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Weighing the Wealth Effect

BY MARK ZANDI, BRIAN POI, SCOTT HOYT AND WAYNE BEST

Abstract

Consumers are powering the U.S. economy's growth. Businesses, housing, government and global trade are all modestly contributing to growth, but it is the consumer who is key to the economy's performance. Consumers are not spending with the abandon they did in the boom and bubble prior to the Great Recession, but they are stalwart in their spending.

Benefiting consumers are strong economic tailwinds. The job market is healthy, creating lots of jobs across all pay scales in most regions of the country. With unemployment at near 4%, the economy is at full employment. Wage growth has been somewhat disappointing, but it is slowly picking up, and because of low inflation, real wage growth—nominal wage growth less inflation—is improving. Household leverage is low and credit is increasingly ample and cheap. Gasoline prices are off their recent bottom, but they remain low by most historical standards.

Another critical tailwind to consumer spending has been rapidly rising asset prices—most important, stock and house values. Stock prices are up a robust 20% over the past 18 months, despite the recent market correction, and 300% since their nadir during the recession. House price gains have also been impressive, rising a robust nearly 10% to new highs over the past 18 months, and 40% since their nadir five years ago. The resulting increase in household wealth has supercharged consumer spending via the so-called wealth effect—the impact on consumer spending of changes in household wealth.

The importance of the wealth effect has significant implications for the economic expansion. With stock prices now seemingly richly valued and house prices fairly valued, further outsize gains in asset prices appear less likely. If consumers are to continue spending as strongly as they have been, stronger wage gains will be needed. Moreover, the real possibility of a correction in the stock market, particularly as the Federal Reserve normalizes monetary policy, poses a meaningful threat to consumers and the broader economy.

In this paper, we quantify the wealth effect based on data on household stock and financial asset holdings from Equifax and retail sales estimates based on Visa credit and debit card data that are modeled to represent all forms of payments, including cash and checks. These data are available for states and metropolitan areas, and thus provide numerous data points to refine our econometric estimates of the wealth effect. We examine differences in the wealth effect across retail spending categories, the lags in the wealth effect, and possible asymmetries in the wealth effect due to rising versus falling asset prices.

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We estimate that the wealth effect on total consumer spending is 4.5 cents. That is, for every $1 change in household wealth, consumer spending ultimately changes by 4.5 cents. Close to one-fourth of the growth in consumer spending during the current economic expansion, and one-third of the spending over the past year, is thus due to the wealth effect. The wealth effects are especially large for spending on travel and home improvement, and small for groceries and drugstores.

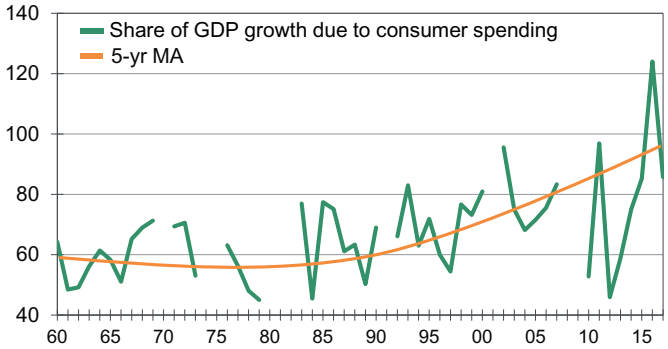
The wealth effects are at their maximum one year after the change in wealth, and they are bigger when asset prices are falling than when prices are rising. This suggests that if we were to suffer a major correction in stock price or housing values, consumer spending and the broader economy would be substantially impacted.

Consumers lead the way

U.S. consumers have been the strongest and most consistent source of growth in the current economic expansion. During the past eight years of the expansion, consumers have accounted for nearly three-fourths of the

Chart 1: Consumers Power Economic Growth

Share of GDP growth due to cons. spending in expansion yrs, %



Sources: BEA, Moody's Analytics

economy's growth (see Chart 1). The strongest gains in spending have occurred in the past several years, as in the aftermath of the Great Recession many households struggled with foreclosures and deleveraging.

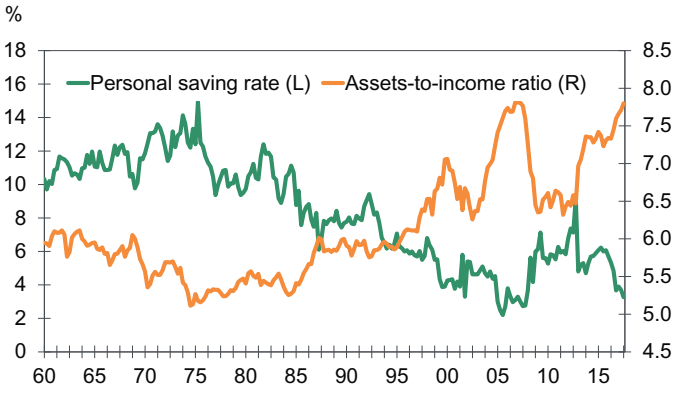
Critical to consumers has been the improving job market. Job growth has been consistently robust during the expansion, averaging well over 2 million jobs per year. This is about double the pace of job growth needed to absorb the slowing growth in the labor force, and thus unemployment and underemployment have steadily declined. At currently just over 4%, unemployment is consistent with a full-employment economy. Indicative of the tightening labor market are the record number of open job positions, across nearly every industry, and the rising quit rate, as workers jump to better jobs. Millennial workers have been particularly aggressive in moving to higher-paying and more suitable jobs.

The tight labor market is prompting businesses to give their workers bigger pay increases. Wages as measured by the employment cost index—the most accurate measure of wages—have accelerated from close to 1.5% per year a few years ago when unemployment was still high to near 2.5% today. Even bigger pay increases are forthcoming, although given lower underlying productivity growth and inflation, future nominal wage growth is likely to be slower than in times past.

Households have deleveraged. The proportion of after-tax income households must use to make payments and remain current on their debts has never been lower in the 35 years of available data. Mortgage delinquency rates remain near record lows, and while credit card delinquency rates are rising, this likely reflects a normalization of credit conditions. And most households have insulated themselves from higher interest rates by refinancing into long-term fixed-rate mortgages. A record low one-fifth of household debt has an interest rate that adjusts within a year of a change in market rates.

In response to the good credit conditions, lenders have eased up on their standards and credit is flowing freely. Credit- and retail-card lending is back to normal, as is consumer finance lending. Even home equity lending has come back to life, as higher house prices have increased homeowners' equity and lenders are more comfortable extending loans given much-improved credit quality. It is also easier to qualify for a first mortgage loan to refinance or purchase a home, although standards are still a bit tight compared with pre-housing bubble historical norms. The only exception is vehicle lending, as vehicle lenders have responded to a weakening in credit quality and have tightened their standards, contributing to the recent slowing in vehicle lending and sales.

Chart 2: Wealth Surges, Saving Rate Falls



Sources: Federal Reserve, BEA, Moody's Analytics

Until recently, lower gasoline prices also provided a boost to consumers. Consumers currently spend about $100 billion a year less on gas and on other energy, not quite 1% of spending, than they did before the collapse in oil prices several years ago.

Wealth supercharger

Supercharging consumer spending during this expansion has been the wealth effect. This goes to both the rapid rise in asset prices and the sensitivity of households' willingness and ability to spend in response to changes in their wealth.

The increase in household wealth has been stunning as stock and house prices have surged. Since their bottom near the nadir of the Great Recession in early 2009, stock prices have rocketed higher. Based on the Wilshire 5000, the value of all publicly traded stocks has risen from $7 trillion to $27 trillion. Over the past nearly two years, since the last significant correction in the stock market, the value is up more than 35%, equal to an increase in stock wealth of more than $7 trillion.

The revival in house values has also been impressive. House prices hit bottom in early 2012, after a long, painful 30% crash in prices during the housing bust. Since then prices have fully recovered and are at record highs. The value of housing owned by households has risen from a low of not quite $16 trillion to about $24.5 trillion. Over the past two years, house prices are up 12%, equal to an increase in housing wealth of close to $2.5 trillion.

The impact of changes in household wealth on consumer spending is the strong inverse relationship between wealth and the personal saving rate (see Chart 2). The simple correlation coefficient between the ratio of household assets to disposable income and the personal saving rate over the past more than 50 years is a very strong -0.84. That is, rising asset values are associated with declining personal saving, and thus more consumer spending. That the relationship remains very strong today is clear in that over the past five years, during which the assets-to-disposable income ratio has surged close to a record high, the personal saving rate has been halved from 7% to its current near 3%. The only other time the personal saving rate was lower than it is today was back during the housing bubble in the mid-2000s.

Also consistent with a strong wealth effect is that the decline in saving during this expansion has been among the highest-income households that are also the wealthiest households (see Table 1). Those households in the top 5% of the income distribution are the only households for which saving rates have fallen since the Great Recession.

Methodological notes

While this is strong evidence of a wealth effect, to quantify its size we need to use

Table 1: The Highest Income Group Has Reduced Its Saving Rate During the Recovery

	Personal saving rate				
	Pre-bubbles 1990-1994	Stock bubble 1995-1999	Housing bubble 2000-2007	Great Recession 2008-2009Q2	Expansion 2009Q2-2017Q2
Total population	10.2	7.1	3.0	9.9	8.1
Part of the income distribution:					
Income: 0% - 39.9%	5.7	6.7	3.0	3.8	4.0
Income: 40% - 59.9%	4.6	3.0	-0.3	2.5	4.5
Income: 60% - 79.9%	6.1	3.3	-0.0	2.9	5.1
Income: 80% - 94.9%	10.1	6.4	1.7	7.3	7.9
Income: 95% - 100%	17.5	12.4	6.7	19.2	11.9

	Change in the personal saving rate			
	1995-1999 vs. 1990-1994	2000-2007 vs. 1995-1999	2008-2009Q2 vs. 2000-2007	2009Q2-2017Q2 vs. 2008-2009Q2
Total population	-3.0	-4.2	7.0	-1.8
Part of the income distribution:				
Income: 0% - 39.9%	1.0	-3.8	0.8	0.2
Income: 40% - 59.9%	-1.6	-3.3	2.8	2.0
Income: 60% - 79.9%	-2.8	-3.3	3.0	2.2
Income: 80% - 94.9%	-3.7	-4.7	5.6	0.6
Income: 95% - 100%	-5.2	-5.6	12.4	-7.3

Note: A description of the methodology used to construct estimates of the personal saving rate by income is available upon request.

Sources: Federal Reserve, Moody's Analytics

econometric analysis. Our methodological approach is described in detail in our previous paper on the wealth effect, but put simply, it rests on estimating a standard consumption function that rests on a life-cycle/permanent income hypothesis model of consumption. This is similar to the approach taken in most other wealth effect studies.

What makes our study unique is that it is based on data on retail sales and household assets at the state and metropolitan area level for the past decade since before the start of the Great Recession. Equifax is the source of the household financial assets data, which has a semiannual periodicity that is interpolated to a quarterly periodicity and is available for various types of financial assets, including stocks. Visa is the source of the modeled retail sales data, which has a monthly periodicity and is available for various retail categories. Moody's Analytics is the source of the data on the value of housing, which is based on house prices and the stock of homes, and homeowners' equity is also available using mortgage debt data from Equifax.

We estimate consumption functions for each retail spending category at a quarterly periodicity. These consumption functions are estimated as panel regressions over the past decade across all states or metropolitan areas.

Wealth effects vary

The estimated wealth effects over the past decade are substantial and statistically significant. For total consumer sales, which is defined to include nonauto retail sales and spending on hotels and airline tickets, the elasticity with respect to changes in the value of financial and housing assets is 21 basis points (see Table 2). That is, for every 1-percentage point change in asset values, consumer sales changes by 21 basis points. Translating this into dollars and cents, for every $1 change in asset values, consumer sales change by almost 2 cents. The relationship between asset values and consumer sales spending is statistically very strong, as is evident from the large t-statistic.

Since consumer sales account for just over 40% of all consumer spending, if we assume that the wealth effect on the rest of consumer spending is the same as for sales, then the wealth effect for all consumer spending is an estimated 4.5 cents.

The largest wealth effects are for spending on travel. The estimated wealth effect elasticity for airline tickets is 61 basis points, and that for hotels and motels is 44 basis points. It is intuitive that these wealth effects are large given that spending on travel is highly discretionary. Most households need to feel that they are in a good financial position before taking a trip. The wealth effect elasticities for home improvement and home furnishings are also large at 50 and 41 basis points, respectively. This too is intuitive, as households will not invest in their homes unless they feel as though it is an investment that will pay off. This is much more likely when house prices and thus housing wealth are rising quickly.

Wealth effects are smaller, but still consequential, for general merchandise stores. Not surprisingly, clothing stores have a similar wealth effect, as clothing is a large sales item for many general merchandise stores. Nonstore retailers, including internet retailers, have a wealth effect that is also similar. Wealth effects are much smaller for spending on more everyday items at grocery

stores, drugstores and gasoline stations. This is not surprising, as these are necessities that households will spend on regardless of whether they are more or less wealthy.

If there is a surprise in the results, it is that the wealth effect is not larger for sports and hobby stores, which include bookstores, and restaurants. These are somewhat discretionary purchases, although arguably increasingly less so for very busy middle-class families.

Financial vs. housing wealth

Decomposing the wealth effect into separate financial wealth effects, which includes stocks, bonds and deposits, and housing wealth effects, suggests that the housing wealth effects have been generally larger than the financial wealth effects (see Table 3). However, these results may be idiosyncratic to the current business cycle over which these wealth effects are estimated, a period dominated by the housing crash.

Across spending categories, as with the total wealth effect, the financial and housing wealth effects are generally larger for travel and spending on the home, and smaller for more essential items such as groceries. It is no surprise that the housing wealth effect is much larger than the financial wealth effect for furniture and appliance stores and building and hardware stores. The financial wealth effect is larger than the housing wealth effect only for general merchandise, grocery and clothing stores, but there is no financial wealth effect on sports and hobby stores and drugstores.

One seeming anomaly is that the financial wealth effect is larger than the housing wealth effect across all consumer sales. This is despite being smaller for core retail sales, a large subset of consumer sales, and most spending categories.

Lags and asymmetries

Wealth effects appear to impact consumer spending with a lag. After experimenting with various lag structures, a five-quarter second degree polynomial lag structure results in the best fitting relationships. The wealth effect in the initial quarter of the change in wealth is small and often negative, and then turns quickly positive in

Table 2: Wealth Effect by Retail Spending Category

	Elasticity	T-statistic
Consumer sales	0.212	42.9
Retail sales less autos and gas	0.157	34.0
Airlines	0.609	40.7
Building & hardware	0.499	47.0
Hotels & motels	0.441	29.5
Furniture & appliances	0.412	47.3
Clothing stores	0.194	21.5
Nonretail stores	0.209	26.3
General merchandise	0.171	27.4
Sports & hobbies	0.192	25.7
Restaurants	0.150	25.4
Gasoline stations	0.133	16.4
Grocery stores	0.092	16.4
Drugstores	0.072	12.1

Notes:

Consumer sales are defined as nonauto retail sales and spending on hotels and airline tickets.

Panel regression using quarterly data from 2007Q3 to 2017Q2 across metropolitan areas, 13,910 observations.

The left-hand side variable is real per capita retail spending by category; the left-hand side variables include asset values and disposable income on a real per capita basis.

Assets include financial assets and housing.

Disposable income and fixed effects by metro area are not shown.

The coefficients are interpreted as elasticities.

Sources: Moody's Analytics, Visa Retail Spending Monitor, Equifax, BEA, BLS, Census Bureau

Table 3: Financial vs. Housing Wealth Effects

	Financial wealth effect		Housing wealth effect	
	Coefficient	T-statistic	Coefficient	T-statistic
Consumer sales	0.133	34.7	0.082	20.3
Retail sales less autos and gas	0.046	12.9	0.104	27.6
Airlines	0.267	23.1	0.384	31.5
Building & hardware	0.089	11.1	0.433	50.9
Hotels & motels	0.095	8.2	0.321	26.2
Furniture & appliances	0.200	29.4	0.227	31.8
Clothing stores	0.118	16.8	0.077	10.4
Nonretail stores	0.038	6.2	0.173	26.7
General merchandise	0.084	17.2	0.076	14.8
Sports & hobbies	-0.001	-0.1	0.188	31.1
Restaurants	0.049	10.7	0.092	19.0
Gasoline stations	0.026	4.1	0.089	13.4
Grocery stores	0.053	12.3	0.034	7.4
Drugstores	-0.012	-2.5	0.062	12.8

Notes:

Consumer sales are defined as nonauto retail sales and spending on hotels and airline tickets.

Panel regression using quarterly data from 2007Q3 to 2017Q2 across metropolitan areas, 13,910 observations.

The left-hand side variable is real per capita retail spending by category.

Stock wealth is measured by real per capita stock wealth with a five-quarter, second degree polynomial lag.

Housing wealth is measured by real per capita value of the stock of housing with a five-quarter, second degree polynomial lag.

Real per capita disposable income and fixed effects by metro area are not shown.

The coefficients are interpreted as elasticities.

Sources: Moody's Analytics, Visa Retail Spending Monitor, Equifax, BEA, BLS, Census Bureau

Table 4: Wealth Effects When Asset Prices Are Rising and Falling

	Rising asset prices (7,852 observations)		Falling asset prices (6,058 observations)	
	Coefficient	T-statistic	Coefficient	T-statistic
Consumer sales	0.143	18.7	0.237	33.3
Retail sales less autos and gas	0.082	11.6	0.191	29.0
Hotels & motels	0.481	22.8	0.413	18.1
Airlines	0.621	27.0	0.613	28.6
Building & hardware	0.339	20.0	0.558	37.9
Furniture & appliances	0.254	19.2	0.482	39.1
General merchandise	0.155	15.5	0.178	20.2
Gasoline stations	0.127	10.3	0.127	10.7
Restaurants	0.069	7.4	0.180	33.3
Nonretail stores	0.127	10.3	0.267	23.8
Drugstores	0.001	0.1	0.088	10.6
Clothing stores	0.051	3.6	0.253	20.2
Sports & hobbies	0.017	1.5	0.282	27.8
Grocery stores	0.003	0.3	0.126	15.8

Notes:

Consumer sales are defined as nonauto retail sales and spending on hotels and airline tickets.

Panel regression using quarterly data from 2007Q3 to 2017Q2 across metropolitan areas.

The left-hand side variable is real per capita retail spending by category.

Stock wealth is measured by real per capita stock wealth with a five-quarter, second degree polynomial lag.

Housing wealth is measured by real per capita value of the stock of housing with a five-quarter, second degree polynomial lag.

Real per capita disposable income and fixed effects by metro area are not shown.

The coefficients are interpreted as elasticities.

Sources: Moody's Analytics, Visa Retail Spending Monitor, Equifax, BEA, BLS, Census Bureau

the second quarter after the change. The peak of the wealth effect generally occurs within one year after the change in wealth.

There is some variability in the lags across spending categories. The wealth effect impacts occur much more quickly at general merchandise and clothing stores, they are fairly even over time for nonstore retailers, and they take longer to develop for spending on airlines and home improvement. This appears intuitive since it takes longer to plan for a trip or to repair or remodel a home.

The wealth effect is significantly larger and statistically more significant when asset prices are falling than when they are rising (see Table 4). For total consumer sales, the wealth elasticity in rising asset markets is 14 basis points, which translates into almost 3 cents of consumer spending for every dollar increase in wealth. This compares with an elasticity of 24 basis points in falling markets, equal to 5 cents of spending for every dollar decrease in wealth.

The wealth effect is positive and highly significant in periods when asset prices are falling across all spending categories. It is especially large for spending on homes and travel, and even for general merchandise and nonstore retailers. Drugstores are the only spending category for which the wealth effect is relatively small. The wealth effect is also generally positive and significant across spending categories in periods when asset prices are rising, with the exception being spending on more essential items such as groceries and at drugstores. There is also no wealth effect on sports and hobby stores in rising markets.

The wealth effect is larger in down markets than in up markets across all spending categories, except for hotels and motels. The wealth effects are not very different for airlines and gasoline stations. The difference between wealth effects in down and up markets is largest for spending on the home, clothing and sports and hobby stores.

We also tested whether the wealth effect has been larger in metropolitan areas that have enjoyed a quicker recovery in house prices. Metro areas where house prices have risen above their prerecession peaks do not appear to have larger wealth effects than metro areas where house prices are still below their peaks. State and metro area economies have gone through very different experiences in recent years, yet the stock and housing wealth effects across regions do not appear to vary all that much. Perhaps this goes in part to the national financial and banking systems.

Adding it all up

Continued sturdy consumer spending is critical to the ongoing strength of the U.S. economic expansion, and this study suggests that the wealth effect is critical to the consumer.

Given that households' stock holdings and housing wealth have increased by over $25 trillion since the start of the economic expansion, a near doubling in wealth, the wealth effect has lifted real consumer spending by over $600 billion during this economic expansion. An impressive approximately one-fourth of the increase in consumer spending during the expansion is due to the wealth effect.

The wealth effect's contribution to overall GDP growth has thus been significant. Real GDP has expanded at close to a 2.2% per year pace during the eight years of the recovery. Of this growth, almost half a percentage point per year is due to the wealth effect alone, according to our analysis. That is, without the positive wealth effect, real GDP growth during this expansion would have been a paltry 1.7% per annum.

This highlights the importance of the Federal Reserve's quantitative easing program in supporting the current economic expansion. One of the principal channels through which QE and the resulting lower long-term interest rates impact the real economy is through higher asset prices and the resulting wealth effects. At its peak impact in late 2013, QE reduced 10-year Treasury yields by approximately 100 basis points, lifting stock prices by more than 15% and house prices by almost 10%. Doing the arithmetic, the Fed's QE lifted real GDP growth via the wealth effect by more than 75 basis points on a cumulative basis by the end of 2013. This is not quite three-quarters of the total estimated increase in real GDP due to the Fed's QE programs.

With the Fed now winding down QE and prospects for higher interest rates, risks are rising that asset prices will come under pressure and that the wealth effect will fade, or even more serious, weigh on economic growth. With stock prices at record highs, and most measures of stock valuation stretched, there is a real threat of a significant and persistent decline in stock prices.

To see how serious, consider that a once-and-for-all decline in stock prices of 10%, consistent with a typical garden-variety stock market correction, would ultimately reduce real GDP by about 70 basis points via the wealth effect. A sustained 20% decline, consistent with a bear market, would result in an economy that is barely growing and at risk of sliding into recession.

American consumers are key to the U.S. and global economic recoveries. Fortunately, they are enjoying significant tailwinds such as a stronger job market, low debt loads, and easier credit. However, it is critical that stock and housing values hold their own. The wealth effect is powerful, and declining stock or house prices could quickly overwhelm all the positives now powering consumer spending. This is not the most likely outlook, but it bears close watching.

About the Authors

Mark Zandi

Mark Zandi is chief economist of Moody's Analytics, where he directs economic research. Moody's Analytics, a subsidiary of Moody's Corp., is a leading provider of economic research, data and analytical tools. Dr. Zandi is a cofounder of the company Economy.com, which Moody's purchased in 2005.

Dr. Zandi's broad research interests encompass macroeconomics, financial markets and public policy. His recent research has focused on mortgage finance reform and the determinants of mortgage foreclosure and personal bankruptcy. He has analyzed the economic impact of various tax and government spending policies and assessed the appropriate monetary policy response to bubbles in asset markets.

A trusted adviser to policymakers and an influential source of economic analysis for businesses, journalists and the public, Dr. Zandi frequently testifies before Congress on topics including the economic outlook, the nation's daunting fiscal challenges, the merits of fiscal stimulus, financial regulatory reform, and foreclosure mitigation.

Dr. Zandi conducts regular briefings on the economy for corporate boards, trade associations and policymakers at all levels. He is on the board of directors of MGIC, the nation's largest private mortgage insurance company, and The Reinvestment Fund, a large CDFI that makes investments in disadvantaged neighborhoods. He is often quoted in national and global publications and interviewed by major news media outlets, and is a frequent guest on CNBC, NPR, Meet the Press, CNN, and various other national networks and news programs.

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Before joining Moody's Analytics, Dr. Hoyt spent five years as an economist for J.C. Penney, where he did extensive work supporting the company's strategic planning efforts, real estate research department, merchandise departments, and credit department. He received his PhD and MA in economics from the University of Pennsylvania and his BA summa cum laude from Bates College.

Wayne Best

As Chief Economist for Visa Inc., Wayne Best keeps close watch on emerging opportunities in the trillion-dollar payments industry. An active participant in the World Economic Forum's Future of Consumption community, he identifies economic trends shaping the future. His unique presentations explain the impact of these trends to company and client executives as well as government leaders around the globe.

Frequently quoted in the trade and business media, Best brings economic theory and analysis to life with compelling stories and up-to-the-minute data from the largest payment provider in the industry. Because he stays close to the underlying dynamics of the business, his insights provide a clear perspective on the consumer's ability to spend, save and pay down debt. His passion for business and engineer's logic turn mathematical models and technical jargon into business intelligence that enables future oriented business decisions.

Before joining Visa in 1990, Best worked as a consultant performing cost benefit analyses for the power industry. In addition to his MBA, Best holds a degree in nuclear engineering and has participated in the Stanford University and Kellogg School of Management executive programs.

Moody's Analytics helps capital markets and credit risk management professionals worldwide respond to an evolving marketplace with confidence. With its team of economists, the company offers unique tools and best practices for measuring and managing risk through expertise and experience in credit analysis, economic research, and financial risk management. By offering leading-edge software and advisory services, as well as the proprietary credit research produced by Moody's Investors Service, Moody's Analytics integrates and customizes its offerings to address specific business challenges. Moody's Analytics is a subsidiary of Moody's Corporation (NYSE: MCO). Further information is available at www.moodysanalytics.com.

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Equifax is a global leader in consumer, commercial and workforce information solutions that provides businesses of all sizes and consumers with insight and information they can trust. Equifax organizes and assimilates data on more than 600 million consumers and 81 million businesses worldwide. The company's significant investments in differentiated data, its expertise in advanced analytics to explore and develop new multi-source data solutions, and its leading-edge proprietary technology enables it to create and deliver unparalleled customized insights that enrich both the performance of businesses and the lives of consumers.

Headquartered in Atlanta, Equifax operates or has investments in 19 countries and is a member of Standard & Poor's (S&P) 500® Index. Its common stock is traded on the New York Stock Exchange (NYSE) under the symbol EFX. In 2014, Equifax was nominated as a Bloomberg BusinessWeek Top 50 company; its CIO was listed as one of the top 100 by CIO magazine; and the company was named to the Fintech 100 list, was recognized as a top 20 company to work for by the Atlanta Journal-Constitution, and was named a 2014 InformationWeek Elite 100 Winner. For more information, please visit www.equifax.com.

Visa Inc. (NYSE: V) is the world's leader in digital payments. Our mission is to connect the world through the most innovative, reliable and secure payment network - enabling individuals, businesses and economies to thrive. Our advanced global processing network, VisaNet, provides secure and reliable payments around the world, and is capable of handling more than 65,000 transaction messages a second. The company's relentless focus on innovation is a catalyst for the rapid growth of connected commerce on any device, and a driving force behind the dream of a cashless future for everyone, everywhere. As the world moves from analog to digital, Visa is applying our brand, products, people, network and scale to reshape the future of commerce. For more information, visit usa.visa.com/aboutvisa, visacorporate.tumblr.com and @VisaNews.

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