An era of economic recovery amid high risk

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MASSACHUSETTS’ ECONOMIC RECOVERY HAS EXPERIENCED TEN CONSECUTIVE QUARTERS OF INCREASING GROSS STATE PRODUCT AND A STEADY DROP IN ITS UNEMPLOYMENT RATE. IN SPITE OF THESE GAINS, THE BAY STATE SAW A SIGNIFICANT SLOWDOWN LAST YEAR AND FACES RISKS AHEAD FROM FEDERAL BUDGET CUTS, FRAGILE EURO ZONE ECONOMIES, SLOWER ASIAN ECONOMIC GROWTH, AND INTERNATIONAL CONFLICTS.

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Introduction
Following a rapid recovery from the recession in 2010, the Massachusetts economy experienced a significant slowdown last year. Faster-than-national growth in 2010 continued in 2011, but only just. Overall, national Gross Domestic Product (GDP) grew by 1.6 percent in 2011, whereas the state grew by 1.8 percent. While the state’s unemployment rate remained well below the national rate, employment grew very slowly during the year. House prices and construction have both stabilized, albeit at considerably below prerecession levels. The state now seems to be matching a lackluster national growth pattern.

This analysis is clouded by recent major, and downward, payroll employment data revisions for the state. While it is straightforward to incorporate revisions into our analysis, there continues to be uncertainty regarding the veracity of the revisions. Only adding to the ambiguity, the recent release of “benchmarking” data suggests that much or all of the downward revision will be reversed when the benchmarking process is complete.1

This growth slowdown has been taking place in a national and global setting that is fraught with risks, virtually all of them on the downside. Domestically, the federal government budget is under great pressure. With the failure of the congressional supercommittee to agree on a better than $1 trillion budget deficit cut over the next decade, the resulting budget sequestration will bring draconian cuts to budget categories that are of great impact on the state economy.
Globally, the sovereign debt and banking crisis in the Euro Zone economies, which could result in a European financial crisis and a renewed European recession, threatens to transmit both those events across the Atlantic to the United States and to Massachusetts. China, an increasingly important trading partner for the state, is experiencing an economic slowdown and some financial sector problems as well, and all of Asia is undergoing an economic slowdown. Europe and Asia have become increasingly important trading partners for the state. A slowdown in their economies will have damaging impacts on our own. And now, the stronger possibility of an Israeli attack on Iran is fueling added political and economic uncertainty.

Our Current Condition
While we have reservations about the extent to which these revised employment data are accurately describing current and historical economic conditions, the economic analysis that follows necessarily relies in important ways on the “official” data. Not only are state employment data analyzed in their own right, but they are also one of the components of our gross state product estimates. It is largely the magnitudes of state economic performance that we believe are different from what the official data show. The broad patterns, especially comparative patterns between the state and the nation, as well as the major forces influencing our economy, are described here as we believe them to be. It is our judgment that the data revisions (and therefore the data reported here) have been revised downward too far, and that when the dust settles recent state economic performance will be seen as stronger, especially during 2011, than current data describe.

Massachusetts’ gross state product, the most comprehensive measure of economic activity, has been growing, though somewhat erratically recently, since the second quarter of 2009. In all but two of the quarters, the state exhibited faster growth than the nation, though one of those quarters was the fourth quarter of 2011. Growth slowed considerably during 2011.

During this period there was a steady drop in the unemployment rate as well as initial claims for unemployment compensation. In addition, the state experienced a
consistently lower unemployment rate than the nation as a whole. This contrasts with past recessions, during which Massachusetts customarily suffered from higher unemployment rates and a longer recovery time than for the nation. This has held true for the state, even though the size of the labor force has been fairly steady through the recession and up to the present.

The reason for this altered pattern can be found in the structure of national and global demand during the recovery. Unlike many past national recoveries, which have been led by housing and durable product consumption as well as inventory replenishment, this one has been driven by business demand for the types of products arising from the state’s innovation economy. This innovation economy has been a major growth driver for the Commonwealth in recent decades and during the current recovery. Massachusetts is home to world-class research universities and other institutions that are a magnet for public and private investment. These institutions have helped the Bay State to incubate and grow a wide variety of technology and knowledge-intensive enterprises in diverse areas.

These include information technology, life sciences, and a wide variety of advanced manufacturing sectors that contribute to and benefit from a robust industrial and economic ecosystem that has made Massachusetts a world leader in many advanced technology fields.

The Bay State’s knowledge-intensive industries have been the recipients of substantial investment and the beneficiaries of growing demand for their productivity-enhancing products and services. This has been largely responsible for the Commonwealth’s growth premium of late. The firms and workers most directly benefitting from this growth are largely in eastern Massachusetts, primarily in the Greater Boston region.

In the state, these sectors experienced a significant turnaround and recent growth. This growth is qualified because these sectors have expanded without making large additions to their workforce. These are high value-added sectors and add high value per employee as well. They are not, however, especially elastic in adding jobs as value-added increases. In other words, the increase in value added in these sectors does not necessarily lead to increases in employment.

**Whither the Information Sector?**

A reasonable proxy for and important component of the economic activity in the state’s high-technology sector is dollars invested in the Information Processing and Equipment and Software sector at the national level. As the accompanying graphic illustrates, after a precipitous drop in investment in this sector (and in the narrower Software sector) at the end of 2008 and into 2009, the sector recovered toward the end of 2009, and then was prominent in the state’s economic recovery. Growth in the sector, however, has been erratic. In the larger information-processing equipment and software sector, there was considerable variance in investment spending during 2011, even turning negative in the first quarter of the year and approaching zero growth during the third quarter. This pattern of investment spending may well explain the recent slowdown in state economic growth.

**The Threat from Europe and Asia**

The Euro Zone crisis was triggered by the financial crisis in the United States, as well as current account imbalances in troubled Euro Zone countries. The focal point has become the sovereign debt of the peripheral Euro Zone members, including at first Ireland and Greece, and more recently Italy, Spain, and even Belgium and France. Lenders have sold sovereign debt, and been reluctant to buy new debt, lowering bond prices and raising interest rates to, at times, unsustainable levels for the governments of these countries. Recent actions by the European Central Bank have reduced pressure on these interest rates, but the crisis is far from resolved. At the very least, the European Union countries are entering a period of slow growth at best, and more likely a renewed recessionary contraction. At worst, a full-blown financial emergency could ensue, which could even lead to some countries leaving the Euro Zone. Such a possibility was unthinkable until recently, but is now widely being discussed.

Events across the Atlantic can affect the nation and the Bay State in a variety of ways. Most obviously, the Euro Zone, and the larger European Union are major trading partners for Massachusetts. In 2011, the Euro Zone countries purchased nearly 25 percent of Massachusetts’ exports. When the non-Euro European Union countries

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**Investment in Information Processing Equipment & Software Growth at Annual Rates, U.S.**

(Nominal SA Dollars)

![Graph](source: U.S. Bureau of Economic Analysis, National Income and Product Accounts, Table 5.3.5)
are added in, Europe accounts for 36 percent of the state’s exports. Canada, the state’s largest single trading partner, accounts for 13 percent of Bay State exports. A European recession, or a full-blown crisis, would deal a serious blow to the very sectors of the state’s economy that have led us out of the recession. Even a decline in the exchange value of the Euro relative to the dollar, which is ongoing as this is written, would damage the state’s export volume. The affected industries are high value adding, pay high salaries, and account for approximately 20 percent of the state’s jobs. The state’s primary export sectors include the vital high-technology industries. At the top of the list are instruments and various kinds of machinery, including computer equipment. Plastics and pharmaceuticals are also important. A serious decline in Massachusetts exports would be transformed quickly into substantial job losses.

In addition to the possible decline of export markets, the state could suffer from a transmission of a Euro Zone crisis through the financial channel. In the event that the Euro Zone enters a genuine financial crisis, the effects would negatively affect financial markets across the globe. The result would be markedly lower stock prices, which would affect the balance sheets of businesses and households. This would result in a reduction of both durable goods purchases and household consumption — especially on housing, which is already in the doldrums. Business investment in plant, equipment, and hiring would also plummet.

Difficulties among the state’s export partners are not limited to Europe. Asia, which ranks just behind the European Union countries as buyers of the state’s products, is experiencing its own brand of trouble. China in particular is experiencing a slowdown and may be in the later stages of a property bubble. In the very least, Asia in the near term faces a slowdown in growth. In addition, there is continuing pressure on the Chinese government to allow the Yuan to appreciate on international exchange markets. This would lead to a rise in the price of Massachusetts exports in China.

The Real Estate Industry
While the state avoided the catastrophic decline in house construction experienced in other states, housing has created a drag on our recovery. From their peak in 2006, housing starts in the state declined until the beginning of 2008. Since then, they’ve continued to stagnate.

An important part of the story is the pattern of price change for repeat house sales, as compiled in the Standard

Massachusetts Housing Starts Quarterly, SA, 2006 – Q3 2011
and Poors Case-Shiller Home Price Index. The graph on page eight shows the pattern of indexed house prices for Boston, the nation and for the sake of comparison, Las Vegas, Nevada (probably the hardest hit city in terms of house prices and housing construction). Note that Boston’s prices have experienced a more modest decline than either the nation or Las Vegas. Even so, at the moment, there is little evidence that prices are poised to turn around.

Likewise, data from the National Association of Realtors show a stronger commercial real estate market in Massachusetts than in other parts of the country. Available office space for lease in the Boston area is below the national average at 14.7 to 16.7 percent. This is indicative of more businesses wanting space in the city and of the potential need for more commercial construction to follow. Retail space is tight with a 6.9 percent vacancy rate, approximately half the national average. The apartment rental market — multifamily housing — is especially tight in the Boston area, with vacancy rates at 3.9 percent. Multifamily vacancy rates below 5 percent are considered a landlord’s market, with high demand leading to higher rents.

The only exception to the stronger demand for commercial real estate in the Boston area is with industrial properties. The city’s 21.1 percent vacancy rate is well above the 12.3 percent national average, a sign of fewer manufacturers looking to be in the city. While the overall commercial real estate market fell flat in the recession, an improving economy brings the prospect of continued positive trends.

Federal Budget Cuts: What Will the Impacts Be?
The Massachusetts economy benefits greatly from the infusion of billions of dollars in direct federal government spending, nearly $84 billion in the most recently reported fiscal year — 2010. A large portion of these funds, over 40 percent, go directly to Massachusetts residents as payments like Social Security. Federal contributions to state and local governments also support a variety of programs and efforts. The salaries of federal workers here top $4.5 billion. Massachusetts is also the fifth-highest recipient of Department of Defense expenditures, at over $14.5 billion, and much of the state’s prowess in education and innovation leadership is underwritten by an estimated $7.7 billion in federal funding for research and development activities.

Significant cuts to federal spending would impact the state’s economy and jobs. The currently mandated federal budget cuts are set to take effect in 2013 and are legislated to reach $1.2 trillion in savings over ten years. The parameters of the existing plan require equal cuts to defense and non-defense spending along with reductions to Medicare and other mandatory spending programs. As of this writing, various proposals were circulating to circumvent these cuts, especially to the defense budget, so the impacts we estimate are not inevitable. Here we analyze the potential impacts of the original sequestration legislation. We modeled the impact of this plan to Massachusetts using REMI, a dynamic forecasting and comprehensive economic tool that answers “what if” questions about the state’s economy.

Prior analyses of the impact of budget cuts have focused primarily upon those that result from cuts in the federal defense budget. Our analysis incorporates the across-the-board cuts that would be implemented in all budget areas. We estimate that job losses resulting from the currently mandated federal budget cuts will reach better than 52,000 over the ten years beginning in 2013. This figure is the average difference between an employment forecast in the absence of the impending budget cuts, and the forecast of employment that would ensue following the implementation of budget cuts.

These job losses pale next to the state’s total employment of nearly 3.5 million. To put this in perspective, the estimated job loss here is greater than employment growth in the state for the entire year. In other words, the job loss attributable to the federal budget cuts would more than wipe out the entire number of added jobs in the recent period of recovery.

Furthermore, the pattern of these job losses strikes at the heart of the state’s innovation economy. In addition to the 13,000+ government and military job losses, the two largest private sector employment cuts are estimated to be in Professional and Technical Services, with a loss of nearly 10,000, and in Health Care and Social Assistance, with a loss of over 6,000 jobs. Most of the former cuts would be due to cuts in the defense budget, while the latter would be due largely to cuts in Medicare provider payments. These two sectors represent much of the innovation economy in the state. Most of these jobs require a highly educated work force, and are high paying and benefitted. Significantly, these are the sectors that have allowed the
Massachusetts economy to outperform the nation in recent years, a fact that underscores the stakes for the Bay State in ongoing federal budget debates. Other job cuts are spread throughout the state’s industrial mix.

What is also not captured fully by these numbers is the collateral damage the cuts could trigger. There is no way to conjecture what future innovations would be lost without the support to the state’s high-technology sector provided by federal dollars. A large number of important inventions and innovations in modern times can be traced to federal support of research and development. In addition, the numbers by themselves do not capture the importance of industrial clusters in high-technology economic growth. No technology develops on its own, but instead requires the complex interactions of many companies combining their specific technological knowhow to come up with “the next big thing.” These clusters require a critical mass of activity to thrive, and large federal budget cuts threaten this diverse community of firms.

These budget and job cuts are not inevitable. Congress and the President could finally agree on a Grand Bargain to rationalize budget cuts and combine them with revenue increases. The allocation of cuts could also be very different than in our assumptions in making these estimates, which are based on the sequestration rules and past patterns of sector-specific expenditures in Massachusetts. It is possible, for instance, and has in fact been speculated that a leaner military could depend on more high-technology support systems, favoring the state’s comparative advantage. Still, planned federal budget cuts loom as a Damoclean sword over the state’s economy.

Concluding Thoughts
We continue to live in uncertain times, and the state continues to be at the mercy of outside forces beyond its control. Still, the national recovery seems to be firming up, though it is not by any means robust at this point. Massachusetts cannot hope to continue on a growth trajectory without a strong national economic recovery. Largely because of the improving national outlook, economic prospects for the state are positive but guarded and contain some downside risks. Events in Europe, the Middle East — including the precarious relationship between Israel and Iran — Asia, and even Washington, D.C. could have serious adverse effects on the state economy. The state’s innovation economy has weathered the Great Recession and is currently pulling the state into a recovery. Let’s hope that federal government policy will not undo the basis for Massachusetts’ economic recovery along with the fabric of the state’s dynamic, knowledge-based economy.

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Endnotes:

1.) Professor Alan Clayton-Matthews, Senior Contributing Editor of MassBenchmarks, explains and offers commentary on these data revisions in the Endnotes section of this journal.


3.) To estimate federal budget-cutting impacts, it was assumed that across-the-board federal government spending cuts would be fully implemented starting in 2013, as legislated. This will entail more than $1 trillion in cuts over a ten-year period. Federal budget documents, as well as data on federal contract outlays, were used to estimate sector-specific cuts in federal spending as they would affect Massachusetts.

### Federal Budget Cut Scenario, Average Massachusetts Job Losses, 2013–2022

<table>
<thead>
<tr>
<th>Sector</th>
<th>Average Job Losses, 2013–2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forestry, Fishing, Related Activities, and Other</td>
<td>68</td>
</tr>
<tr>
<td>Mining</td>
<td>119</td>
</tr>
<tr>
<td>Utilities</td>
<td>62</td>
</tr>
<tr>
<td>Construction</td>
<td>1,801</td>
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<tr>
<td>Manufacturing</td>
<td>1,985</td>
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<tr>
<td>Wholesale Trade</td>
<td>1,022</td>
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<tr>
<td>Retail Trade</td>
<td>2,241</td>
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<tr>
<td>Transportation and Warehousing</td>
<td>951</td>
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<tr>
<td>Information</td>
<td>1,075</td>
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<tr>
<td>Finance and Insurance</td>
<td>2,769</td>
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<tr>
<td>Real Estate and Rental and Leasing</td>
<td>1,019</td>
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<tr>
<td>Professional and Technical Services</td>
<td>9,882</td>
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<tr>
<td>Management of Companies and Enterprises</td>
<td>550</td>
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<tr>
<td>Administrative and Waste Services</td>
<td>3,227</td>
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<tr>
<td>Educational Services</td>
<td>2,164</td>
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<tr>
<td>Health Care and Social Assistance</td>
<td>6,238</td>
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<tr>
<td>Arts, Entertainment, and Recreation</td>
<td>841</td>
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<tr>
<td>Accommodation and Food Services</td>
<td>1,396</td>
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<tr>
<td>Other Services, except Public Administration</td>
<td>2,169</td>
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<tr>
<td>State and Local Government</td>
<td>3,055</td>
</tr>
<tr>
<td>Federal Civilian and Military</td>
<td>10,379</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52,993</strong></td>
</tr>
</tbody>
</table>

Source: REMI; Model assumption developed by the authors.