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US Economics

Inequality and Consumption

Laid bare, then exacerbated by the financial crisis, income inequality explains divergent consumer spending behavior in the recovery. Understanding its drivers, and what will work to level the playing field, helps us to anticipate spending patterns going forward.

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Deconstructing Consumption

The key to understanding current US consumption patterns is to analyze historical spending behavior and the evolution of its major drivers over time. In this handbook, we provide a comprehensive review of income inequality and disaggregate the core determinants of consumer spending past, present and future. We conclude by highlighting **which categories of discretionary spending are the most likely to benefit from labor income and wealth increases.**

A Study of Income Inequality

- Rise in lower wage paying jobs
- Wealth: financial vs real estate
- Demographic shifts
- Educational attainment
- Tax policies

Consumption Contextualized

- Income and employment
- Confidence and financial expectations
- Household debt
- Morgan Stanley Liquidity Index

Looking Forward: What Consumers Want

- Spending by income group
- Wealth effect
- Leading indicators
- Income elasticity of demand: categories that will benefit

Appendix: Spending During Economic Recoveries

For important disclosures, refer to the Disclosures Section, located at the end of this report.

Summary - Sowing the Seeds of Inequality

A quick Internet search of the keywords “income inequality” returns more than 9 million results. Other monikers such as “income gap” and “income disparity” would no doubt turn up millions more (though admittedly, the search results would not be mutually exclusive). Although income inequality is not a new phenomenon (a plethora of literature in social economics suggests rising income inequality is inevitable as developed countries age), it has been catapulted as a key topic of interest among social, economic, and political circles in the wake of the financial crisis.

What the financial crisis did was lay bare **the ugliness of a growing income gap by removing the layer of debt accumulation that had been masking its presence**. The ensuing run-up in financial wealth in the wake of the crisis further exacerbated the gap.

There are many catalysts of growing income disparity in the US. Some of them include:

- **Lower wage paying jobs:** As the US economy has shifted away from being an economy led by manufacturing to one increasingly reliant on services, lower wage paying jobs have come to dominate the labor market. The result is a consistent slowdown in inflation-adjusted wage growth since the 1940s.
- **Ramp in household wealth:** Increasing wealth has primarily benefitted higher income groups. And wealth created by the run-up in equities in the current recovery has been concentrated among the top 10% income bracket.
- **Demographics:** As the burgeoning Baby Boomer generation moved into the prime working years associated with peak income, inequality has been skewed for a time simply due to this cohort's substantial share of the overall population. In addition, recent research has suggested that a growing share of “like marrying like”, that is, a tendency to marry someone with a similar educational and professional background, has driven inequality since the 1960s.
- **Educational Attainment:** A growing wage premium has helped drive a wedge between the “haves” and the “have nots.”
- **Tax policies:** Though tax policies are still largely supportive of lower income groups, they have become less progressive over time.

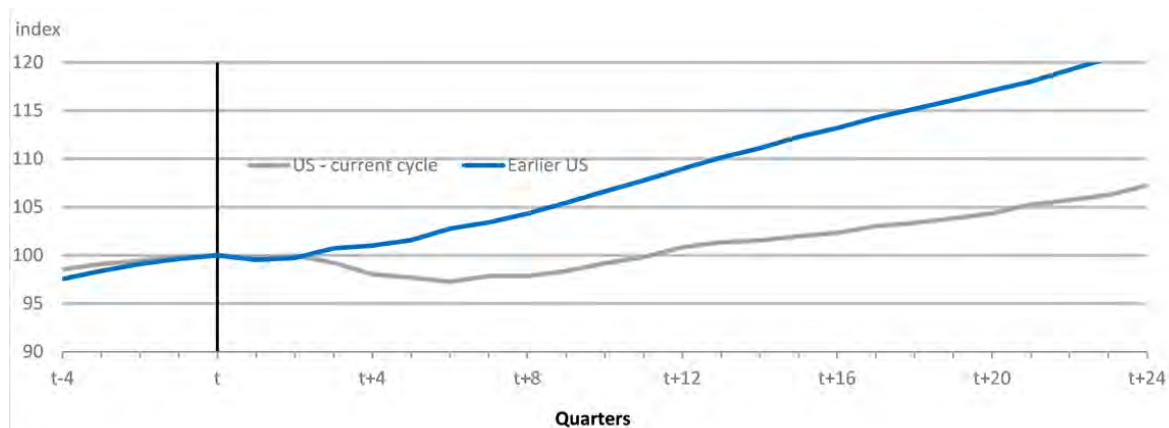
As income inequality grew, the average American household took on more and more debt to supplement the lack of income growth, all so that Middle America could stay, well, in the middle. By late 2007, debt as a share of disposable income peaked at an eye-popping 135%. Outstanding balances on credit cards, for example, increased in perpetuity since 1968 (when tracking credit card usage began) until 2009 when the full brunt of the financial crisis hit home. But the final straw that broke the back of America's average household was the housing market boom that added trillions of dollars in debt to balance sheets, and when it burst, stripped homeowners of equity.

For US households, the financial crisis was a 30-year debt correction in the making. Left with unmanageable debt levels and constricted access to credit, lower income groups have been forced to spend only what's in their pocket. Moreover, the bulk of America's households are influenced by the wealth created from residential assets, and while housing equity has recouped some of the trillions of dollars lost after the housing bust, home equity remains well below its previous peak.

For the first time in generations, even affluent households felt the sting of the massive drop in home and equity values. The stock market turned upward in spring 2009, but it wasn't until late 2012 that wealthy Americans began to respond notably. Indeed, based on year-over-year growth rates and adjusted for price changes, pleasure aircraft was the single fastest growing category of consumer spending in 2013, “taking off” by nearly 25%.

With all income groups withdrawing from the marketplace to focus attention on balance sheet repair, **consumer spending experienced the sharpest decline of any recession, and took the longest to reach its previous peak (Exhibit 1).**

Exhibit 1: Consumer Spending Around Recessions - Indexed to Start of Recession (t=100)



Note: Earlier US cycles include the past 7 recessions dating back to 1957. Source: Bureau of Economic Analysis, Morgan Stanley Research

So, despite the roughly \$25 trillion increase in wealth since the recovery from the financial crisis began, consumer spending remains anemic. Top income earners have benefited from wealth increases but middle and low income consumers continue to face structural liquidity constraints and unimpressive wage growth. **To lift all boats, further increases in residential wealth and accelerating wage growth are needed.**

Home price appreciation is slowing from lofty levels, but our housing strategists still expect price growth to outpace its historical average over the next few years. Our leading indicators are telling us stronger wage and salary growth lay ahead. **The answers to how these developments will affect consumer spending patterns going forward, and the categories of spending that stand to benefit most, are discussed herein.**

A Study of Income Inequality

The income divide in the United States is not a new phenomenon; it has been increasing for several decades. The Gini coefficient is a common statistic used to measure the degree of income inequality within a population. The Gini ranges from 0 to 100, with a value of zero reflecting perfect equality and a value of 100 reflecting perfect inequality. **The US Gini coefficient has increased by more than 20% from 1968 to 2013 (Exhibit 2).**

Viewed in a different light, the top 5% of US households represented 20% of aggregate income in 1960, but by the mid 2000s the proportion rose to around 35%. [\[1\]](#)

Moreover, **the US far outstrips the global average for inequality.** In 2011, the average income of the world's richest 10% was nine times that of the poorest 10%. In the US, the ratio was much higher, at 14-to-1. [\[2\]](#)

In the following sections, we explore some of the primary drivers of the growing income gap in the US.

Exhibit 2: Gini Coefficient Measure of Inequality Has Increased by 23% Since 1968

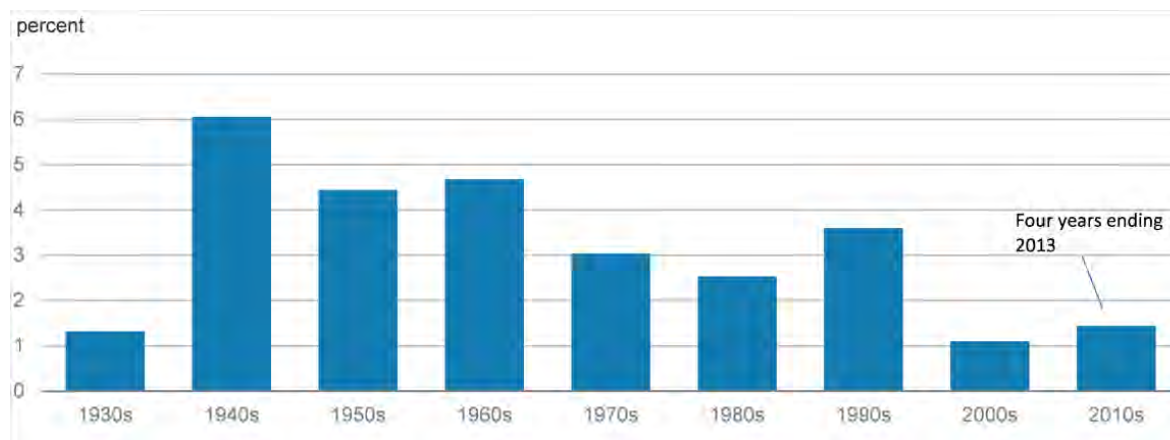


Source: Census Bureau, Morgan Stanley Research

Rise in Lower Wage Paying Jobs

Adjusted for inflation, slowing wage growth has been a long-standing trend in the US that has been amplified by deep labor market downturns followed by weak recoveries during the past two business cycles. Indeed, **Exhibit 3** illustrates the **fairly consistent slowdown in wage growth, by decade, since the 1940s.**

Exhibit 3: Annual Growth in Inflation-Adjusted Wages and Salaries by Decade



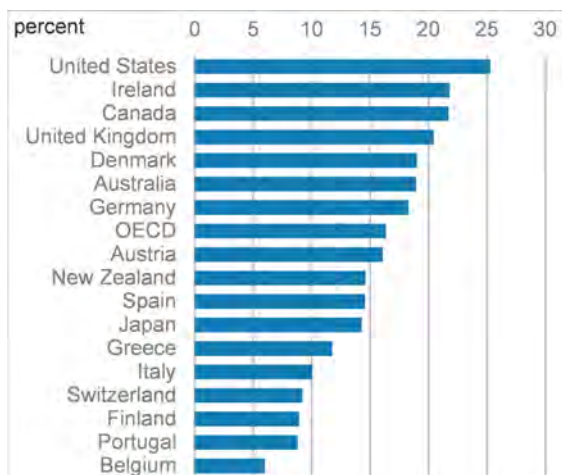
Source: Bureau of Economic Analysis, Morgan Stanley Research

Data compiled by the Organization for Economic Cooperation and Development (OECD) indeed reveal a troubling metric - in 2012, **the US ranked highest in its share of low paying jobs among developed countries** (Exhibit 4). In 2001, the US had ranked fifth (see [Where the Rubber Hits the Road: Wage & Salary Growth](#), May 5, 2014).

Slow wage growth over time has exacerbated inequality because **lower and middle-income households rely more heavily on labor market income compared with their higher-income counterparts**. One prevalent explanation for the downtrend in wage growth is the US transition away from its reliance on manufacturing toward (lower paying) services for job creation (Exhibit 5). For example, in the 1950s, goods-producing sectors accounted for nearly 40% of private job creation. By the 1990s, its share had dropped to just 14%.

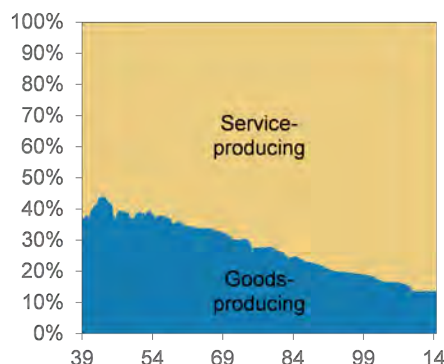
Unfortunately, it is likely that the US will continue to dominate the OECD ranking shown in Exhibit 4. **Since the labor market recovery began in early 2010, we estimate that roughly 65% of net new jobs created have been concentrated in low wage paying industries (Exhibit 5).**

Exhibit 4: Share of Low Wage Paying Jobs by Country, 2013



Source: OECD Employment Outlook 2013, Morgan Stanley Research

Exhibit 5: Manufacturing vs Services, Share of Total Private Sector Jobs

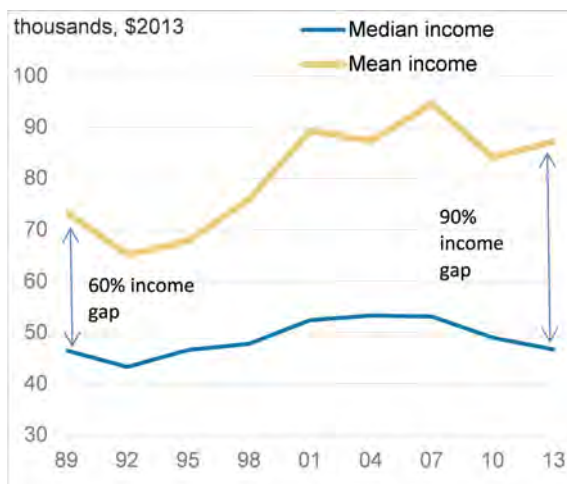


Source: Bureau of Labor Statistics, Morgan Stanley Research

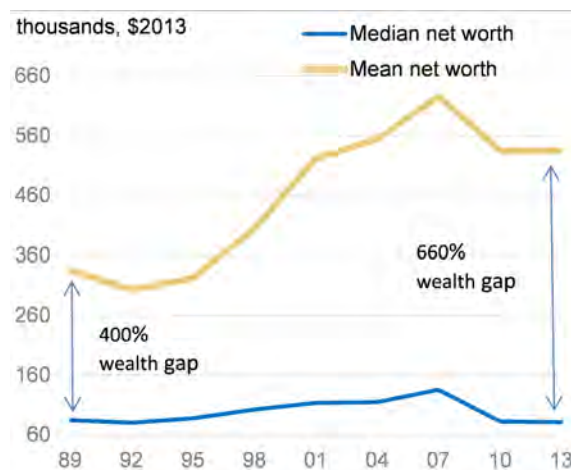
Ramp Up in Wealth: Financial versus Real Estate

Data from the Federal Reserve's triennial Survey of Consumer Finances reveal a growing income and wealth gap. Exhibit 6 depicts median and mean family income over time, adjusted for inflation. In every year since 1989 (the year of the survey's inception), mean income has remained above median income, reflecting the concentration at the top of the income distribution. Moreover, **growth in mean family income has outpaced median family income, such that the income gap has increased from 60% in 1989 to 90% in 2013.**

Likewise, growth in inflation-adjusted family wealth has also been concentrated among the top of the distribution. The wealth gap has increased from 400% in 1989 to 660% in 2013 (Exhibit 7).

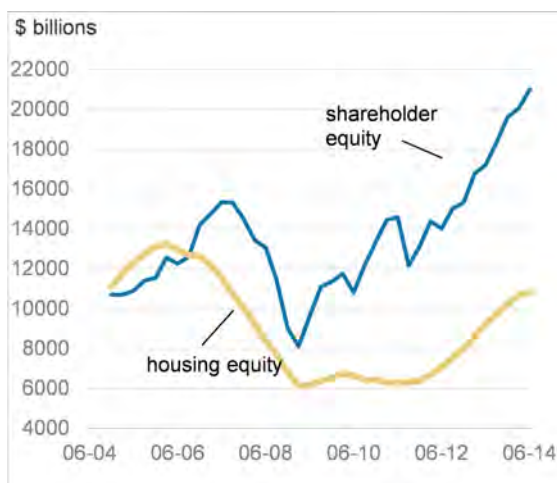
Exhibit 6: Growth in Mean and Median Family Income Reveal Widening Gap

Note: Mean income is the average income across all families regardless of how that income is distributed. Median income is the level at which 50% of families have lower income and 50% have higher incomes. Source: Federal Reserve, Morgan Stanley Research.

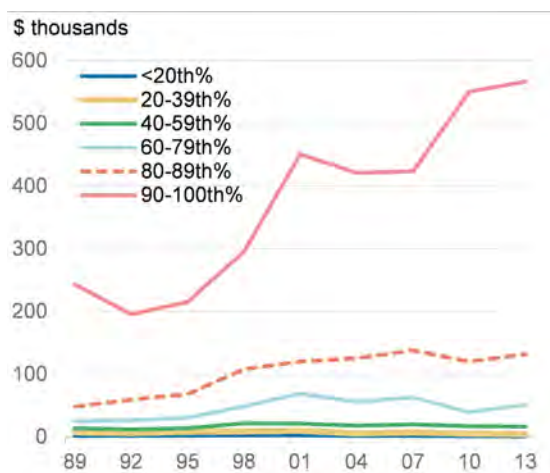
Exhibit 7: Growth in Mean and Median Wealth Reveal Widening Gap

Note: Mean wealth is the average wealth across all families regardless of how that wealth is distributed. Median wealth is the level at which 50% of families have lower wealth and 50% have higher wealth. Source: Federal Reserve, Morgan Stanley Research

An explosion in financial assets that has outpaced the growth in real estate assets is a major driver of the wealth gap. Since the start of the recovery in mid-2009, the S&P 500 composite stock index has more than doubled. Home values have risen as well, but the upward climb was quite lagged and has been less impressive, particularly if we exclude the price effects of distressed sales. The clawback in household wealth is illustrated in [Exhibit 8](#). While shareholder equity raced past its previous peak in 2012, housing equity remains far below its previous peak, underscoring that a substantial amount of negative equity remains (20% or so). Moreover, as shown in [Exhibit 9](#), the amazing run-up in shareholder equity has gone to the benefit of only the top 10% income group, leaving the majority of households behind.

Exhibit 8: Incredible Wealth Creation, But Housing Equity Lagging

Source: Federal Reserve Board, Morgan Stanley Research

Exhibit 9: Growth in Financial Assets Has Benefitted Top 10% of Income Earners

Source: Survey of Consumer Finances 2013, Morgan Stanley Research

Demographic Shifts

Demographic shifts alone skewed income inequality, particularly in the 90s, as a greater share of the population moved through the prime working/earning years.

Post-WWII brought a surge in US births, at the time creating the largest demographic group in the country's history. Most commonly referred to as the "Baby Boom" generation, the aging of this demographic has had a significant impact on economic activity. For example, the economy's potential growth was already slowing prior to the financial crisis as the Baby Boom generation began moving into the age cohorts associated with lower rates of labor force participation (see [Potential GDP and Its Implications](#), March 10, 2014).

This generation began skewing income to the upside when its bulk began moving into its prime earning years in the 1990s. More recently, the oldest of the Baby Boomers (around age 68) are now entering retirement, when income and spending declines sharply. But **the bulk of the Baby Boomers (the youngest being around age 50) are still in their prime earning years.**

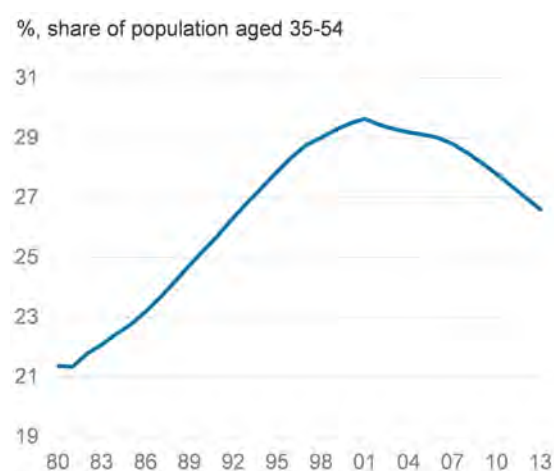
[Exhibit 10](#) and [Exhibit 11](#) chart the income curve by age group as well as the historical share of the total population moving into the prime earning years of ages 35 to 54. In 2013, the Census Bureau estimated the age 35 to 54 population to be 84.2 million compared with 44.7 million over the age of 65.

Exhibit 10: Average Annual Income by Age Group, 2013



Source: BLS: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 11: Historical Look at the Share of the Population of Prime Earning Ages



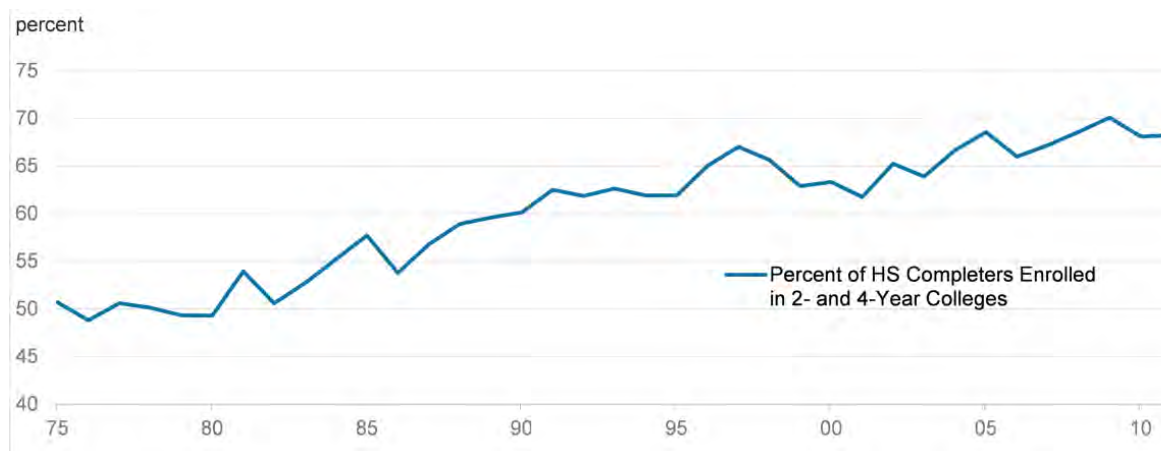
Source: Census Bureau, Morgan Stanley Research

Other demographic shifts have a significant impact on household formation and have concentrated wealth among upper income groups. For example, recent research has suggested that a growing share of "like marrying like", that is, a tendency to marry someone with a similar educational and professional background, has contributed to inequality since the 1960s.^[3]

Educational Attainment

Central to the American ethos is the notion of economic mobility where colleges and universities are major enablers. As we outline below, however, a college education can be both an equalizer and a driver of income inequality.

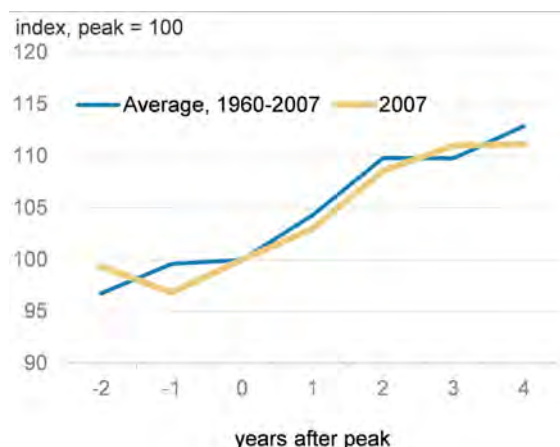
Since the early 1970s, college enrollment rates have been on a perpetual upward trend, at times accelerated by economic downturns – in 2012, 66% of high school graduates immediately enrolled in a degree-granting institution, up from 49% in 1980 ([Exhibit 12](#)).^[4]

Exhibit 12: Percent of Recent High School Completers Enrolled in College

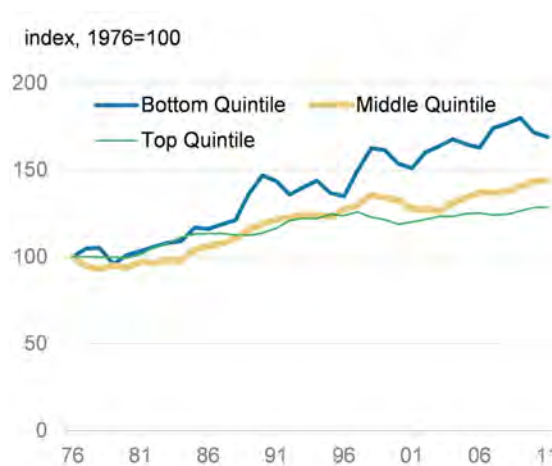
Source: National Center for Education Statistics (NCES), Morgan Stanley Research

Economic downturns lower the opportunity cost of additional schooling via declining wages and employment and tend to drive a substantial increase in the student population. Enrollment rates in the wake of the financial crisis appear to have surged, rising 13% between 2007 and 2012, but surprisingly, data from the Census Bureau shows it was **no more pronounced than enrollment rates following past downturns (Exhibit 13)**. Moreover, Sallie Mae projects **college enrollment rates will increase 13% from 2011 to 2021**.

Even across income categories, the percentage of high school students who enroll in 2 and 4 year colleges has been increasing (**Exhibit 14**). Notably, the percentage of students enrolled from households in the bottom income quintile has increased more dramatically than those in the middle and top quintiles.

Exhibit 13: College Enrollment Rates Indexed to Peak of Business Cycle

Source: Census Bureau, Morgan Stanley Research

Exhibit 14: Proportion of High School Completers Enrolled In College by Income

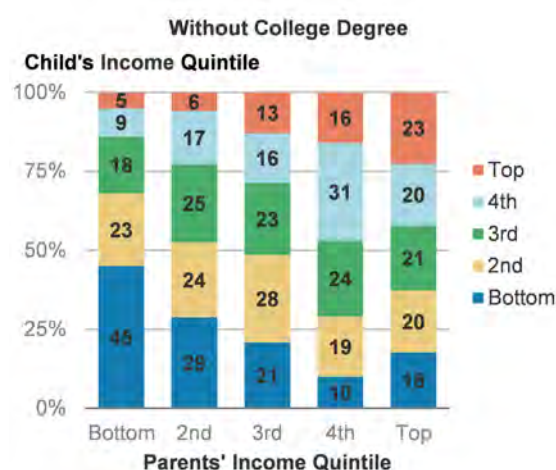
Source: NCES, Morgan Stanley Research

Social Mobility

On the one hand, education has the potential to reduce inequality. In what he calls “education-based meritocracy”, John Goldthorpe explains that postsecondary schooling is a filter that keeps parents' economic position from simply passing through to their children, thus simultaneously promoting economic efficiency, social justice, and social mobility.^[5] In other words, **obtaining a college degree can go far in helping students propel themselves to higher levels of income compared with their parents** (what is referred to as intergenerational mobility).

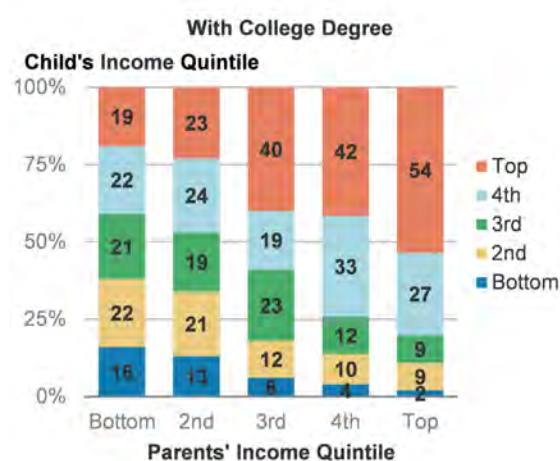
Exhibit 15 and **Exhibit 16** depict results from the Panel Study of Income Dynamics - the longest running longitudinal household survey in the world - that has tracked a representative sample of over 18,000 individuals in 5,000 families, as well as their descendants since 1968. Findings indicate that **without a college degree, 45% of children whose parents with incomes in the bottom quintile also earn bottom quintile income. With a college degree, that number reduces to 16%.**

Exhibit 15: Intergenerational Mobility for Children Without College Degrees



Source: Panel of Income Dynamics, Morgan Stanley Research

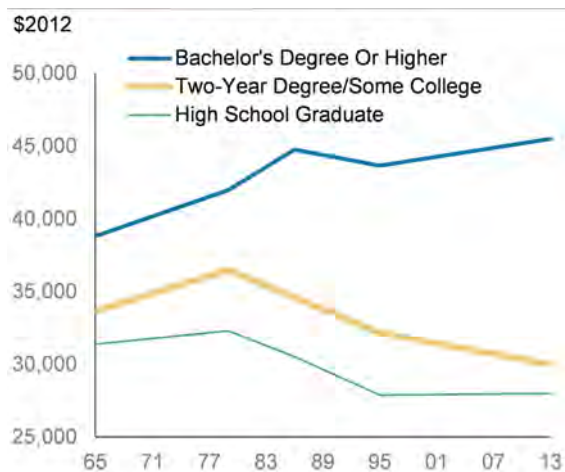
Exhibit 16: Intergenerational Mobility for Children With College Degrees



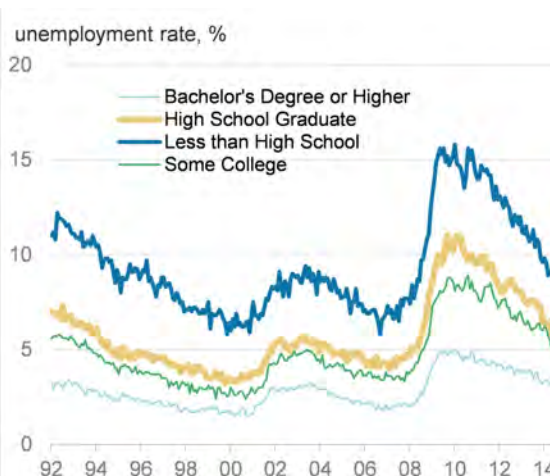
Source: Panel of Income Dynamics, Morgan Stanley Research

Locked into Inferior Wages

On the other hand, education has exacerbated inequality. Students that graduate enjoy an increasing wage premium over those without a college degree. In fact, the wages of a college graduate are now double that of a high school graduate.^[6] **Exhibit 17** and **Exhibit 18** show that **while the benefits to college graduates are obvious, those who are not able to obtain a degree face a lifetime of dimmer prospects for income and employment.**

Exhibit 17: Wage Premium for Bachelor's Degree Holders

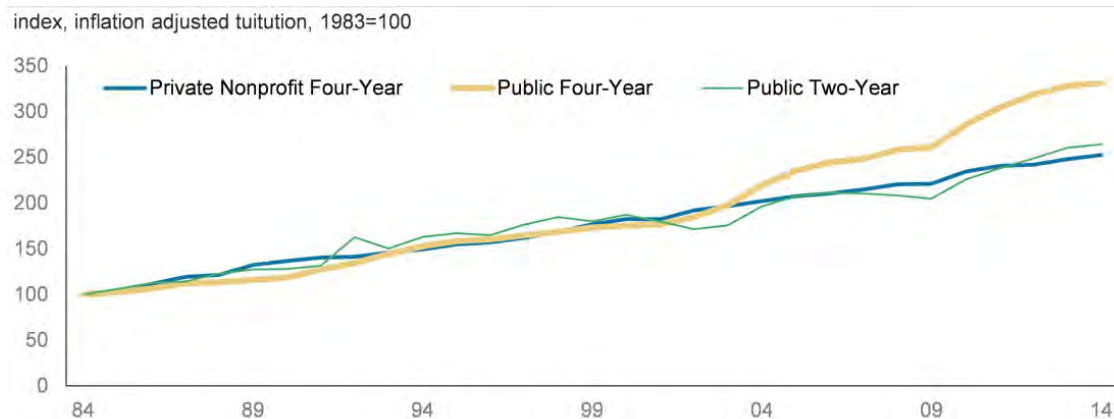
Source: US Census Current Population Survey, Morgan Stanley Research

Exhibit 18: Lower Unemployment Rates for Bachelor's Degree Holders

Source: Bureau of Labor Statistics, Morgan Stanley Research

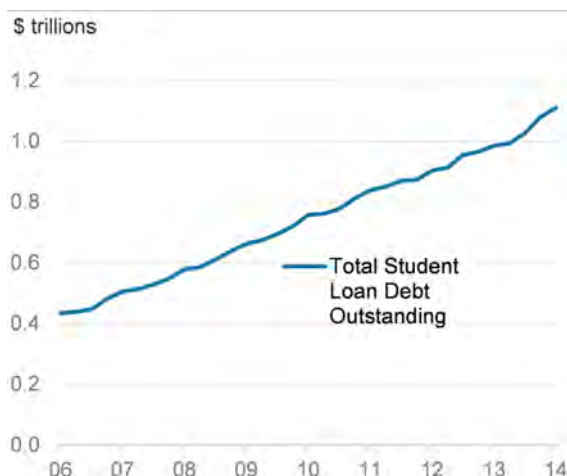
Student Debt

Across all types of institutions, tuition has substantially outpaced inflation, handily doubling over the past three decades ([Exhibit 19](#)). With increased demand comes increased costs and an increased need to borrow. Though grants, scholarships, and other deductions have mitigated some of the increase in tuition, data from the most recent 2013-14 school year showed that 27% of college funding came from borrowing, with 18% being personally borrowed by students.^[7]

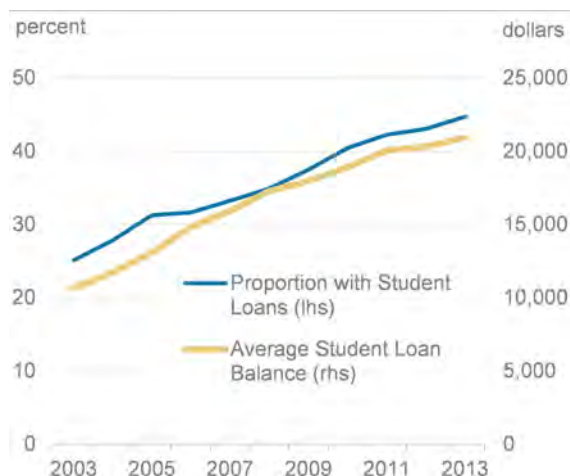
Exhibit 19: Tuition Costs Have Rapidly Expanded

Source: The College Board, Annual Survey of Colleges, NCES, Integrated Postsecondary Education Data System (IPEDS), Morgan Stanley Research

Total outstanding student debt surpassed \$1 trillion in 3Q 2013 and sat at \$1.1 trillion at the end of 2Q 2014, growing on average an incredible 12% a year for the past 8 years ([Exhibit 20](#)). The average student loan balance per student aged 22 to 25 has about doubled from nearly \$11,000 in 2003 to more than \$20,000 by the end of 2012. **Meanwhile, the proportion of students at age 25 with loans increased from 25% to 43% over that same period ([Exhibit 21](#)).** Indeed, student debt is now the largest component of household debt outside of mortgages.^[8]

Exhibit 20: Student Loan Debt Outstanding, On Upward Trend

Source: FRBNY Consumer Credit Panel, Morgan Stanley Research

Exhibit 21: Student Loans Become More Widespread

Source: FRBNY Consumer Credit Panel, Morgan Stanley Research

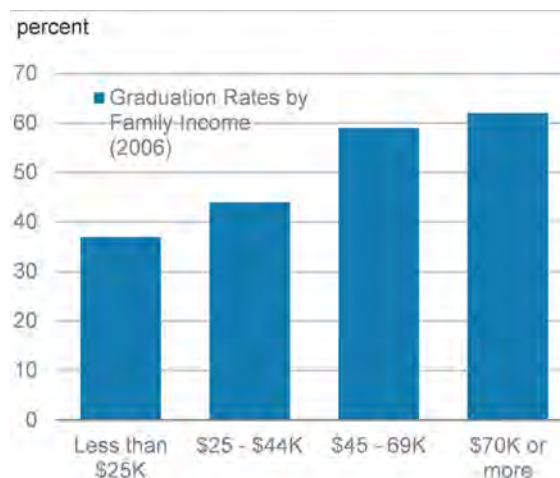
Student debt, though burdensome, is a necessary evil. As we noted above, job prospects and lifetime earnings are much higher for those individuals that obtain a college degree. **The worst outcome, though, occurs when a student takes on debt but fails to complete their college education.**

Matriculation, But Not Graduation

While college attendance rates are rising, **college graduation rates have not kept pace and are lowest for lower income students.**

Indeed, less than 40% of those whose families earn less than \$25,000 end up graduating from college, while more than 60% of those whose families earn above \$70,000 complete a degree ([Exhibit 22](#)).

Further, as we will discuss later in the section that explores *Household Debt*, consumption for the debt-laden student population may be depressed. Indeed, **the share of consumption driven by college age consumers has been in decline since 2003.**

Exhibit 22: College Graduation Rates by Family Income

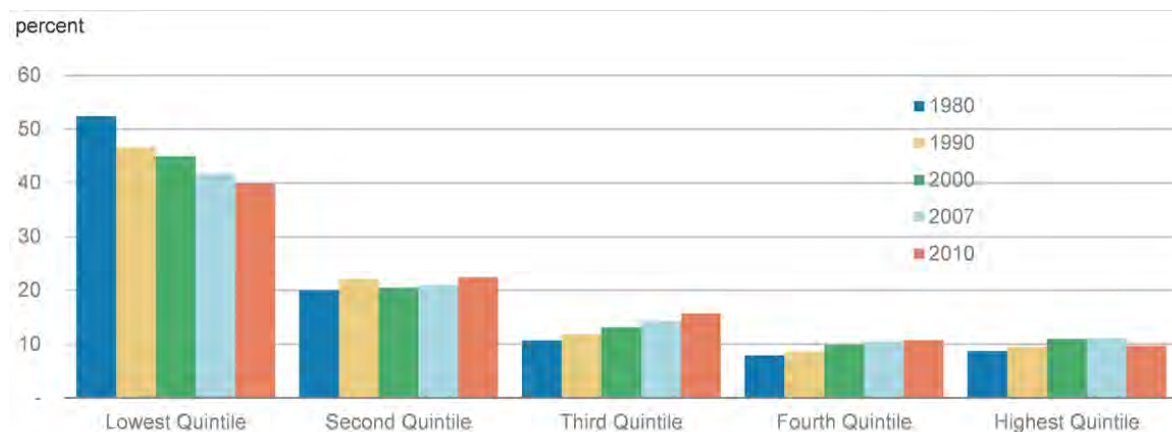
Source: National Association of Independent Colleges and Universities (NAICU), Morgan Stanley Research

Fiscal Policy

Over time, government policies on transfers and taxation have impacted inequality.

In general, government transfers continue to target lower income households, but **the distribution of transfers has gradually shifted away from households in the lower part of the income scale**. For example, the bottom income quintile received 36% of transfer payments in 2010, down substantially from 54% in 1979 ([Exhibit 23](#)).^[9] The shift owes in large part to expanding programs such as Social Security and Medicare, whose benefits are not limited to lower income households.

Exhibit 23: Distribution of Federal Transfer Payments by Income Quintile



Source: Congressional Budget Office, Morgan Stanley Research

More recently, on January 1, 2013, temporary legislation that had lowered the Social Security tax withholding rate by two percentage points expired. In a special note, the Bureau of Economic Analysis (BEA) estimated that the expiration of the so-called payroll tax holiday reduced personal income by roughly \$114 billion (annual rate) at the start of the year.^[10]

Payroll taxes are regressive, that is, the burden (or incidence) of the tax falls disproportionately on lower income taxpayers. For example, the maximum taxable earnings subject to payroll taxes are capped at \$117,000 in 2014, which means that higher earners do not face the payroll tax on all of their wage income. Moreover, lower-income groups tend to rely on wages for the majority of their income whereas higher-income households receive a greater share of income from investments ("market" income derived from capital gains and dividends, for example) – income that is not subject to payroll taxes.

Consumption Contextualized

Aggregate Overview

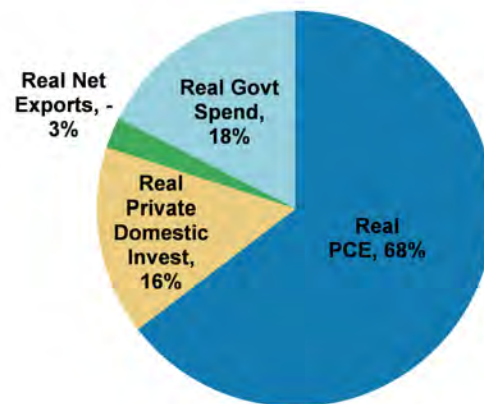
Since the 1950s, consumer demand has increasingly gained share as the largest sector of the economy. [Exhibit 24](#) and [Exhibit 25](#) depict consumption as a share of GDP.

Exhibit 24: Historical Look at Consumption's Share of GDP



Source: Bureau of Economic Analysis, Morgan Stanley Research

Exhibit 25: Share of GDP by Major Component, 2013



Source: Bureau of Economic Analysis, Morgan Stanley Research

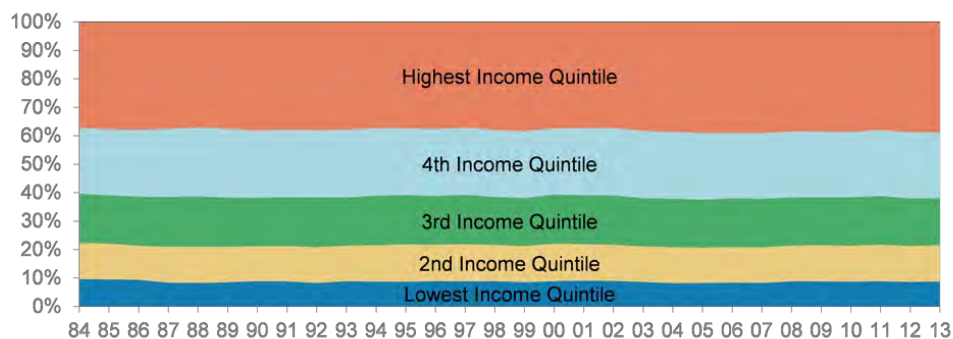
As income inequality increases, demand across income groups grows more uneven, negatively impacting consumption - unless, of course, spending can be easily fueled by income substitutes such as credit. [Exhibit 26](#) shows the distribution of spending by income quintile.^[11] In 2013, the top quintile earned an average annual income of \$163,000 before taxes, followed by an average \$75,000 for the 4th, \$46,000 for the 3rd, \$26,000 for the 2nd and \$10,000 for the bottom 20%.

If we define middle and lower income households to be those households in quintiles 1-3, **these 60% of total households are responsible for a meaningful 40% of total consumer spending** - a proportion that has remained fairly steady for decades. If 60% of America's households change their spending patterns, the aggregate economy feels it - and acutely so.

Exhibit 26 also shows that **the top income quintile alone accounts for nearly 40% of all consumer spending**. Of late, spending behavior of this spendthrift group has masked the full brunt of weakness at the low end of the income spectrum when looking at data in the aggregate.

Exhibit 26: 60/40 Rule: 60% of US Consumers Comprise 40% of Spending

Total Annual Spend



Source: BLS: Consumer Expenditure Survey 2013, Morgan Stanley Research

Consumption Drivers

Understanding what drives aggregate consumption allows us to isolate what factors are contributing most to the lack of stronger growth.

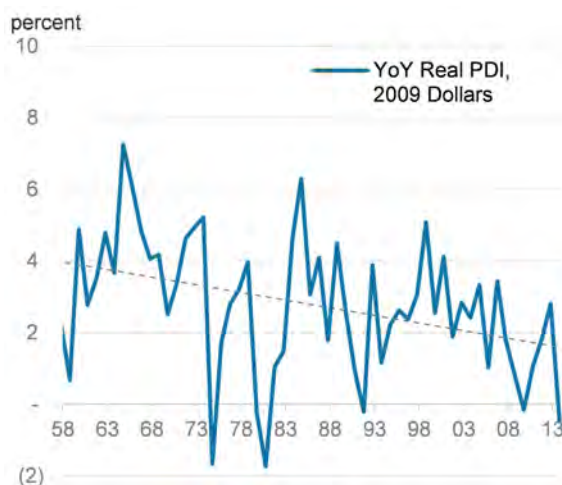
Aggregate income for the majority of households is driven by growth in wages and salaries, which, as we've shown in prior research, has been in long term decline. Income is also driven by overall levels of employment, but demographic trends as well as a particularly weak labor market have sent the labor force participation rate to its lowest level since the late 1970s.

Credit availability and real estate and financial wealth also play a key role in how households think about income. Following the financial crisis, difficulty in obtaining credit and lingering negative equity in homes has disproportionately affected liquidity, or cash available for consumption for middle and lower income consumers.

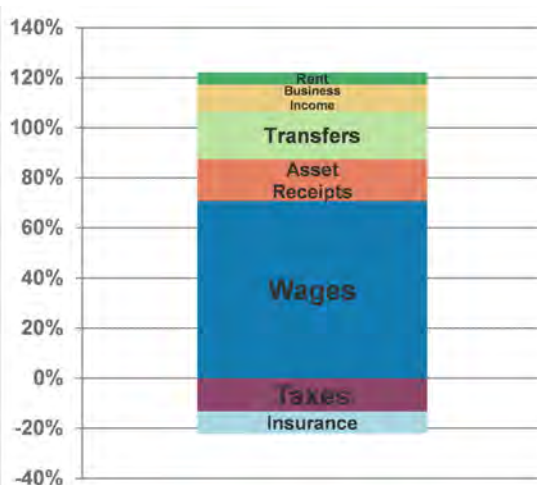
At the end of this section, we present the **Morgan Stanley Liquidity Index** which aggregates many of these drivers of consumption.

Income

Real personal disposable income (real PDI) is the inflation adjusted amount of money households have available for spending or saving after taxes. Its growth has been on a downward trend since the 1960s (**Exhibit 27**). Real PDI includes wages and salaries, as well as proprietor's and rental income. The component share of real PDI in 2013 is shown in **Exhibit 28**.

Exhibit 27: Real PDI in Long-Term Decline

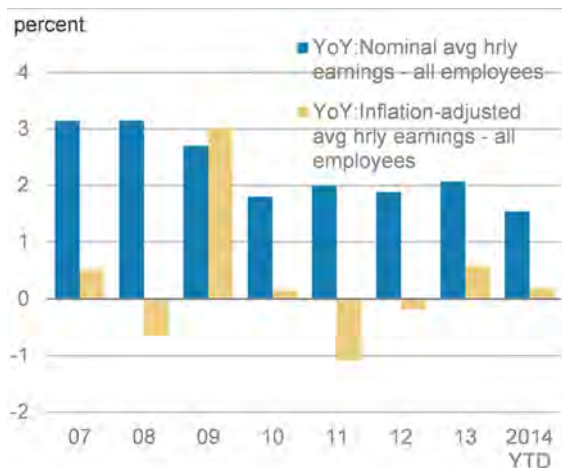
Source: Bureau of Economic Analysis, Morgan Stanley Research

Exhibit 28: Components of Real PDI, 2013

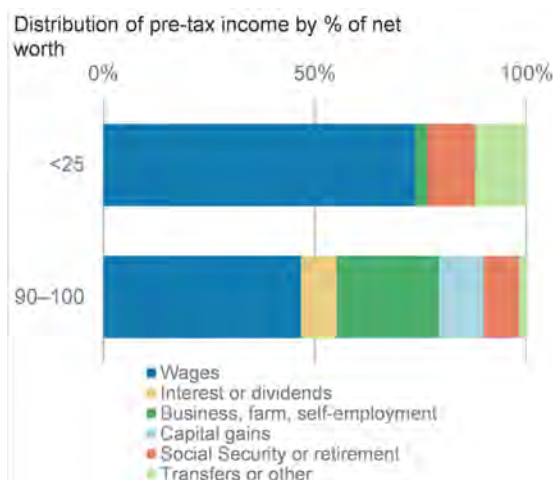
Source: Bureau of Economic Analysis, Morgan Stanley Research

As can be seen in [Exhibit 28](#) above, wages comprise 40% of real PDI. Growth in nominal average hourly earnings slowed sharply in the wake of the recession and financial crisis and has remained subpar to date. When adjusting for inflation, wage growth looks even more bleak ([Exhibit 29](#)). **Weak wage growth tends to lead weaker domestic demand, particularly in today's economic environment, which has seen a general lack of US households' willingness to fuel spending via debt accumulation.** To be sure, Fed Chair Janet Yellen has consistently demonstrated that she places great importance on the wage environment when formulating her thoughts around the appropriate conduct of monetary policy (see [Yellen's Conundrum: Slow Wage Growth, Higher Prices](#), June 27, 2014).

For households in the bottom income quintile, wages represent over 70% of pretax income ([Exhibit 30](#)). **Current growth trends in wages and salaries are unsatisfactory and are a headwind to increases in consumption for this group because it relies disproportionately on wage and salary growth to fund spending.**

Exhibit 29: Inflation-Adjusted Average Hourly Earnings Growth Is Flat

Source: Bureau of Labor Statistics, Morgan Stanley Research

Exhibit 30: 2013 Wages Comprise Majority of Real Pre-Tax Income for Less Wealthy Households

Source: Survey of Consumer Finances, Morgan Stanley Research

Employment

While stronger wages are needed to lift spending of individuals, a stronger, more fully employed labor force is the key to consumption in the aggregate.

While the number of Americans employed has returned to prerecession levels, focusing on that metric alone masks the depressing effects of America's underemployment and declining labor force participation ([Exhibit 31](#)). As described in several of our notes (see [Explaining the Exodus in Labor Force Participation](#), January 30, 2014 and [Moving Sideways](#), September 5, 2014), the active portion of the labor force is now at the lowest level since the late 1970s ([Exhibit 32](#)).

Exhibit 31: Number of Americans Employed Has Returned to Prerecession Levels

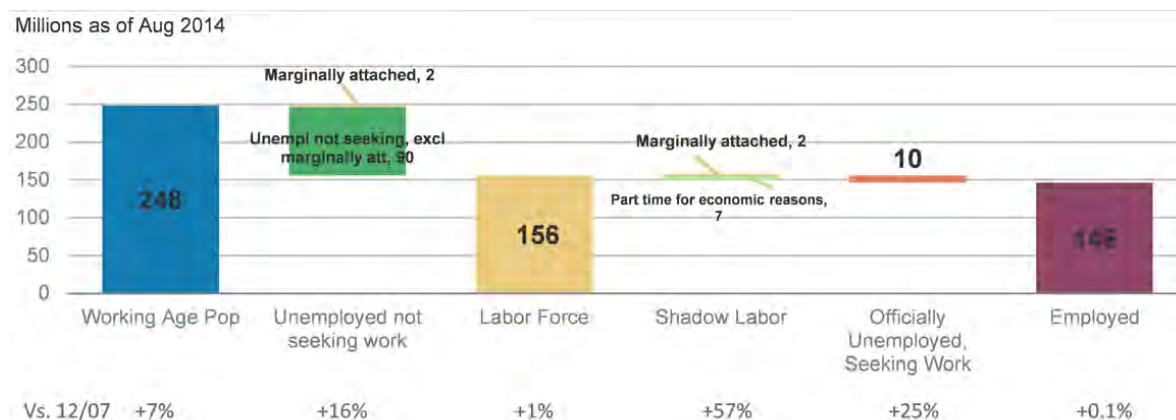
Source: Bureau of Labor Statistics, Morgan Stanley Research

Exhibit 32: Labor Participation Rate at Lowest Levels Since Early 80s

Source: Bureau of Labor Statistics, Morgan Stanley Research

The waterfall diagram shown in [Exhibit 33](#) depicts the underlying dynamics at play in the labor force. Of the current 248 million individuals of working age in the US (ages 16+), 156 million consider themselves active members of the labor force. Two million of those individuals are classified as marginally attached workers, or those who would like a job but no longer search because they don't believe any jobs are available. Add to that the 7 million workers who are working part-time but would prefer full-time if it were available and you get 9 million workers, or **6% of the labor force, that are currently underemployed**. We describe these workers as representing a pool of "shadow labor", made up of workers who could become more fully employed as the labor market improves. Pre-recession, shadow labor as a share of the labor force was 3.9%.

Exhibit 33: Employment Waterfall, August 2014



Source: Bureau of Labor Statistics, Morgan Stanley Research

Shadow labor can be easily calculated as the spread between U-6, the Bureau of Labor Statistics' broadest measure of unemployment, which includes all types of underemployment, and U-3, the official, narrow measure of unemployment. [Exhibit 34](#) charts shadow labor (inverted) against the year-over-year percent change in wage and salary growth taken from the Bureau of Labor Statistics Employment Cost Index. The relationship underscores that **a reduction in the shadow labor population puts upward pressure on wage growth**.

Though shadow labor has been declining, and wage growth improving, [Exhibit 34](#) shows that both remain far from normal (see [Where the Rubber Hits the Road: Wage & Salary Growth](#), May 5, 2014).

Exhibit 34: Shadow Labor vs. Wage and Salary Growth, Quarterly, as of Aug 2014



Source: Bureau of Labor Statistics, Morgan Stanley Research

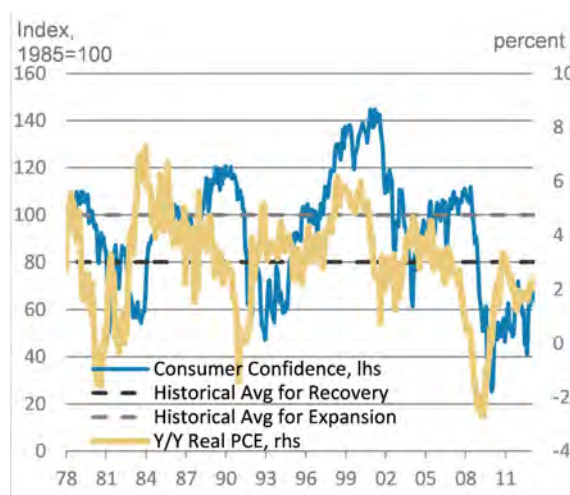
Consumer Confidence and Financial Expectations

It doesn't always ring true, but a happy consumer tends to spend more.

The Conference Board's index of consumer confidence correlates well with year-over-year growth in consumer spending (**Exhibit 35**). After dropping sharply during the financial crisis to a new historical low, it has taken more than five years for the index to reach levels considered normal in recovery. Indeed, it wasn't until March 2014 that confidence surpassed a level of 80, the long-term average level in recoveries. Described another way, **it has taken more than five years for US households to "feel" like they are in recovery.**

Encouragingly, confidence has increased further to a reading of 92.4 in August, approaching its historical average level of 100 during economic expansions. Unfortunately, **the rise in aggregate confidence measures is being disproportionately influenced by the upper income groups.** **Exhibit 36** makes it easy to see that the rise in equity values since the recovery began has elicited a strong response from wealthier households, while confidence among the lowest income group has moved sideways, in line with weak wage and salary growth.

Exhibit 35: Aggregate Consumer Confidence is Rising



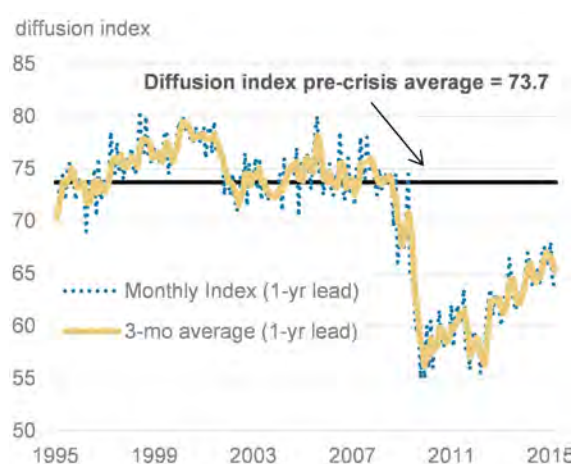
Source: The Conference Board, Morgan Stanley Research

Exhibit 36: Consumer Confidence By Income Versus S&P 500



Source: The Conference Board, Morgan Stanley Research

Exhibit 37: Household Income Expectations are Depressed But Improving



Source: University of Michigan, Morgan Stanley Research

How consumers feel about their future finances tends to dictate how they spend today. In its Survey of Consumers, the University of Michigan polls households for their expectations of changes in income during the next year. According to the August survey, "61% thought the economy would not deliver uninterrupted economic growth over the next five years." **This lingering skepticism over future economic conditions is likely holding back a more robust reaction on the part of US households to better labor market conditions, improved finances, and increases in household wealth** (see [Sticky Expectations](#), August 15, 2014).

We have constructed a diffusion index from data included in the University of Michigan's consumer sentiment survey to show overall expectations of finances 12 months hence. The index began dropping sharply leading up to the recession and plummeted with the onset of financial crisis. Since then, **improvement has been on an anemic upward trend with financial expectations remaining far from normal** ([Exhibit 37](#)).

In the press conference following the September meeting of the Federal Open Market Committee (FOMC), when asked about the sluggish recovery, Chair Yellen explained that the Committee sees that "households' expectations about their likely income paths remain quite depressed relative to pre-crisis levels, and that's something that may be holding back consumer spending."

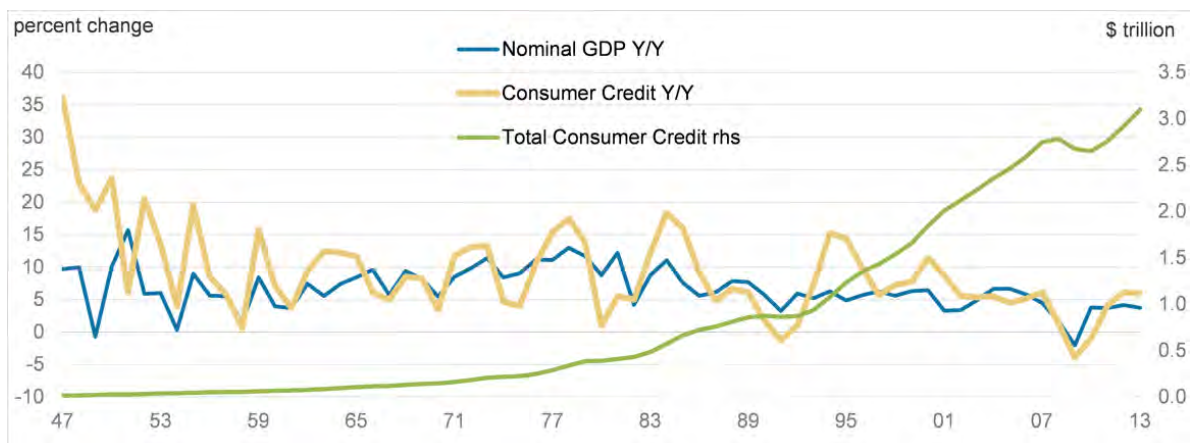
Household Debt

Over the past several decades as growth in income slowed, middle and lower income households increasingly relied on debt to help fuel consumption. **The expansion of credit simply delayed the day of reckoning from declining incomes and rising inequality.** In particular, credit card balances and home equity based lines of credit – namely mortgage equity withdrawals – exploded.

Then, in a dramatic, unprecedented shift, consumers reduced borrowing, defaulted, and paid down debt in the aftermath of the financial crisis. **Focusing attention on balance sheet repair hampers spending in the short and medium term, but creates a more healthy consumer dynamic in the long term.** More than five years beyond the financial crisis, household deleveraging is largely complete, though mortgage debt remains a headwind and access to credit remains difficult to all but the most creditworthy borrowers.

Consumer Credit

Consumer credit, which includes revolving (primarily credit cards) and nonrevolving (primarily auto and student loans) types, and excludes loans secured by real estate, has increased dramatically since the 1980s. Indeed, year-over-year growth in consumer credit has well outpaced growth in nominal GDP 60% of the time since the 1940s ([Exhibit 38](#)).

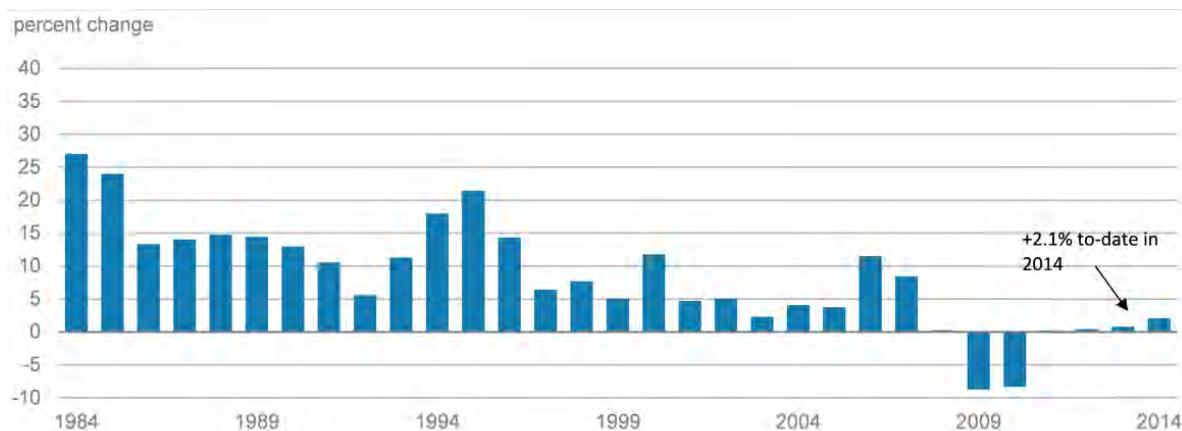
Exhibit 38: Dramatic Expansion of Consumer Credit

Source: BEA, Federal Reserve, Morgan Stanley Research

Credit Cards

In particular, Americans became awash in credit card debt, often carrying half a dozen or more cards, giving them upwards of \$150,000 in instant credit. ^[12] As income growth slowed, **Americans increasingly turned to credit cards as a stop-gap measure** to purchase the consumer goods that their salaries could no longer support alone.

Since the financial crisis, however, there has been an unprecedented shift in consumers' use of revolving credit. Prior to the financial crisis there was not one year that revolving credit balances declined, but in 2009 those balances dropped by 8.8%, and in 2010 by another 8.3% ([Exhibit 39](#)). Since then, growth in revolving credit has increased, and at an accelerating pace, but at 2.1% year-over-year to-date in 2014, growth remains far from historical annual rates of 6% (10-year average before 2008) and 10% (20-year average before 2008).

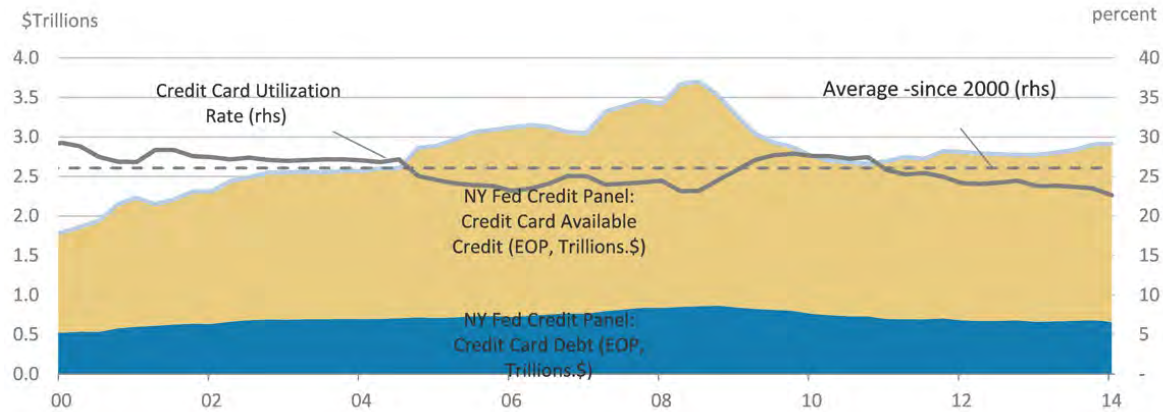
Exhibit 39: Annual Growth in Revolving Credit Balances

Source: Federal Reserve, Morgan Stanley Research

Households' desire to maintain progress in balance sheet repair has held growth in outstanding credit card balances to a minimum. However, as we discuss in [Looking Forward: What Consumers Want](#), **several leading indicators signal that we should expect revolving credit to pick up pace** - a good sign that household credit conditions are improving.

On the supply side, **lenders severely contracted credit card limits in the wake of the financial crisis, and these remained little changed for some time after.** Of late, credit limits are rising again, but consumers' credit card utilization rate (historically around 25%) continues to decline. The result is a growing amount of available, unused credit ([Exhibit 40](#)).

Exhibit 40: Credit Card Debt, Availability, and Utilization Rates

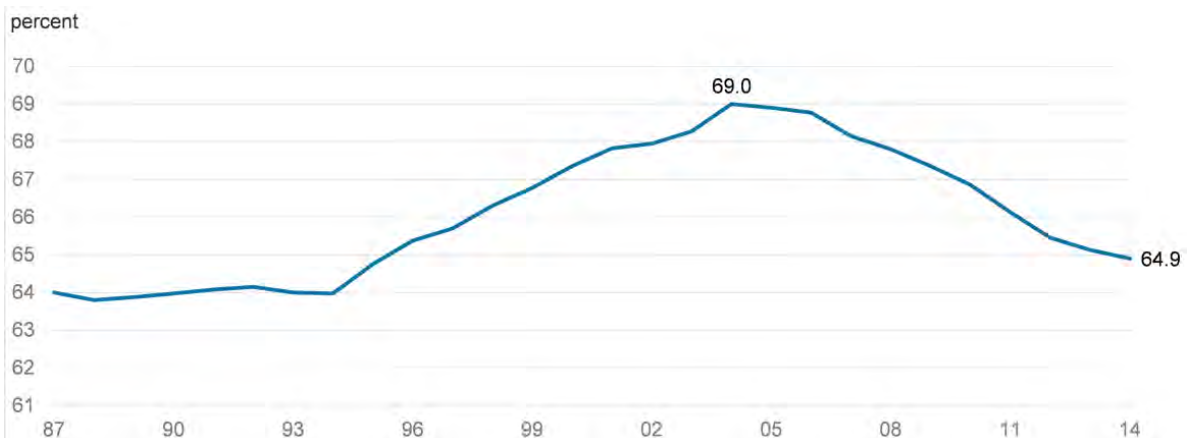


Source: Federal Reserve Bank of New York, Morgan Stanley Research

Mortgage Debt

The US government created fiscal initiatives to expand home ownership throughout the 1990s and 2000s, including mandates to Fannie and Freddie to make housing more affordable ([Exhibit 41](#)). In 2004, the Department of Housing and Urban Development (HUD) boasted, "During the mid-to-late 1990s, they [Fannie and Freddie] introduced new low-down-payment products, and worked to expand the use of automated underwriting in evaluating the creditworthiness of loan applicants." ^[13]

Exhibit 41: Homeownership Rate



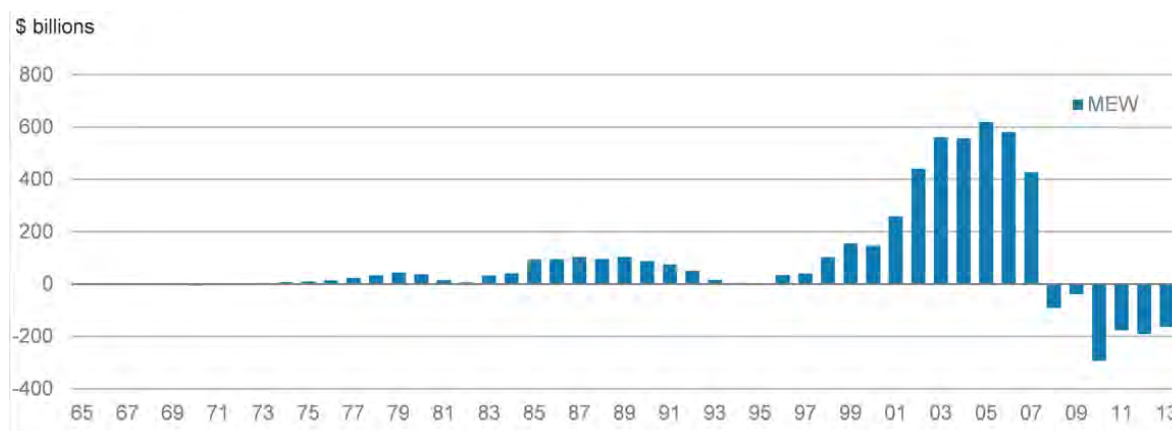
Source: Census Bureau, Morgan Stanley Research

The tendency of home values to increase in line with inflation was an economic truism in US – until the beginning of the housing bubble in the early 2000s, that is. By 2004, home prices had become like Internet stocks in the 1990s - their rise was fast and furious. The subprime mortgage arose against this backdrop, with far fewer underwriting and income requirements compared with traditional prime mortgages. Despite slowing income, middle and low income consumers who had never owned homes now had access to a piece of the American Dream. This, of course, led to a dramatic rise in outstanding mortgage debt in the 2000s. With increased homeownership and the real estate wealth it afforded, middle and lower income households felt wealthier and increased spending as a result.

In 1957, home equity in the US was three times the amount of outstanding mortgage debt. As recently as 1989, equity was still twice as much. Then, in a dramatic shift, **by Q1 2009 the value of mortgages was close to double that of equity**. In 2007, estimates by Greenspan and Kennedy concluded that “discretionary extraction of home equity account[ed] for about four-fifths of the rise in home mortgage debt since 1990.”^[14]

The Bank of England originated the concept of equity extraction in the late 1990s and gave it the name “mortgage equity withdrawal” (MEW). MEW represents the borrowing by consumers on their homes that exceeds the amount necessary to finance the investment in the house itself. The strength in home prices over construction values in the 2000s increased homeowner equity considerably, and consumers leveraged that equity to fund consumption. In fact, **MEW topped \$600 billion annually in the mid 2000s and fueled a significant amount of retail spending** (Exhibit 42).^[15]

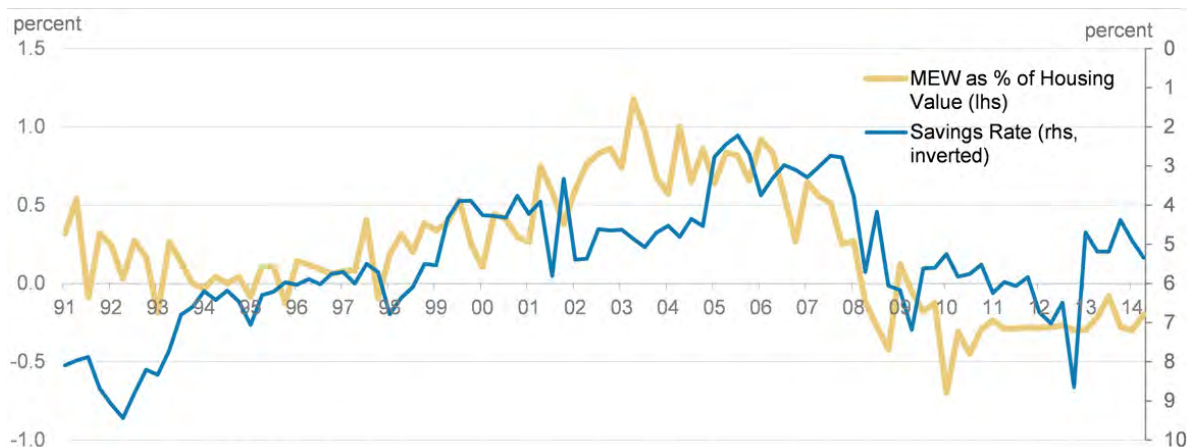
Exhibit 42: Mortgage Equity Withdrawals Topped \$600B in the mid 2000s



Source: Haver Analytics, Morgan Stanley Research

Exhibit 43 shows that as MEW grew, so did its share as a source of financing for household expenditures. The personal savings rate is measured as the ratio of income saved (versus consumed) to disposable income. Because MEW isn't counted as a traditional source of income, the household savings rate declined as MEW increased. In other words, **MEW took some of the place of traditional income in financing consumption**.

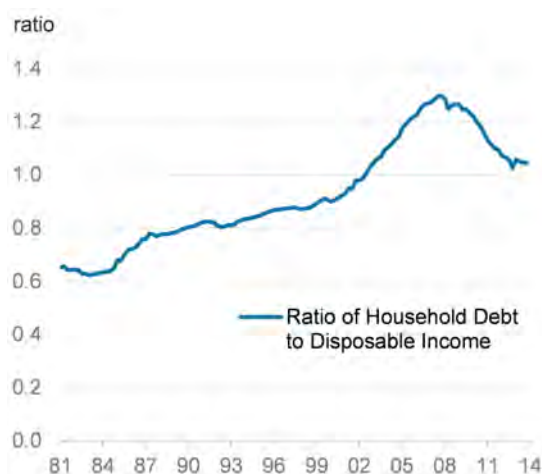
^[16]

Exhibit 43: MEW and Savings as Countervailing Funding Sources

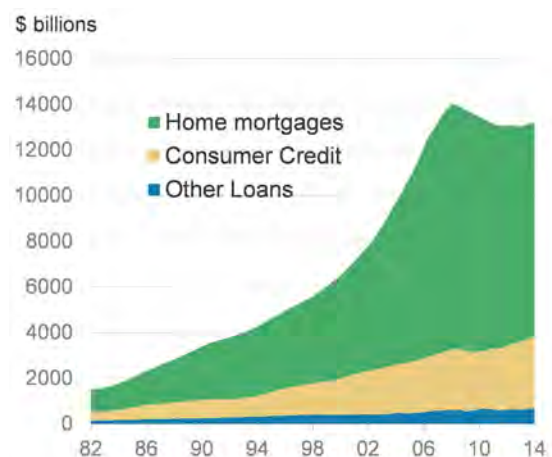
Source: Bureau of Economic Analysis, Haver Analytics, Morgan Stanley Research

Eventually, the colossal rise in real estate wealth was followed by an even more dramatic bust. When the housing bubble burst and prices declined precipitously, millions of homeowners were left with all the mortgage debt and none of the value ([Exhibit 44](#)).

Through foreclosures, distressed sales, mortgage workouts, refinancing, and principal payments, households have slashed mortgage debt by more than \$1.3 trillion since the peak in Q1 2008. However, mortgages still comprise the largest component of household leverage. As of Q1 2014, more than 70 percent of outstanding household debt sat in mortgages ([Exhibit 45](#)).

Exhibit 44: Usage of Debt to Fund Consumption

Source: : Federal Reserve Board, Morgan Stanley Research

Exhibit 45: Household Debt by Type

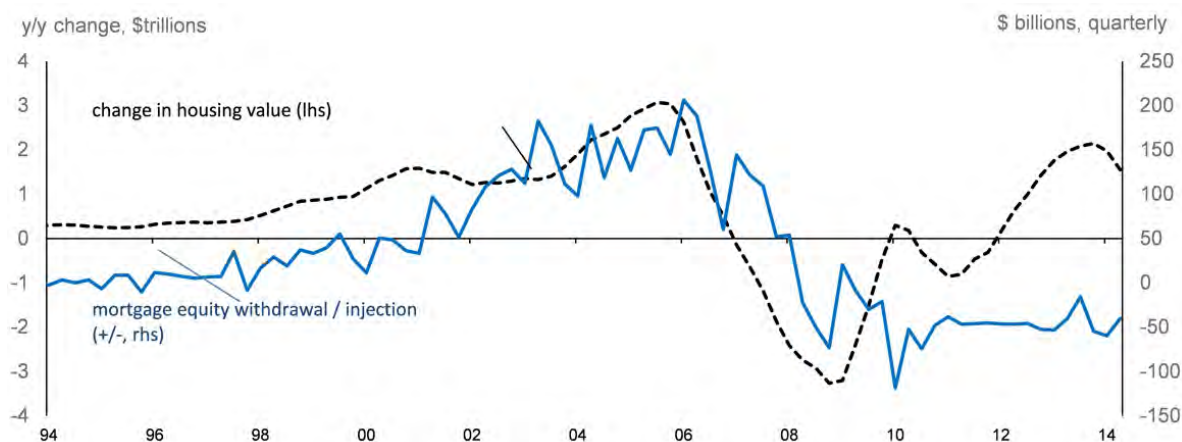
Source: Federal Reserve Bank, Morgan Stanley Research

On the bright side, while mortgage debt dominates the household balance sheet and remains a headwind to consumer activity, this **significant share of the household balance sheet is largely protected in a rising interest rate environment because it is locked in at a very low rate**. In fact, 90% of all outstanding mortgages are being held at a fixed rate, and the effective yield on all outstanding mortgages has fallen to a historical low of 3.9% ([Exhibit 46](#)).

Exhibit 46: Effective Yield on All Outstanding Mortgages at Historical Low

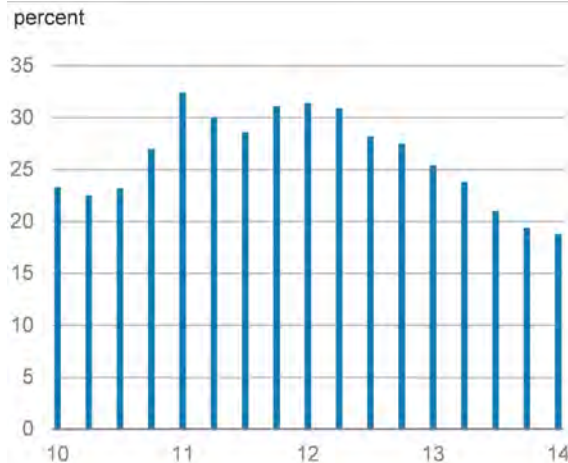
Source: BEA, Freddie Mac, Morgan Stanley Research

Unfortunately, in the years since the recovery began, home prices have increased substantially, yet overall negative equity remains. To date, national home prices remain 15% below the previous peak. The result is that **MEW has remained negative, removing what was once a strong driver of consumption (Exhibit 47).**

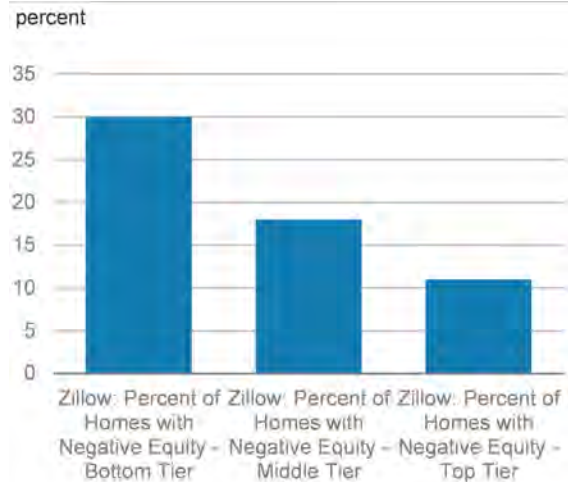
Exhibit 47: Mortgage Equity Withdrawals Have Not Increased Despite Rising Housing Values

Source: Federal Reserve Board, Morgan Stanley Research

Data from Zillow reveal that 20% of homes in the US still have negative equity (Exhibit 48). Moreover, most of those homes are in the bottom tier of value (Exhibit 49). Additionally, according to Fitch Ratings, **a growing percentage of borrowers are now entering foreclosure even with positive equity in their homes.** Many borrowers are unable to sell their properties because the proceeds of the sale are insufficient to cover the mortgage amount, the closing costs and the backlog of missed payments. Even with positive equity, these homeowners have not been able to tap into their homes to fund expenses.

Exhibit 48: Proportion of Homes with Negative Equity

Source: Zillow, Morgan Stanley Research

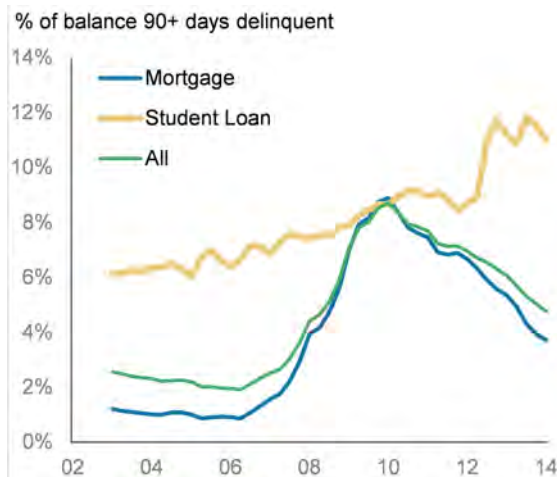
Exhibit 49: Majority of Homes with Negative Equity are in the Bottom Tier

Note: Tiers refer to the tiers by home value. The mean value in the US is \$169,800. Source: Zillow, Morgan Stanley Research

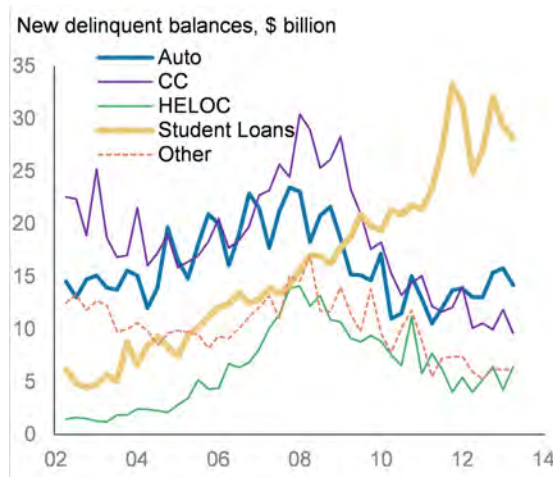
In previous downturns, lower interest rates triggered broad waves of mortgage refinancing (which freed up cash) and new borrowing. The spending that resulted helped power the recoveries. This time around, mortgage financing was broken and lower interest rates alone were unable to help. Instead, millions of refs were only made possible through the government programs HARP and HAMP (Home Affordable Refinance Program and Home Affordable Modification Program). While critical, **these programs simply helped homeowners afford to stay in their home, rather than free up cash for spending.**

Student Debt

Amid rising tuition costs, an increasing share of students rely on debt to fund their education. Student loan delinquent balances have been on the rise since the early 2000s and those with student loans are likely to be less credit worthy than those without ([Exhibit 50](#) & [Exhibit 51](#)). As a result, consumption for the student debt-laden population may be depressed. To be sure, **the share of consumption driven by college age consumers has been in decline since 2003.** ^[17]

Exhibit 50: Seriously Delinquent: Student Loans Rise While All Else Decline

Source: NYFRB/Equifax, Morgan Stanley Research

Exhibit 51: Student Loans Delinquent Balance Exceeds Others

Source: NYFRB/Equifax, Morgan Stanley Research

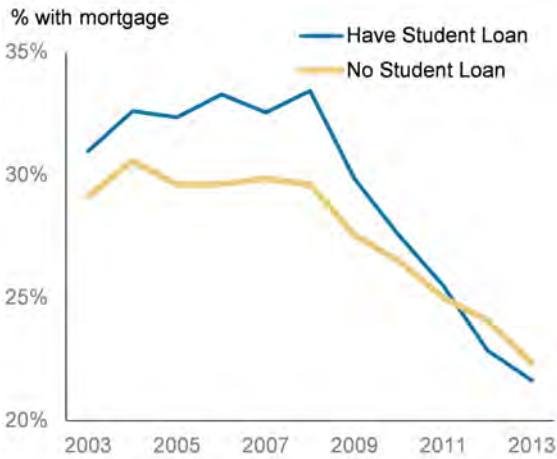
These challenges are further compounded under the Qualified Mortgage (QM) regulatory regime that became effective in January 2014. The QM definition relies on the back-end Debt-to-Income (DTI) ratio not exceeding 43%. **This ratio takes not only mortgage debt servicing but all debt servicing into consideration.** Outstanding student loan debt has grown from around \$375 billion in 2005 to over \$1.1 trillion today to become the second largest outstanding category of debt. The first-time home buyer age cohort bears a disproportionate share of this burden – almost 60% of the outstanding student loan debt is owed by the under 39 age group.

As a result, despite the low level of interest rates, mortgage affordability for first-time buyers remains roughly at the long-term average levels whereas the aggregate home buyer's affordability remains well below the long-term average.^[18] **As the servicing of student loan debt is part of the DTI calculation, the new regulatory regime compounds the already substantial challenges confronting the first-time homebuyer's access to mortgage credit.**

We believe **the average student debtor is likely unable to secure a typical home mortgage due to their debt-to-income ratio.** A simple calculation yields startling results: the average student loan debtor's DTI ratio was 0.48 in 2012, up from 0.41 in 2002. With nearly half of their income going to debt payments, the average student borrower would face challenges qualifying for an FHA mortgage.

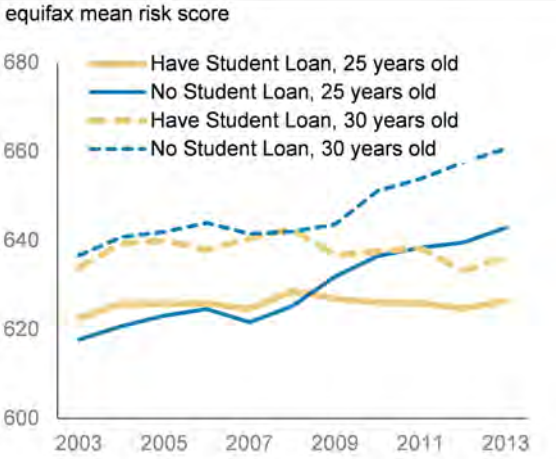
Researchers at the New York Fed have found that prior to the financial crisis, a positive correlation existed between student loan debt among 30-year olds and the rate of homeownership.^[19] The relationship suggested that someone with student loan debt was likely to be more affluent, having secured a well-paying job after college, and therefore be more likely to purchase a home. But following the financial crisis, the authors found that the correlation had turned negative. In other words, carrying student loan debt has become an impediment to home buying, primarily because the borrower no longer qualifies under stricter debt-to-income guidelines (see [Student Debt a Drag on the Economy](#), April 24, 2014). Compared to their peers without student loans, 30-year-olds with student loans are much less likely to have a mortgage ([Exhibit 52](#)). In general, data from the New York Fed reveal higher credit risk scores (higher=better) for "no student loan" borrowers compared with borrowers that carry student loans ([Exhibit 53](#)).

Exhibit 52: Student Loan Burden Dampens Mortgage Demand...



Source: FRBNY Consumer Credit Panel, Equifax, Morgan Stanley Research

Exhibit 53: Student Debt Associated With Higher Credit Risk Score



Source: FRBNY Consumer Credit Panel, Equifax, Morgan Stanley Research

The Morgan Stanley Liquidity Index

There are many factors that influence available cash for discretionary consumption. **Morgan Stanley's Liquidity Index aggregates sources of income and credit that consumers can tap into to fund consumption, while also accounting for the necessary financial obligations households must meet on a regular basis** (including taxes, interest, auto lease payments, rent, insurance, out of pocket medical costs and public transportation). **The index helps anticipate and explain changes in personal consumption (Exhibit 54).**

Exhibit 54: Consumer Liquidity Remains Structurally Impaired in 2014



Source: Bureau of Economic Analysis, Federal Reserve Board, Bureau of Labor Statistics, Federal Home Loan Mortgage Corporation, Centers for Medicare & Medicaid Services, Morgan Stanley Research

As [Exhibit 54](#) illustrates, **liquidity dried up in the fourth quarter of 2013 and has experienced only anemic growth in 2014.** Despite positive income growth in the first and second quarter of 2014, real essential expenditures have risen substantially - including high energy costs from the harsh winter, higher interest payments on revolving debt as usage increases, higher out of pocket medical costs, as well as increased public transportation costs as job growth improves. The index also captures the declines in MEW that we've previously discussed. Revolving credit also declined every quarter from 2008 to 2011 and has had only spotty growth since. **Spending by the average American household continues to be affected by structural liquidity constraints.**

Looking Forward: What Consumers Want

Given the liquidity constraints facing the average consumer, further increases in US consumption will depend on greater realized gains in labor income, alongside continued gains in wealth. Lower and middle income households, in particular, have not increased their spending to historically normal levels as wage and salary growth and access to credit remains subpar. **Should the demand and supply of credit normalize, the average consumer will have the ability to return to prior consumption patterns. But that normalization will depend greatly on rising financial expectations that can only be driven by accelerating wages and higher real estate values.**

We begin this section by examining spending trends since 2007. We then discuss the impact of the wealth effect and review our leading indicators of wage growth and revolving credit usage - essential to improvements in liquidity for middle and lower income households. Finally, we highlight the spending categories most likely to benefit from increases in income, credit and wealth, using an analysis of elasticity of demand, as well as by comparing current category growth trends to those in prior recoveries.

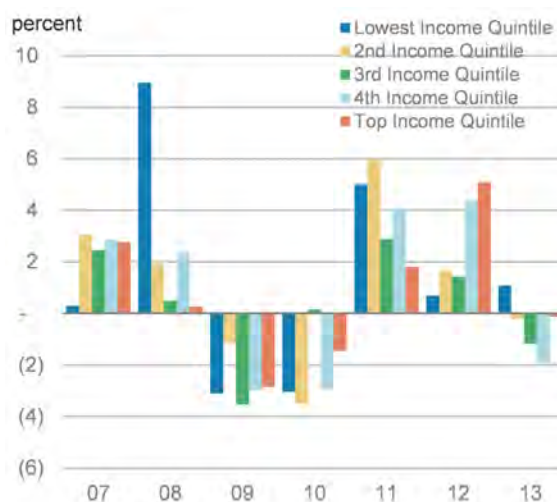
Spending by Income Quintile, 2007-2013

Since the financial crisis, spending patterns for higher and lower income groups have diverged.

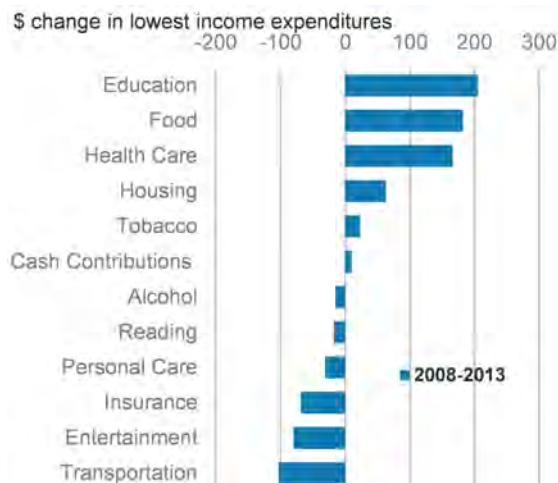
While all groups experienced consumption declines in 2009-10 ([Exhibit 55](#)), overall consumption among the highest income quintiles rebounded more so than that of the lower income quintiles. Note that **growth declined across most groups in 2013 as changes in fiscal policy lowered after-tax income.**

From 2008 through 2013, increases in spending for middle and lower income consumers have centered on necessities, such as education, food and healthcare ([Exhibit 56](#)). Higher income households have increased spending in most categories of spending since 2008, with the exception of entertainment ([Exhibit 57](#)).

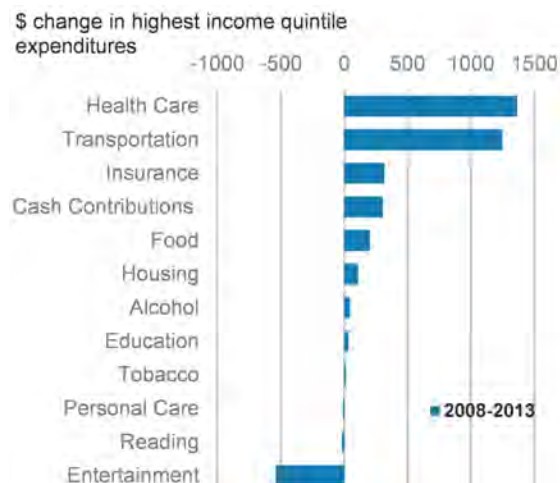
Exhibit 55: Yearly Change in Average Annual Expenditures By Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 56: Change in Average Lowest Income Group Expenditures by Category, 2013

Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 57: Change in Average Highest Income Group Expenditures by Category, 2013

Source: Consumer Expenditure Survey, Morgan Stanley Research

The Wealth Effect

Estimates of the effect of wealth on consumption are many and varied. Further, if and how the wealth effect “trickles down” is hotly debated.

The wealth effect attempts to describe, or measure, how fluctuations in household wealth influence household consumption. In other words, an increase in wealth, whether perceived or realized, is an important driver of consumer confidence, which in turn propels spending. ^[20] Increased consumption from wealth compels companies to hire and invest more, which then creates more income, which leads to greater demand, and so on - the virtuous cycle.

This **marginal propensity to consume, however, is dependent on the type of wealth being created.** The average American household is much more likely to have equity in the home than it is to own stocks. At the end of 2013, 65.2% of US households had equity in their homes, with a median value of \$170,000 (2013 dollars), compared to 13.8% with corporate equity, with a median value of just \$27,000 (2013 dollars); 8.2% of households held pooled investment funds with a median value of \$80,000. ^[21] Indeed **as a broad driver of consumer spending, gains in housing equity pack much more bang for the buck.** ^[22] Monetary policymakers know this.

Monetary Policy's Role After the Financial Crisis

To fight against economic downturns and kick-start a recovery, the Federal Reserve ‘eases’ credit, i.e., lowers interest rates, to increase aggregate demand. Interest rate sensitive sectors, particularly housing, respond quickly and the economic recovery kicks into full gear. **Traditionally, it is housing activity that leads the US economy in recovery.** Following the financial crisis, however, with mortgage financing broken, the Fed's preferred transfer mechanism of how monetary policy affects the economy was rendered useless. Rock-bottom mortgage rates were unable to inspire much more than a massive wave of refinancing.

Unable to kick-start the economy via housing, the Fed turned its eye toward extraordinary measures to boost other assets, the so-called portfolio rebalancing effect. The Fed's massive program of quantitative easing, in which it has purchased large amounts of longer-term assets, drove investors away from fixed income and into equities and other riskier investments. Indeed, **consumers holding financial assets have experienced unprecedented growth in wealth.**

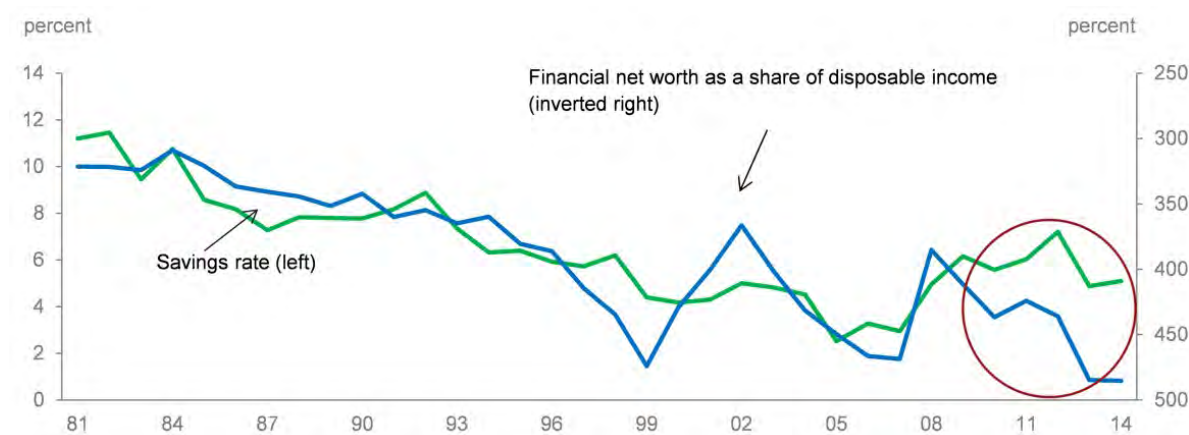
The Trickle Down Effect

Minutes of the December 2013 meeting of the FOMC indicated that participants viewed the gains in equities as a favorable trend that would support stronger job and income growth in the year ahead. The expectation is that even though the rise in equities has primarily benefitted higher income households, those households in turn would spend more, which would lead businesses to hire more, and so on.

In [What Consumer's Want](#), we highlighted categories of spending that have clearly benefitted from the wealth effect.^[23] Indeed, based on year-over-year growth rates and adjusted for price changes, pleasure aircraft was the single fastest growing category of consumer spending in 2013, "taking off" by nearly 25%.

When studying the savings rate by income group, Maki and Palumbo (2001) found the persistent decline since the early 1980s to be the result of a behavioral response by wealthy households to a surge in stock market wealth.^[24] A naïve examination, shown in [Exhibit 58](#), indeed implies that the increase in equities appears to explain the decline in the personal savings rate since 2009. Yet it also suggests that **a measure of caution lingers even among wealthy households** as the gap between growth in financial net worth as a share of disposable income and the personal savings rate has widened.

Exhibit 58: Financial Net Worth vs Personal Savings Rate



Source: Federal Reserve, Morgan Stanley Research

The bottom line is that the majority of US households are still recouping lost wealth from real estate holdings, while wealth from financial assets has reached new highs. Unfortunately, the marginal propensity to consume from financial wealth is lower compared with real estate wealth because it not only touches fewer households, but touches households that tend to carry a higher savings rate. Further, even the marginal propensity to consume from financial wealth appears to have been dampened in the wake of the financial crisis.

Leading Indicators: Wage Growth

We are following three leading indicators that suggest we are on the cusp of stronger wage and salary growth. **Stronger growth in wages and salaries is essential to the macro outlook, because it would help households spend more broadly across the income spectrum, and it matters for monetary policy, because the FOMC will remain reluctant to raise rates in the absence of a pickup in wage growth.**

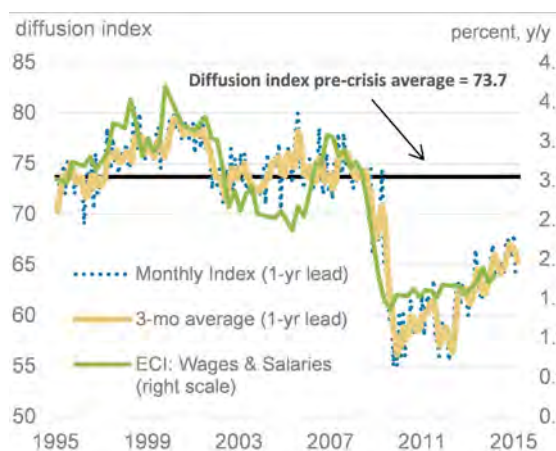
- **Recent research suggests that positive developments in core inflation may in fact be a leading indicator of firming wage trends.**

The central idea is that higher prices will motivate workers to push for higher compensation. In late June, Philadelphia Fed President Plosser (Voter) commented that wage inflation often lags behind price inflation. Moreover, transcripts from the June 2004 FOMC meeting suggest Fed Chair Yellen may be of this mindset as well (see [Yellen's Conundrum: Slow Wage Growth, Higher Prices, June 27, 2014](#)). At that time, Yellen thought an "uptick in core inflation could also affect future wage bargains." Finally, researchers at the Cleveland Fed found that the relationship between wages and prices is not easily disentangled as the two often move together, but "current and expected future wages and other components of costs may actually be driving the inflation process in theory" (see Cleveland Fed [Economic Commentary: On the Relationships between Wages, Prices, and Economic Activity, August 19, 2014](#)).

- **Expected change in income appears to be a convincing 12-month lead to changes in wages and salaries.**

Though our own analysis suggests the inflation-wage link is a somewhat loose relationship, we see other signs that wage growth is poised to pick up. The same diffusion index of financial expectations depicted previously suggests that US households do a pretty good job of anticipating future income gains. [Exhibit 59](#) charts this index again, but overlays year-on-year growth in the wage and salary component of the Employment Cost Index. It appears that **there is a tight relationship, with a one-year lead-time, between financial expectations of households and wage and salary growth**. While the chart does not suggest wage growth will increase substantially, it does suggest the growth trend will continue along a positive slope, **reaching 2% in 2015 - just strong enough to hold inflation-adjusted wage growth roughly flat**.

Exhibit 59: Expected Change in Income During the Next Year vs ECI Wages and Salaries



Source: University of Michigan, Morgan Stanley Research

Exhibit 60: Small Business Compensation vs ECI Wages and Salaries (adjusted for lead time)



Source: NFIB, BLS, Morgan Stanley Research

■ Small business compensation plans are pointing to stronger wage and salary growth.

In recent research, we have also highlighted an encouraging development in the National Federation of Independent Business' (NFIB) Small Business Optimism Index (see [Where the Rubber Hits the Road: Wage and Salary Growth, May 5, 2014](#)). The Small Business Optimism Index tracks the net percentage of small businesses that have raised workers compensation over the past 3 to 6 months. The index has moved sharply higher and is back to its pre-crisis levels. **Compensation practices of small employers tend to lead broader wage and salary growth by about 9 months (Exhibit 60). Its continued climb suggests upward pressure on broader wage measures may emerge as we head into 2015, on the heels of an upturn in inflation.**

It's important to note that the NFIB's compensation index turned up sharply in 1Q 2010, yet wage and salary growth has yet to follow. In difficult labor markets, the lag time may be stretched. In 2003, in what was deemed the "jobless recovery", the NFIB index turned up in 3Q 2003 but wage growth did not accelerate until a full two years later. Interestingly, year-on-year growth in core inflation also turned up prior to the acceleration in wage growth during that time.

Leading Indicators: Revolving Credit

We track two primary indicators of growth in revolving credit. As financial conditions improve, middle and lower income households should feel more comfortable adding to debt levels to fund spending.

■ Consumer confidence

In [Exhibit 61](#), we map the 3-month average of consumer confidence against the yearly change in revolving credit. We have found that the growth in revolving credit lags consumer confidence by 6 months. **Consumer confidence has inflected higher and growth in revolving credit has begun to follow. We expect growth in revolving credit to accelerate over the next 6 to 12 months.**

■ Credit inquiries

In [Exhibit 62](#), we examine Equifax inquiries as a measure of consumer credit demand. Equifax inquiries include only "hard pulls," which are voluntary inquiries generated when a consumer authorizes lenders to request a copy of their credit report. It excludes inquiries made by creditors about existing accounts (for example to determine whether they want to send the customer pre-approved credit applications or to verify the accuracy of customer-provided information) and inquiries made by consumers themselves. Within each industry of auto finance, mortgage, and utilities (excluding wireless), multiple inquiries in 30-day periods count as one inquiry.

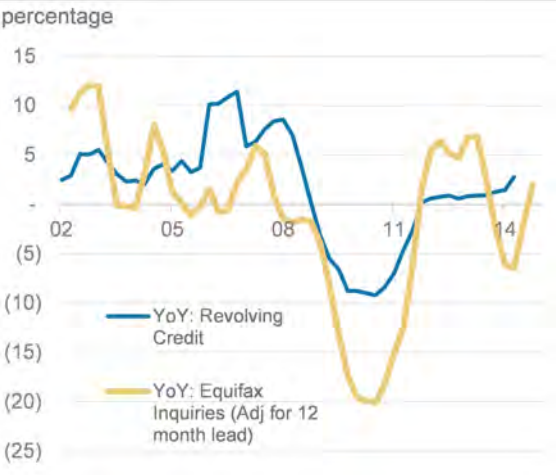
[Exhibit 62](#) shows that **household credit inquiries declined significantly from 2007 through 2010** (adjusted by 12 month lead in the chart below) **and the decline in outstanding credit card balances appear to have tracked this change.** By mid-2010, inquiries began to grow again, but dropped off in late 2012/early 2013, perhaps coinciding with heightened uncertainty about tax policy leading up to, and higher tax rates that went into effect at, the start of 2013. **Since mid-2013, inquiries have trended upward, and indeed we have seen balances increase in the past several months.**

Exhibit 61: Consumer Confidence Leads Growth in Revolving Credit



Source: Federal Reserve, Morgan Stanley Research

Exhibit 62: Demand for Credit: Growth in Equifax Inquiries



Source: FRBNY Consumer Credit Panel, Morgan Stanley Research

Income Elasticity of Demand

To understand where consumers are likely to spend based on increases in income and wealth, we calculate the income elasticity of demand, or how sensitive the demand for a particular good or service is to changes in income or wealth. First, comparing drivers, we note that **consumers have become broadly less responsive to changes in income since the financial crisis (Exhibit 63)**. This shift is likely a reflection of changing balance sheet priorities and increases in the savings rate. Empirically, housing wealth and consumption tend to move together, but the relationship has clearly deteriorated since 2008, likely reflecting the lack of MEW we've discussed previously, as well as lingering post-crisis caution despite improving balance sheets. Income elasticity of demand elasticity driven by increases in financial wealth has also declined since the crisis.

Exhibit 63: Income Elasticity of Demand by Income Source



Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Board, Morgan Stanley Research

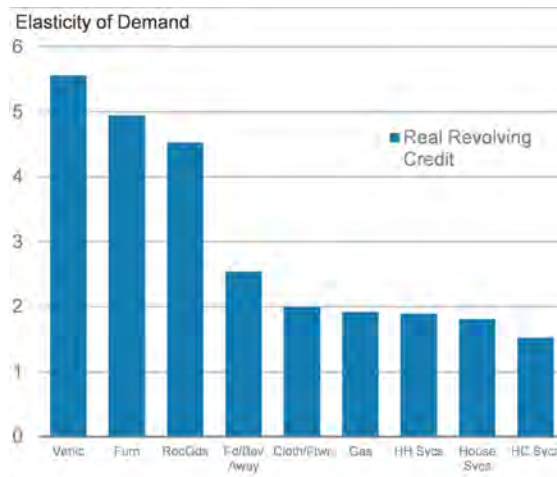
Going forward, **as labor market income and wealth increase, certain categories of spending are likely to benefit.** We find that since the end of the recession, the **categories most sensitive to an increase in wages are recreational goods and vehicles, motor vehicles, furnishings and transportation services (Exhibit 64).** Further, given the importance of credit to the middle income consumer, we also calculate the credit elasticity of demand. Top categories that benefit from an increase in credit are similar to those driven by wage income, but with the addition of **food and beverages for off-premises consumption, clothing and footwear, and gas and household services (Exhibit 65).**

Exhibit 64: Income Elasticity of Demand from Wages and Salaries, 2009 -Present



Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Board, Morgan Stanley Research

Exhibit 65: Credit Elasticity of Demand, 2009 - Present

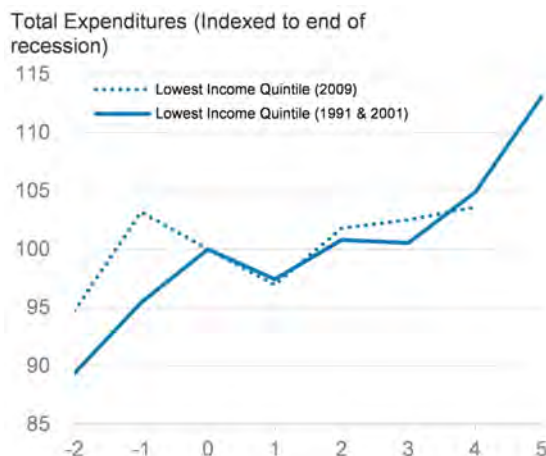


Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Board, Morgan Stanley Research

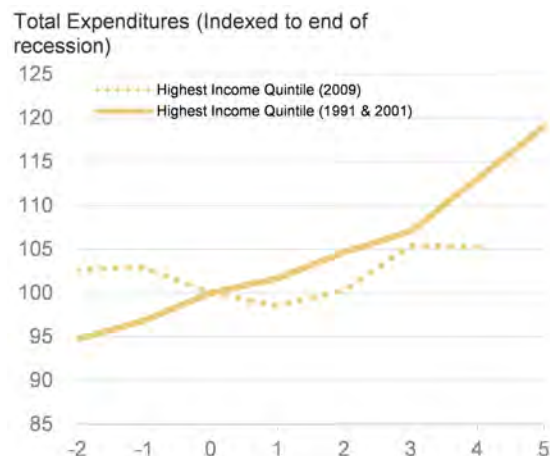
Spending by Income During Recoveries

Since recession shocks can have a lasting impact on consumer spending patterns, we examine details provided in the Consumer Expenditure Survey to determine what spending categories tend to increase first after a recession - by income group. **After a recession, lower income households tend to restore spending on necessities first as a share of total income. In past recessions, households in the top income quintile have weathered the storm and continued to increase spending despite the economic downturn, but the severity of the financial crisis compelled these households to reduce overall spending as well.**

Exhibit 66 and **Exhibit 67** compare the change in average annual spending for households in the years surrounding the most recent recessions. **Exhibit 66** displays the trend for the bottom quintile households and **Exhibit 67** illustrates the spending patterns for top quintile households. Whereas spending among lower income groups appears to have recovered normally following the financial crisis, it appears the recovery in spending among wealthier households has lagged that of the prior two recessions ending in 1991 and 2001. **We suspect this is a result of the severe decline in financial assets.**

Exhibit 66: Bottom Quintile Total Spending Patterns Similar to Prior Recoveries

Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 67: Top Quintile Spending Diverges from Prior Recovery Spending Patterns

Source: Consumer Expenditure Survey, Morgan Stanley Research

In Exhibits 68 through 105 located in the [Appendix: Spending During Economic Recoveries](#), we examine the major Consumer Expenditure Survey spending categories by income quintile in detail. **For bottom quintile households, the categories that tend to return first to normal growth levels are food (Exhibit 68, Exhibit 94 and Exhibit 96), housing (Exhibit 72, Exhibit 90 and Exhibit 92) and healthcare (Exhibit 78).** In the years following the financial crisis however, growth in spending on food at home has been relatively muted, though curiously, food for off-premise consumption recovered more strongly - (Exhibit 94 and Exhibit 96), while spending on new cars and trucks has significantly outpaced prior patterns (Exhibit 98).

For **top income quintile households who unusually cut back spending in the latest recession**, the categories that declined were those related to **housing (Exhibit 73 and Exhibit 91 Exhibit 93), entertainment (Exhibit 81), personal care (Exhibit 83), education (Exhibit 87), food away from home (Exhibit 97),** as well as **pets, toys and playground equipment (Exhibit 103).** As highlighted by our colleagues in [Housing Market Insights, A Bumpy Road to Recovery, July 23, 2014](#), **spending on rent increased as homeownership-related spending declined.**

Categories that have been particularly strong for top income quintile households are new car purchases (Exhibit 99) as well as public transportation (Exhibit 101), healthcare (Exhibit 79), food at home (Exhibit 95), and footwear (Exhibit 105).

Conclusion

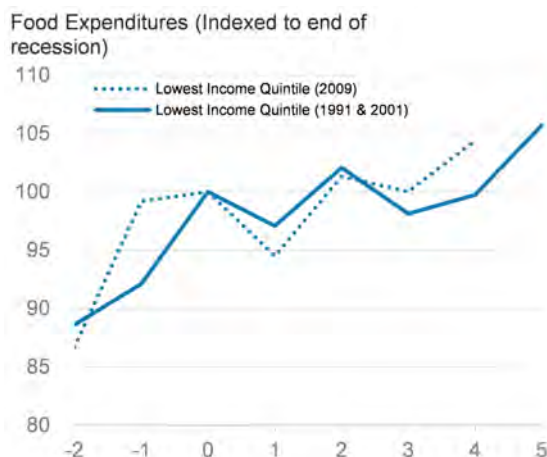
In this handbook we have explored the drivers of the anemic recovery in consumer spending since the financial crisis. Income inequality explains divergent consumer spending as lower-income households remain liquidity constrained and higher-income households continue to respond to growing wealth from financial assets.

We believe that we are on the cusp of a pickup in wages and salaries which should improve lower-income liquidity and spending. The **low-end discretionary categories that are likely to benefit most from this improvement are food for off-premises consumption, housing/furnishings, vehicles, recreational goods, healthcare, clothing and footwear.**

Appendix: Spending During Economic Recoveries

Major Consumer Expenditure Categories

Exhibit 68: Food - Bottom Income Quintile



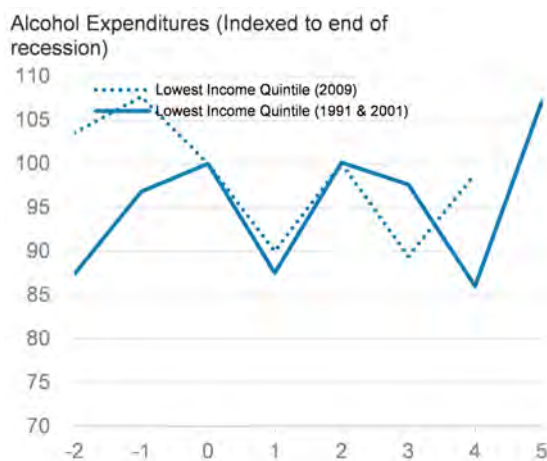
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 69: Food - Top Income Quintile



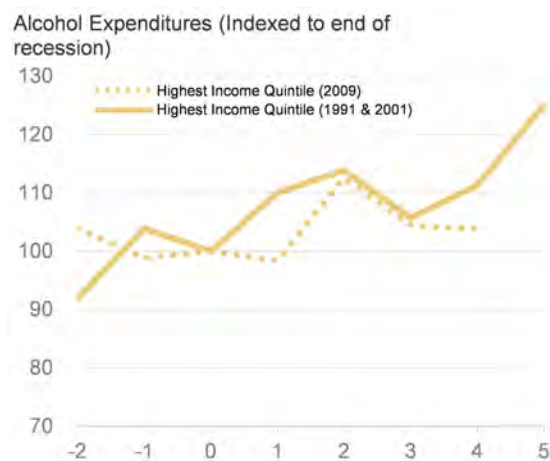
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 70: Alcohol - Bottom Income Quintile



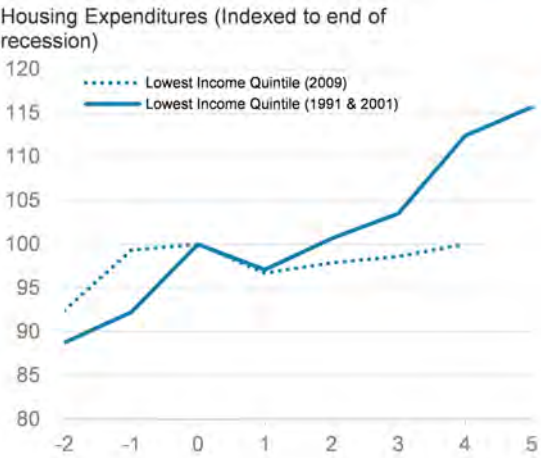
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 71: Alcohol - Top Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 72: Housing - Bottom Income Quintile



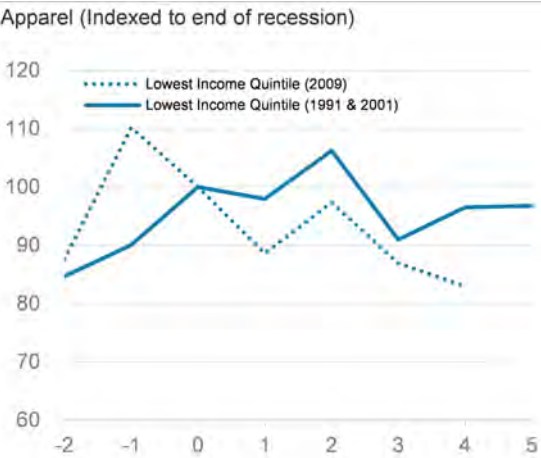
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 73: Housing - Top Income Quintile



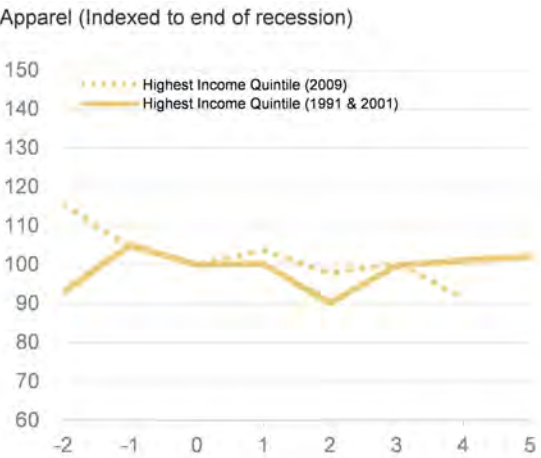
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 74: Apparel - Bottom Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 75: Apparel - Top Income Quintile



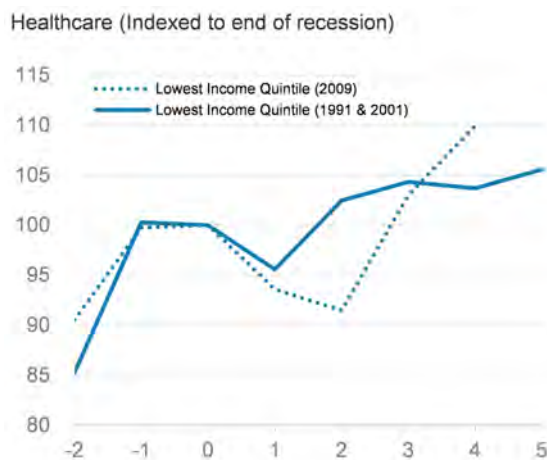
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 76: Transportation - Bottom Income Quintile

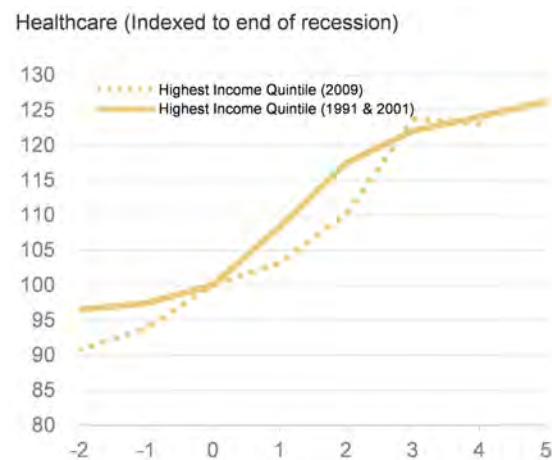

Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 77: Transportation - Top Income Quintile


Source: Consumer Expenditure Survey, Morgan Stanley Research

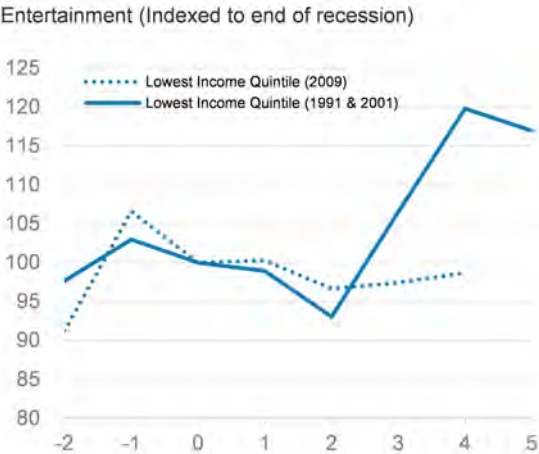
Exhibit 78: Healthcare - Bottom Income Quintile


Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 79: Healthcare - Top Income Quintile


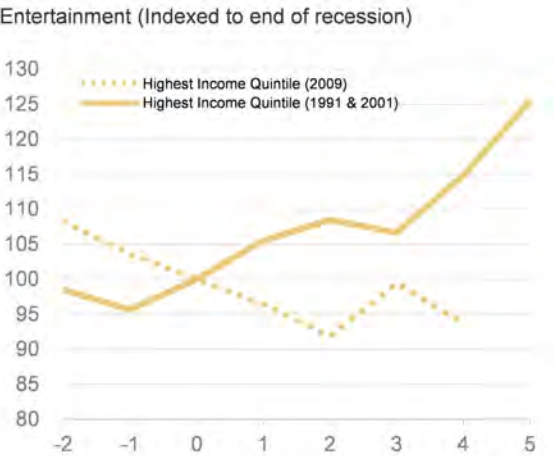
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 80: Entertainment - Bottom Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 81: Entertainment - Top Income Quintile



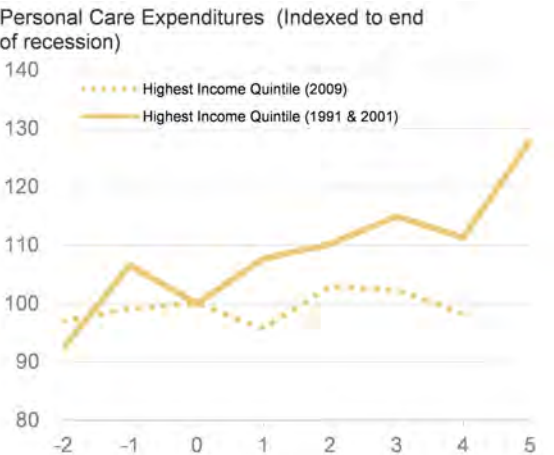
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 82: Personal Care - Bottom Income Quintile

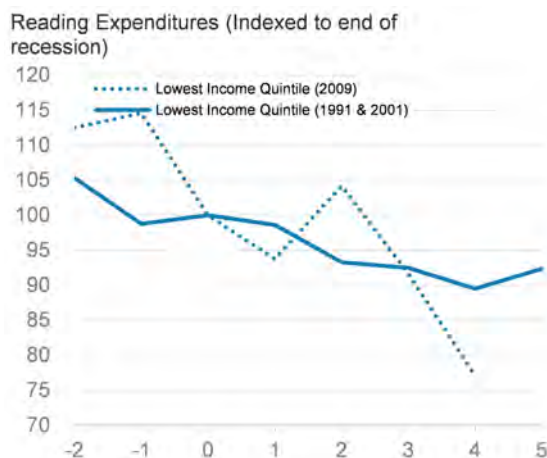


Source: Consumer Expenditure Survey, Morgan Stanley Research

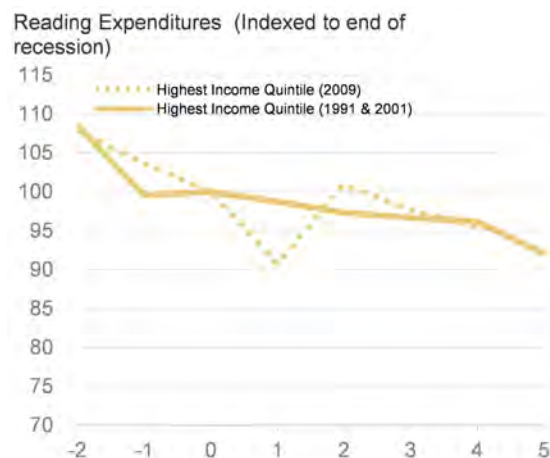
Exhibit 83: Personal Care - Top Income Quintile



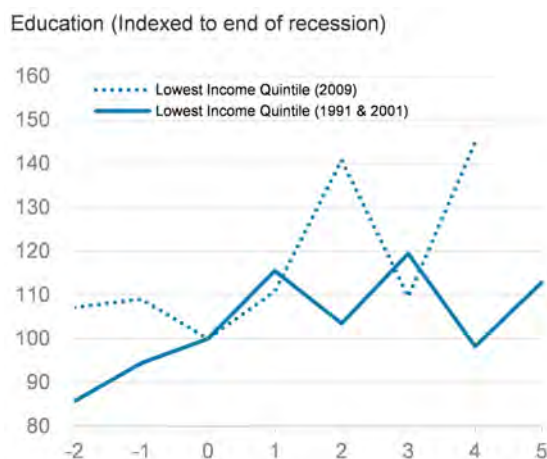
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 84: Reading - Bottom Income Quintile

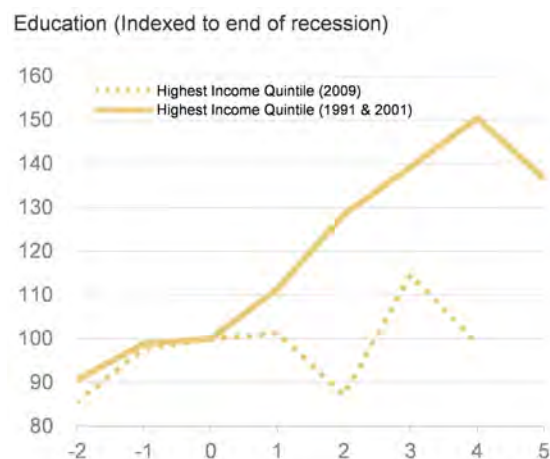
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 85: Reading - Top Income Quintile

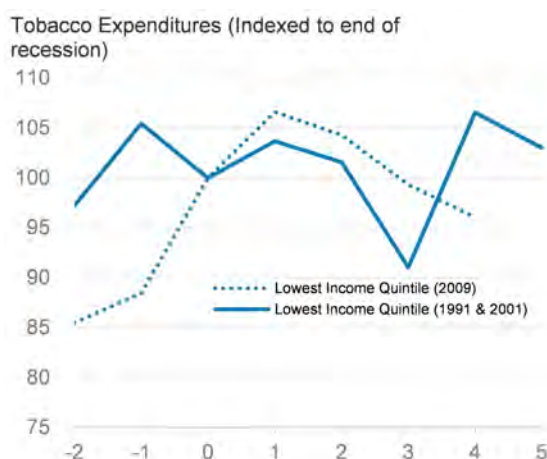
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 86: Education - Bottom Income Quintile

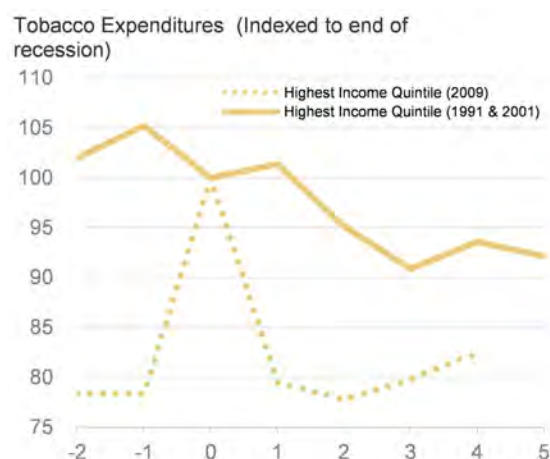
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 87: Education - Top Income Quintile

Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 88: Tobacco - Bottom Income Quintile

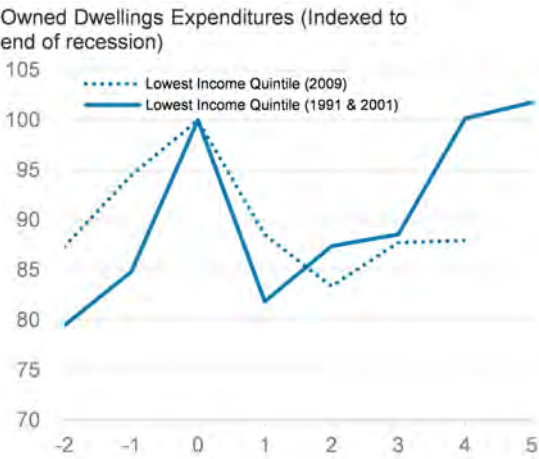
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 89: Tobacco - Top Income Quintile

Source: Consumer Expenditure Survey, Morgan Stanley Research

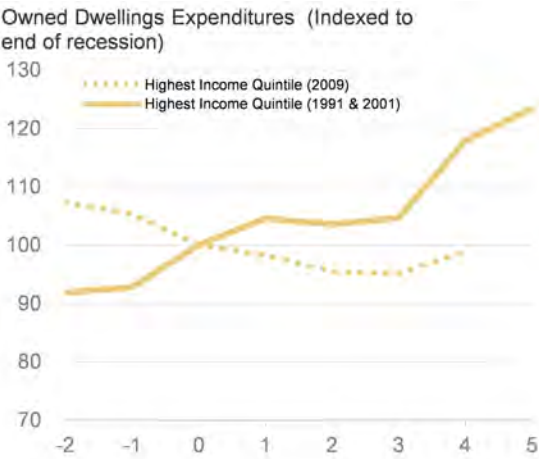
Housing Spend Detail

Exhibit 90: Owned Dwellings - Bottom Income Quintile



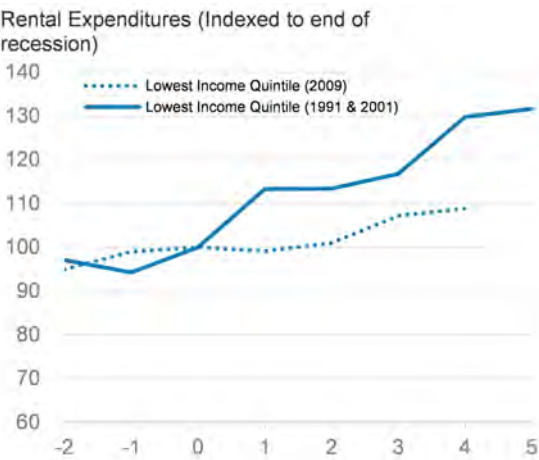
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 91: Owned Dwellings - Top Income Quintile



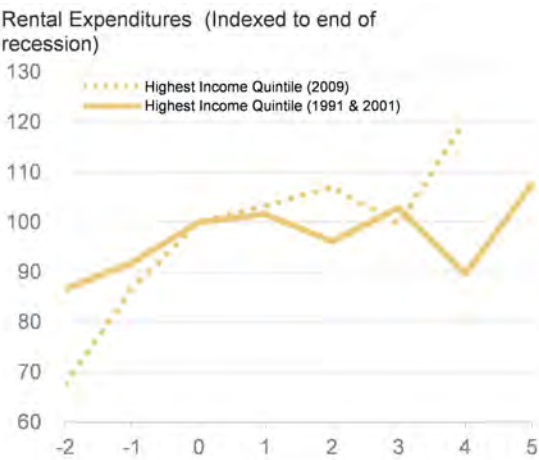
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 92: Rent - Bottom Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 93: Rent - Top Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Food Spend Detail

Exhibit 94: Food at Home - Bottom Income Quintile



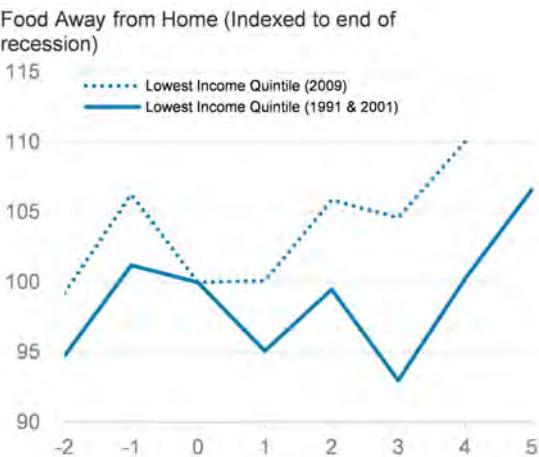
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 95: Food at Home - Top Income Quintile



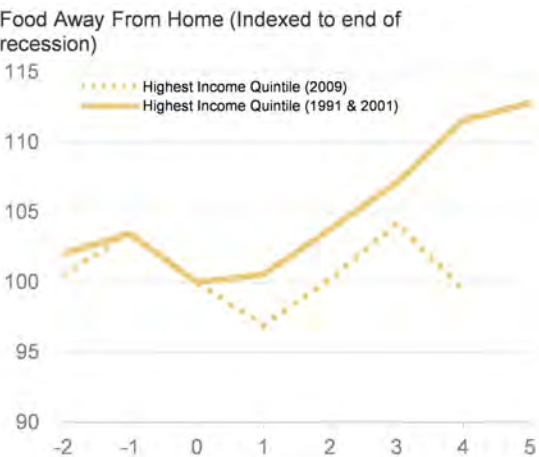
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 96: Food Away from Home - Bottom Income Quintile



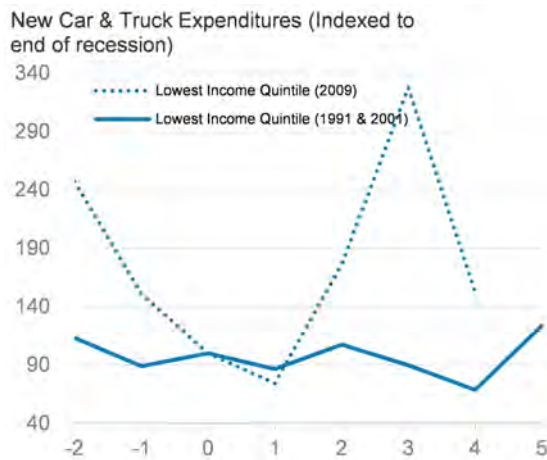
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 97: Food Away from Home - Top Income Quintile

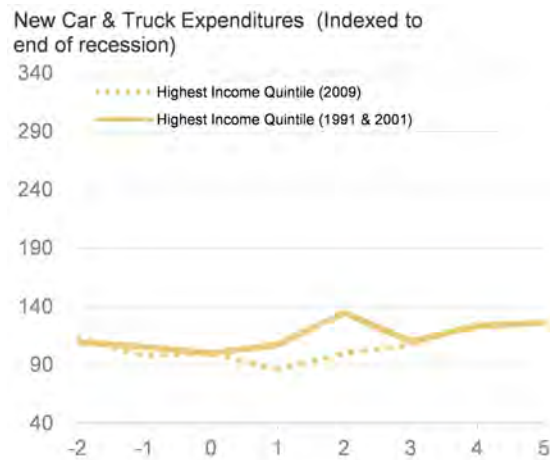


Source: Consumer Expenditure Survey, Morgan Stanley Research

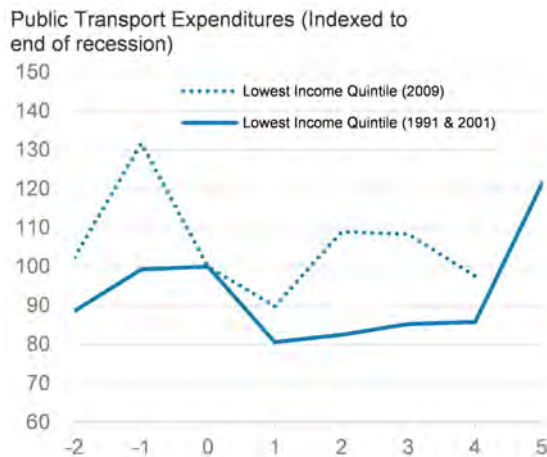
Transportation Spend Detail

Exhibit 98: New Cars & Trucks - Bottom Income Quintile

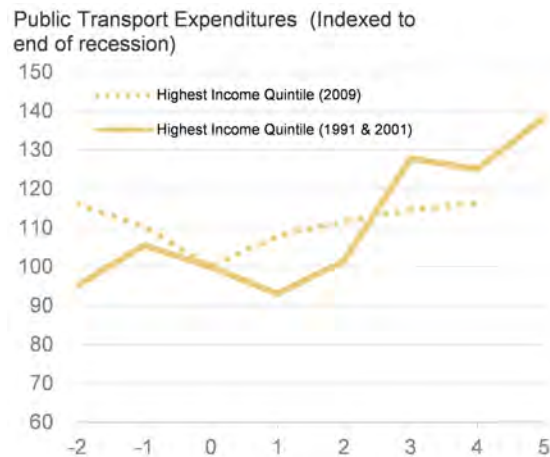
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 99: New Cars & Trucks - Top Income Quintile

Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 100: Public Transportation - Bottom Income Quintile

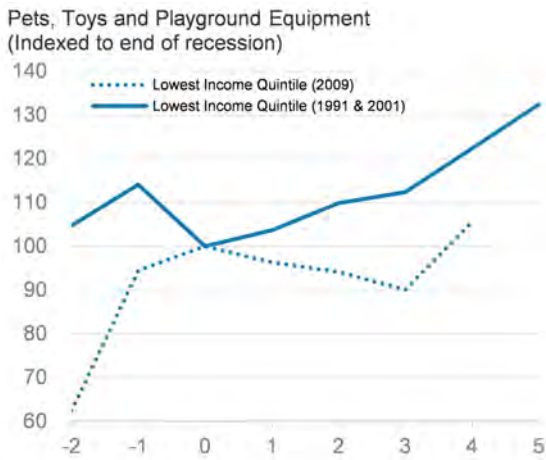
Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 101: Public Transportation - Top Income Quintile

Source: Consumer Expenditure Survey, Morgan Stanley Research

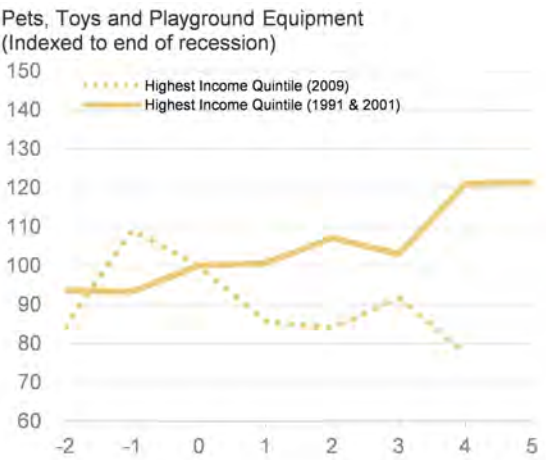
Pets, Toys, and Playground Equipment Spend Detail

Exhibit 102: Pets, Toys and Playground Equipment - Bottom Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 103: Pets, Toys and Playground Equipment - Top Income Quintile

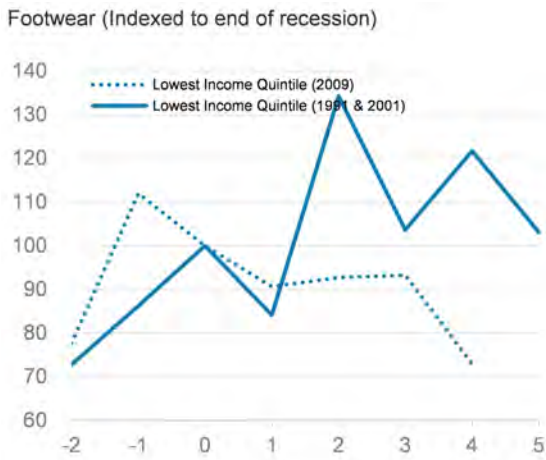


Source: Consumer Expenditure Survey, Morgan Stanley Research

Footwear Spend Detail

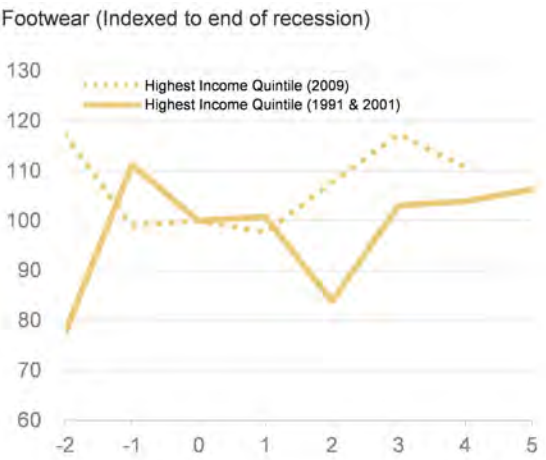
Top income quintile households have increased spend on footwear relative to prior recoveries while bottom income quintile households have reduced footwear spend.

Exhibit 104: Footwear - Bottom Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Exhibit 105: Footwear - Top Income Quintile



Source: Consumer Expenditure Survey, Morgan Stanley Research

Other US Economics Research

[US Economics: USD Sensitivity](#)

[Economics & Strategy Insights: FOMC Briefing | The Morgan Stanley Teal Book](#)

[Video | US Economics: Weird Science of Monetary Policy - Heading for the Exit](#)

[US Economics: US Economic Outlook: Somewhere in Between](#)

Endnotes

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- ⁶ Levy Economics Institute of Bard College.
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