Shifting U.S. Demographics - Trends Shaping the Future

Over the years we have studied shifting demographic trends here in the U.S. - noting that with each boom / bust cycle occurring in U.S. population, the country oftentimes experienced significant economic and cultural changes. Within this historical framework, the equity markets have shown themselves to be a discounting mechanism or ‘leading indicator’ of such demographic shifts, and with the assistance of other macro drivers such as valuation, credit conditions/liquidity, and sentiment, have generated measurable secular market trends over the past 80+ years.

- **Millennials and Boomers on the Move - Impact to REITs**: Millennials in general are more transitory than previous generations, essentially more willing to pick up and move for a job or lifestyle. As such, they have also been the least inclined group since the Depression to own a home. Thus, in our view, they will continue to benefit both single-family and multifamily rental demand.

- **Millennials and the ‘Experience’ - Travel & Leisure**: We believe the emergence of the Millennial cohort is a significant positive tailwind for travel, lodging, and leisure stocks. Evidence indicates that this generation prefers to allocate more disposable income towards experiences instead of hard goods. Whether the experience is at a theme park, a hotel, a ski mountain or an all-inclusive resort, we believe Millennials can be a driver for our entire coverage universe.

- **Baby Boomers and Long-Term Care Insurance - Implications for the Industry**: Perhaps one of the most daunting questions facing our country - the aging of the Baby Boom population - is also creating one of the most daunting questions for the insurance industry, at least for those insurers that have underwritten long-term care insurance.

- **Preference and Need: Millennial Impact to Specialty Finance**: The impact of a growing strata of Millennial consumers on our specialty finance universe is two-pronged: consumer preference and consumer need. First, and most obvious, is the shift to digital delivery of financial services (i.e., consumer preference).

- **Beneficiaries of the US Healthcare Demographic Changes**: The healthcare industry is responding to the need of the growing US population with a record number of biologic drug approvals. Last year was a record for approvals with 46; or about double the historical average. Biologics or biotechnology derived therapies that are injected, compared to drugs or small molecule therapies that are taken by mouth, is the growth segment within drug and therapeutic discovery.

- **Increasing Demand for New Therapies**: We see the shift in U.S. demographics as positively impacting biotechnology companies. Specifically, we believe several diseases are likely to increase in market size based on an increased patient population creating a need and opportunity for new therapies.

- **Millennials and Their Potential Impact on Energy Consumption**: Broadly speaking, we believe demographic and consumption trends will be beneficial for US utilities at the expense of the E&P sector over the next 20 years. With domestic energy consumption stagnating and technology leading to dramatic cost reductions in renewables, we expect the power sector to gain market share in overall energy consumption.
The Millennials are the largest boom this country has seen thus far. At approximately 85-90 million strong, they are slightly larger than their Boomer parents overall (U.S. Census data, 2014-2016) and in 2019 are expected to be the largest living adult population in the U.S. (surpassing the Boomers and Gen X; Pew Research; 2018).

Commitment to Individual Investors

In this latest edition of our Quarterly Newsletter, some of our senior Analysts share their insights surrounding the changing demographic environment in the U.S. and how it can potentially impact their sectors / industries going forward. It is by no means an exhaustive study, but instead is intended to spark conversation around a pivotal topic that will likely gain more attention in years to come.

As always, the Janney Equity Research team is an available resource for you, should you have any questions or comments, please feel free to reach out.

Shifting U.S. Demographics

By: Dan Wantrobski, Director of Research, Technical Strategy

Over the years we have studied shifting demographic trends here in the U.S. - noting that with each boom / bust cycle occurring in population, the country oftentimes experienced significant economic and cultural changes. Within this historical framework, the equity markets have shown themselves to be a discounting mechanism or ‘leading indicator’ of such demographic shifts, and with the assistance of other macro drivers such as valuation, credit conditions/liquidity, and sentiment, have generated measurable secular market trends over the past 80+ years.

**U.S. Equities: 1913 - Present**

- **Secular Bull 1949 – 1966**
  - Shifting demographics- GIs return home to form households
  - Reasonable Valuation in Equities-multiple expansion
  - Healthy / functioning credit markets after deleveraging cycle
  - Rising interest rates

- **Secular Bull 1983 – 2000**
  - Shifting demographics- Boomers enter workforce/form households
  - Reasonable Valuation in Equities-multiple expansion
  - Healthy / functioning credit markets after deleveraging cycle
  - Declining interest rates

The rise of the Millennials and the Baby Boomers’ march toward retirement in the U.S. are not new concepts, but in our view, they remain a vastly understated force of future (significant) change in both our financial markets and underlying economy.
Millennials Impact:

+Production:
The Millennials are the largest population boom this country has seen thus far. At approximately 85-90 million strong, they are slightly larger than their Boomer parents overall (U.S. Census data, 2014-2016), and in 2019 are expected to be the largest living adult population in the U.S. (Surpassing the Boomers and Gen X; Pew Research; 2018).

+Consumption:
Millennials currently generate roughly $200+ billion in annual discretionary spending power (which is expected to increase), and they stand to inherit nearly $30 trillion in wealth in the decades ahead.

+Investment:
The Millennials are expected to generate a combined $8 trillion of global net income by 2025.

-Debt:
At $1.5 trillion, aggregate student debt accumulated by this Millennial cohort (the most formally educated generation in history) is the highest in history—and will likely have implications on consumption and investment habits (as well as public policy) in the years ahead.

Generation Landslide:

The Millennials are the largest population boom this country has seen thus far. At approximately 85-90 million strong, they are slightly larger than their Boomer parents overall (U.S. Census data, 2014-2016), and in 2019 are expected to be the largest living adult population in the U.S. (Surpassing the Boomers and Gen X; Pew Research; 2018).

It is with this cohort in mind that we remain generally bullish on the U.S. demographic profile for the years ahead. We understand that on a macro level, the world is dealing with an aging global population, but in the not-so-long-run, the U.S. will see household and family formations reach new all-time highs within the coming decade. In the past, this ‘nesting’ by boomer cohorts has generated significant economic expansion… and though the Millennials certainly face their fair share of challenges as they become producers, consumers, and investors- we feel confident that the market multiple has not adequately reflected the amount of change and growth that will manifest in the years ahead due to their economic onboarding.

But alongside this Millennial integration into our economic system, what perhaps may be equally disruptive going forward is the fact that advances in technology and healthcare have increased overall life expectancy. These advancements allow older cohorts to remain in the labor force longer as producers and consumers. Case in point: to our knowledge, at no other time in modern history have we seen three major demographic segments (Baby Boomer, Gen-Xer, and Millennial) all producing, consuming, and investing side by side. We believe this will have significant implications in regard to economic velocity (i.e. ‘money turnover’) in the years ahead, which can continue to generate an inflationary response from financial assets such as equities.

At the other end of the spectrum, it is equally important to address (as best we can) the aging Boomer cohort in the U.S.- for in just over a decade from now, all U.S. citizens officially considered a ‘Baby Boomer’ (roughly 78-80 million) will be 65 or older. This means that by 2030, nearly 1 out of every 5 residents will be of retirement age (though we would add- not necessarily retired); (U.S. Census Bureau, 2018). The implications for both the public and private sectors are profound-and reach into vast institutions such as Social Security, health/senior care, affordable housing/living, infrastructure/energy, and of course wealth transfer. To cloud the picture further, Millennials have not (yet) produced their own ‘baby boom’ so to speak – yet the total U.S. population is projected to grow by
another 78 million people into the year 2060 (from roughly 326 million today to 404 million). So in addition to the various implications surrounding our domestic boom-bust birth cycle, issues involving immigration policy and integration will need to be addressed. Moreover, these topics can impact the financial markets and broader economy as well.

**In Summary:**

We believe this shifting landscape in demographics will ultimately prove to be a net positive for U.S. equities on a longer-term basis.

The markets have been generally kind to this type of generational baton-passing. This has been especially true when other factors such as fundamental/economic conditions, supply-demand forces, credit markets, and sentiment are all well supported; as we believe they are today.
Millennials in general are more transitory than previous generations—essentially more willing to pick up and move for a job or lifestyle. As such, they have also been the least inclined group since the Depression to own a home. Thus, in our view, they will continue to benefit both single-family and multifamily rental demand (apartment and single-family rental REITs), as many do not want to be tied down by homeownership (they are getting married later in life—as has been the trend for the last 20+ years). Millennials also prefer to work in the ‘urban cores’ rather than non-descript suburban office park locations with little to no amenities. This particular trend should continue to benefit the CBD office REITs over the suburban office REITs from an investment perspective.

Millennials generally value experiences over possessions, to a greater extent than previous generations. This can benefit REITs like EPR (EPR Properties; Buy rated at Janney) with activity-based real estate. But in terms of ‘possession’ they buy more online than previous generations—making more traditional retail locations (shopping centers and mall REITs) obsolete. As a result, Industrial REITs with their fulfillment centers and third party logistics operations should continue to benefit.

Boomers have been selling their large suburban homes and moving back into the urban core in larger numbers than ever before. Drawn by restaurants, art, theatre, and other cultural events, urban apartment rentership by 55+ adults is at a post-Depression high. This is another notable benefit for apartment REITs. It also highlights a growing problem for the single-family sales market, as less “Baby Busters” and other 35+ year olds look to buy large and expensive suburban homes. Going forward, this could put downward pressure on pricing in many markets.

Boomers also continue to be a boon for healthcare REITs of all types. Eventual need for assisted living and nursing homes spurred significant supply in the 1990s and early 2000s, which we are still working through. Eye centers and other outpatient locations continue to be in demand, as people prefer to be serviced near their homes, and avoid driving to urban core to see their doctor or undergo surgery. Hospital systems continue to expand and grow their locations and services, generating more demand for the facilities the medical office REITs provide.

Overall, we see many opportunities for the REIT space in the years ahead as the economy continues to adjust for these ongoing shifts in our demographic base.
We believe the emergence of the Millennial cohort is a significant positive tailwind for travel, lodging, and leisure stocks. Evidence indicates that this generation prefers to allocate more disposable income towards experiences instead of hard goods.

Timeshare: While timeshare historically was a product tailored towards Baby Boomers, Millennials have emerged as a significant buyer of the product. Wyndham (WYND-Neutral) has disclosed that the average age of a buyer has gone from 54 years old in the early 2000s to under 39 today. Hilton Grand Vacation (HGV-Buy) has also had success selling to younger customers and 18% of its ~288k owners are Millennials. Besides the desire to travel, we think Millennial family formation is a positive for the timeshare industry. The product is typically more attractive to those with children given the extra space. Moreover, Millennials are more accustomed to the “sharing economy” and concepts like AirBnB, which is similar to timeshare. Our favorite name in the timeshare sector is HGV given the potential long-term benefits of the inventory investments made this year.

Lodging REITs and All-Inclusive: Over the past few quarters, leisure travel has been a bright spot for the lodging industry. We believe Millennials have been an important driver of this growth. Unfortunately, the impact of Millennial travel on lodging REITs is less than other industries given that upwards 2/3rds of U.S. lodging demand is purely corporate business. The exception is the all-inclusive industry, which is mostly driven by leisure travel. One of our favorite stocks in our coverage universe is Playa Resorts (PLYA-Buy), which owns all-inclusive resorts in Mexico, Jamaica and the Dominican Republic- we believe the company should benefit from more Millennial leisure travel in the years ahead.
Baby Boomers and Long-Term Care Insurance: Implications for the Industry

By: Larry Greenberg, Managing Director, Insurance

Definition:

Long-term care insurance policies reimburse policyholders a daily amount (up to a pre-selected limit) for services to assist them with activities of daily living. Unlike traditional health insurance, long-term care insurance is designed to cover long-term services and supports, including personal and custodial care in a variety of settings such as a person’s home, a community organization, or other facility.

Perhaps one of the most daunting questions facing our country— the aging of the Baby Boomer population— is also creating one of the most daunting questions for the insurance industry, at least for those insurers that have underwritten long-term care insurance. While the country will grapple with incremental funding challenges brought about by a growing population of retirees and inadequate savings rates, a number of Life and Health insurers will be challenged because a number of the assumptions these companies made when they wrote long-term care insurance (for this Baby Boomer population) have proven to be incorrect.

To underwrite these policies, actuarial assumptions had to be made regarding “persistency,” “incidence” and “mortality.” Persistency refers to the rate at which policies stay in force over time, and presupposes a certain level of policy lapses, whether due to voluntary or involuntary (death) decisions. In this instance, industry estimates on how many policyholders would terminate their policies before utilizing them (a good thing for profits) undershot the mark. And where policies remained in force, estimates also had to be made as to the “incidence” of policyholders going on claim. And here too, the industry appears to have undershot the mark, with more policyholders than assumed utilizing the policies. It appears clear that long-term care policyholders who have been paying premiums for years have a higher interest in utilizing their policies than the industry believed. Obviously, the combination of lower terminations and higher utilization is not good for industry profitability, and when combined with the fact that claimants who move into long-term care facilities are living longer than the actuarial table suggested they would, the picture for the industry gets even less rosy.

We would note that Prudential (PRU - Neutral) recognized a large charge for LTC in the second quarter as part of its annual actuarial review, and Unum (UNM – Neutral) is reviewing its LTC reserves and investors expect a likely charge here as well. Also, General Electric’s reserve charge for long-term care earlier this year underscored the challenges this product line is facing. GE divested (in the 2004/2006 timeframe) Genworth Financial, a major underwriter of long-term care. To facilitate its divestiture, GE retained some of Genworth’s liabilities in the form of a reinsurance agreement. It was these liabilities that accounted for GE’s first quarter 2018 reserve charge.

To be fair, Genworth, GE, PRU, and UNM are not alone in encountering financial challenges with blocks of long-term care insurance. Probably every company that underwrote LTC in its early days has been challenged by these early blocks of business. To the extent that some companies took a more tempered approach to the business in the early days, and had more questions about the lack of actuarial data needed to support the product, these underwriters are likely feeling a bit less pain. And over the years, there have certainly been companies that have been more proactive in managing their long-term policies than others. Active management would include seeking rate increases on in-force blocks, updating actuarial assumptions as new information becomes available and recognizing the appropriate reserving and capital levels necessary to support the business. We’re certain that some in the industry have been more successful than others, but the lack of uniformity of disclosures on the business makes for a very difficult analytical exercise from the outside.
The reality is that long-term care insurance is a ‘long-tail policy,’ meaning that it takes many years for claims dollars to be paid. Long-tail insurance lines are inherently more unpredictable than short-tail lines (those where losses emerge and claims are paid quickly) because during the passage of time many things can change. Inflation can change, which impacts the trend in how underlying losses are growing… laws can change, which potentially impacts the definition of exposure… and behavior can change, which possibly impacts everything. All of these factors have adversely impacted the economics of long-term care insurance, and if these challenges weren’t enough, there has also been an environment of low interest rates sprinkled on top, which has significantly diminished the return on float (a critical piece of the underlying economics of the long-term care policy).

As of today, it seems fair to say that the potential exists that long-term care becomes analogous for the Life Insurance industry to what asbestos had been for the Property-Casualty industry decades ago. And that would be a long-tail exposure that requires a period of meaningfully unpredictable (shock) charges followed by a number of years of more modest but regular charges. But remember, the Life Insurance industry is heavily represented by large and well capitalized companies with meaningful financial resources, and as we sit here today our working assumption is that most will be healthy survivors with plenty of good business to offset the weak.

**Preference and Need: Millennial Impact to Specialty Finance**

By: John Rowan, Managing Director, Specialty Finance

The impact of a growing strata of Millennial consumers on our specialty finance universe is two-pronged: consumer *preference* and consumer *need*. First, and most obvious, is the shift to digital delivery of financial services (i.e., consumer preference). Companies like Enova International Inc. (**ENVA**, BUY), CURO Group Holdings, Inc. (**CURO**, BUY) and LendingClub Corp. (**LC**, NEUTRAL) all have a strong digital platform to service Millennial consumers- and these companies will likely continue to adapt as Gen-Y becomes a much larger portion of the income-producing population in the U.S.

The broader issue for our specialty finance coverage centers around this generation’s financial habits and whether or not they will need/want short-term, non-bank loans (i.e., consumer need). The perception is that Millennials are financially irresponsible, plagued with student debt, report a lack of savings, and are lacking in household formation. While some of these may be misconceptions, there is strong data that shows at least one of these to be accurate: the generation is burdened by student debt. Based on a report from *Young Invincibles*, student debt is in fact a challenge to many Millennials: at the end of 2016, the median net worth of a 25-34 year old with a degree and debt was -$1,900, versus +$6,798 in 2013 and +$89,143 in 1989. And per data from the Federal Reserve, student debt now stands at an all-time high of $1.5 trillion (from 2013-2017 student debt grew at a 7% compounded annual growth rate). Thus from an investment perspective, we do believe that the long-standing issue of rising student debt levels can have a notable impact on ‘consumer need’ and thus some of the stocks in our coverage universe.
Increasing Demand for New Therapies

By: Esther Hong, Director, Biotechnology

We see the shift in U.S. demographics as positively impacting biotechnology companies. Specifically, we believe several diseases are likely to increase in market size based on an increased patient population creating a need and opportunity for new therapies.

In the U.S., approximately 75mn Americans (23%) were born between 1946 and 1964. By 2029, when all boomers will have reached 65 years, the population of Americans 65 years or older is estimated to increase to 71mn from 50mn today. Advances in medicine and living standards have contributed to Americans living longer than previous generations, but offsetting these advances is an increasing rate of obesity (~40%) and chronic diseases. In addition, an aging population is also increasingly dealing with forms of neurodegeneration such as Alzheimer’s disease which is expected to grow from 5.7mn today to 14mn in 2050. Millennials’ are also impacted by increasing rates of obesity and associated diseases. A general trend towards sedentary lifestyles in the U.S. is a contributing factor. Here, we focus on Alzheimer’s disease as a therapeutic indication likely to increase in market size with an aging population.

Despite the high prevalence of Alzheimer’s Disease – one in every 10 Americans over the age of 65 has the disease and it is estimated that only 25% of the patients have been diagnosed – there are no cures available nor treatments that can prevent the disease or delay disease progression. Decades’ efforts in drug development have only led to repeated failures. Although many questions still remain, significant progress has been made in elucidating the disease pathophysiology. Additionally, lessons have been learned in clinical development to optimize both patient population and efficacy measures to maximize the possibility of demonstrating clinical benefit.

A large biotech company, which has a neuroscience-focused pipeline and a late stage clinical program for Alzheimer’s disease, recently announced positive data from an Alzheimer’s study. Debates are still ongoing on how to best interpret the data. However, we believe the data, by providing incremental evidence to suggest that a treatment for one of the most difficult to treat diseases could still be within reach with persistent effort, should bode well for companies that are engaged in developing novel therapies for neurodegenerative disorders.

While we believe future performance in the biotech sector will continue to be driven by the delivery of innovative therapies, we note external risks could impact the sector. Potential risks and headwinds include regulatory price controls (unlikely in our view), hurdles put up by payers and the government to reduce patient access to therapy, and regulatory changes.
The healthcare industry is responding to the need of the growing US population with a record number of biologic drug approvals. Last year was a record for approvals with 46; or about double the historical average. Biologics or biotechnology derived therapies that are injected, compared to drugs or small molecule therapies that are taken by mouth, is the largest growth segment within drug and therapeutic discovery. Representative companies are: TMO – Buy; LONN-SWX – Buy; CDMO – Buy; and WST – Buy.

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| TMO        | TMO    | • “Amazon of Life Science Tools”  
• Dominant in commercial channel  
• Benefits from Strategic acquisitions [i.e. Patheon]  
• Key supplier of technology used in production of biologics  
• About 20% of Thermo is linked to biological production and 100% of Thermo’s products are used for global quality control, research, biologic applications |
| Lonza      | LONN-SWX | • World’s leader in biopharmaceutical contract manufacturing and development services  
• 40% share of global market  
• LONN’s 5-6% organic growth rate, will likely accelerate due to Bio Production’s ascent to the fastest growing market in Life Science Technology  
• Recently opened 300,000 sq. ft cell and gene therapy production site in 1Q18, the largest in the world  
• 900 regenerative medicine therapies are in clinical trials, this site has the potential to generate as much as $400mn in revenue provide 200 bps of unexpected growth for the company |
| CDMO       | CDMO   | • In last 18 months Avid has pivoted their focus to contract manufacturing  
• Only a year ago Avid’s operations were strictly used for excess capacity operations, through a newly convened board of CDMO industry veterans, a CDMO veteran as CEO, and a dedicated sales force, Avid has been able to grow its operations and diversify its revenue stream through the expansion of existing customers along with the acquisition of new customers  
• 14+ years of experience, unblemished regulatory track record, we estimate that management has more than tripled its number of customers in the last 12-18 months |
| West       | WST    | • Global leader in manufacturing of packaging components and delivery systems for injectable drugs and other healthcare products  
• 70% market share in the drug container and packaging market  
• A leveraged play on the burgeoning growth of biological therapies, we believe West’s organic revenue growth and operating margin expansion has high visibility highlighted by 2Q18’s organic revenue growth of 9%.  
• While West ‘only’ grew 5.2% in 2017 due to a combination of Puerto Rico shutdowns, India customer compliance issues in the summer, and the shutdown of Venezuelan (VZ) operations, we see expanding margins moving forward. |
Millennials and Their Potential Impact on Energy Consumption

By: Akil Marsh, Vice President MLPs & Energy Infrastructure

Broadly speaking, we believe demographic and consumption trends will be beneficial for US utilities at the expense of the Exploration and Production (E&P) sector over the next 20 years. With domestic energy consumption stagnating and technology leading to dramatic cost reductions in renewables, we expect the power sector to gain market share in overall energy consumption.

In the Energy Information Agency’s (EIA) Reference Case Scenario, oil/petroleum product consumption remains relatively flat through 2050. Electricity consumption doesn’t fare much better over that time frame with annual growth under 1%. The combination of the Great Recession, the decoupling of energy consumption from GDP growth in a mature economy, and more efficient cars/appliances have all led to low/no growth projections for US energy consumption.

The media’s caricature of millennials (living in city centers, no cars, small apartment, etc.) and various polls (75% of Millennials wanting cleaner energy sources) in theory should hasten declines in oil consumption. We view this characterization as oversimplified. Consumer needs are not static. As millennials age and start having families they will likely want the same luxuries as their parents. And like their parents, cost and ease of use will be the biggest determining factors in their energy consumption.

So where are costs headed? Over the long term we believe all signs point to lowering cost of renewables and cheaper technology solutions. The unsubsidized cost to build a wind or solar farm is now cheaper than natural gas plants in many parts of the country. Bloomberg New Energy Finance projects build cost for utility scale solar will fall another 40% by 2030. Oil major BP projects 300 million electric vehicles will be on the road by 2040 due to more affordable vehicle options. While the pace and timing is difficult to predict, options to use cleaner forms of energy are clearly getting cheaper and easier. Inexpensive clean energy options should find a welcome consumer in Millennials in our opinion.

For utilities, the shift toward renewables and electric vehicles is a saving grace. Regulated utilities make money by spending on capital expenditures (electric grid, power plants) and being allowed a return on those investments from their regulators. More electric vehicles, upgrading the grid, and investments in renewable power generation all present opportunities for utilities to add to their rate base. The iShares Utilities ETF (IDU) or utilities with renewables expertise like AGR (Buy Rated by Mike Gaugler) present an opportunity to play this theme over the long term in our view.

The long term losers in this transition are E&Ps and potentially some of the MLP’s that are currently fuel (gasoline and diesel) distribution related. But again timing matters here: today, electric vehicles are just a fraction of vehicle ownership. A true shift in consumer car buying patterns will take time. Many E&Ps get little/no value for reserves expected to be used +15 years from now, so arguably the market has already discounted the risk of lower fuel consumption to a certain degree. MLPs tied to fuel distribution ultimately could experience lower fuel distribution related trends; however, we believe there will be many years for these participants to pursue alternative assets in the renewables space to offset any potential fuel distribution related headwinds. Thus overall, factors such as oil prices, ability to live within free cash flow, and capital return strategy are much more important factors to E&P valuations near term, then any demographic and consumption related trends projected for the Millennials.
IMPORTANT DISCLOSURES

Research Analyst Certification

We, Dan Wantrobski, Rob Stevenson, Tyler Batory, Larry Greenberg, John Rowan, Esther Hong, Paul Knight, and Akil Marsh, the Primarily Responsible Analysts for this research report, hereby certify that all of the views expressed in this research report accurately reflect our personal views about any and all of the subject securities or issuers. No part of our compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views we expressed in this research report.

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Individual disclosures for the companies mentioned in this report can be obtained by accessing our Firm's Disclosure Site

Disclosure Site

Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

Janney Montgomery Scott Ratings Distribution as of 09/30/2018

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*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

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