Empirical Research Partners

Aram Rubinson 212 803-7930 Wes Sapp 212 803-7945

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The U.S. Consumer: Response to Tax Cuts

The Bottom Line

Shape Matters More than Size

- In the coming months investors will be looking for tangible signs that the Tax Cuts and Jobs Act of 2017 is stimulating the U.S. consumer and the broader economy. This report uses a historical perspective to understand the effects of tax reform, but we also study the consumer's response to other forms of stimuli, including gas prices, mortgage resets and annual EITC refunds. Our overall take-away is that the tax cut will be additive, but we do not think it should be the centerpiece of the investment process when it comes to picking consumer stocks.
- Fiscal stimuli come in all shapes and sizes. Size matters, but the aggregate figures can be misleading. We are more interested in the shape of the stimulus. That is likely to be determined by distributional effects such as income and age. The state of the economy and timing are also important factors to consider. We analyze the consumer's response to stimulus and dissect their marginal propensity to consume. We also analyze how stocks in the consumer sector have typically responded to tax reform. This reinforces our preference for discretionary over staples.

How, When and What Will They Spend?

- The current tax cut is similar in size to the precedents, but the timing is different since it is being enacted in the
 middle of an economic recovery. Others came when there was more slack in the system. This could serve to dampen the overall marginal propensity to consume, though it might also steer spending to discretionary goods as opposed to basic necessities.
- The marginal propensity to consume is noticeably higher for lower-income cohorts. We have found a consistent 10-15-point differential over the past twenty years. The current tax plan appears to be aimed at higher-end consumers. The lower and middle class are slated to receive no more than one-third of the benefit. The bottom 80% of tax payers are likely to see their after-tax incomes rise by +0.8-+2.4% in 2018. Taxpayers in the top 1% would see a gain of +7.5% largely due to business-oriented tax cuts.
- By blending findings from academic research together with our own, we can estimate the impact of the tax cut by income cohort and by product category. We apply MPCs to each cohort and make adjustments to reflect the timing and composition of the stimulus. The "bottom line" is that we see consumption accelerating by roughly +100 basis. Tough comparisons may set in thereafter in the absence of a large multiplier.
- Categories like furniture, alcohol, jewelry, new cars, vacation homes and cruising should match or beat the average and grow by +1.5% for a period of time. We arrive at this by allocating incremental spending by income cohort and by category based on past patterns. Discretionary stocks such as these have also performed well in the twelve months following a tax cut. We make no changes to our Consumer Lens portfolio as a result of the stimulus.

Buy Stocks with Multiple Ways to Win, Not Just One

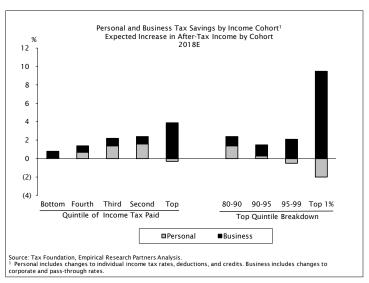
- Investors looking to exploit increased spending driven by the tax cut can choose to buy low-quality names hoping that a rising tide will lift all boats. Alternatively, they can focus their investments on businesses with the greatest leverage to income gains -- whether they are tax-driven or not. We prefer the latter strategy since it offers multiple ways to win. Housing, entertainment, air travel, cruise lines, hotels and restaurants are attractive to us with or without a tax cut.
- Staples have historically not performed well in the wake of a tax cut. In fact, they are not attractive on any of our themes at the moment. As it relates to retailers, we see no need to go dumpster diving for ideas in this troubled sector. After all, if the effects of the tax cut prove to be fleeting, we would not want to be left holding that bag when tough comparisons set in. We rank winning and losing stocks by sector in Appendix 1 and 2 on pages 15 and 16.

Nicole Price 212 803-7935 Sungsoo Yang 212 803-7925 Yi Liu 212 803-7942 Yu Bai 212 803-7919 Longying Zhao 212 803-7940 Iwona Scanzillo 212 803-7915

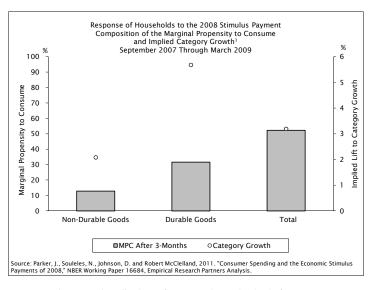
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Conclusions in Brief

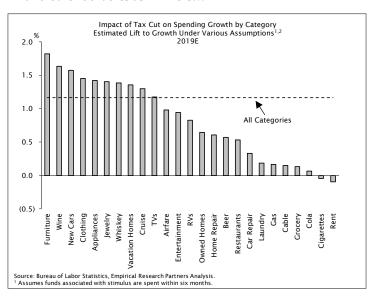
The latest tax cut is skewed to the rich...



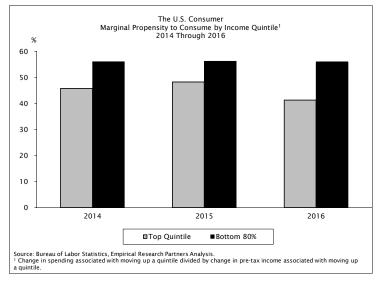
Extra spending usually over-indexes to durables...



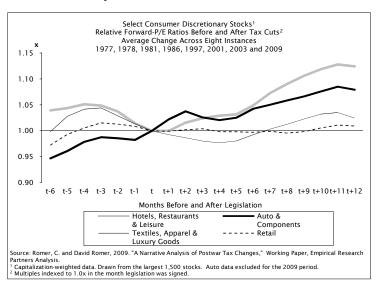
 Our "bottom line" identifies jewelry, alcohol, furniture, cars and other durables as winners...



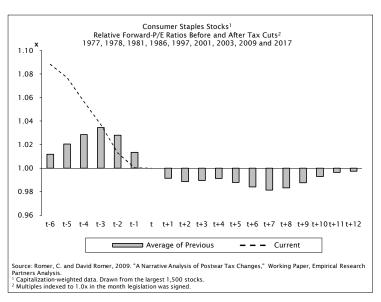
...Who typically exhibit a lower marginal propensity to consume:



...Discretionary stocks also tend to act the best:



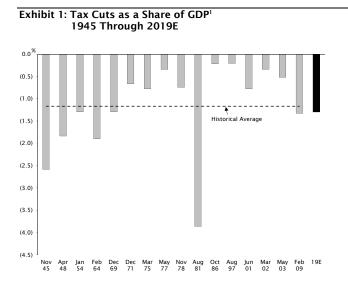
...Staples might continue their slide if history is a guide:



The Bottom Line

Shape Matters More than Size

Tax cuts come in all shapes and sizes. Determining the size of a stimulus is fairly straightforward. Relative to GDP, the current stimulus is not too different from others enacted in the post-war era (see Exhibit 1). Aggregate figures however, tend to be limiting and often misleading. For that reason, we are more interested in the shape of the tax cut than the size. That shape is likely to be determined by distributional effects such as income and age. It will also be influenced by the nature of the stimulus as well as its timing. Understanding these so-called "heterogeneous" effects is likely to be far more instructive than assessing aggregate or "homogenous" effects.



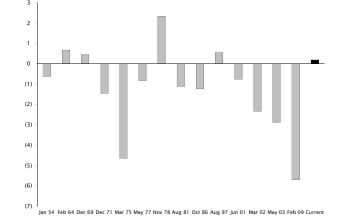


Exhibit 2: Economic Slack as a Share of Potential GDP

1954 Through Early-January 2018

at the Time of Tax Cuts

Source: Romer, C. and David Romer, 2009. "A Narrative Analysis of Postwar Tax Changes," Working Paper, Congressional Budget Office, Empirical Research Partners Analysis.

Source: Congressional Budget Office, Empirical Research Partners Analysis.

There is extensive academic research on the subject of taxes and much of it echoes that view. We have included some of the most salient findings in the pages that follow. Our aim is to use a historical perspective to understand the effects of tax reform. In addition to taxes, we also study the consumer's response to other forms of stimuli, including gas prices, mortgage resets and annual tax refunds. We attempt to apply the research to the 2018 stimulus in order to determine how best to exploit the current opportunity set. We refer to this as the "bottom line".

Our overall take-away is that the stimulus will be additive, but we do not think it should dominate the investment process when it comes to picking consumer stocks. Rather, we encourage investors to keep their eye on the ball. Veering off course in an effort to clutch the wind could generate a good short-term result, but it might not be a durable strategy.

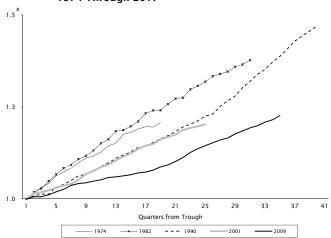
Dissecting the MPC

In some ways, the current tax cut resembles others before it. In other ways it is quite different. One key difference is that the Tax Cuts and Jobs Act of 2017 was enacted in the middle of an economic recovery that already appeared to be gaining steam. Most others were enacted when there was slack in the system (see Exhibit 2). This slack is characterized by a gap between potential GDP and actual GDP. In this respect, the current plan is not like the others.

The current recovery may be 9 years old in chronological terms, but we submit that the cycle is still in the middle innings of its real recovery. Real consumption for example, has increased just over +20% from the trough versus an average increase of +30% seen in other post-war recoveries (see Exhibit 3). With growth already underfoot, it might be reasonable to expect a more muted response to fiscal stimulus this time. After all, consumers are already in the groove of earning more and spending more. A rising stock market meanwhile, has also helped to increase household wealth by \$10 trillion over the past year. With that as a backdrop, a new source of income may not be as jarring. It is also well-documented that the marginal propensity to consume is highest when incremental income is directed towards constrained consumers. That does not seem to be the primary target of the newest legislation.

¹ Present value of cuts at the time.

Exhibit 3: Real Personal Consumption
Best Point in Cyclical Recoveries Indexed
from Recession Troughs
1974 Through 2017

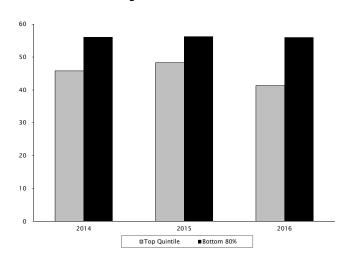


Source: Bureau of Economic Analysis, Empirical Research Partners Analysis.

Exhibit 4: The U.S. Consumer

Marginal Propensity to Consume by Income Quintile¹

2014 Through 2016



Source: Bureau of Labor Statistics, Empirical Research Partners Analysis.

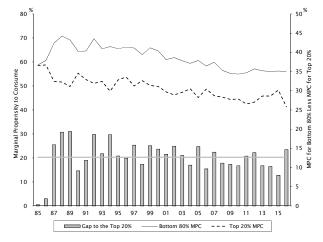
Change in spending associated with moving up a quintile divided by

change in speriding associated with moving up a quintile.

Constrained Customers Spend More at the Margin

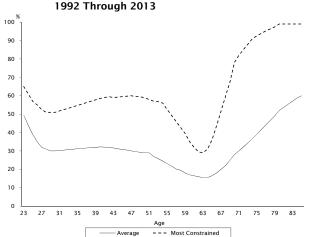
As high-earners move even further up the economic ladder, they tend to spend roughly 40% of incremental income (see Exhibit 4). We arrive at this by looking at how consumers spend across cohorts in a given year. Lower-income earners tend to spend closer to 55% of incremental income as they become upwardly mobile. We show how this disparity has tracked over time in Exhibit 5. The difference in MPCs across the income spectrum ebbs and flows, but it has averaged 12% pretty consistently over the past twenty years. When it comes to estimating the overall effect of the tax cut on consumption, we apply different MPCs to understand the expected benefits by income cohort.

Exhibit 5: Marginal Propensity to Consume by Quintile¹
The Bottom 80% and the Top 20%
1985 Through 2016



Source: Bureau of Labor Statistics: Consumer Expenditure Survey, Empirical Research Partners Analysis.

Exhibit 6: Marginal Propensity to Consume by Age
Average Population and the Most Liquidity
Constrained
Composite of Various Studies Issued



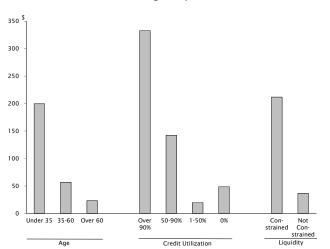
Source: Empirical Research Partners Analysis.

Age is also an important factor to consider. In Exhibit 6 we depict the marginal propensity to consume by age compiled by a number of researchers. The data indicate that the average person spends 40-50% of incremental dollars when they are young. As people age the MPC flattens out and then falls sharply as they prioritize saving for retirement. After the age of 62, people tend to spend more freely, giving meaning to the phrase "you can't take it with you!" The dotted line in the graph confirms the notion that the marginal propensity to consume is more pronounced for constrained consumers. Results from the 2001 tax rebate also make that point clearly (see Exhibit 7).

¹ Change in spending associated with moving up a quintile divided by change in pre-tax income associated with moving up a quintile.

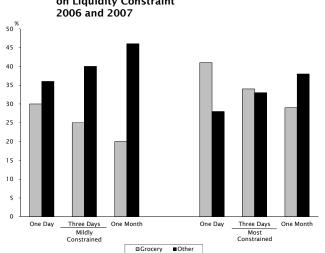
About two-thirds of U.S. filers received a tax rebate between July and September 2001. This policy yielded a wind-fall of \$500 for the average customer and amounted to a total stimulus of \$38 billion in all. By tracking 75,000 credit card accounts for a period of two years, researchers were able to prove that young people were far more likely to spend their rebate¹. They found the same pattern held for those with high credit card utilization rates and overall liquidity constraints. As we discuss later in this report, the current tax plan appears to be aimed at higher-end consumers and not at the lower or middle class. Our calculations indicate that this skew could hinder the overall marginal propensity to consume by as much as 5%. We account for this as we construct our estimate of the "bottom line".

Exhibit 7: Consumer Response to 2001 Tax Rebates
Change in Spending Across Demographic Characteristics
March 2001 Through May 2002



Source: Agarwal, S., Liu, C., and Nicholas Souleles, 2007. "The Reaction of Consumer Spending to Tax Rebates - Evidence from Consumer Credit Data," Working Paper 2007-10, Empirical Research Partners Analysis.

Exhibit 8: Consumer Response to Tax Refunds¹
Share of Proceeds Spent by Category Depending on Liquid 2005



Source: Cole, S., Thompson, J., and Peter Tufano, 2008. "Where Does it Go? Spending by the Financially Constrained," Working Paper 08-083, Harvard University, Empirical Research Partners Analysis.

Here Today; Gone... Today?

The Earned Income Tax Credit program (EITC) represents payments that are made to consumers making less than \$30,000 per year. In one interesting academic study, researchers tracked 1.5 million H&R Block customers and determined that recipients of tax refunds exhibit a high marginal propensity to consume (see Exhibit 8). This is consistent with our expectations. They are after all, below-average earners. We were however surprised to see just how quickly these families spent their funds. Much of it was gone the same day it arrived².

Consumers initially focus their spending on exigent needs like groceries, which over-index to that category's baseline share by a factor of three. The most constrained families displayed an even higher MPC when it came to food, but as time passed, people began to shift their spending away from immediate needs and towards more discretionary categories. Both sets of consumers that were tracked – mildly constrained and severely constrained – spent 70% of their refunds over the course of a single month. The most constrained consumers prioritized food more heavily. In time, both sets of customers were able to redirect spending towards discretionary goods – presumably once they were able to put enough food on the table.

A separate set of research tracked EITC refunds over a 15-year period of time. They were able to compare spending patterns for refund recipients relative to those of the broader population³. As we would expect, EITC recipients spend less than the average household across an entire year since they make a lot less (see Exhibit 9). The trend in durable goods is especially anemic with an average monthly shortfall of (5)% compared to other households. The months of February, March and April however, are notable exceptions. These reflect the peak inflow of EITC refunds, and they actually see constrained consumers spend more than the average household. Here too the trend is

¹ Data reflects patterns in credit card accounts over a 9-month period. Average rebate received was \$500.

¹ Sample population reflects 1.5 million H&R Block customers.

¹ Agarwal, S., Liu, C., and Nicholas Souleles, 2007. "The Reaction of Consumer Spending to Tax Rebates - Evidence from Consumer Credit Data," Working Paper 2007-10.

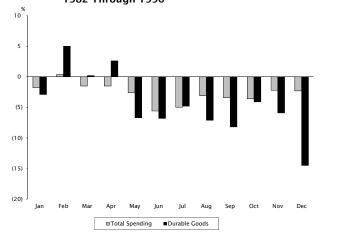
² Cole, S., Thompson, J., and Peter Tufano, 2008. "Where Does it Go? Spending by the Financially Constrained," Working Paper 08-083, Harvard University

³ Barrow., Lisa and Leslie McGranahan, 2000. "The Effects of the Earned Income Credit on the Seasonality of Household Expenditures," National Tax Journal, Vol., 8, No. 4, Part 2.

pronounced for durables. Relative to other households, the improvement in these months seemed to mark an acceleration of +9 percentage points for the durables category driven by an outright gain of +4%that compares with a baseline deficit of (5)%.

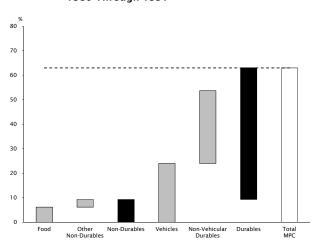
From studying EITC refunds over time, we can draw three conclusions. First, low-income earners are the most responsive to this form of stimulus. Second, consumers act fast when the money comes in, spending their newfound cash within days of receipt. Third, food starts strong, but durables begin to shine in relatively short order even for the most constrained households. Food at home represents 10-15% of baseline spending for lower-income households, but it accounts for only 5% of expenditures made upon receipt of the refund (see Exhibit 10). That suggests that non-durables – like food -- punch only half their weight when it comes to incremental income. Durables on the other hand, over-index by a factor of three. These products attract 40-50% of incremental spending versus a baseline share of only 10-15%. This leverage is what drives the overall MPC in this study to 63%. Durable goods have also over-indexed in other instances. As a result, our estimate of the overall impact of the tax cut includes a multiplier for durable categories.

Exhibit 9: The Effect of Tax Refunds on Household Spending Monthly Spending of Earned Income Credit Recipients Relative to Non-Recipients 1982 Through 1996



Source: Barrow., Lisa and Leslie McGranahan, 2000. "The Effects of the Earned Income Credit on the Seasonality of Household Expenditures," National Tax Journal, Vol., 8, No. 4, Part 2, Empirical Research Partners Analysis.

Exhibit 10: Household Response to Income Tax Refunds Composition of the Marginal Propensity to Consume 1980 Through 1991



Source: Souleles, N., 1999. "The Response of Household Consumption to Income Tax Refunds," American Economic Review, Vol. 89, No. 4, pp. 947-958, Empirical Research Partners Analysis.

Apparel Makes a Fashionable Appearance in 2003

The Child Tax Credit of 2003 is an important episode to study for two reasons. First, the payments occurred in a period of reasonable economic growth. That could serve as a worthwhile comparator to the current policy, which is also occurring in a benign environment. Second, the 2003 payout was intended to support families with children. This too is similar to the 2017 plan, which effectively doubles the child tax credit.

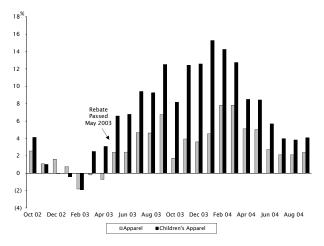
Researchers estimate that consumers spent 25% of the 2003 payment on non-durable goods in the first three months after the payment was received⁴. Consistent with other studies, those with greater liquidity constraints spent more like 47%. A difference in this example is the relative performance of apparel, which seemed to account for a disproportionate share of the overall payment. Fully 33% of the rebate seemed to go towards apparel. We can actually see this from Exhibit 11 that shows national sales of apparel accelerating beginning in May 2003. The category, which had been trending flat prior to enactment of the stimulus, accelerated to +8% in a few month's time. Children's apparel in particular, was a key driver of this phenomenon with growth accelerating to +15% in relatively short order. The overall effect of the Child Tax Credit of 2003 was not as pronounced as other stimuli, but it seemed to reach its target audience – children - relatively accurately. Interestingly, apparel growth has been trending +2% over the past six months, very similar to the anemic growth rates seen before the 2003 stimulus kicked it into high gear.

It is reasonable to expect apparel to participate in the current stimulus as well. First, discretionary goods -- like apparel -- benefitted most in 2003 when the economy was not in dire straits. People might have been able to think be-

⁴ Coronado, J., Lupton, J., and Louise Sheiner, 2005. "The Household Spending Response to the 2003 Tax Cut: Evidence from Survey Data," Federal Reserve Board, Working Paper 2005-32.

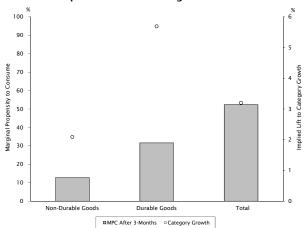
yond basic necessities. Second, the current stimulus is aiming at the same audience by doubling the child tax credit once again. The Joint Committee on Taxation puts the annual benefit of reforming the Child Tax Credit at \$70 billion. This is higher than the 2003 episode, though it will not come in the same lump-sum form. As a result of this feature, our estimate of the tax cut's "bottom line" give additional weight to apparel.





Source: Bureau of Economic Analysis, Empirical Research Partners Analysis.

Exhibit 12: Response of Households to the 2008 Stimulus Payment Composition of the Marginal Propensity to Consume and Implied Category Growth¹ September 2007 Through March 2009

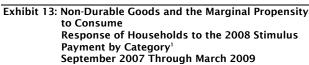


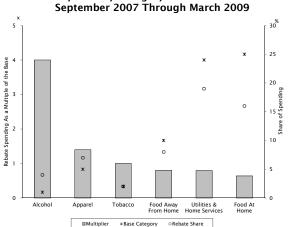
Source: Parker, J., Souleles, N., Johnson, D. and Robert McClelland, 2011. "Consumer Spending and the Economic Stimulus Payments of 2008," NBER Working Paper 16684, Empirical Research Partners Analysis.

After three months.

Drinking and Driving in 2008

The Economic Stimulus Act of 2008 included \$100 billion in payments, which were made to 130 million people in the spring of 2008. The policy targeted middle-income earners since the \$300 or \$600 reward was phased out once adjusted gross income exceeded \$75,000 for single filers and \$150,000 for joint filers. The data indicate that the stimulus accelerated overall consumption (relative to prior trends) by +3.2%. This included a gain of +2% for non-durables and a gain of +6% for durables (see Exhibit 12). As it relates to non-durables, alcohol was the big winner, having over-indexed its base share by a factor of four. In our estimate of the tax cut's bottom line, we give some extra weight to alcohol as a result of this finding. Apparel out-punched its weight here too, albeit by a small margin (see Exhibit 13).

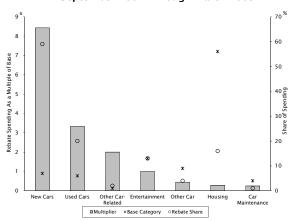




Source: Parker, J., Souleles, N., Johnson, D. and Robert McClelland, 2011. "Consumer Spending and the Economic Stimulus Payments of 2008," NBER Working Paper 16684, Empirical Research Partners Analysis.

1 After six months

Exhibit 14: Durable Goods and the Marginal Propensity to Consume Response of Households to the 2008 Stimulus Payment by Category¹ September 2007 Through March 2009



Source: Parker, J., Souleles, N., Johnson, D. and Robert McClelland, 2011. "Consumer Spending and the Economic Stimulus Payments of 2008," NBER Working Paper 16684, Empirical Research Partners Analysis.

1 After six months.

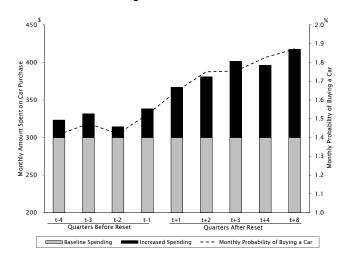
Autos and alcohol don't typically mix well, but both were winners on the back of the 2008 refunds. It is hard to see it from the SAAR, which was in the process of bottoming out at alarmingly low levels, but the data show that autos were the biggest priority for consumers by far, having accounted for 60% of dollars spent. That is roughly 8-9x their base weight. Other car-related expenditures participated as well. Recall that spending on cars at the time was essential since it enabled people to get to work. Housing stood at the other extreme and under-indexed by a wide margin (see Exhibit 14 overleaf). In 2008 housing was simply in no shape to participate. At the time, roughly 30% of homes were under water and a \$600 payout was not going to make a dent in the average negative equity value of \$70,000. Our estimate of the impact of the tax cut factor in extra weight for autos as it does with other durable goods.

Will Consumers Pre-Game It?

Adjustable mortgages helped to fan the flames of the housing boom and accounted for as much as 40% of originations at their peak in 2005. Unwittingly, this trend ultimately created a windfall for consumers as interest rates fell after the initial five-year term expired. This improved the fortunes of the average homeowner (with an ARM) by \$900 per month for a reduction of (50)% in this important expense item. By analyzing credit card data, researchers found that these households spent an additional \$150 of this windfall per month on household durables at retailers like Best Buy. And by analyzing Equifax accounts, they were also able to detect a significant increase in the likelihood to buy a new car⁵. Interestingly, the benefit seemed to begin even before the mortgage reset took place, indicating that people sometime spend ahead of actual cash flow generation.

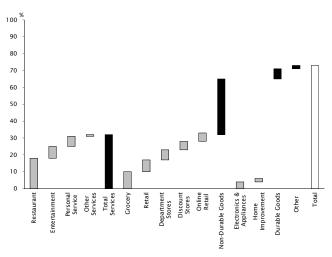
The odds of buying a car increased by +10% in the year before mortgages were reset at lower levels. Ultimately, this trend strengthened further, culminating in +40% increased likelihood to buy a new car. This can be seen graphically in Exhibit 15, which shows the monthly probability of buying a car rising from 1.3% to 1.8% in a fairly linear fashion. Incremental dollars devoted to buying a new car are shown in the grey bars. These represent increases on top of a baseline monthly expenditure of \$300 shown in black.

Exhibit 15: Consumer Response to Mortgage Resets Monthly Spending on New Cars Before and After Adjustable Mortgage Reset 2010 Through 2012



Source: Di Maggio, M., Kermani, A., and Rodney Ramcharan, 2014. "Monetary Policy Pass-Through: Household Consumption and Voluntary Deleveraging," Society for Economic Dynamics Paper No. 256, Empirical Research Partners Analysis.

Exhibit 16: Consumer Response to Lower Gas Prices for Transactions Using Credit Cards¹ Percent of Gas Bounty Spent by Category 2015 Versus 2014



Source: JP Morgan Institute, 2015. "How Falling Gas Prices Fuel the Consumer: Evidence from 25 Million People," Empirical Research Partners Analysis.

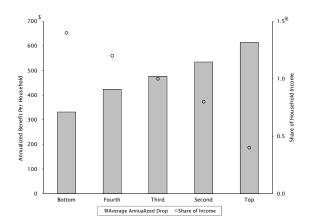
We learn three things from this episode. First, we see that consumers can anticipate cash flow and therefore prespend some of the stimulus. Second, despite an early jump, the stimulus had legs with salutary effects spanning two years. This could be due to the fact that customers perceived the benefit to be permanent as they locked in lower rates for longer terms. Third, the marginal propensity to consume was once again higher for liquidity-constrained consumers than it was for others. Those with a mortgage LTV over 120% had an MPC that was double that of low LTV homeowners.

⁵ Di Maggio, M., Kermani, A., and Rodney Ramcharan, 2014. "Monetary Policy Pass-Through: Household Consumption and Voluntary Deleveraging," Society for Economic Dynamics Paper No. 256.

Adding Fuel to the Fire in 2015

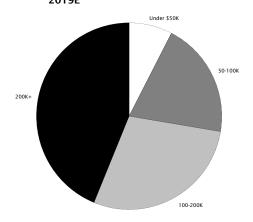
In 2015, falling gasoline prices aided consumers to the tune of \$100 billion. The average household benefitted by \$700 on an annualized basis, making the fuel stimulus similar in size to other, more policy-driven ones. By using its own credit card transaction data and extrapolating from there, the J.P. Morgan Institute finds that consumer plowed 24% of their savings back into gas stations by driving more miles, buying more premium blends and trading up to the 64 oz. slushee at the adjacent c-store. Another 34% of the savings was spent at restaurants and retail. In all, the researchers were able to identify enough components to build up to a marginal propensity to consume of 73% (see Exhibit 16 overleaf). By extrapolating the results to reflect a broader base of consumption (including things not bought on credit), they find an MPC as high as 89%. For middle-income consumers, the gas benefit of 2015 was especially helpful as it equated to more than 1% of annual income (see Exhibit 17).

Exhibit 17: Gas Price Bounty
Dollar Savings and Share of Household Income by Quintile
2015 Versus 2014



Source: JP Morgan Institute, 2016. "The Consumer Response to a Year of Low Gas Prices: Evidence from 1 Million People," Empirical Research Partners Analysis.

Exhibit 18: The Tax Cuts and Jobs Act Distribution of the Dollar Changes in Personal and Business Tax Payments By Taxpayer Income 2019E



Source: Joint Committee on Taxation, December 18, 2017, Empirical Research Partners Analysis.

Gasoline is likely to be more of a Grinch this time around than a gift. Prices at the pump have been rising and, at current prices, the consumer will face an annualized headwind of roughly \$30 billion. This is less than the \$100 billion benefit the consumer saw from falling gas prices in 2015. It is also small in comparison to the \$250-300 billion annualized windfall expected as a result of the tax cut. Nonetheless, gas price affect middle and low-income earners disproportionately. This together with the fact that the Tax Cuts and Jobs Act of 2017 is skewed to the rich, factors into our bottom line expectations (see Exhibit 18). According to the Joint Committee on Taxation, the bottom 80% of taxpayers should see an average increase in after-tax income of +0.8% to +2.4% in 2018. Taxpayers in the top 1% would see a gain of +7.5%. These distributional elements are shown in Exhibit 19.

Boiling it Down to the Stocks

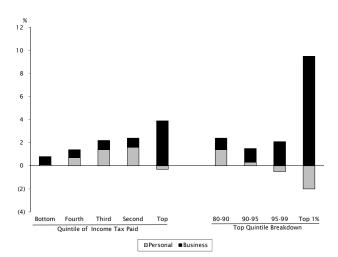
In Exhibit 20 we graph the forward P/E for a number of consumer discretionary segments using an average of eight tax-related precedents dating back to 1977. In the graph, time *t* represents the signing of tax reform into law. Autos have historically seen the greatest revaluation in anticipation of a tax cut. The relative multiple of auto stocks continued to march higher after the bills were signed, but hotel, restaurants and leisure stocks have historically performed stronger in the following 12 months. Retail and related stocks have historically had a more muted response to stimuli, at least when it comes to their forward earnings multiple. This is very much in line with our current positioning that favors consumer cyclicals and discretionary stocks over staples, which is unchanged as a result of this analysis.

As it relates to investment style, some investors have decided to play the stimulus as a rising tide that will lift all boats. This approach is not without merit. The consumer is after all, likely to spend more strongly in the coming months. They may also pivot the spending pattern to focus on buying things as opposed to experiences, at least temporarily. That is because things can be bought instantaneously, but experiences take time to plan and time to enjoy. The tax cut will give the consumer more money to spend, but they have yet to come up with a way to give us all more time.

Exhibit 19: Personal and Business Tax Savings by Income Cohort

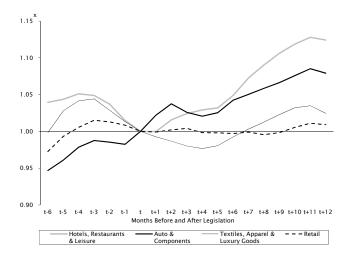
Expected Increase in After-Tax Income by Cohort

2018F



Source: Tax Foundation, Empirical Research Partners Analysis.

Exhibit 20: Select Consumer Discretionary Stocks¹
Relative Forward-P/E Ratios
Before and After Tax Cuts²
Average Change Across Eight Instances
1977, 1978, 1981, 1986, 1997, 2001, 2003 and 2009

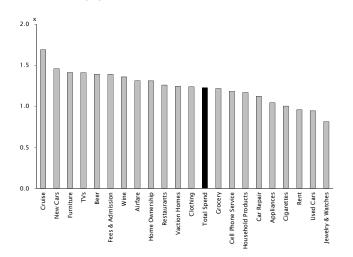


Source: Romer, C. and David Romer, 2009. "A Narrative Analysis of Postwar Tax Changes," Working Paper, Empirical Research Partners Analysis.

- ¹ Capitalization-weighted data. Drawn from the largest 1,500 stocks. Auto data excluded for the 2009 period.
- ² Multiples indexed to 1.0x in the month legislation was signed.

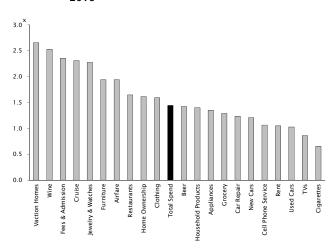
Households spend incremental income differently depending on how much they earn. We highlight categories that are likely to benefit most from improvements in the middle of the economic pyramid in Exhibit 21. This has been a driving force in our thesis and is predicated on the fact that middle-income earners are beginning to participate in the broadening economic recovery. Cruise lines, autos, durables, alcohol, housing and entertainment feature prominently here. At the same time, it is reasonable to expect higher-income earners to benefit from the skew of tax cuts as well as rising asset prices. We highlight businesses that are leveraged to gains at higher income levels in Exhibit 22. But perhaps the best strategy is simply to own stocks that benefit from both of these outcomes. We rank order stocks based on how leveraged their industries are to the stimulus and other forms of income gains in Appendix 1 on page 15. We do the same for businesses that are least exposed in Appendix 2 on page 16.

Exhibit 21: Marginal Propensity to Consume for Middle Income Households¹ 2016



Source: Bureau of Labor Statistics, Empirical Research Partners Analysis.

Exhibit 22: Marginal Propensity to Consume for High Income Households¹ 2016



Source: Bureau of Labor Statistics. Empirical Research Partners Analysis.

¹ Personal includes changes to individual income tax rates, deductions, and credits. Business includes changes to corporate and pass-through rates.

¹ Reflects movement in income from \$50-\$70K cohort into \$70-100K cohort.

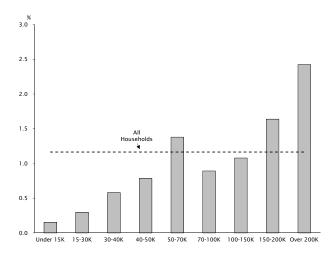
¹ Reflects movement in income from \$100-\$150K cohort into \$150-200K cohort.

The Bottom Line

By combining our own analyses with an extensive body of academic research, we have enough data to estimate how each consumer and each category might respond to the tax cut. To do this we make a number of assumptions. We assume that lower-income households display a marginal propensity to consume of 55% while upper-income households see just below 40%. We then make adjustments to account for the fact that the economic recovery is already in motion. We apply this MPC to incremental income associated with the individual tax component of the benefit. We apply these and the expected business related gains per The Joint Committee on Tax (JCT) for the 2019 year. This allows us to estimate the extra spending we are likely to see by cohort. In Exhibit 23 we show the lift to consumption growth by income cohort associated with the stimulus using these assumptions. The net effect is that we expect the average consumer to accelerate spending by +100 basis points for a one year period of time. The wealthier cohorts should outperform in keeping with JCT's estimates, but those in the \$50-75,000 bracket also stand

We go one step further in Exhibit 24 by estimating the lift by category with the help of the Consumer Expenditure Survey. We use that to develop a baseline, but we give additional weight to categories that have performed well in response to previous stimuli. This "bottom line" analysis suggests furniture, alcohol, cars, appliances, jewelry cruise lines and vacation homes should benefit the most. These categories could see growth rates accelerate by as much as 150-200 basis points in a given year. We use 2019 as an approximation. These findings rely on many assumptions, but they are grounded in data based on historical precedent.

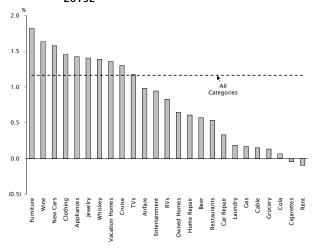
Exhibit 23: Impact of 2017 Tax Cut on Spending Growth by Income Cohort Estimated Lift to Spending Under Various Assumptions^{1,2}



Source: Bureau of Labor Statistics, Empirical Research Partners Analysis.

² See text of the report for additional assumptions

Exhibit 24: Impact of 2017 Tax Cut on Spending Growth by Category Estimated Lift to Growth Under Various Assumptions 1,2 2019E



Source: Bureau of Labor Statistics, Empirical Research Partners Analysis.

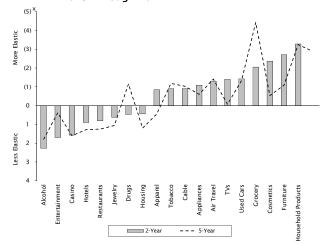
- 1 Assumes funds associated with stimulus are spent within six months.
- ² See text of the report for additional assumptions

Companies with Pricing Power Should Keep the Gains

In addition to analyzing the expected top-line impact associated with the tax cut, we must also consider the effect of a reduction in corporate taxes on the various businesses. The market has probably handicapped the aggregate impact effectively, but we are more interested in which consumer businesses will retain the benefit. In our view this is not a complicated matter. A cut in corporate rates is not unlike a drop in any other input cost. Companies which are able to hold price in the face of falling costs by definition exhibit pricing power. We believe businesses with pricing power will therefore retain the tax benefit while those exhibiting little or no pricing power are more likely to reinvest it in order to get more competitive. We have constructed a pricing power paradigm that ranks businesses based on their ability to increase volume without sacrificing price (see Exhibit 25). Businesses at the far left of the graph have seen positive price and volume growth for the past two and five years. Businesses at the right have seen greater elasticity indicating that price declines have been necessary in order to drive volume. This has been a critical factor in selecting stocks for our Consumer Lens portfolio (see Exhibit 26). We are making no changes to the portfolio as a result of the tax stimulus. Instead, we are opting to play for a stronger status quo rather than a different status quo. Housing and live experiences continue to be the linchpin of the portfolio.

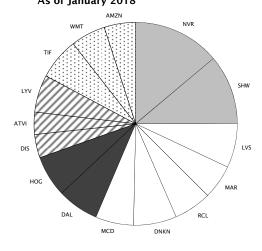
¹ Assumes funds associated with stimulus are spent within six months.

Exhibit 25: Magnitude of Price Elasticity By Category
Change in Volume Relative to Change in Price
2013 Through 2017



Source: Bureau of Economic Analysis, Empirical Research Partners Analysis.

Exhibit 26: Consumer Lens Portfolio Weighting by Theme¹ As of January 2018

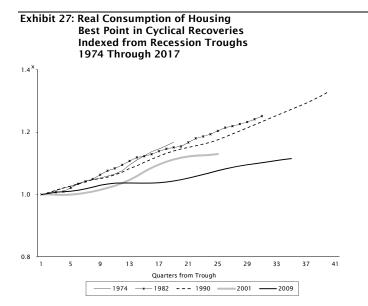


Source: Empirical Research Partners Analysis.

¹ Adjusted to reflect inclusion of DAL, RCL and MAR, deletion of CVS, ROL and WYN as well as the rebalancing of AMZN and LYV.

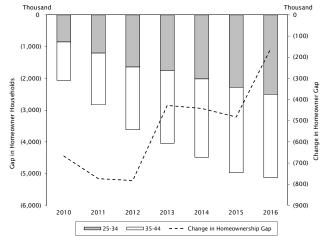
Housing: Our Favorite Theme

Housing sails through nearly all of our thematic filters in strong form. The category is not yet fully recovered relative to previous cycles and demographics are increasingly favorable (see Exhibit 27). These two forces together should help release a large well of pent-up demand. Exhibit 28 indicates that 25-44 year-olds alone should demand an incremental 5 million homes in due time. From Exhibit 29 we can also see that home ownership is a highly progressive good. As incomes rise, home ownership surges while demand for rental homes fades. This is true across the entire income spectrum. Housing has one other vitally important attribute that others do not possess – the industry does not face a technologically disruptive force. The absence of Amazon, Netflix and Tesla is a virtue in its own right. We think NVR and SHW best express our view.



Source: Bureau of Economic Analysis, Empirical Research Partners Analysis.

Exhibit 28: The Homeownership Gap Actual Homeowner Households Versus Expected Result for Younger Age Cohorts' 2010 Through 2016



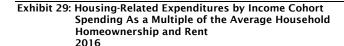
Source: U.S. Census Bureau, Empirical Research.

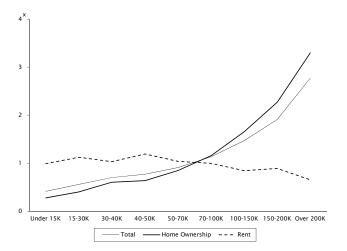
¹ Expected result uses10-year pre-recession average of homeowners to population by cohort.

Live Experiences: The Show Will Go On

Our second key investment theme has been betting on live experiences. Under that umbrella, we have been constructive on hotels, airlines, casinos and cruise lines. These continue to make sense to us even if the tax cut shifts buying habits towards durables in the short-term. The most consistent winner we have identified is a category

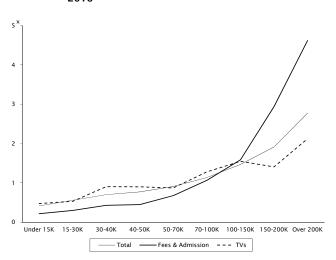
called "fees and admissions". This covers theme parks, live sports events, concerts and the like. These and other recreation services are not yet fully penetrated from a cyclical standpoint. They also show well on our income mobility framework. From Exhibit 30 we can see that spending on fees and admissions rises with income. The slope of their demand curve shoots up once household incomes reach \$50K and the category never looks back. The steep curve far outshines the average category and more mundane "things" like TVs. We think LYV and DIS express this theme best.





Source: Bureau of Labor Statistics: Consumer Expenditure Survey, Empirical Research Partners Analysis.

Exhibit 30: Entertainment-Related Expenditures by Income Cohort Spending As a Multiple of the Average Household Fees & Admissions and Televisions¹



Source: Bureau of Labor Statistics: Consumer Expenditure Survey,. Empirical Research Partners Analysis

No Diving into the Retail Dumpster or Bottom-Fishing for Staples

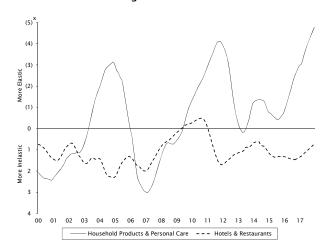
It is possible that a strong reaction to the stimulus could throw a lifeline to retailers selling more mundane "things". And to the extent that investors are eager to wade into the treacherous waters of the retailing pool, we would continue to advise caution. The best way to navigate those choppy waters is still to focus on retailers that are fast-turning like WMT, vertically-oriented like TIF, or both, like SHW. Considering how well jewelry fares in our analysis of the stimulus, is might even be a good idea to exposure to this theme. We prefer that than dumpster diving for department stores and others like them in the hopes of catching a tailwind.

Staples are likely to remain poorly positioned whether or not the tax stimulus works. To us, they face disruptive forces, they are over-earning and are exhibiting unprecedented levels of price sensitivity (see Exhibit 31). At some point, the stress in these names will trigger a change in our viewpoint, but it is too early. Staples have been significant underperformers, but they have come from high levels. Exhibit 32 graphs the forward P/E for consumer staples stocks before and after tax cuts are enacted. They have typically experienced valuation pressure before and after the bills are signed into law. It just so happens that they had an extra 10% to lose this time around owing to their bond proxy status.

Discretionary stocks tell the opposite story. They were a bit behind the curve relative to history per Exhibit 33. History suggests that they can continue to perform well in the months ahead. Valuation of discretionary stocks improved across the eight cuts we studied, but this was particularly true for 1997, 2001 and 2009 (see Exhibit 34). Themes within discretionary such as housing, hotels, restaurants, casinos, airlines and live entertainment are attractive on other measures as well. They are not yet fully penetrated from a cyclical standpoint nor do they look extended from a valuation standpoint (see Exhibit 35). An extra tailwind from the tax cut coupled with pricing power that should enable them to retain the corporate cut should keep their fortunes headed in the right direction.

¹ Fees & admissions include: sporting events, museums, concerts, theme parks, gym memberships and movies.

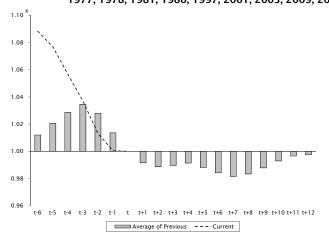
Exhibit 31: Price Elasticity of Live Experiences and Packaged Goods Change in Volume Relative to Change in Price¹ 2000 Through 2017



Source: Bureau of Economic Analysis, Empirical Research Partners Analysis.

1 Data smoothed twelve months

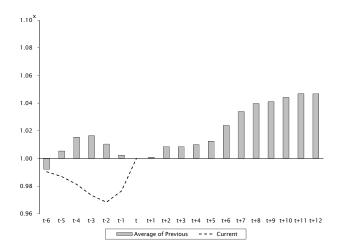
Exhibit 32: Consumer Staples Stocks¹
Relative Forward-P/E Ratios Before
and After Tax Cuts²
1977, 1978, 1981, 1986, 1997, 2001, 2003, 2009, 2017



Source: Romer, C. and David Romer, 2009. "A Narrative Analysis of Postwar Tax Changes," Working Paper, Empirical Research Partners Analysis.

¹ Multiples indexed to 1.0x in the month legislation was signed.

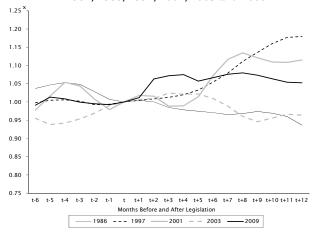
Exhibit 33: Consumer Discretionary Stocks¹
Relative Forward-P/E Ratios Before and After Tax Cuts²
1977, 1978, 1981, 1986, 1997, 2001, 2003, 2009 and 2017



Source: Romer, C. and David Romer, 2009. "A Narrative Analysis of war Tax Changes," Working Paper, Empirical Research Partners Analysis. Postwar Tax Changes," Working Paper, Empirical Research Partners Analysis.

- ¹ Capitalization-weighted data. Drawn from the largest 1,500 stocks.
- ² Multiples indexed to 1.0x in the month legislation was signed.

Exhibit 34: Consumer Discretionary Stocks'
Relative Forward-P/E Ratios Before
and After Tax Cuts²
Average Change Across Eight Instances
1981, 1986, 1997, 2001, 2003 and 2009



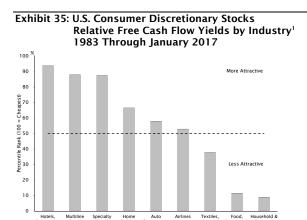
Source: Romer, C. and David Romer, 2009. "A Narrative Analysis of Post-

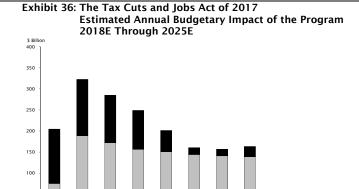
- ¹ Capitalization-weighted data. Drawn from the largest 1,500 stocks. Auto data excluded for the 2009 period.
- ² Multiples indexed to 1.0x in the month legislation was signed.

Conclusion: Don't Go Changin' ...

When it comes to assessing the 2017 Tax and Jobs Act, we can understand the market's ebullience, which has helped to send stocks up since December 22nd. The plan is big enough by historical standards to make a difference. There is also strong potential for tack-on gains resulting from lower corporate tax rates, the potential for repatriated funds to drive job growth in U.S., a wealth effect associated with higher asset prices and the potential for companies like Wal-Mart, Disney and others to share their newfound gain with employees. Wal-Mart for example, will allocate \$400 million of its \$1.8 billion windfall to employees in the form of a 2018 bonus payment which is likely to be made in the coming few months. This amounts to roughly \$170 per employee and an estimated 0.3% of the company's overall payroll. If half of this bonus is incremental and all U.S. businesses did the same, this would serve to lift 2018 wages by +15 basis points – not bad for a tack-on benefit. Of course, in the end this may also be nothing more than a P.R. stunt if companies don't repeat the bonus payment in the out-years even as they continue to reap the benefits associated with lower corporate tax rates.

Our recommendation is that investors should not heavily weight the tax cut in the investment process for a number of reasons. First, the plan is being enacted at a time of general prosperity. Second, the plan is geared towards higher-income earners, which historically have exhibited lower marginal propensities to consume. Third, stimuli that are well-telegraphed such as EITC credits have a tendency to be spent quickly and potentially early. We might already have seen this begin to play out as December retail sales were the strongest in 6 years. Finally, the benefits of the tax plan peak in 2019 at \$280 billion with many of the features ultimately sun-setting in 2025. Unless the stimulus creates a multiplier effect as time goes on, it is possible that early benefits will create one seriously tough comparison a year from now (see Exhibit 36).





Source: Corporate Reports, Empirical Research Partners Analysis.
¹ Capitalization-weighted data.

Source: Joint Committee on Taxation, November, 2, 2017, Empirical Research Partners Analysis.

Appendix 1: Attractive U.S. Stocks With Greater Exposure to Income Mobility Sorted by Category and Core Model Rank As of Late-January 2018

			Quintile Ranks (T=Best, 5=Worst)									
			Super Factors					M emo:			_	
					Earnings			Sector	Free			
					Quality			Attractiveness	Cash	Forward		M arket
				Capital	and	M arket	M odel	(1=Best;	Flow	P/E-	YTD	Capitalization
Symbol	Company	Price	Valuation	Deployment	Trend	Reaction	Rank	3=Worst)	Yield	Ratio	Return	(\$ Million)
FCAU	FIAT CHRYSLER AUTOMOBILES NV	\$24.46	1	1	1	1	1	1	1	6.7 >	37.1 9	% \$47,791
F	FORD MOTOR CO	11.12	1	1	2	5	1	1	2	7.1	(8.7)	44,174
AAL	AMERICAN AIRLINES GROUP INC	52.68	1	1	2	3	1	3	5	9.4	1.2	25,207
BBY	BEST BUY CO INC	76.59	1	i	2	1	1	1	1	17.0	11.9	22,671
GPS	GAPINC	35.08	1	2	2	2	1	1	i	15.5	3.7	13,646
KSS	KOHL'S CORP	67.95	1	1	1	1	1	1	1	15.2	25.3	11,416
KORS	MICHAEL KORS HOLDINGS LTD	67.20	1	1	1	i	1	1	i	16.9	6.8	10,220
PHM	PULTEGROUP INC	33.43	i	i	i	i	1	i	i	10.9	0.5	9,827
RL	POLO RALPH LAUREN CORP -CL A	116.97	i	i	i	i	1	i	i	20.5	12.8	9,510
HOG	HARLEY-DAVIDSON INC	55.29	i	i	i	4	1	i	i	14.7	8.7	9,305
IWN	NORDSTROM INC	50.89	i	2	2	3	1	i	i	16.1	7.4	8,478
M	MACY'S INC	27.31	i	2	2	2	i	i	i	9.0	8.4	8,319
HBI	HANESBRANDS INC	22.59	i	1	2	5	i	i	i	11.6	8.0	8,236
TOL	TOLL BROTHERS INC	47.49	i	i	2	1	i	i	i	11.0	(1.0)	7,466
URBN	URBAN OUTFITTERS INC	35.28	i	i	2	i	i	i	i	18.7	0.6	3,819
SIG	SIGNET JEWELERS LTD	54.74	i	i	2	5	i	i	i	8.9	(3.2)	3,310
KBH	KB HOME	32.66	i	3	2	1	i	i	i	22.2	2.2	2,842
LOW	LOWE'S COMPANIES INC	106.84	2	2	1	2	i	i	2	18.6	15.4	88,784
RCL	ROYAL CARIBBEAN CRUISES LTD	134.77	2	1	i	3	i	i	1	15.5	13.4	28,853
WYN	WYNDHAM WORLDWIDE CORP	125.02	2	i	4	2	i	i	2	20.7	7.9	12,668
DECK	DECKERS OUTDOOR CORP	88.38	2	i	1	1	i	i	1	18.7	10.1	2,831
PLCE	CHILDRENS PLACE INC	157.25	2	i	2	i	i	i	i	18.2	8.2	2,743
NVR	NVR INC	3,177.89	3	3	1	i	i	i	2	16.8	(9.4)	11,730
CRI	CARTER'S INC	120.71	3	1	3	2	i	i	2	21.5	2.7	5,724
COLM	COLUMBIA SPORTSWEAR CO	74.78	3	i	1	3	i	i	2	26.4	4.0	5,225
SAM	BOSTON BEER INC -CL A	191.45	3	1	2	2	i	3	2	30.5	0.2	2,252
HD			4	1	1	2	i	1	2	22.1	8.1	239,347
VFC	HOME DEPOT INC	204.92	4	1	1	1	i	i	3	27.2	11.6	
ROST	VF CORP	82.55		1	1	2	i	1	2			32,620
	ROSS STORES INC	84.57	4	1	1	2	i	1	4	22.4	5.4	32,318
VAC	MARRIOTT VACATIONS WORLDWIDE	152.51	1		3	4	2	1		28.4	12.8	4,041
GM	GENERAL MOTORS CO	43.02		2	5		2		5	6.8	5.0	61,106
DAL	DELTA AIR LINES INC	55.76	1	2		3	2	3	4	8.8	(0.4)	39,755
UAL	UNITED CONTINENTAL HLDGS INC	65.78	1	•	4	5	2	3	5	8.9	(2.4)	19,487
LB	L BRANDS INC	52.11	1	4	3	4		1	1	15.2	(13.5)	14,709
ALK	ALASKA AIR GROUP INC	65.48	1	2	3	5	2	3	1	10.9	(10.9)	8,058
FL	FOOT LOCKER INC	51.28	1	1	3	5	2	1	1	12.0	10.1	6,287
HA	HAWAIIAN HOLDINGS INC	37.50	1	2	4	5	2	3	4	8.3	(5.9)	1,968
LUV	SOUTHWEST AIRLINES	60.36	2	1	4	4	2	3	2	12.3	(7.8)	35,817
PVH	PVH CORP	155.16	2	4	5	1	2	1	3	17.9	13.1	11,960
www	WOLVERINE WORLD WIDE	33.39	2	3	3	2	2	1	2	20.4	4.7	3,195
LYV	LIVE NATION ENTERTAINMENT	45.03	3	2	1	2	2	2	1	NM	5.8	9,312
GIL	GILDAN ACTIVEWEAR INC	33.87	3	1	4	3	2	1	2	19.8	4.9	7,473
SKX	SKECHERS U S A INC	40.84	3	4	4	1	2	1	4	23.9	7.9	6,472
SHOO	MADDEN STEVEN LTD	46.80	3	2	3	2	2	1	3	20.9	0.2	2,766
TIF	TIFFANY & CO	109.30	4	1	1	3	2	1	2	25.1	5.1	13,583
LULU	LULULEM ON ATHLETICA INC	79.96	4	3	3	1	2	1	4	27.1	1.7	10,825
SERV	SERVICEM ASTER GLOBAL HLDGS	52.96	4	3	1	2	2	1	2	25.2	3.3	7,151

Quintile Ranks (1=Best; 5=Worst)

Source: Empirical Research Partners Analysis

Appendix 2: Unattractive U.S. Stocks That are Less-Exposed to Income Mobility Sorted by Category and Core Model Rank As of Late-January 2018

			Quintile Ranks (1=Best; 5=Worst)									
			Super Factors					M				
			Earnings				Sector	Free				
					Quality		Core	Attractiveness	Cash	Forw ard		M arket
				Capital	and	M arket	M odel	(1=Best;	Flow	P/E-	YTD	Capitalization
Symbol	Company	Price	Valuation	Deployment	Trend	Reaction	Rank	3=Worst)	Yield	Ratio	Return	(\$ Million)
BUFF	BLUE BUFFALO PET PRODUCTS	\$33.1	5	5	5	2	5	3	5	36.0 x	1.0 %	\$6,469
JJSF	J & J SNACK FOODS CORP	149.55	5	5	4	4	5	3	4	33.2	(1.5)	2,792
CVNA	CARVANA CO	18.81	5	5	5	2	5	1	5	NM	(1.6)	2,497
TR	TOOTSIE ROLL INDUSTRIES INC	35.55	5	2	4	4	5	3	4	25.4	(2.3)	2,240
PM	PHILIP M ORRIS INTERNATIONAL	108.61	4	5	4	4	5	3	3	22.9	2.8	168,693
MO	ALTRIA GROUP INC	69.83	4	2	4	4	5	3	3	21.3	(2.2)	133,349
UN	UNILEVER NV	56.91	4	5	3	3	5	3	3	20.9	1.0	97,585
KHC	KRAFT HEINZ CO	78.42	4	5	5	5	5	3	4	21.8	0.8	95,552
MDLZ	M ONDELEZ INTERNATIONAL INC	44.54	4	2	3	4	5	3	4	20.9	4.1	66,604
COTY	COTY INC	19.70	4	5	5	3	5	3	4	27.0	(1.0)	14,765
MKC	M CCORMICK & CO INC	107.78	4	5	4	2	5	3	2	22.3	5.8	14,138
HAIN	HAIN CELESTIAL GROUP INC	38.49	4	4	4	4	5	3	3	22.8	(9.2)	3,995
LANC	LANCASTER COLONY CORP	126.45	4	5	4	4	5	3	3	26.4	(2.1)	3,470
TMUS	T-M OBILE US INC	64.60	3	5	4	4	5	2	5	26.1	1.7	53,745
FDP	FRESH DEL MONTE PRODUCE INC	47.77	2	4	5	5	5	3	4	16.6	0.2	2,376
BGS	B&G FOODS INC	33.40	2	5	5	5	5	3	4	16.0	(5.0)	2,221
LNCE	SNYDERS-LANCE INC	50.07	5	4	4	2	4	3	3	43.9	(0.0)	4,869
FIVE	FIVE BELOW INC	65.94	5	5	4	1	4	1	4	28.7	(0.6)	3,642
HRL	HORM EL FOODS CORP	34.64	4	3	3	4	4	3	3	20.9	(4.3)	18,345
PF	PINNACLE FOODS INC	62.07	4	2	3	4	4	3	2	24.3	4.4	7,387
IRBT	IROBOT CORP	93.45	4	5	3	1	4	1	3	50.6	21.8	2,605
TSN	TYSON FOODS INC -CL A	78.91	2	5	4	2	4	3	2	13.6	(2.7)	29,008
GPC	GENUINE PARTS CO	107.01	2	5	4	3	4	1	3	23.5	12.6	15,689
AAP	ADVANCE AUTO PARTS INC	122.89	2	3	3	4	4	1	3	23.5	23.3	9,081
Caurea	Empirical Decearsh Dartners Analysis											