On Rocket Science

Dennis P. Lockhart
President and Chief Executive Officer
Federal Reserve Bank of Atlanta

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I'm honored to speak at this joint meeting of the Huntsville Rotary Club and the Greater Huntsville Rotary Club. I arrived here this morning and just visited the Hudson-Alpha Institute of Biotechnology—more evidence that your community is a center of innovation. Huntsville's unique attributes and ongoing prosperity are reminders that in today's world it's human capital—brain power—that accounts for much of the wealth creation and economic resilience. While I'm here over the next two days I plan to visit with some businesses and leaders to find out more about this area's vibrant economy.

I first came to Huntsville in the 1980s, calling on some of your leading corporations. At that time, I was intrigued by Huntsville's cluster of defense and technology businesses. Before that, as a schoolboy growing up in California in the 1950s and '60s, I knew something of the story of Wernher von Braun and the rocket scientists who came to Huntsville after World War II. In the fourth grade, as I recall, I actually tried to build a to-scale model of a rocket in my backyard using crates and cardboard. When my father gently suggested I remove that piece of junk from the premises, I concluded I might not be destined for a career in rocket science.

But in my banking and finance career, I've been exposed to a different breed of rocket scientists. Instead of exploring the frontiers of space, these so-called rocket scientists have pushed the boundaries of finance. I believe this subject is timely because financial innovations have a major bearing on economic activity—not just on Wall Street but also on Main Streets throughout the United States.

Also this afternoon I plan to discuss the current economy. My remarks have the disclaimer that the views I express are mine alone—and not those of my colleagues on the Federal Open Market Committee (FOMC), the Federal Reserve's monetary policy setting body.

The economic situation

Given the importance of the defense industry in Huntsville's economy, I suspect a number of people in the room have some military background. Perhaps some of you remember the term "sitrep." For those not familiar with military terminology, a sitrep (situation report) is a current, real-time assessment of conditions and forces on a battlefield. Let me offer a sitrep of our current economy.

Recent economic data present a mixed picture, but basically one of continued strength. The first report of third quarter gross domestic product (GDP) growth issued last Wednesday had the economy growing at an annual rate of nearly 4 percent—a slight increase from strong growth in the second quarter. This year's solid growth has taken place despite widespread and well-publicized weakness in the housing sector.

Residential weakness is reflected in almost every national housing statistic, including a 23 percent year-over-year decline in the sales of new single-family homes in September and a 30 percent drop in building permits.

So far, evidence of spillover from problems in housing to the broader economy is limited. For instance, personal consumption has held up surprisingly well, and national job market data for October released after the last FOMC meeting were encouraging. According to the initial estimate, nonfarm payroll employment increased by 166,000 in October—the largest gain since May. Net exports have also been very strong recently, propelled by a combination of strong global demand and the depreciation of the dollar.

In addition to growth, I'm keeping a close watch on prices. Readings on inflation have improved this year, and I believe that inflation will most likely continue to moderate as measured by so-called core inflation indices. But there are some inflationary risks. In particular, recent increases in energy and commodity prices, among other factors, could put renewed upward pressure on headline inflation—the inflation you and I encounter in the marketplace.

Despite the positive readings on recent economic performance outside the housing sector, my forecast calls for below trend, slower GDP growth in the fourth quarter of 2007 and first half of next year. This forecast anticipates further weakness in housing in the near term and the likelihood that declines in housing wealth will contribute to a weakening of the pace of consumer spending.

FOMC actions

It should be no surprise that the troubles in the financial sector were a topic of discussion at last week's FOMC meeting. At this meeting, you'll recall the Fed lowered the target for the fed funds rate 25 basis points to 4.5 percent. This move followed a cut of 50 basis points announced after our FOMC meeting September 18.

The FOMC noted on October 31 that "economic growth was solid in the third quarter, and strains in financial markets have eased somewhat." However, the committee added "the pace of economic expansion will likely slow in the near term, partly reflecting the intensification of the housing correction." The committee believed its October 31 policy action, combined with its action taken in September, "should help forestall some of the adverse effects on the broader economy that might otherwise arise from the disruptions in financial markets and promote moderate growth over time."

As discussed a moment ago, my view of the economy is consistent with the FOMC statement, and I supported last week's policy action. In part, my position was based on the notion of insurance against downside risks to the general economy given the unusually high level of uncertainty.

I base that assessment on both recent hard data and what I'm hearing from business and financial industry contacts. These contacts provide timely and detailed information that is extremely valuable to a Reserve Bank, particularly during transitional periods.

Some anecdotal information contradicts the picture suggested by recent data. Recent feedback from our Reserve Bank board members and other contacts on the ground is somewhat more negative than the numbers suggest. For instance, anecdotally we hear that attitudes toward future discretionary capital investment have grown more cautious since the onset of financial market turmoil. I attribute negative sentiment about future capital expenditures more to growing pessimism about economic growth rather than to restrictive credit conditions for businesses.

If I were to use one word to characterize our current economic circumstances, that word would be "uncertain." Much of this uncertainty relates to the potential depth, length, and impact of the housing downturn and potential flow-back to Main Street from the turbulence we have seen on Wall Street.

Financial market turbulence

Federal Reserve officials ground monetary policy deliberations mostly in the outlook for the general economy. In these times this focus cannot be uncoupled from concern about the financial sector. This connection exists because credit plays a vital role in fueling virtually all aspects of economic activity. The current level of uncertainty necessarily has a financial markets dimension. So for the sake of a more complete picture, I would like to briefly discuss the evolution of our financial system that brings us to where we are today.

When I started my banking career in the 1970s, banks were the dominant intermediaries in the credit system. Banks mostly kept exposure on their books. In those days we spoke of the "Cs of credit"—cash flow, collateral, and character—and character reflected the admonition to know your borrower and assess the intangibles of your client. Old timers in those days said, "Companies don't repay loans, people do."

Over the last several decades we've seen an evolution from a bank-centered financial intermediation system to a market-centered system. As a result, lenders have become investors, loan spreads have become investment yields, and individual loans have become the feedstock of pools of like assets brought together through a process known as securitization. These changes have had significant implications both for loan underwriting and where in the system loans are ultimately held.

In terms of underwriting, the old "banker-looking-borrower-in-the-eye" business model has been largely replaced by an "originate and distribute" business model. Standardization of loan terms has allowed many classes of loans—to individuals and businesses—to be channeled into marketable securities. The new underwriting model for many types of loans relies on credit scoring and quantifiable measures of the borrower's repayment capacity and the loan's collateral. Loans become units of statistically modeled pools of assets.

In terms of who owns the loans, the holders could be almost anywhere. A Huntsville mortgage may be held by a local bank, but it could just as easily be held by a New York investment bank, a London hedge fund, an Asian bank, or a Middle Eastern sovereign wealth fund.

In the global asset management industry that invests in credit instruments, competition is intense. Small increments of yield can result in performance that differentiates one manager from another. So the incentive to pursue better yield for apparently equivalent risk is very compelling for these investment managers.

We all know that in today's world—especially in the credit securities markets—there are few, if any, low-risk, high-return investments waiting to be discovered. As a result, many portfolio managers have sought to boost the returns on their portfolios by using leverage. While this leverage may be obtained in various ways, the end result is similar to an individual investor buying stock on margin or buying an option on a stock.

None of this is to imply that banks have become irrelevant to modern finance. They remain very important to our system, but the reality is that banks are not as dominant as they once were. In their place has emerged a constellation of asset and investment managers that includes money market funds, hedge funds, and specialized players. We used to call some of these groups "nonbank banks." Suffice to say, the makeup of today's credit intermediation system is quite complex.

Benefits of financial rocket science

Accompanying increased complexity, the market-centered evolution of our credit system has brought many benefits. The innovations of Wall Street's rocket scientists have made markets more efficient, deeper, and more liquid.

Specifically, financial innovations have provided credit to classes of borrowers who were previously denied access and allowed financial institutions to diversify their often geography-bound risk exposure. Through securitization, risk and yield can now be cut to fit the exacting needs of investors worldwide. Innovations in securitization have turned risky individual exposures—which would require high rates of return—into diversified pools of loans qualifying for lower rates, with those lower rates partially passed back to individual borrowers.

This financial "rocket science" has on balance been positive for society. But, predictably, financial innovation and the evolution of the credit system have brought new challenges. As mentioned, today's institutions, portfolios, and securities can be extremely complex. And this complexity is compounded by opacity. Compared to the past, today's system is opaque.

Visibility—or information—is limited in a variety of ways. First, knowing where risk lies in the system is a challenge. Determining the extent of leverage assumed by investors is a challenge. Holders of mortgage-backed and otherwise collateralized securities are challenged to value new instruments encompassing asset pools that have little performance history. And liquidity-providing market participants often suffer from limited visibility into the risk positions carried by actual or potential counterparties.

Clearly, the current circumstances of this new world of financial markets—credit markets—present serious challenges, and then there is the continuing housing sector weakness. So how will the story play out?

A story of transition

Let me describe three potential story lines, emphasizing the one I believe represents the most likely scenario for the economy.

The first is a very adverse scenario with housing and financial markets severely affecting real economic activity. In this story, extreme balance sheet pressures cause lending institutions to cut back their regular lending to households and businesses, and the dynamic becomes circular, feeding back on itself. A colleague termed this hypothetical scenario an "adverse feedback loop" in a recent speech. I want to emphasize that I view this outcome as being quite unlikely.

Another story line holds that recent developments in financial markets are a mere hiccup—a temporary dislocation of financial markets followed by a return to normalcy as defined by conditions and practices that prevailed before this summer. I don't view this scenario as realistic. I believe markets, institutions, and risk management practices

have been affected profoundly by recent experience.

In my view, the most likely story line is one involving a moderate slowdown in economic activity over the coming quarters, with a return to growth near trend by late 2008 as the housing sector begins to recover. Underpinning this story is the view that our modern market economy has a keen ability to self-correct as opportunistic capital moves into depressed markets. Markets correct. And market solutions are preferable. This transition already is happening in the market for subprime mortgages. In this story, financial markets may endure some more weeks or months of volatility, but I believe they will find a restructured state of "normality," involving improved risk management practices, reduced leverage, and greater transparency.

An appropriate public policy posture is to be supportive of market solutions in the financial markets. During our past two meetings, the FOMC reduced the fed funds rate target by 75 basis points. While aimed mostly at the macroeconomy, these reductions, I believe, also support those purposes.

As already explained, I joined the Atlanta Fed in March of this year. No surprise, but I've learned firsthand that the job involves intense tracking and discussion of the state and path of the economy. We have some near-term uncertainty, but one cannot help being impressed with the continuing resilience of the U.S. economy. That conclusion isn't rocket science, but it gives comfort as the economy works through our current difficulties.

Contact: Jean Tate 404-498-8035

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