## GLOBAL INSIGHT

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## **Executive Summary**

In conjunction with IHS Global Insight, the Senate Finance Committee reviewed and analyzed the economic and revenue projections contained within the Executive Budget for SFY 2013-14. Based upon IHS Global Insight's February economic forecast, the Senate Finance Committee projects \$126 million in General Fund revenues (inclusive of miscellaneous receipts and transfers) above the Executive Budget forecast for SFY 2013-14. This amount is enhanced by the estimate for the remainder of SFY 2012-13, which is \$116 million above than the Executive estimate. Therefore, the two year General Fund receipts forecast is \$242 million above the Executive forecast.

The General Fund is not the only fund of the State that receives tax revenues. New York has a variety of tax revenues that are divided among the General Fund, special revenue funds, capital projects funds, and debt service funds. The revenues deposited into these other funds are then utilized for targeted spending purposes. In addition, certain tax revenues (e.g. petroleum business taxes and real estate transfer taxes) are exclusively deposited into these other funds. By aggregating all the revenues collected by the State in each fund, the Senate Finance Committee projects All Funds tax revenues to be \$190 million above the Executive for SFY 2013-14. This amount is enhanced by the estimate of tax revenues for the remainder of the 2012-13 fiscal year which is \$55 million above the Executive estimate. This results in a two year All Funds tax revenue forecast that is \$245 million above the Executive projection.

The economy at the national level is measured by the Gross Domestic Product, which is the total amount of goods and services produced and the consumption of these goods and services. Spending on these goods and services by the three sectors of the economy – the consumer, business, and government - influences the degree to which the economy will either expand or contract. Influencing these spending decisions are many different variables, such as inflation and interest rates, whose impacts on these spending decisions change from year to year. Economic growth is not only dependent upon growth in the production and consumption of

goods and services of these sectors of the economy but, how each sector impacts growth in the other sectors.

History sometimes repeats itself. This applies to the economies of 2012 and 2011. Similar to 2011, the economy in 2012 began with strong economic growth from the fourth quarter of the previous year. However, also similar to 2011, that economic growth could not be maintained.

There was still a lot of uncertainty facing the economy in 2012: uncertainty in the fiscal policy of the federal government, uncertainty in the global economy, and uncertainty in the financial markets. The only certainty that existed was that the Fed would not hike interest rates since economic growth was not accelerating. These all translated into a lack of confidence in the minds of businesses and consumers.

The Eurozone continued to be in crisis in 2012. The economy had gone into a double dip recession and, although the European Central Bank was injecting liquidity into the marketplace, the member countries had a difficult time making fiscal reforms to alleviate their debt problems. This resulted in continued volatility in the financial markets.

There were positive aspects in the economy in 2012. Even with the uncertainty, businesses still created jobs with employment growing by 1.7 percent. The unemployment rate dropped from 8.9 percent to 8.1 percent.

The housing market was also showing a stronger recovery. Home sales exhibited strong growth and the homeowner vacancy rate declined. As the inventory of homes declined, home prices began to increase. Besides the sale of existing homes, housing starts continued to show strong growth, both in the single family sector and the multi-family sector as the demand for rental housing increased.

The start of 2013 is showing continued uncertainty, especially in terms of federal fiscal policy. Although the fiscal cliff crisis was averted, the reduction in the payroll tax expired, taking more money from paychecks and decreasing disposable income. In addition, many of the business tax reductions were only extended for one year. The debt ceiling crisis was also averted by pushing the problem out until May. Budget sequestration and a government shutdown are also looming in March.

There is also uncertainty in different areas of the economy that can impact economic growth. The continued Eurozone crisis would not only affect the financial markets but would also impact export growth as the euro continues to depreciate against the dollar. The issue of expiring tax cuts and the uncertainty of their extension will once again impact the economy. Real GDP for the whole of 2012 is expected to grow at a rate of 1.9 percent.

At the state level, the economy is measured by the Gross State Product. The state economy, unlike the national one, has two major sectors – consumer and business – with government taking a more supporting role. Even though there was volatility in the financial markets over the course of 2012, Wall Street firms still realized profit growth. This growth positively impacted the New York economy; especially in relation to financial sector bonuses. Conversely, Hurricane Sandy caused major damage to New York City, Long Island, and the southern portion of the State and served to slow down economic activity. Total real GSP grew by 1.7 percent in 2012. Economic growth in New York is projected to mirror national economic growth in 2013; growing by 1.9 percent.

With the economic growth, wages and personal income at both the national and state level have shown growth in 2012. Wages at the national and state level grew by 0.6 percent and 3.2 percent, respectively, while personal income grew by 2.0 percent and 3.5 percent, respectively. Growth in personal income in 2013 is projected to continue to grow at both the national and state levels as a result of the continued growth in the economy, growing by 2.5 percent and 2.6 percent, respectively.

As outlined in the following tables, total All Funds tax collections are estimated at \$65.98 billion in SFY 2012-13. This estimate is \$55 million above the Executive Budget forecast. For

SFY 2013-14, All Funds tax revenues are expected to increase by \$3.3 billion to \$69.3 billion or \$190 million above the Executive's projections.

Estimates for the remainder of the current fiscal year reflect growing revenues from the increase in fourth quarter bonus payments to the financial services industry that are paid in the fourth quarter and increased estimated payments resulting from the large payment of special dividends in December 2012. IHS Global Insight's forecast of the overall national economy in 2013 is slightly stronger than the economic forecast presented by the Executive. The forecast for the State economy in 2013 appears to be stronger than that of the Executive with employment growth projected to be stronger.

Although the forecast exhibits stronger revenue growth for the upcoming fiscal year based on the projection of stronger economic growth, there are both upside and downside risks associated with the forecast, as with any forecast. As stated above, a resolution of the Eurozone debt crisis will help ease the volatility of the financial markets. In addition, the uncertainty with the duration of a budget sequester could reduce economic growth as spending is taken out of the economy. Uncertainty associated with events in the Middle East could cause a spike in oil prices, fueling inflation pressures.

On the positive side, increased employment and wage growth as a result of a more optimistic business outlook would have a positive impact on the State's personal income and sales tax revenues. Continued low mortgage rates and employment growth may spur additional consumers into the housing market, boosting sales and home prices. This, in turn, could boost additional sales tax revenues from the purchase of durable goods as well as real estate transfer tax revenues. Additional revenues realized by the State should support the State's reserve funds or be used to support taxpayer relief to make New York more competitive for job creation and more affordable for families.

## SFY 2012-13 General Fund Tax Collections

(Millions of Dollars)			
Υ. Υ.	Senate	Executive	
	Finance	Budget	Variance
Personal Income Tax	26,904	26,818	86
Withholding	31,845	31,818	27
Estimated Payments	12,196	12,188	8
Final Returns	2,188	2,172	16
Other Payments	1,151	1,174	(23)
Gross Collections	47,380	47,352	28
Refunds	(7,140)	(7,226)	86
STAR	(3,276)	(3,276)	0
RBTF	(10,060)	(10,032)	(28)
User Taxes and Fees	9,091	9,127	(36)
Sales and Use	8,410	8,430	(20)
Cigarette/Tobacco	438	448	(10)
Alcoholic Beverage Tax/Fees	243	249	(6)
Business Taxes	6,050	6,038	12
Corporate Franchise	2,566	2,570	(4)
Corporate Utilities	659	655	4
Insurance	1,300	1,291	9
Bank Tax	1,525	1,522	3
Other Taxes	1,074	1,064	10
Estate and Gift	1,055	1,045	10
Pari-mutuel Taxes	18	18	0
Other	1	1	0
Total General Fund Taxes	43,119	43,047	72
Miscellaneous Receipts	3,813	3,784	29
Transfers	12,245	12,230	15
Total General Fund Receipts	59,177	59,061	116

## SFY 2013-14 General Fund Tax Collections

(Millions of Dollars)			
	Senate Finance	Executive Budget	Variance
Personal Income Tax	28,503	28,396	107
Withholding	33,457	33,466	(9)
Estimated Payments	12,971	12,958	13
Final Returns	2,595	2,266	29
Other Payments	1,187	1,208	(21)
Gross Collections	49,910	49,898	12
Refunds	(7,348)	(7,478)	130
STAR	(3,419)	(3,419)	0
RBTF	(10,641)	(10,605)	(36)
User Taxes and Fees	9,415	9,492	(77)
Sales and Use	8,739	8,802	(63)
Cigarette/Tobacco	431	441	(10)
Alcoholic Beverage Tax/Fees	245	249	(4)
Business Taxes	6,156	6,244	(88)
Corporate Franchise	2,795	2,881	(86)
Corporate Utilities	653	633	20
Insurance	1,342	1,364	(22)
Bank Tax	1,366	1,366	0
Other Taxes	1,181	1,154	27
Estate and Gift	1,162	1,135	27
Pari-mutuel Taxes	18	18	0
Other	1	1	0
Total General Fund Taxes	45,255	45,286	(32)
Miscellaneous Receipts	3,106	3,103	3
Transfers	12,821	12,667	154
Total General Fund Receipts	61,182	61,056	126

## SFY 2012-13 All Funds Tax Collections

(Millions	of Dollars)		
	Senate	Executive	
	Finance	Budget	Variance
Personal Income Tax	40,240	40,126	114
Withholding	31,845	31,818	27
Estimated Payments	12,196	12,189	7
Final Returns	2,188	2,172	16
Other Payments	1,151	1,174	(23)
Gross Collections	47,380	47,353	27
Refunds	(7,140)	(7,227)	87
User Taxes and Fees	14,596	14,630	(34)
Sales and Use	11,979	11,994	(15)
Auto Rental Tax	109	109	0
Cigarette/Tobacco	1,546	1,561	(15)
Motor Fuel Tax	491	490	1
Alcoholic Beverage Tax/Fees	243	249	(6)
Highway Use Tax	142	141	1
MTA Taxicab	86	86	0
Business Taxes	8,174	8,181	(7)
Corporate Franchise	2,915	2,946	(31)
Corporate Utilities	839	839	0
Insurance	1,455	1,448	7
Bank Tax	1,823	1,823	0
Petroleum Business	1,142	1,125	17
Other Taxes	1,810	1,819	(9)
Estate and Gift	1,055	1,045	10
Real Estate Transfer	736	755	(19)
Pari-mutuel Taxes	18	18	0
Other	1	1	0
Payroll Tax	1,158	1,167	(9)
Total All Funds Taxes	65,978	65,923	55

## SFY 2013-14 All Funds Tax Collections

(Millions of Dollars)			
	Senate Finance	Executive Budget	Variance
Personal Income Tax	42,562	42,421	141
Withholding	33,457	33,466	(9)
Estimated Payments	12,971	12,958	13
Final Returns	2,295	2,266	29
Other Payments	1,187	1,208	(21)
Gross Collections	49,910	49,898	12
Refunds	(7,348)	(7,477)	129
User Taxes and Fees	15,068	15,167	(99)
Sales and Use	12,470	12,533	(63)
Auto Rental Tax	111	114	(3)
Cigarette/Tobacco	1,502	1,535	(33)
Motor Fuel Tax	502	500	2
Alcoholic Beverage Tax/Fees	245	249	(4)
Highway Use Tax	142	140	2
MTA Taxicab	96	96	0
Business Taxes	8,361	8,460	(99)
Corporate Franchise	3,212	3,310	(98)
Corporate Utilities	837	811	26
Insurance	1,506	1,531	(25)
Bank Tax	1,618	1,618	
Petroleum Business	1,188	1,190	(2)
Other Taxes	2,005	1,839	166
Estate and Gift	1,162	1,135	27
Real Estate Transfer	824	685	139
Pari-mutuel Taxes	18	18	0
Other	1	1	0
Payroll Tax	1,300	1,219	81
Total All Funds Taxes	69,296	69,106	190

## **United States Economic Outlook**

### (Dollar Figures in Billions of Dollars)

	2012	2013	2014	2015
GDP	\$15,676	\$16,184	\$16,936	\$17,759
Percent Change	4.0	3.2	4.6	4.9
Real GDP	\$13,589	\$13,843	\$14,233	\$14,697
Percent Change	2.2	1.9	2.8	3.3
Consumption Expenditures	\$9,605	\$9,790	\$10,039	\$10,300
2005 Dollars, Percent Change	1.9	1.9	2.5	2.6
Government Expenditures	\$2,482	\$2,449	\$2,423	\$2,412
2005 Dollars, Percent Change	(1.7)	(1.3)	(1.0)	(0.5)
Investment Expenditures	\$1,912	\$2,017	\$2,220	\$2,445
2005 Dollars, Percent Change	9.6	5.5	10.1	10.2
Change in Inventories	\$45	\$40	\$47	\$49
2005 Dollars, Percent Change	44.0	(11.1)	19.0	4.5
Exports	\$1,834	\$1,877	\$1,976	\$2,091
2005 Dollars, Percent Change	3.2	2.4	5.2	5.8
Imports	\$2,240	\$2,274	\$2,391	\$2,498
2005 Dollars, Percent Change	2.5	1.5	5.1	4.5
CPI - All Urban, Percent Change	2.1	1.4	1.7	1.6
CPI - Core, Percent Change	2.1	1.8	2.1	1.9
Pretax Corporate Profits	\$1,934	\$1,923	\$1,982	\$2,016
Percent Change	15.9	(3.1)	12.4	2.3
After-tax Corporate Profits	\$1,698	\$1,614	\$1,769	\$1,708
Percent Change	15.1	(5.0)	9.6	(3.4)
Personal Income	\$13,402	\$13,744	\$14,461	\$15,178
Percent Change	3.5	2.5	5.2	5.0
Wages and Salaries	\$6,875	\$7,115	\$7,443	\$7,796
Percent Change	3.2	3.5	4.6	4.7
Nonagricultural Employment, Millions	134	136	138	141
Percent Change, Seasonally Adjusted	1.7	1.5	1.7	2.0
Unemployment Rate	8.1	7.7	7.3	6.6
Interest Rates T-Bill Rate, 3-Month T-Note Rate, 10-Year T-Bond Rate, 30-Year	0.09 1.80 2.92	0.08 2.09 3.24	0.08 2.60 3.72	0.18 3.02 3.98
Standard and Poor's 500 Stock Index Percent Change	8.7	7.7	3.5	3.9

Source: IHS Global Insight US Macroeconomic Forecast: February 2013

## **The National Economy**

If there was one word to attribute to the national economy in 2012, that word would be uncertainty; uncertainty in the fiscal policy of the federal government, uncertainty in the global economy, especially in the Eurozone, uncertainty in food and gas prices, and even uncertainty in the weather. Lack of confidence in outcomes in all of these areas contributed to the slow economic growth over the course of 2012.

The Federal government, with its uncertainties relating to the extension of the payroll tax cut and emergency unemployment benefits earlier in the year, the presidential elections, and the "fiscal cliff" issues at the end of the year, played a significant role in the weak economic growth in 2012. Due these uncertainties, businesses and consumer confidence could not gain a foothold. Spending was reined in since they did not know what their tax burden would be. Even state and local governments were impacted because their budgets were dependent on revenue growth from activities of businesses and consumers. However, state governments did benefit from some of the uncertainty in the form of increased tax revenues as taxpayers increased their realizations of capital gains and received additional dividend income ahead of the imposition of the Medicare tax on investment income and the potential expiration of the Bush era tax cuts.

The only certainty provided by the Federal government was its monetary policy of maintaining the Federal Funds rate at the same low levels.

Weather was not a friend to the economy in 2012. The Midwest suffered through an extreme drought, killing crops and livestock, resulting in higher food prices. At the end of August, Hurricane Isaac struck the Gulf Coast, impacting states from Florida through Louisiana. Then, at the end of October, Hurricane Sandy, also known as Superstorm Sandy, hit the East Coast, causing major damage in New Jersey and New York. This hurricane shut down the stock market for two days, caused major power outages, disrupted transit systems, and destroyed thousands of homes.

The crisis in the Eurozone was ongoing throughout 2012 plunging the Eurozone back into recession. Although the Eurozone united the countries of Europe under one monetary structure, it did not unite their governments under one fiscal structure. Part of the original agreement under the Maastricht Treaty was to have the member countries exercise fiscal discipline through the reduced reliance on deficit financing and high debt levels. However, some of the member countries, especially Greece and Portugal, were unable to comply with these fiscal disciplines and, when the financial crisis hit in 2008, the economies of these countries were severely impacted. Throughout 2010 and 2011, the European Central Bank employed its own Troubled Asset Releif Program (TARP) in order to stabilize the Eurozone members' economies.

In 2012, although the policies of the European Central Bank were working for many of the impacted countries, the austerity budget measures in Greece caused civil unrest. In addition, many of the Eurozone countries saw changes in leadership in 2012. These changes in leadership also brought changes in views as to how the Eurozone should address the fiscal difficulties of its member countries. For example, the new administration of France backed away from requiring IHS Global Insight / Senate Finance Committee Page 11

austerity measures from member countries, instead, proposing a "growth with discipline" approach.

Although the Great Recession ended in June 2009, the national economy was still portrayed as being in the recovery stage in 2012 rather than in the expansion stage due to the slow momentum of economic growth over the previous three years. The economy was exhibiting signs that growth could accelerate – employment was increasing; businesses were making investments, and even the housing market finally reached its trough and was turning around. However, the numerous shocks to the economy served to counteract any positive momentum these fundamentals could muster. In addition, these shocks translated into uncertainty in the minds of businesses and consumers that resulted in a desire to increase savings rather than spend.

As shown in figure one, real GDP growth was erratic throughout the recovery. The economy showed consistent growth throughout 2010, however, this growth was artificially inflated by the American Recovery and Reinvestment Act (ARRA). Once that spending expired, the economy stagnated again. In 2011, the economy was once again bolstered by the reduction in the payroll tax which helped spur consumer spending. However, as shown, that stimulus was short lived. Although real GDP growth in the third quarter did accelerate to 3.1 percent on an annualized basis, this growth was attributable to an acceleration in defense spending as well as an acceleration of inventory accumulation, both of which were not sustained in the fourth quarter. Instead, economic growth declined by 0.1 percent in the fourth quarter, with overall growth of

2.2 percent for the year.



Some of the political uncertainty was resolved with the passage of the American Taxpayer Relief Act (ATRA) which averted the fiscal cliff. However, many of the provisions that focused on businesses and their tax burdens were only extended for one year; as a result businesses had little confidence as to the status of their tax burden and their ability to plan investments into the future. The ATRA also did not resolve the issue of budget sequestration; it only delayed its implementation until March first 2013. Sequestration, which impacts \$85 billion in discretionary spending authority, is projected to decrease economic growth by a tenth of a percentage point for the whole year if it occurs.

In addition, The crisis in the Eurozone is projected to continue in 2013 with the economy of the Eurozone remaining in recession. The political views of existing governments as well as new IHS Global Insight / Senate Finance Committee Page 13

governments within the Eurozone will also have an impact on how the member economies fare. This political risk not only impacts exports of goods to the Eurozone but, the financial markets, as well. As a result of this continued uncertainty, the national economy will continue its slow pace of growth in 2013, increasing by 1.9 percent.

#### GOVERNMENT

### FISCAL POLICY

Government policies are employed in an attempt to influence the overall economy, whether it be to stimulate spending or to control inflation. Although the economy is cyclical in nature, the government tries to ensure that the economy does not expand too quickly –causing inflation to spin out of control – or to slow down too quickly –resulting in a recession. There are two mechanisms by which government intervenes in the economy – fiscal policy and monetary policy.

Fiscal policy entails directing the economy through tax policy or through government spending. When the Federal government, or state and local governments, lower taxes, more money is put into the hands of the consumers and businesses to spend as they wish.

For most of 2012, the focus was primarily on dealing with the fiscal policies of the past. The Federal government employed various forms of fiscal policies to get the economy on the road to recovery after the recession. One of these was the enactment of the reduction in the payroll tax to spur consumer spending. This tax cut, which expired at the end of 2011, was extended at the beginning of 2012 after much political wrangling. In addition, as the unemployment rate IHS Global Insight / Senate Finance Committee Page 14

remained high, emergency unemployment benefits were extended for those unemployed workers whose regular unemployment benefits had run out. Both of these provisions were only extended until the end of 2012.

As part of the agreement to increase the debt ceiling in 2011, discretionary spending was reduced and a "budget super committee" was created to identify \$1.2 trillion in spending reductions to eliminate the budget deficit. Without enactment of spending cuts by the committee, the Office of Management and Budget (OMB) would identify the spending items to be reduced. However, the committee could not agree on the spending cuts. As a result, the automatic sequestration of discretionary spending was set to occur on January 1, 2013.

These items, along with the expiration of the Bush era tax cuts at the end of the year, resulted in more political disagreements on the formation of a fiscal policy to accelerate economic growth.



As shown in figure 2, over the course of the recession, non-defense spending, which includes entitlement spending grew in both 2009 and 2010 as a result of increased spending on Social Security and healthcare as well as the employment of increased funding to support state and local government spending through the American Recovery and Reinvestment Act (ARRA). However, as the ARRA provisions expired and concerns over the budget deficit came to the forefront, non-defense spending declined in 2011.

In addition, defense spending was also declining. With the withdrawal of troops from Iraq in 2011, defense spending declined by 2.3 percent. As the operations in Afghanistan also abated, defense spending further declined by 3.1 percent in 2012.

Although the budget sequestration did not occur in January 2013, its imposition was only postponed until March. A budget sequestration in projected to occur but, only until a longer term, spending reduction package is enacted. As a result, both defense and non-defense spending are projected to decline in 2013, decreasing by 2.5 percent and 1.7 percent, respectively.

Although spending by state and local governments accounts for a larger share of GDP, its contribution to economic growth varies widely due to their resources being more limited than those at the federal level. Primarily, state and local governments cannot deficit spend like the federal government.

Although state and local governments saw revenues decline in 2009, their spending was bolstered by federal funding through ARRA. With the expiration of the ARRA provisions that temporarily boosted government spending, state and local governments were now relying on tax increases as well as spending decreases to balance their budgets.

The slow growth in the economy since the end of the recession resulted in slow growth in tax revenues for state and local governments. This, in turn, has resulted in decreased spending. State and local government spending decreased by 1.3 percent in 2012 and is projected to decline by 0.6 percent in 2013.

### **MONETARY POLICY**

Monetary policy, under the control of the Federal Reserve Board, involves the manipulation of interest rates and the money supply. One of the ways that the Fed manipulates rates is through the interest rate on Federal Funds which is the rate used when banks loan money to each other. The Fed Funds rate then becomes a basis upon which banks set their own loan rates such as mortgage rates and personal loan rates. When the economy is slow, the Fed will decrease interest rates to reduce the cost of capital in order to spur spending by consumers and businesses; thus boosting the economy. However, if the Fed thinks the economy is growing too fast and inflation is too high, it will increase interest rates to slow down spending and encourage saving.

During the recession of 2001, the Fed reduced the Federal Funds rate to one percent in order to spur economic growth. Over the course of the next seven years, the Fed gradually increased rates as the economy recovered and the economic expansion took hold.

Similarly, in the recession of 2009, inflation was not a concern for the Fed. Instead, its concern was calming investors' fears and loosening the credit markets to allow money to flow through the economy. The Federal Reserve reduced the Fed Funds rate by approximately 400 basis points since the start of the recession in 2007. With the slow economic recovery and the volatility of the financial markets, the Federal Reserve maintained the Fed Funds rate in the sub-0.25 percent range.



Another reason why the Federal Reserve has kept the Fed Funds rate low is that inflation has not been an issue. With the slowdown in the global economies, there are no inflation pressures from other countries. The slow economic recovery has also constrained inflation domestically. With continued low inflation, the Fed made a change in its policy regarding increasing interest rates. At the December meeting of the Federal Open Market Committee, the Fed stated that it would maintain interest rates at the current level until the unemployment rate fell to 6.5 percent. As a result, the Fed Funds rate is projected to stay below 0.25 percent for all of 2013.

The Fed also continued the use of quantitative easing in 2012 Quantitative easing is a monetary policy tool by which a central bank increases the money supply through the purchase of government securities or other securities from the market. The first quantitative easing program by the Federal Reserve was employed in 2008, also known as the Troubled Asset Relief Program (TARP). This program allowed the U.S. Treasury to purchase mortgage backed securities from various financial institutions across the country. By purchasing these securities, the Treasury pumped liquidity, in the form of money supply, into the marketplace as well as improved the bottom line of the financial institutions. The increased liquidity allowed financial institutions that were hesitant to give out loans the ability to make new loans to spur spending growth. Under this program, the Federal Reserve also purchased Treasury bonds to inject additional money supply into the market and to keep interest rates low.

The Federal Reserve employed another round of quantitative easing, known as QE2, over the period of November 2010 to June 2011. Under QE2, the Treasury purchased up to \$600 billion

in long term treasuries which maintained low yields on treasuries. This, in turn, decreased interest rates on consumer loans and mortgages that are tied to those yields.



In September 2011, the Fed employed "Operation Twist", which was similar to quantitative easing. The only difference was that instead of purchasing bonds directly, the Fed issued short term bonds to purchase long term bonds, essentially refunding the long term bonds into shorter term debt.

A third round of quantitative easing (QE3) was announced in November 2012 to replace Operation Twist. Under this program, the Treasury would purchase \$40 billion per month in mortgage backed securities as well as purchase long term treasuries at a rate of \$45 billion per month. However, unlike the first two rounds of quantitative easing, QE3 is open ended. That is, the Treasury will continue purchasing these securities until the economy and the labor market realize sustained improvement.

As shown in figure four, since quantitative easing was employed, interest rates have declined to historic lows. In 2012, the prime rate remained flat at 3.25 percent while the 30 year mortgage rate decreased to under 4 percent.

#### **GLOBAL ECONOMY**

Any changes in the global economy can have a significant impact on the national economy even though trade is not a major contributor to overall national economic growth, as measured by GDP. This global impact is due to the increased participation of both businesses and investors in the economies of countries around the world. In the past couple of years, various international events, such as the debt crisis in the Eurozone and the Arab Spring, created uncertainty in the economy, especially in the financial markets. The impact of these changes is reflected not only in relation to value of the dollar compared to other currencies but with the strengths or weaknesses of other national economies which primarily impacted the amount of imports and exports into and out of the United States.

Another result of economic strength in other countries is increased competition for resources. Increased prices for these resources fuels inflation. This has been evident in relation to oil prices. China, for example, has an increasingly stronger economy whose need for energy has grown significantly. That demand causes large increases in oil prices as the world supply of oil is increasingly limited.

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As shown in figure 5, the United States was not the only country to experience slow economic growth after the end of the recession. The natural disasters in March 2011 pushed Japan's economy into another recession. However, the rebuilding effort spurred economic growth in 2012. As previously stated, continued unrest in the Eurozone caused it to slip back into recession at the end of 2011 and the economy continued to decline in 2012. China, although exhibiting economic growth of over eight percent, experienced a slowdown in its economy as it faced the deflation of its own housing market bubble.

In 2013, the economies of the Eurozone and Japan are projected to continue to struggle. The Eurozone will remain in recession as it struggles with the fiscal policies of its member nations. With the absence of increased activity due to the rebuilding effort, Japan's economy is projected to stagnate, only growing by 0.4 percent. China, on the other hand, is projected to continue to exhibit strong growth, increasing by 8.2 percent over growth of 7.8 percent in 2012.



The strength of any nation's economy will have an impact not only on the demand for their domestic goods but, on the demand for other countries' goods as well. In addition, as the supply of business inputs has become more globalized, a change in business spending and production in one country can impact business production in another. As the global economy rose from the recession in 2009, the value of products and services exported out of the United States grew in 2010. However, as global economic growth slowed in both 2011 and 2012, so too did the amount of exports. This slowdown in export growth is projected to continue into 2013.



The value of a nation's currency also helps or hinders export and import growth. When the value of the currency increases, the price of domestic goods increases; making them more expensive compared to imported goods. Conversely, when the value of the currency declines, domestic goods become less expensive.

#### New York State Fiscal Year 2013-14 Economic and Revenue Review

As the volatility in the financial markets abated and global economic growth returned in 2010, especially in the emerging markets, the dollar depreciated. In addition, as the Federal Reserve employed the monetary policy of quantitative easing, it increased the U.S. money supply which, in turn, also caused the dollar to depreciate. However, as the sovereign debt crisis spread through the Eurozone in 2011, dollar denominated assets were once again in demand. In addition, long term interest rates in the US were higher than interest rates in its major trading partners increasing the demand for the dollar and causing it to appreciate.

When the value of a currency declines, that nation also becomes more attractive to foreign travelers. Not only are the goods less expensive but services, such as hotel rooms, are less expensive as well. As shown in figure 7, as the dollar depreciated, the net trade of tourism services (exports less imports) increased; more foreign travelers were visiting the United States. With the appreciation of the dollar coupled with the slowdown in other economies, tourism to the U.S. decreased in 2012.



#### FINANCIAL MARKETS

The volatility that pervaded the financial markets since the collapse of the subprime mortgage continued in 2012. The uncertainty of federal fiscal policy as well as the uncertainty in the health of the global economy served to escalate this volatility.

The stock market, as measured by the Standard and Poor's 500 Index of Common Stocks (S&P 500) began 2012 at virtually the same level as it began 2011. The spread of the debt crisis in Europe spread and the possibility of a federal government default on its bonds resulted in the market giving back the gains it had achieved in the first half of the year. The erratic economic news and the political environment surrounding the expiring tax credits and potential budget sequester all served to constrain stock market growth through 2012.



The positive signs for economic growth in 2013 will, in turn, provide for stock market growth. Aiding this growth is the resolution of the fiscal cliff and debt ceiling issues, if only temporarily. As a result, stock market growth for all of 2013 is projected to be 8.7 percent.

When the sub-prime mortgage market collapsed, the credit markets tightened up. Buyers of municipal and corporate bonds purchased only highly rated bonds; imposing high premiums on the lower rated ones. With the "flight to safety" during the credit crisis, investors increased their purchases of treasury bonds while the amount of corporate and municipal bonds being sold declined. Investors continued this "flight to safety" in 2011 as stock market volatility remained throughout the year. The Federal Reserve's policy of quantitative easing also caused the issuance of treasuries to grow exponentially, as shown in figure nine.



During the credit crisis, a bonding program, Build America Bonds, was created to allow state and local government broader access to the capital markets through the issuance of taxable bonds. In order to offset the increased debt service costs resulting from the issuance of taxable bonds, the Federal government provided a subsidy to the municipal governments equal to the interest rate differential between taxable and tax exempt bonds.

Upon expiration of the Build America Bond program in 2010, municipalities reverted to the tax exempt bond market which serves a narrower set of investors. In addition, with the slow economic growth and the housing market still in recession, local governments were faced with budget deficits as a result of declining revenues. Some local governments were then forced to reduce their spending while others were facing rating downgrades and defaults. With the narrower market access and ratings downgrades, municipal bond issuances declined in 2011.

As the interest rate environment remained low in 2012, many state and local governments reduced their debt service costs by refinancing their higher cost debt. Although municipalities were still struggling with deficits and ratings downgrades, the refinancings resulted in the growth of municipal bond issuances in 2012.

### HOUSING MARKET

Prior to the recession, as interest rates started to rise and the economy began to slow, the housing bubble began to deflate. Then, with the collapse of the subprime mortgage market in 2008, all aspects of the housing market experienced significant declines. As part of the American Recovery and Reinvestment Act of 2009, a first time homebuyer's tax credit was enacted and was in effect until the first quarter of 2010. This tax credit spurred growth in home sales, however, that growth was short lived. Once the tax credit expired, home sales declined in 2010, as shown in figure ten. In 2011, mortgage rates remained at historical lows and sales of existing homes grew, but only by two percent.



Although the growth in home sales in 2011 was a positive sign that the housing market was finally in recovery, this growth did little to decrease the homeowner vacancy rate which is the proportion of the homeowner inventory that is vacant and for sale. Only when the number of existing home sales showed consistent growth from the second quarter of 2011 through 2012 did the homeowner vacancy rate begin to decline.



Growth in housing starts remained flat in 2011 which was largely attributable to growth in the number of multi-family housing developments being built rather than single family housing. In 2011, multi-family housing starts grew by over fifty percent while single family housing starts declined by over eight percent. In 2012, housing starts rebounded, growing by 27.5 percent, although growth in mult-family housing starts was still stronger than that of single family housing starts.

As shown in figure 12, the recession not only affected homeownership but, the rental housing market as well. In 2009, the rental vacancy rates increased which, in turn, resulted in a decline in the number of multi-family housing starts. As the demand for rental housing increased in 2010, the rental vacancy rate began to fall. This, in turn, resulted in growth, albeit small growth, in multi-family housing starts.

In addition, as a result of the subprime mortgage crisis, there was increased scrutiny on the part of lenders and credit was not easily accessible. The demand for rental housing increased as those people who were willing to enter the housing market were now focusing on renting rather than home ownership. As shown, as the rental vacancy rates were declining, the number of multi-family housing starts were increasing in order to meet this new demand. This trend is projected to continue into 2013.



Even with the increased number of home sales in 2011, there was still a large inventory of homes in the marketplace. As a result of this over-supply, home prices continued to decline. With the significant increase in home sales in 2012, the inventory of homes on the market was diminished. This diminished supply as well as increased demand due to the historically low mortgage rates, home prices started to increase once again.



As the economy is projected to strengthen in 2013 and mortgage rates are projected to remain low, the demand for housing is projected to increase. Housing starts for both single family homes and multi-family developments are projected to increase as well as the number of home sales. While home prices are projected to increase in 2013, such growth will be slower than it was in 2012.

### **BUSINESS SPENDING**

Over the course of the current recovery, businesses have been hesitant to make significant expenditures or to ramp up production even though their profits were growing. During the recession, businesses went through a period of inventory decumulation since consumer demand for their goods and services declined dramatically. When the economy started to grow again, businesses found themselves with depleted inventories and, as a result, needed to ramp up production.



When economic growth started to slow down at the end of 2010, businesses slowed down their production and their inventory growth. With the volatility in the economy over the course of 2011, inventory decumulation once again returned in the third quarter. However, unlike the significant inventory decumulation over the course of 2009, this business pessimism did not last long. Businesses were realizing increased sales in the fourth quarter and, as a result, had to increase their inventories to meet the demand.

Inventories continued to increase over the course of 2012. A large part of this inventory accumulation was from the automotive industry. Due to declining wage and income growth

over the course of the recession, people postponed large purchases, such as replacing their vehicles. As the economy recovered and income growth occurred, people started purchasing again. This pent up demand for automobiles resulted in significant inventory growth. As this demand is met, inventory growth is projected to abate in 2013.

Similar to the events of the previous economic recovery, businesses were holding on to their cash and making do with their current equipment and facilities. In addition, lackluster consumer demand and tight credit markets did not provide any incentives for investment.

Equipment and software purchases by businesses comprise a majority of the investment spending due the changes in technology and the shorter useful life of equipment. Although businesses do need to maintain and renovate their facilities, capital investments in facilities have a much longer life.

Businesses needed to rebuild their inventories over the course of 2010, they were faced with the requirement to upgrade or replace their equipment and software in order to support their increased production. Combined with a fifty percent bonus depreciation incentive offered by the Federal government, this need resulted in an increase in equipment spending of almost fifteen percent.

At the end of 2010, the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act was enacted. This legislation increased the bonus depreciation amount from fifty percent to
one hundred percent for the 2011 tax year. As a result, growth in investments in equipment and software increased to approximately eleven percent.

With the reduction in the bonus depreciation to 50 percent and the possibility of the elimination of bonus depreciation as a result of the expiration of the Bush era tax cuts at the end of the year, businesses were hesitant to make additional equipment investments in 2012, resulting in slower growth of 6.9 percent.

Even though bonus deprecation was extended as part of the American Taxpayer Relief Act, it was only extended for one year. This, again, leaves businesses with an investment decision to make in 2013, take advantage of the bonus depreciation rules or postpone such investments since bonus depreciation could be extended for another year. As a result, growth in equipment investments are projected to continue to slow to 5.5 percent in 2013.





As previously stated, facilities and their associated capital improvements have a much longer useful life than equipment. Prior to the recession, when businesses were expanding, they had a need for additional facility space as well as renovations to their operations. As consumer demand for their goods and services declined and the workforce shrunk, there was diminished need for expanded facilities. Although interest rates were still low in 2010, the economy had not recovered enough to warrant additional investment in structures; resulting in continued declines in 2010.

In 2011, there was a turnaround in both residential and non-residential construction after two years of declines, growth of 2.7 percent and 1.0 percent, respectively. This growth is mainly attributable to growth in construction for the power sector and the mining and petroleum sectors.

As a consequence of the increased oil prices, the amount of drilling increased, resulting in this construction increase. All other businesses were content with the facilities they had.

Non-residential construction grew at a significantly stronger pace in 2012, growing by almost ten percent. Unlike 2011, where all the construction growth was concentrated in two business sectors, all business sectors increased their investments in their facilities in 2012, the largest growth coming from the power and communications and manufacturing sectors.

Unlike the projected slowdown in the growth of equipment and software investments, nonresidential investments are projected to decline in 2013, decreasing by 0.4 percent. This reflects an almost ten percent decline in investments by the power and communications sector offset by growth of 2.2 percent, on average, in all other sectors.

As capital investment by businesses declined in 2010, so did their investment in labor. With declining inventories, there was no need for the labor to produce these inventories. Therefore, businesses reduced their workforce. Even when the need for inventories returned, businesses, while investing in equipment, utilized their existing employees. As shown in the figure 16, employment decreased significantly in 2010 but productivity increased.

Job growth returned in 2011, increasing by 1.2 percent. Responding to historic high prices in precious metals, the mining sector realized the greatest amount of job growth, however, it only accounts for 0.6 percent of total non-farm employment. The sector with the second highest growth in employment was the professional and businesses services sector, bolstered by over IHS Global Insight / Senate Finance Committee Page 37

eight percent growth from employment services businesses which include temporary employment agencies. Growth in employment in this sector is usually a pre-cursor to stronger overall job growth.



Job growth continued into 2012, increasing by an additional 1.7 percent. Both the mining sectors and the employment services sector continued to increase employment at a rate of over seven percent. The only sector that did not realize employment growth were the publishing industries.

In 2013, job growth is projected to continue to grow at 1.5 percent. The growth in employment in the employment services sector is projected to slow to just over 6 percent. All other sectors

are projected to have their employment growth slow slightly. Even with these extra workers, productivity is also projected to continue to grow.

As the financial markets were the drivers of overall corporate profit decline in 2008, they were also a driver of corporate profit growth in 2009. The growth in the stock market and the infusion of the federal funds in the form of the TARP positively impacted their bottom lines. As the recession ended and the economy began to recover, other businesses became more profitable. In addition, since businesses were realizing increased productivity with less workers, their profits increased significantly in 2010; corporate profits increased by approximately 25 percent.

As stock market volatility ensued in 2011, corporate profits weakened. Corporate profits for the non-financial sector increased by over ten percent in 2011. However, this growth was tempered by the weakness in financial sector profits. As a result, total corporate profits grew by 2.1 percent in 2011.



Growth in corporate profits rebounded in 2012, increasing by 15.9 percent. As the financial sector was the driver for weaker corporate profits in 2011, it was now the driver of stronger corporate profits in 2012. However, corporate profits are projected to weaken in 2013, declining by 3.1 percent.

### **CONSUMER SPENDING**

The consumer is the most significant contributor to economic growth. As a result, the amount of money that he has in his pocket will drive his consumption choices. With the decline of the housing market in 2008, consumers realized large declines in their household net worth as the values of their homes declined.

As job losses mounted in 2009, both wages and personal income decreased. However, household net worth exhibited growth even though the housing market was still depressed. This increase was a result of growth in the value of a household's equity holdings. In addition, as the credit markets tightened, consumers were not increasing their household debt.



Although job losses continued to mount in 2010, wages did manage grow by two percent. Personal income fared better in 2010 due to the stock market gains that increased dividend income and growth in proprietor's income. With job growth in 2011, wages increased at a stronger pace of 3.6 percent. Besides the growth in wages, personal income benefitted from the payroll tax cut that was enacted as part of the Job Creation Act of 2010. In addition, dividend income continued to grow as well as proprietor's income.

As job growth continued in 2012, wages continued to grow at a rate of 3.2 percent However, growth in personal income outpaced wage growth, increasing by 4.7 percent. This increase in personal income growth is due to approximately \$26.4 billion in special dividends being paid in December of 2012 ahead of the new Medicare tax on investments that went into effect on January 1, 2013 and the potential expiration of the Bush era tax cuts. For the same reason, taxpayers increased their capital gains realizations in 2012 which is also a factor in the increase in personal income.

As employment growth is projected to continue in 2013, wage growth is also projected to increase. Both wages and personal income are projected to increase by 3.5 percent. The slower growth in personal income, as compared to 2012, is a result of the "spin up" of dividends and capital gains.

While income and wages are a major factor influencing consumption, the rate at which prices are increasing, also known as inflation, is a significant influence. This is especially true in relation to the prices of necessities, such as food and energy. Increases in the prices of theses goods limits the amount of money a consumer has for discretionary spending. In addition, increases in energy costs impacts the price of finished goods as businesses take the cost of energy in the production process into account when pricing their goods.



With the global recession, there was a period of deflation in 2009, as shown in figure 19. However, during this same time period, core inflation decreased but, was still positive. This difference between the two indices was due to a large decrease in oil prices which are excluded in the calculation of core inflation. As the economy began to grow in 2010, prices began to increase, thus, increasing inflation.

Figure 20 shows the relationship between the inflation rate and oil prices. As mentioned above, oil prices decreased significantly which, in turn, caused a drop in the Consumer Price Index, the measure of inflation. With the subsequent rise in oil prices during the current recovery, inflation has also risen. Although there continued to be unrest in the Middle East impacting oil production, growth in oil prices was relatively flat, resulting in a slower rate of inflation. Oil prices are projected to decline in 2013 which will slow the rate of inflation to 1.4 percent.



However, oil prices were not the only factor impacting inflation in 2012. Food prices, especially farm products, realized significant growth. This can be attributable to the impact of the weather on crops in various sections of the country. In the first quarter of 2011, the southern portion of the country, specifically Florida, experienced extremely cold weather which impacted the orange crop. In 2012, extreme drought conditions in the Mid-West had a negative impact on crops as well as livestock. Inflation in these prices is projected to slow in 2013, reducing overall inflation.

With the slow growth in the economy and increases in the prices of food and energy, businesses are hesitant to pass on the increased price of inputs into the prices of their finished goods. As shown, core inflation continued to decrease in 2010 even though the recession had ended. As

job creation returned in 2011 and increased labor costs were factored in to prices, core inflation accelerated from 1.0 percent to 1.7 percent.

Even though food prices were impacted by the weather conditions, the flat growth in oil prices enabled the overall inflation rate to decline from 3.1 percent in 2011 to 2.1 percent in 2012. In addition, as businesses started to pass along a portion of their increased costs in their prices. As a result, the core inflation rate, while increasing from 1.7 percent, was the same as the overall inflation rate.

In 2013, core inflation is projected to outpace overall inflation; increasing by 1.8 percent and 1.4 percent, respectively. This inversion is a result of the lower projected oil prices, which reduces overall inflation.

As consumers realized a precipitous drop in their household wealth as a result of job losses and declining home values, they were the ones keeping tight control over their budgets; decreasing their spending on all components of consumption in 2009.

The consumption of non-durable goods and services accounts for approximately 87 percent of all consumption expenditures; 65 percent of these consumption expenditures come from services. Services include not only personal services, restaurant meals and travel, but also include a consumer's housing expenses, utility expenses, and health care. The main components of non-durable goods are clothing, food, and fuel. As a result, growth in these components drive consumption growth.



With the enactment of the American Recovery and Reinvestment Act, the federal government tried to spur consumer spending through a variety of tax incentives. The Making Work Pay credit, along with the sales tax deduction for new vehicles, restrained the drop in consumption in 2009. In 2010, there was the return of wage growth as well as personal income growth, In addition, some of the ARRA provisions enacted in 2009 were realized in consumers' annual personal income tax returns. As a result, consumption was positively impacted in 2010.

Consumption growth accelerated in 2011 due to considerable wage growth and personal income growth. As a result of this income growth, consumers were able to release some of their pent up demand, especially for durable goods. Similar to the increase in inventories, the consumption of automobiles increased. Consumers were now willing to make the vehicle purchase that they had postponed over the course of the recession.

Although slowing in 2012, consumption still grew at 1.9 percent. The increases in income as a result of the payment of special dividends were realized too late in the year in order to have an impact on consumption.

With projected wage and income growth as well as low inflation, consumption is projected to continue to grow in 2013, increasing by 1.9 percent. As the pent up demand for vehicles wanes, growth in the consumption of durables is projected to decline. However, this decline is offset by growth in the consumption of both non-durables and services.

Figure 22 illustrates that during the course of the recession, banks were not willing to make loans to consumers. As the economy recovered, more and more financial institutions were willing to loosen their credit standards and make more loans. However, with the mortgage crisis and the reduced personal income, consumers were also not willing to take on additional debt. Even as more banks were willing to lend in 2010, demand for consumer credit was still negative.

With job growth returning in 2011 and interest rates still low, consumers became more willing to take on additional debt. Coinciding with the growth in consumption of motor vehicles, the largest increase in demand for consumer loans resulted from increased demand for automobile loans rather than credit cards.

Credit conditions continued to loosen in 2012 as financial institutions continued their willingness to make consumer loans. As in 2011, the increased demand for consumer loans was for automobile loans. Although the demand for automobile loans did recede at the end of 2012, IHS Global Insight / Senate Finance Committee Page 47

the decline in overall demand was primarily a result of the lack of consumer demand for credit cards.



### **RISKS TO THE FORECAST**

Similar to 2012, the economy of 2013 will face similar uncertainties. Although the American Taxpayer Relief Act resolved some of the fiscal cliff issues, it did not resolve all of them.

The current forecast assumes that the budget sequestration that was delayed until March first will take effect. However, the question remains as to whether the sequestration will be quickly replaced with long term, fiscal solutions or whether it will be fully implemented. While not of significant economic consequence, the sequestration will serve to limit economic growth in 2013.

In addition to the sequestration, another risk would be the absence of a federal budget as a result of the expiration of the continuing resolution. This would have a more significant economic impact than the sequestration.

The Eurozone debt crisis has yet to be completely resolved. The European Central Bank has been closely monitoring the situation in Greece and other Euro nations and has been willing to inject liquidity into the market. However, the new political administrations in a number of the member countries have reversed their position on fiscal austerity. In addition, the question still remains as to whether and/or when Greece will exit. Each bit of news, whether it be good or bad, has the result of injecting volatility into the financial markets.

If the volatility in the market continues, investors could employ a "flight to safety" and increase their purchases of U.S. Treasuries. In addition, the credit markets could tighten once again, putting downward pressure on the housing market and dampening consumer confidence.

Although a decline in oil prices has been projected, increased demand in China and reduced production by OPEC nations have already caused a spike in gasoline prices. The continued unrest in the Middle East could interrupt oil supplies could also cause a spike in oil and gasoline prices. This would result in higher than projected inflation and the Federal Reserve may be forced to increase interest rates ahead of schedule even if the unemployment targets are not met. Increases in oil prices and their impact on the costs of producing and transporting goods as well as the impact on the consumer's discretionary spending are a major concern.

# New York State Economic Outlook Calendar Year

(Dollar Figures in Billions of Dollars)

-	2012	2013	2014	2015
Gross State Product	\$1,196	\$1,241	\$1,293	\$1,349
Percent Change	3.3	3.7	4.2	4.3
Real Gross State Product	\$1,034	\$1,053	\$1,077	\$1,105
Percent Change	1.7	1.9	2.3	2.5
Nonagricultural Employment, Thousands	8,807	8,915	9,026	9,132
Percent Change	1.5	1.2	1.2	1.2
Unemployment Rate	8.6	8.3	8.0	7.6
Personal Income	\$1,015	\$1,041	\$1,093	\$1,142
Percent Change	2.0	2.6	4.9	4.5
Wages and Salaries	\$543	\$563	\$586	\$608
Percent Change	0.6	3.7	4.1	3.8
Retail Sales	\$251	\$258	\$265	\$273
Percent Change	3.6	2.9	2.9	3.0
Housing Starts, Thousands	21.1	30.7	34.7	35.0

Source: IHS Global Insight New York State Economic Forecast, February 2013

# New York State Economic Outlook Fiscal Year

# (Dollar Figures in Billions of Dollars)

-	2012	2013	2014	2015
Gross State Product	\$1,189	\$1,233	\$1,269	\$1,321
Percent Change	6.0	3.7	2.9	4.1
Real Gross State Product	\$1,077	\$1,101	\$1,120	\$1,146
Percent Change	7.3	2.2	1.7	2.4
Nonagricultural Employment, Thousands	8,582	8,672	8,807	8,933
Percent Change	0.6	1.0	1.6	1.4
Unemployment Rate	8.2	7.6	7.0	6.7
Personal Income	\$952	\$986	\$1,025	\$1,069
Percent Change	4.3	2.8	3.9	4.3
Wages and Salaries	\$528	\$540	\$563	\$587
Percent Change	3.3	2.3	4.3	4.4
Retail Sales	\$231	\$245	\$257	\$268
Percent Change	5.8	5.9	5.2	4.2
Housing Starts, Thousands	18.7	21.5	29.5	36.5

#### Source: IHS Global Insight New York State Economic Forecast, February 2013

# The New York Economy

Similar to the use of the Gross Domestic Product to measure the state of the national economy, the Gross State Product (GSP) is used to measure the state of the New York economy. Gross State Product focuses primarily on the output of the various industries within the State since products made in New York are utilized and consumed both in the state as well as other states. The output of all these industries are then combined to determine the aggregate GSP.

Most factors that impact the national economy will also impact the New York economy. The changes in some of these factors may have only a small impact on the New York economy while others will have a significant impact. For example, interruptions in oil supplies from the Middle East may result in increased drilling domestically, resulting in job and revenue growth in states such as Texas or Alaska.

With New York City's position as the financial capital, events that impact the financial markets have a significant impact on the New York economy. This was particularly apparent in 2009 as shown in figure 23. The stock market was still showing volatility and the S&P Index declined by over 22 percent. Corporate profits were also continuing to decline. As a result, the New York economy declined by 3.0 percent.



However, since the financial markets were a beneficiary of the fiscal and monetary policies employed by the Federal government in 2009 and 2010, New York's economy was able to recover at a much stronger pace than the nation. In addition, even though the financial services industry was decreasing employment, it was able to increase the productivity of the remaining employees. Another factor that contributed to this stronger growth was the fact that the New York housing market as a whole was not as adversely impacted by the housing market decline as other parts of the country.

Although the financial markets were volatile due to the Eurozone debt crisis and other economic news in 2011, the stock market increased by over eleven percent.

However, in August and September, Hurricane Irene and Tropical Storm Lee caused significant damage to the Eastern and Central portions of the state, disrupting economic production in those areas. This caused economic growth in New York to lag national growth.

The political uncertainty at the national level as well as the uncertainty in the Eurozone continued to cause volatility in the financial markets in 2012. At the end of October, Hurricane Sandy caused significant damage to Long Island, New York City, and the downstate area. This storm destroyed homes and businesses, shut down transit systems, and shut down the stock market for two days. Growth in the New York state economy was 1.7 percent, slower than national growth of 2.2 percent.

With the continued economic recovery and the rebuilding effort from Hurricane Sandy, the New York economy is projected to grow by 1.9 percent in 2013, equal to the economic growth projected for the national level.

## EMPLOYMENT

Although employment declined in 2009, decreasing by 2.7 percent, the decline was not as severe as the 4.4 percent decline in national employment. Employment in New York also fared slightly better than the nation as a whole in 2010. New York employment remained relatively unchanged while national employment decreased by 0.7 percent. As employment recovered in 2011, job growth also returned to New York, growing by 1.3 percent, slightly higher than the national job growth of 1.2 percent.

However, job growth in New York was outpaced by the national job growth in 2012, increasing by 1.5 percent as compared to national job growth of 1.7 percent. Similarly in 2013, job growth is projected to once again lag the nation, 1.2 percent and 1.5 percent, respectively.



Profits earned by Wall Street firms, as reported by the Securities Industry and Financial Markets Association, realized significant growth during the economic expansion of the last decade. In addition, all of the jobs that had been lost in the financial services industry during the recession of 2001 were recouped. However, as the economy began to slow in 2007, so did the profits and employment growth of these firms. As the credit crisis hit in 2008, the financial institutions began realizing significant losses. With these revenue losses, employment in the financial activities sector started to decline, declining by 1.5 percent in 2008. In the next two years, the industry continued shedding jobs, with declines of 6.9 percent and 0.9 percent, respectively.

In 2011, the financial activities industry was growing and jobs were being created. However, this job creation was realized primarily in the first half of the year. As market volatility continued in the second half of the year and the profits of Wall Street firms diminished, hiring was put on hold.

Even though the profits of the Wall Street firms increased significantly in 2012, this did not translate into a significant increase in jobs. With the continued volatility in the financial markets, the financial services industry increased jobs by 1.4 percent. In 2013, job growth in this industry is to remain slow, growing by only 1.0 percent.

The other industry that was hit hard by the economic downturn was the construction industry. With the decline in the housing market and tight credit conditions, the construction industry started to realize a significant declines in employment, decreasing by almost ten percent. As housing starts began to grow in 2011, especially multi-family housing starts, construction job losses began to subside, decreasing by only 0.2 percent. However, this abatement was short lived, as the number of construction jobs declined by 2.4 percent in 2012.

Due to the rebuilding efforts to repair the damage from Hurricane Sandy, construction jobs will be in demand in 2013. As a result, job growth of 0.6 percent is projected for the construction industry.



### WAGES

The payment of year end bonuses by the financial services industry plays an important part in New York's wage and income growth. Due to the timing of the payment of Wall Street bonuses which are usually paid in the first quarter of the succeeding year, wage growth in New York is influenced by the performance of the industry in the previous year. The financial markets recorded large revenue losses in 2008 and bonuses that year declined by forty-seven percent, however, wages did not exhibit large declines until 2009 due to the timing of the bonus payments. Similarly, wage growth in 2010 reflected not only the economic recovery but also the increase in bonuses from 2009.

Due to the public and political backlash over the payment of large bonuses during the financial market crisis and the subsequent bailout by the Federal government, there was a change in the

method by which bonuses were paid. A larger percentage of bonus compensation is being paid with stock options by which the recipient must hold the stock for a specified number of years to exercise the options. As a result, wage growth is negatively impacted by these changes, increasing by 3.8 percent in 2011.

Along with the change in the payment of bonuses, the amount of bonuses paid for 2011 decreased by thirty percent. Even with this decline, wages grew by 0.6 percent in 2012. Although part of this increase is due to increased employment over the course of the year, this increase is also the result of bonuses for the 2012 calendar year being paid in December to avoid Federal tax increases.

Although wages only grew by 0.6 percent in 2012, personal income grew by 2.0 percent. While growth in personal income tends to closely coincide with the wage growth, the disparity in 2012 is due to the payment of special dividends in December as well as increased capital gains realizations. These actions were done to avoid the new Medicare tax on investment income that began in January 2013 as well as to avoid any tax increases resulting from the expiration of the Bush era tax cuts.

Similarly, wage growth in 2013 is projected to be 3.7 percent while personal income growth is only projected to be 2.6 percent. This slower growth in personal income reflects the absence of the tax avoidance "spin up" in dividends into 2012 from 2013.



### HOUSING MARKET

Although the bursting of the housing market bubble did affect New York, its impact was less severe than in other parts of the nation. As the subprime mortgage crisis unfolded in 2008, both home sales and housing starts throughout the nation realized significant declines. In New York, however, housing starts increased even though existing home sales were declining. This paradox was a result of an increase in the number of multi-family housing starts which more than offset the decline in single family housing starts.

In 2009, as the full impact of the recession was felt, both single family and multi-family housing starts declined. In addition, while the first time homebuyer's tax credit boosted existing home sales throughout the nation, it had a less positive impact in New York. Home sales continued to decline in 2009 and 2010.

Similar to the rebound in housing starts at the national level, housing starts were exhibiting growth in 2010. Although a portion of the national growth was attributable to growth in multi-family housing starts, New York's growth in 2010 was primarily concentrated in the single family sector.

Even though the economy was growing in 2011, the growth was slow and there was a significant amount of doubt. There was increased demand for housing but, that demand was focused in the rental market. Despite low mortgage rates, New York residents were opting to rent rather than buy. As a result, multi-family housing starts increased by 75 percent while single family housing starts and existing home sales continued to decline.

The improving economy in 2012 allowed growth in both existing home sales and single family housing starts in New York. After the significant growth in multi-family housing starts in 2011, the demand for more rental units was sated in 2012. Although multi-family housing was still being built, the number of housing starts was slightly lower than in 2011.

All sectors of the housing market in New York are projected to experience double digit growth in 2013. The most significant growth being realized in multi-family housing starts, with growth of 55 percent.



Average home prices, on the other hand, did not decline as significantly as they did at the national level. While the average, existing home price at the national level declined by close to ten percent in 2009, the average price in New York was relatively flat, actually increasing by 0.8 percent. Although the economy improved in 2010, housing prices in New York did not change significantly, increasing by 1.7 percent.

As the economy slowed in 2011, the federal tax incentives for first time homebuyers expired, and the demand for housing focused on the rental market. Home prices declined once more, decreasing by 1.5 percent. For 2012, however, home prices did not follow the national trend, declining by 1.4 percent where home prices increased by over 5 percent nationally.



In 2013, growth in average home prices are projected to grow at approximately the same rate as home prices at the national level. Home prices in New York are projected to increase by 0.3 percent while nationally, home prices are projected to increase by 0.8 percent.

### CONSUMPTION

Consumption, as a component of the Gross Domestic Product, is comprised of the consumption of goods as well as services, including housing, health care, and utilities. While not a perfect proxy for consumption at the national level, the change in the amount of retail sales in New York reflects how the changes in the economy have impacted the consumer's spending behavior. Similar to consumption growth at the national level, retail sales rebounded in 2010 as both wages and personal income grew. These sales also benefitted from the large increase in financial sector bonuses in the first quarter of the year which helped boost overall disposable income of consumers.

As the global economy grew in 2010 and the dollar depreciated, foreign travelers realized greater buying power in relation to the cheaper U.S. dollar. Tourism spending increased over five percent at the national level. As New York is a top travel destination, this growth in tourism spending translated into retail sales growth in New York as well.



In 2011, personal income and wage growth slowed which also reduced disposable income. Even though the global economy was also showing signs of slowing, the dollar was still depreciating and tourism grew, albeit at a slower pace than in 2010. As a result, the growth in retail sales slowed slightly, decreasing from 5.4 percent in 2010 to 4.1 percent.

The significant slowdown in wages and personal income in 2012 is due to the decline in financial industry bonuses for 2011. Moreover, the growth in retail sales slowed to 1.8 percent. With the slowdown in the global economy and the appreciation of the dollar, tourism also became a drag on retail sales.

In 2013, retail sales are projected to maintain approximately the same rate of growth as 2012, growing by 1.9 percent. This growth mirrors consumption growth at the national level as the demand for durable goods, especially automobiles is satisfied, and growth primarily results from increased sales of non-durable goods and services.

# **Revenue Outlook**

The New York State Senate Finance Committee generates its revenue estimates using IHS Global Insight's forecasts of national and state economic growth. The economic data is utilized in the New York State Tax Revenue and Economy Model (NYSTREM) – an econometric model developed and operated by IHS Global Insight – to generate the Committee's independent revenue estimates. As summarized in the Appendix of this report, NYSTREM is designed to capture historical and the latest forecast information on the US economy, the New York State economy, and New York State tax revenues and use that information to generate a forecast for each State tax revenue stream.



Using the NYSTREM model, the Senate Finance Committee expects gross General Fund tax collections in SFY 2012-13, excluding the STAR and debt service funds, to increase by 3.2

percent to \$56.5 billion. On an All Funds basis, gross collections are expected to increase by 2.6 percent to \$66 billion in SFY 2012-13. These increases are primarily the result of the continued economic recovery as well as increased collections due to the payment of special dividends and Wall Street bonuses in December. A portion of this increase is offset by the sunset and return of deferred business credits.



In SFY 2013-14, the Senate Finance Committee projects that General Fund tax collections, excluding special revenue transactions, will increase by 5.1 percent to \$59.3 billion. All Funds collections will increase by 5.0 percent to \$69.3 billion. This increase reflects the continued growth in the economy.



# **Personal Income Tax**

Personal income tax collections account for over half of all New York tax collections and over two thirds of General Fund tax collections (net of reserves). The personal income tax is imposed on all types of income a person may receive (e.g. wages, interest income, dividends, and capital gains). In addition, the personal income tax is imposed on the income of New York's small businesses, such as sole proprietorships, partnerships, and limited liability companies. This income is subsequently offset by certain deductions as enumerated in either the Internal Revenue Code or the New York State Tax Law. For SFY 2012-13, total General Fund personal income tax collections, net of \$13.3 billion in reserve transactions, are estimated to increase by 3.8 percent. This increase reflects wage growth, inclusive of growth in bonuses paid to the financial services industry, as well as the payment of special dividends in December. A portion of this increase is offset by the reductions in the personal income tax rates that were enacted in December 2011.

In SFY 2013-14, total personal income tax collections, net of \$14.0 billion in deposits to the reserve funds, are projected to increase by 5.8 percent to \$42.6 billion. This increase is a result of the projected growth in the economy as well as increased collections in final returns and extension payments due to increased capital gains realizations in 2012.



## **PIT Components**

The withholding tax and estimated payments are methods by which the taxpayer can equalize his personal income tax payments over the course of the tax year as opposed to being liable for one, lump sum payment. When a person receives income, primarily wages, the appropriate tax is withheld and remitted to the State at the time the income is received. Withholding tax collections in the current fiscal year are estimated to increase by 2.1 percent to \$31.8 billion.

Although wages showed modest growth in 2012, the growth in withholding is due to a small increase in Wall Street bonuses for 2012 partially offset by the impact of the tax cuts enacted at the end of December 2011. Withholding collections in the fourth quarter of the fiscal year historically have accounted for over thirty percent of total withholding for the year. This is due to the payment of bonuses by the financial services industry for their performance in the previous calendar year. In addition, the compensation structure of financial services employees has changed since the public backlash over bonuses being paid to financial companies who received government support through the TARP. Many businesses in the industry have changed the method by which bonus compensation is paid by either: paying bonuses in the form of stock options by which the recipient must hold the stock for a specified number of years to exercise the options or incorporating into wages what they would have paid their employees in bonuses.

In December 2011, the personal income was changed to restructure the income tax brackets to provide reductions in tax rates to middle class taxpayers and to reduce the tax rates that were imposed in 2009. Although the new tax rates took effect on January 1, 2012 which impacted withholding collections in the fourth quarter of SFY 2011-12. Withholding collections in the first three quarters of the current fiscal year were also impacted.

Withholding collections in SFY 2013-14 are projected to increase by 5.1 percent resulting from the projected increase in employment and wage growth.

Another method by which the State collects the personal income tax throughout the tax year is through estimated payments. These payments are made when a taxpayer does not pay the income tax through withholding, such as a self employed individual, and/or has a significant amount of non-wage income not subject to withholding but subject to the personal income tax. These payments are made quarterly throughout the fiscal year. These collections are the most volatile portion of the personal income tax due to the fact that a taxpayer must "forecast" his tax liability for the year.

Estimated tax payments are also made when a taxpayer requests an extension for the submission of his annual return. Upon the request of the extension, the taxpayer estimates what his final tax liability will be for the previous tax year and remits the estimated tax, net of any withholding or previous estimated tax payments.

The most common form of income that is paid through estimated tax payments is capital gains, which are incurred through the sale of an asset. Most people associate capital gains with the stock market. However, as a result of the significant growth in the housing market, the real estate market had been a major contributor to capital gains realizations during the economic expansion. As the housing market declined, there has been less speculation in real estate by investors which decreased its contribution to capital gains realizations.
Another contributor to the strength or weakness of estimated payment growth is proprietor's income. This type of income includes all the self-employed businesses who earn their money through their business profits and not through the traditional withholding of wages.

Estimated tax payments are projected to be 4.9 percent higher in SFY 2012-13; an increase of approximately \$568 million. This growth reflects an increase in the amount of estimated payments paid in January for the fourth quarter of 2012 due to the payment of special dividends at the end of December in order to avoid federal tax increases that were going into effect in January 2013. In SFY 2013-14, estimated payments are projected to increase by 6.4 percent, to \$13.0 billion. This increase reflects growth in estimated payments as a result of increased capital gains realizations and increased dividend payments in 2012. This increase also reflects growth in proprietors' income in 2013.

The personal income tax is also collected through the annual returns taxpayers must file. The annual return is essentially a reconciliation of a taxpayer's taxable income (gross income less deductions) and taxes paid through withholding or estimated payments throughout the preceding calendar year. As such, additional tax liability due or refunds are considered the "settlement" of a taxpayer's personal income tax. Payments made through the filing of annual returns are estimated to increase by 3.3 percent in SFY 2012-13. Since final return payments are based on a taxpayer's income for the previous calendar year, this increase is primarily the result of strong personal income growth in 2011. In SFY 2013-14, collections from final returns are projected to increase by 4.9 percent, to \$2.3 billion. This increase is a result of the increased personal

income growth in 2011 due to increased capital gains partially offset by the decrease in personal income tax rates that were enacted at the end of 2011.

The amount of refunds to be paid to taxpayers is estimated to be 1.7 percent lower in SFY 2012-13. The decrease in refunds in SFY 2012-13 is attributable to personal income growth in 2011 partially offset by an increase in refunds claimed under amended returns for prior years.

The amount of refunds paid in the final quarter of the fiscal year is constrained in order to maintain cash flow between fiscal years. Due to the advent of electronic filing, there are a larger number of refunds being claimed in the January to March period. In order to ensure that taxpayers receive their refunds in a timely manner, the amount of refunds to be issued had been capped at \$1.75 billion prior to SFY 2009-10. To deal with a cash flow crisis in SFY 2009-10, the cap on refunds paid in the fourth quarter was reduced to \$1.25 billion. The amount of refunds paid in the fourth quarter of SFY 2010-11 was reinstated at the \$1.75 billion level.

For SFY 2013-14, refunds are projected to increase by 2.9 percent. This increase reflects the impact of the reduced tax rates partially offset by the growth in personal income in 2012.

Lastly, personal income tax collections are composed of assessments imposed upon taxpayers as a result of the audit process and filing fees imposed on limited liability companies. Assessments not only consist of any overdue taxes but the interest and penalties imposed upon such liability. Other collections are estimated to increase by 6.0 percent to \$1.15 billion in SFY 2012-13. In SFY 2013-14, other payments are projected to continue to increase by 3.1 percent, to \$1.19 billion.

A portion of income tax collections are deposited to a special revenue fund and a debt service fund. The School TAx Relief (STAR) reserve is a special revenue fund that receives a portion of personal income tax collections to reimburse school districts for the reduction in their property tax collections as a result of the STAR program.

The Revenue Bond Tax Fund (RBTF) is a debt service fund into which twenty-five percent of personal income tax receipts (net of refunds and the STAR deposit) are deposited. This fund is used to pay the debt service on the State's PIT revenue bonds. Any funds in excess of the required debt service payments are transferred back to the General Fund. Deposits to the RBTF are estimated to grow by 3.8 percent in SFY 2012-13. This increase is reflective of the increase in personal income tax collections during the year. Deposits into the RBTF are projected to be 5.8 percent higher in SFY 2013-14. This increase is due to higher projected personal income tax receipts as a result of personal income and wage growth.

## **User Taxes and Fees**

User taxes, also known as consumption taxes, are what their name implies - taxes on the use or consumption of different items in the State. These taxes consist of the sales and use tax, the auto rental tax, the cigarette tax, the motor fuel tax, alcoholic beverage taxes, the highway use tax and the MTA taxicab surcharge. Some of these taxes are exclusively deposited to the General Fund; IHS Global Insight / Senate Finance Committee Page 73

some are deposited only to special revenue funds; while others are deposited to a combination of funds.



Sales and use tax collections comprise a large portion of the tax collections in this category. Receipts from this tax are deposited into the General Fund, a Special Revenue fund (the Metropolitan Transportation Operating Account), and a debt service fund (the Local Government Assistance Tax Fund). In SFY 2012-13, General Fund receipts are estimated to increase by 0.8 percent, to \$8.41 billion. On an All Funds basis, sales and use tax collections are estimated to increase by 0.9 percent to \$12.0 billion in SFY 2012-13. Both the increase in General Fund and All Funds collections reflect growth in consumption as well as income growth slightly offset by the reinstatement of the sales tax exemption on clothing at \$110 per item of clothing in April 2012.

In SFY 2013-14, General Fund receipts are projected to increase by 3.9 percent to \$8.74 billion. All Funds sales and use tax receipts are projected to increase by 4.1 percent. Both the increase in General Fund and All Funds collections reflect the projected consumption and income growth for 2013 as well as the impact of the rebuilding efforts from Hurricane Sandy.

Receipts from the cigarette tax are deposited to the General Fund and the HCRA funds while receipts from the tobacco tax are deposited solely to the General Fund. General Fund collections for cigarette and tobacco taxes in SFY 2012-13 are estimated to decrease by 7.1 percent reflecting further decline in taxable sales due to bootlegging and sales on Native American reservations. All Funds collections for SFY 2012-13 are estimated to decrease by 5.4 percent.



In 2011, the State won their court case against the Native American retailers allowing the prior approval system to be substituted for the former coupon system of tax collection. This prior approval system allows taxes on cigarettes that are destined for sale to New Yorkers to be collected prior to the cigarettes arriving on the reservation. This new enforcement tool along with a decision by the Federal Postal Service to stop shipping cigarettes had a short-term positive effect on cigarette tax revenues. However, the Native American reservations started manufacturing their own cigarettes which has made enforcement more difficult.

In SFY 2013-14, General Fund cigarette and tobacco tax collections are projected to continue to decline by 1.6 percent. This decrease is due to the continuing enforcement problems with Native American manufactured cigarettes and the new calculation of the tax on cigars resulting from a lawsuit by tobacco wholesalers which the State lost. All Funds cigarette and tobacco tax collections are projected to decrease by 2.8 percent in SFY 2013-14.

The only other user tax that is deposited to the General Fund is the Alcoholic Beverage Tax which is estimated to increase by 2.0 percent to \$243 million in SFY 2012-13. In SFY 2013-14, these tax collections are projected to increase by 0.8 percent, increasing to \$245 million.

All Funds collections of the remaining user taxes are estimated to increase by 0.4 percent to \$828 million in SFY 2012-13. For SFY 2013-14, collections from these other taxes are projected to increase by 2.8 percent, increasing to \$851 million.

## **Business Taxes**

Business taxes in New York are imposed on various aspects of a business' income. The corporate franchise tax and the bank tax are imposed on a business' entire net income; the corporate utility tax is imposed on the gross receipts of the business; and the insurance tax is imposed on premiums. The petroleum business tax is imposed on the gross receipts from the sale of various petroleum products by the business. However, any increase/decrease in liability for the petroleum business tax is pegged to an inflation index.



General Fund business tax collections are estimated to increase by 5.0 percent to \$6.1 billion in SFY 2012-13. This increase is due to strong corporate profit growth offset by the reinstatement of tax credits that were deferred in the prior three years. On an All Funds basis, business taxes are estimated to increase by 3.8 percent to \$8.2 billion. This increase is due to the factors enumerated above as well as an increase in collections from the petroleum business tax as a result of the five percent indexing increase in the tax rate which occurred in January 2013. IHS Global Insight / Senate Finance Committee Page 77

General Fund and All Funds business taxes in SFY 2013-14 are projected to increase by 1.8 percent to \$6.16 billion and by 2.3 percent to \$8.36 billion, respectively. This increase reflects a decline in corporate profits offset by an increase in audit receipts, and a projected 3.0 percent increase in the petroleum business tax rate.

# **Other Taxes**

Other taxes consist of the estate tax, the real estate transfer tax, the pari-mutuel tax, the boxing and wrestling exhibitions tax and the MTA payroll tax. Both the real estate transfer tax and the MTA payroll tax are deposited solely to special revenue funds while the remainder of the taxes are deposited solely to the General Fund.



General Fund receipts of these taxes are estimated to decrease by 2.1 percent to \$1.07 billion in SFY 2012-13. This decrease is primarily due to smaller growth in household net worth as well as the reduction in the number of super large estates settled in the current fiscal-year. In SFY 2013-14, General Fund receipts are projected to increase by 10.0 percent to \$1.18 billion; reflecting the continued growth in the housing market and increased household wealth.

All Funds collections of other taxes are estimated to decrease by 3.7 percent to \$2.97 billion in SFY 2012-13 and are projected to increase by 11.4 percent to \$3.31 billion in SFY 2013-14. The decrease in the current fiscal year is attributable to the December 2011 legislation that reduced the MTA payroll tax rate on small businesses and exempted all schools. The decrease from the MTA payroll tax reduction is offset by increased collections from the real estate transfer tax due to increased capital gains realizations from the sale of property to avoid the tax increases effective in January. The increase in collections in SFY 2013-14 is due to increased collections from the MTA payroll tax resulting from projected wage growth and growth in the housing market which increases real estate transfer tax collections.

# APPENDIX

### THE NEW YORK STATE TAX REVENUE AND ECONOMY MODEL

#### **Technical Characteristics**

This report represents a continuation of the long-standing relationship between the Senate Finance Committee and IHS Global Insight. Prior to 1995, IHS Global Insight (formerly WEFA) produced both the economic and revenue forecasts and issued a final report to the Senate Finance Committee. Under a relationship now in its tenth year, IHS Global Insight continues to produce the economic and tax revenue forecasts using the New York State Tax and Revenue Model (NYSTREM) and serves in an advisory capacity to the Senate Finance Committee in the development of revenue forecasts.

The New York State Tax Revenue and Economy Model (NYSTREM) was developed for the New York State Senate by IHS Global Insight to provide forecasts of quarterly tax revenues, by tax category, on a timely basis with the greatest accuracy possible. The model captures the latest historical and forecast information of the U.S. economy, the New York State economy, and New York State tax revenues.

The model and forecasting procedures have the following characteristics and considerations:

• the model is based on economic theory and tax revenue accounting relationships;

- tax variables are first seasonally adjusted to obtain consistency with other seasonally adjusted national and New York State data in modeling and forecasting processes, and are transformed back into non-seasonally adjusted variables to reflect the seasonality of tax collections;
- the New York State economy part of the model belongs to the system of IHS Global Insight's Quarterly State Econometric Model. This system is composed of 51 state and D.C. models, which is further linked to IHS Global Insight's national social and economic forecasting system;
- all of the expertise of the IHS Global Insight Regional Economics Group is embedded in the modeling and forecasting processes;
- the Senate Finance Committee has access to the latest historical data and IHS Global Insight's forecast of the U. S. economy each month; and
- NYSTREM is implemented in AREMOS, IHS Global Insight's proprietary, state-of-theart, econometric, PC-based software, providing the New York Senate Finance Committee with the ability to carry out simulations of the model as needed.

Equations in the model were estimated with the most appropriate methods that econometrics theory suggests based on the availability and characteristics of the data. Because state tax revenue is determined by the state, as well as the national economy, many U.S. and New York State economic and social variables must be used to provide an explanation of New York State tax revenue. Therefore, besides forecasting New York State's tax revenue, NYSTREM also forecasts the State's following variables:

- 2-digit manufacturing (26 components) and 1-digit non-manufacturing employment (29 components);
- 13 components of real income;
- 15 components of nominal income;
- 25 components of population by age;
- 1 component of net migration by age;
- 8 components of household by age and sex of head;
- 2 components of retail sales;
- housing starts, sales and prices;
- passenger motor vehicle registration;
- pari-mutuel racing attendance;
- total retail sales; and
- alcoholic beverage sales volume.

IHS Global Insight needs to process hundreds of endogenous and exogenous data series for estimating equations in the model and producing the forecasts.