SPEECH

Rising Household Borrowing

March 5, 2014
Posted March 6, 2014

James McAndrews, Executive Vice President and Director of Research

Remarks before the CFA Society of Stamford, Stamford, Connecticut
As prepared for delivery

Good evening. It's a pleasure to have the opportunity to speak with you today on the subject of the economy, and especially the household sector. As is always the case, my remarks reflect my own opinions, not those of the Federal Reserve Bank of New York, or the Federal Reserve System.

National Economic Conditions

From the end of the Great Recession in mid-2009 through mid-2013, real gross domestic product (GDP), or the aggregate value, after adjusting for inflation, of all the goods and services produced within the borders of the United States, grew at a rather tepid 2 ¼ percent annual rate. Then, in the second half of 2013, the pace of growth moved up a full percentage point to around 3 ¼ percent.

Roughly half of this increase in the growth rate of real GDP stemmed from a strengthening of consumer spending. While I will discuss the factors behind this improvement in consumer spending in more detail in what follows, the main driver appears to be the substantial stabilization in household balance sheets that has occurred over the past few years. Household net worth has rebounded from its levels after financial crisis and ensuing recession because of increases in asset values and decreases in liabilities. In fact, the financial obligation burden of the aggregate household sector, or long-term financial obligations expressed as a percentage of disposable income, is now the lowest it has been since the early 1980s.

In addition to the firming in consumer spending, growth of exports was quite strong over the second half of last year. Following a few years of lackluster performance, economic growth among our major trading partners improved, providing a boost to employment and output in our manufacturing sector. In addition, a secular trend of increasing energy exports and declining energy imports is now providing steady improvement in our trade balance.

Another contributing factor is that federal fiscal restraint lessened substantially over the second half of 2013. This development is in sharp contrast to the first half of the year, when the payroll tax cut expired, tax rates on higher-income households were raised, a series of taxes associated with the Affordable Care Act took effect, and owing to the sequester and the gradual winding down of foreign military operations, federal spending was restrained. Moreover, the sustained contraction in revenue, spending, and employment by state and local governments appears to be nearing an end.

While overall labor market indicators for the second half of 2013 were not particularly strong, the unemployment rate did fall sharply over that period, from 7.5 percent in June to 6.6 percent in January of this year. However, as has been the case since October 2009 when the unemployment rate peaked at 10 percent, this decline in the unemployment rate was associated with an almost equal percentage point decline in the labor force participation rate. Much has been written about the forces that are causing this decline of the participation rate. Researchers have shown that the aging of the population is playing a role, as are changes in behavior. But our own analysis suggests that the cyclical weakness of demand for labor is an important contributing factor, and so we do not take as much comfort from the decline of the unemployment rate as we otherwise might.

Looking forward, I believe that the underlying fundamentals of the U.S. economy have improved to the point where we can expect sustained growth above the recent pace of 2 1/4 percent. That being said, I doubt that over the near term we will see growth as rapid as that in the second half of last year. Special, one-time factors, such as very rapid growth of exports and sustained inventory building, are unlikely to be repeated over the first half of this year. Moreover, while there is now a much better balance between supply and demand in the housing market, that market is still adjusting to the roughly 100 basis point increase in mortgage interest rates that occurred in mid-2013.

Finally, with somewhat stronger growth of output, I expect inflation to gradually rise toward the Federal Open Market Committee's objective of 2 percent as measured by the PCE deflator. This forecast is based on the projected gradual increase in the levels of resource utilization, which would lessen downward pressure on firms' marginal costs and prices, a firming in global demand, and the continued upward pull exercised by stable inflation expectations on actual inflation. Underpinning the latter assumption is the broad stability of long-term inflation expectations across different financial and survey measures, combined with ongoing moderate growth of wages and unit labor costs, all of which are consistent with well-anchored inflation expectations.

As mentioned above, the key development behind the firmer tone of consumer spending over the second half of 2013 is the significant strengthening in household balance sheets. One aspect of that improvement is that from mid-2008 through mid-2013, total household liabilities declined significantly after a period of quite rapid debt growth over the preceding decade. The reduction in household debt is an extremely rare event for the U.S. economy. In fact, this has been the only period of sustained declines in nominal household indebtedness over the period since the early 1950s.

The Household Sector

In the remainder of my remarks, I'd like to focus on the finding, made public in our most recent *Quarterly Report on Household Debt and Credit*, that for the first time since 2008, households increased their borrowing on a year-over-year basis, at least in nominal terms. I'll argue that this is an encouraging development, although we should be cautious both in predicting future borrowing and in recognizing that the aggregate increase in borrowing may mask the fact that many individual households remain constrained by prior borrowing and/or a reduction of income. These households are still engaged in attempting to reduce their debt burden by pay-downs in debt. Furthermore, I'll explain how the type of borrowing by households has changed over time. Here too there is a reason for some caution, because borrowing for education has become more common for U.S. households. It appears that heavy student debt can restrain the consumption activity of those individuals who are burdened with it. If this is the "new normal" for the economy, it might result in delayed purchases of homes and autos for those graduates who finance their education by taking on large amounts of debt. This is a potential development that bears close monitoring.

Why do I suggest that an increase in household borrowing is an encouraging development? While in recent years we have certainly seen that household debt can carry serious negative consequences, overall an increasing level of borrowing indicates that the economy is returning to normal patterns. After all, with rising GDP and an expanding population, we should not be surprised to see debt increasing, if only modestly. Of course, the kinds of debts that people are taking on and the riskiness of those loans—to both the borrower and the lender—are important issues, and I will return to them later in the talk.

Now households borrow for a variety of reasons, but we can generalize to say that households borrow to smooth their consumption. For households whose incomes are temporarily low, perhaps because they are just starting their careers, borrowing makes it possible to enjoy today some of the consumption that would otherwise have to be delayed far into the future. Another aspect of consumption smoothing is borrowing to invest in durable goods or to make household investments, such as the purchase of autos and houses or the funding of higher education. By borrowing, households can avoid what otherwise might be severe and protracted reductions in their current consumption in order to make such investments. For example, without mortgages, households would have to delay purchasing a home until they had accumulated sufficient wealth to pay cash for the purchase, which for most would require draconian cuts to their other spending for years. Regardless of its motivation, the incurring of debt is predicated on expectations of the ability to repay through diversion of some portion of their future income.

Once acquired, however, debt can impose strains on households' finances if their future incomes do not accrue at the rate expected, or if the cost of servicing the debt rises unexpectedly. These strains in household finances from suddenly excessive debt service burdens are met by households in a variety of ways: through default, foreclosures, and bankruptcy, or renegotiation of the terms of repayment, but also through continued higher principal and interest payments accompanied by much lower consumption than the household had previously planned.

As we see in Chart 1 (Employment declined dramatically) job losses in the recent recession were extremely large and prolonged, a problem that resulted, in part, in significant delinquencies in debt repayment. Furthermore, the significant decline in house values imposed a much stricter limit on how much households could borrow if they needed, for example, to adjust to the effects of a temporary loss of income. Recent economic research has examined how the macroeconomy is affected when households suddenly experience reduced borrowing capacity. Eggertsson and Krugman consider the case of households that have borrowed up to some limit and now see their debt limit reduced; these households suddenly find themselves over-indebted and are forced to cut spending.[1] If the required cuts in spending are large enough, then even a very active monetary policy will be unable to offset them completely. Other research has also suggested similar mechanisms. Hall has pointed out that a tighter household borrowing constraint can help explain the depth and persistence of the most recent recession in the U.S.[2] Mian and Sufi observe that unemployment is much higher in counties across the U.S. where households were more debt constrained by the fall in the price of housing.[3] Their finding provides further support for the hypothesis that it is the especially debt-constrained households that are under the greatest pressure to reduce current consumption.

Given the effect that sudden reductions in borrowing capacity are expected to have on broader economic activity, it is then encouraging to see that, at least at the aggregate level, households are increasing their borrowing. This suggests that the forced cuts in spending caused by declines in borrowing capacity are becoming less of a major concern for households.

I'd now like to turn to some of the empirical analysis that can help explain both the decline in aggregate U.S. borrowing after 2008 and the subsequent turnaround of this trend in 2013.

First, as we now know all too well—and as seen in Chart 2 (House Prices Peaked and Fell Precipitously), house prices in the U.S. rose at steadily increasing rates from 2000 through 2006, followed by an approximately 31 percent reversal that persisted through 2011. That reversal reduced the aggregate wealth of homeowners and, in the worst case, left many "underwater," meaning that the amount of mortgage debt secured by their home exceeded its current value. This outcome is reflected in the dramatic decline in owners' equity in household real estate, seen in Chart 3 (Result was a Huge Decline in Owners' Equity in HH RE). It is interesting to note that while home prices rose during the boom, homeowner's equity share remained constant. Thus, prior to the end of 2006, on average for each 1 percent increase in home prices, homeowners increased their mortgage debt by 1 percent (through higher balances on first mortgages, cash-out refinances, second mortgages, and home equity lines of credit).

When house values began to fall, so did corporate equity values, which depressed household wealth further Chart 4 (Stock Market Wealth also Fell Sharply), limiting households' options for reducing their debt burdens or sustaining their prior levels of consumption.

Consequently, and in line with the logic of the research I discussed earlier, U.S. households decreased the cash flow available for consumption by paying down debt during the recession and early recovery. In Chart 5 (Four-quarter cash flow from borrowing) we measure the amount of borrowing—both mortgage and nonmortgage borrowing—that U.S. households were engaging in over time. Consider that in 2007, households were receiving in aggregate $330 billion in cash from borrowing. These funds were available for consumption expenditures or for household investments such as home improvements. However, with their borrowing limits lowered as house values fell and income levels declined, households began to pay down debt rapidly. (Of course, while many households acted to pay down debt, some debt was written off through foreclosures and bankruptcies, and other households were increasing debt by borrowing for home purchases, as normally would be the case. But we exclude those kinds of transactions here.) In sum, however, households in 2010 actively reduced their net indebtedness by $150 billion. The reversal in cash available for household expenditures was a massive $480 billion over the period from 2007 to 2010. This fact was established by Brown, Haughwout, Lee, and van der Klaauw in our *Liberty Street Economics* blog in 2011.[4]

Allow me a brief digression here, because I think it touches on an important point. A lot of people refer to this pay-down of debt as "deleveraging," but in my view that's a misuse of the term. Since the distinction is more than just semantic, let me explain what I mean.

Financial leverage is usually thought of as a ratio. Consider a typical home purchase with 20 percent down. Here, the buyer makes a down payment equal to 20 percent of the asset value and borrows the other 80 percent of the purchase price in the form of a home mortgage. We would say that the borrower's leverage is 5 (the asset value divided by the equity share). Now, it's easy to see that reducing debt and reducing leverage are the same thing when asset values are constant. If the borrower in our example pays down half the mortgage and the house value doesn't change, her leverage has fallen to 2.5.

Unfortunately, house values fell from 2007 to 2011. So while households were trying their best to reduce their mortgage debt, their leverage was actually *rising*, since house values were falling much faster than debt. It was really only in 2012 that leverage in residential real estate began to fall, because house prices stopped declining faster than housing debt. In 2013, leverage continued to fall, even though net mortgage borrowing resumed, because house values rose even faster.

I think this distinction is important, because if we think that households have been steadily deleveraging since 2008 we might wonder whether we were getting close to the finish line. After all, the labor market has been recovering, albeit slowly, for several years. But in my view, the fact that households saw their leverage increasing in spite of their efforts to pay down debt helps explain why they kept at it. Households may well be trying to reestablish a more normal and sustainable leverage ratio. This view also underlines the importance of avoiding busts in house prices as a fundamental underpinning of a recovery in borrowing and consumption.

It is likely that these reductions in debt and new borrowing during the recession and the early part of the recovery stemmed from what we might label decreases in the demand for borrowing. As households saw their wealth decline, especially the wealth represented by the value of their home, and as unemployment grew and remained elevated, households' capacity to repay debt declined, and, as a result, their desired stock of debt declined as well. At the same time, banks too were suffering from heavy losses on mortgages and other lending, and reduced the supply of credit available to households. We can see this in Chart 6 (Banks and Lenders Imposed Tighter Mortgage Lending Standards) which shows the sustained tightening of lending standards reported by banks starting in 2007. Furthermore, Chart 7 (Origination by Risk Score: First Mortgages) shows the percentage of prime first mortgage originations by the credit score of the borrower. The chart reveals a quite dramatic tightening of credit standards during 2008 and 2009. Here we see that the share of new mortgage borrowing by applicants of all credit scores below the highest quartile declined, while that of the highest quartile increased from about 40 percent to 70 percent. This suggests that lenders were far more selective in their underwriting standards for mortgages than they had been in the period between 2000 and 2006.

Many of these powerful forces of demand and supply that together led to the decline in household borrowing, and hence to the fall-off in resources available for consumption, have either diminished or slowly reversed as the economic recovery that began in 2009 has continued. First, equity values, which dropped 51% between October 2007 and March 2009, as measured by the S&P 500 index, have recovered significantly, rising by almost 140% percent through the end of 2013 Chart 8 (Stock Market Wealth also Fell Sharply, 2nd half). In addition, as seen in Chart 9 (House Prices Peaked and Fell Precipitously, 2nd half) house prices have finally begun to recover, and have been doing so on a broad geographical basis. House prices are up 21 percent since their nadir in 2011. This has helped restore owners' equity in their homes Chart 10 (Result was a huge decline in Owners' Equity in HH RE, 2nd half). In sum, as seen in Chart 11 (Household Net Worth), aggregate household wealth has recovered substantially as a percent of disposable income, albeit with a lesser contribution from housing and a greater contribution from corporate equities.

At roughly the same time, starting in 2011, we've seen a substantial loosening in nonmortgage lending standards by banks, an important sign of normalization in credit markets, as Chart 12 (Standards have loosened since 2011 on non-mortgage products) suggests. Perhaps not surprisingly, mortgage standards have only in recent quarters begun very slowly to reverse the significant tightening that followed the housing bust; see Chart 13 (Banks and Lenders Imposed Tighter Mortgage Lending Standards, 2nd half).

Broad increases in wealth, continued recovery in the overall economy with higher levels of employment and income, a relaxation of credit standards, and historically low interest rates have led to improvements in delinquency rates and increases in both demand and supply for borrowing by U.S. households. In 2013, we see the consequent increase in household debt. In the last quarter of 2013, aggregate consumer debt increased by $241 billion, the largest quarter-to-quarter increase since 2007. More importantly, as shown in Chart 14 (Total Debt Balance and Its Composition, in 2013 total household debt rose $180 billion, marking the first four-quarter increase in outstanding debt since 2008. This is at most the beginning of a turnaround, of course: for example, once we adjust for inflation, debt per capita has just barely stopped falling, as Chart 15 (Real Household Liabilities Per Capita) suggests.

Further analysis based on our Consumer Credit Panel shows that the growth rates in auto and student loan borrowing have been positive for some time now. The reversal in overall borrowing during 2013 was driven by increased credit card and mortgage debt among the young and those with high credit scores. While this suggests that lenders are concerned about the safe underwriting of such loans, it also points to the overall importance of borrowing by younger individuals. Not only did borrowers under age forty-nine take on more credit card and mortgage debt in 2013, they also did most of the borrowing to finance auto purchases and college educations. This is not new—historically, younger individuals account for most new loan originations, while older individuals on average pay down their outstanding debt. Nonetheless, while borrowing for such things as cars and houses is up among younger individuals, it remains somewhat subdued.

Now, this overall picture—young borrowers getting loans while older borrowers are reducing their debts—makes sense, and it is consistent with a growing population and improving income prospects for the young. The fact that (unlike 2006) we now see reductions in mortgage debt for the least creditworthy borrowers tells us about how unusual lending was during the credit boom of the mid-2000s, and it is instructive and reassuring to see that today's patterns look different.

In spite of the improved outlook for income growth and consumption implied by these changes in the way households view and use debt, some imponderables remain on the horizon. For one, the dramatic increase in student debt implies that a fundamental change has taken place in the way we finance higher education in the U.S. A combination of rising college costs, reduced subsidies from cash-strapped state governments to their state universities, and cutbacks in home equity loans and other sources of financing has left new college attendees with larger debts.

There's been a tremendous amount of attention to the growth of student loans in recent years, and our data indicate some of the reasons why. First, student loans are the only form of debt that grew consistently even through the depths of the crisis and the long period of debt paydown. Second, the growth in educational debt, like that of auto loans, is concentrated among the lower and middle credit-score groups.

Unlike other types of loans, student debt continued to grow steadily during and after the recession; now, at almost $1.1 trillion, it comprises 9 percent of household debt and represents the second largest source of debt for U.S. households after mortgages. Student loans provide critical access to schooling, given the challenge presented by the increasing costs of higher education. Those with college degrees earn a high return on their educations; they are much less likely to be unemployed, and they earn on average twice as much as those with only high school diplomas.

Our research indicates that the large growth in student debt, and an associated high level of student debt delinquencies, has been associated with a reduction in mortgage and auto loan borrowing among younger people. While younger individuals were previously much more likely to finance home and car purchases by age thirty,Chart 16 (Proportion of Borrowers with Home-secured Debt at Age 30) shows that those with student debt are now *less* likely to do so than those with no student debt, as shown by Brown and Caldwell in a *Liberty Street Economics* blog post in 2013.[5] In fact, our research suggests that student debt appears to have replaced or crowded out other types of debt, so that the difference in average total debt held by student-loan and non-student-loan borrowers has remained stable over time.

We suspect that this decline in taking on other types of debt by student-loan borrowers partly reflects increased uncertainty about the future. However, in addition to a possibly reduced appetite for borrowing, a reduction in access to credit is also likely to play an important role, despite the comparatively high earning potential of those with a college education.

Consumers with substantial student debt may not be able to meet the stricter debt-to-income (DTI) ratio standards that are now being applied by lenders, particularly on mortgage loans. We believe that student debt growth among new graduates has been higher in the most recent years than growth in their incomes. In addition, delinquency in repayment has become more prevalent among student borrowers, and those with past delinquencies are likely to find it much more difficult to borrow. This decline in credit accessibility is also captured by credit scores. During most of the first decade of the 2000s, those with and without student loans had comparable average credit scores at ages twenty-five and thirty, but since 2010, student loan borrowers have had significantly lower average credit scores. As a result of tighter underwriting standards, higher delinquency rates, and lower credit scores, consumers with educational debt may on average have more limited access to housing and auto loans and, as a result, more limited options in the housing and vehicle markets. This disadvantage may compound the difficulties of young people who enter a depressed labor market; in addition to facing a spell of unemployment that may lead to reduced earnings for a considerable period of time, they may also face tighter future credit constraints as a result of delinquencies on their student loans.

In this light, the recent increase in borrowing among younger individuals is consistent with an improvement in labor market prospects and some loosening of credit standards, although the increase in borrowing by younger age cohorts is modest and remains below their pre-crisis level. The high level of student debt may create the risk of a drag on future consumption growth. In fact, while highly skilled young workers have traditionally provided a vital influx of new, affluent consumers to U.S. housing and auto markets, the unprecedented growth in student debt and the persistently high student loan delinquency rates are likely to dampen the influence of this group in today's marketplace and may represent a structural or long-lasting change in household credit markets.

To summarize, I have reviewed the many positive signals we should take from the fact that in 2013 we observed the first year-over-year increase in borrowing by U.S. households since 2008. The willingness of U.S. households to increase their debt levels in aggregate likely reflects the restorative influences of significant turnarounds in house prices and stock market values since their lows in 2009-10, somewhat better employment outcomes, and much stronger household balance sheets as a result of write-offs and pay-downs of earlier indebtedness. In addition, a gradual loosening of credit availability is likely to have accommodated the increased demand for credit, although mortgage lending continues to be subject to high credit standards. Together, these developments bode well for the macroeconomy, suggesting that U.S. households can return to more normal patterns of borrowing to smooth consumption and to invest in autos and houses.

Still, despite the return to more normal patterns of borrowing, it is worth pondering the significance of the recent change in the composition of household debt as student loans have grown to be the second-largest category of household debt after mortgages. While these loans provide critical access to schooling, they may constrain the consumption choices of young people, especially those who graduate in periods of poor employment prospects.

---

[1] See Gauti B. Eggertsson and Paul Krugman (2012), "Debt, Deleveraging, and the Liquidity Trap: A Fisher-Minsky-Koo Approach," *Quarterly Journal of Economics*, 1469–1513.

[2] See Robert E. Hall (2011), "The Long Slump," American Economic Review 102, 431–69.

[3] See Atif Mian and Amir Sufi (2011), "House Prices, Home Equity-Based Borrowing, and the U.S. Household Leverage Crisis," American Economic Review 101, 2132–56, and (2011), "What Explains High Unemployment? The Aggregate Demand Channel," University of Chicago, unpublished paper.

[4] Meta Brown, Andrew Haughwout, Donghoon Lee, and Wilbert van der Klaauw (2011), Have Consumers Been Deleveraging? Federal Reserve Bank of New York, Liberty Street Economics blog, March.

[5] Meta Brown and Sydnee Caldwell (2013), Young Student Loan Borrowers Retreat from Housing and Auto Markets Federal Reserve Bank of New York, Liberty Street Economics blog, April.