OUTLOOK
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Millennials and the Economy

There will be 73 million U.S. millennials in 2019, according to Pew Research, when they will overtake the long-dominant baby boomers as the largest single generation in the United States. As such, just like those boomers before them, they are bound to transform every aspect of American life, from popular culture to the workplace and economy. In many ways, that process has already started.

Whereas boomers came of age amid postwar optimism and a roaring economy, millennials were influenced by 9/11 and the Great Recession. With fewer economic prospects at the outset, they've been slower than previous generations to enter the workforce, buy houses and start families. Yet as the leading edge of millennials (born between 1981 and 1996) nears 40, they are rapidly making up for lost time, says researcher Philippa Dunne.

As co-manager of the influential economics publication *The Liscio Report*, Dunne (a boomer) specializes in crunching the numbers and unearthing facts that often belie preconceptions and stereotypes on social trends, government policy, markets and other subjects. OUTLOOK spoke with Dunne about why millennials are an idealistic, committed generation that is energizing the companies they work for and the economy as a whole.

OUTLOOK: What sort of economic force does this generation represent?

Philippa Dunne: Millennials represent 24 percent of the population in the U.S., and they already account for 35 percent of the labor force—the largest share of any generation. But they haven't started out with much clout. They came into the workforce during the worst economy in decades, and if you begin your career underpaid and underemployed, that can have a lifelong impact on your earning power. Recently, the unemployment rate for millennials was still in the teens, and they also have had a high rate of underemployment. At one point, 40 percent were working in jobs that didn't require the degrees they had earned.

Still, this generation will eventually have a major impact on the economy and the country. Millennials are educated, they're vocal and they think in different ways than previous generations did. They've been essential to advancing the technological revolution. They want corporate structures that are flatter, they're more interested than previous generations in being mentored and they want immediate feedback. And the U.S. shift from a goods economy to a service economy suits them, because millennials tend to be more interested in working in the service and information sectors.

This Month's Expert

Philippa Dunne joined *The Liscio Report*, a widely influential independent economic research organization, in 1996. Since the death of founder John Liscio in 2000, Dunne and economist Doug Henwood have co-managed *The Liscio Report*, which covers macro-economic trends for trading and investment professionals, as well as *Sightline Bulletin*, geared to business and regional planners. Their findings are frequently cited by *The Financial Times*, *Barron's, Reuters*, and other media.

Dunne is known for her deep research in areas ranging from demographics and the economy to current affairs to employment and productivity. As a volunteer, she works with organizations devoted to helping strengthen depressed rural economies, and is chair of the board of Hudsonia, an environmental research group. A professional musician, Dunne holds an undergraduate degree from the University of California at Santa Cruz and a master's from Wesleyan University.

OUTLOOK: What are the generation's demographic characteristics as a social and economic force?

Dunne: It's the most diverse and well educated we have ever seen. Much of its growth has come not from a high birth rate, as with boomers, but from immigration, with 14 percent of millennials being first-generation residents and 12 percent second generation. Nineteen percent of millennials are Hispanic, 14 percent are African American and 5 percent are Asian, and the number of bilingual households is much higher than it was in previous generations. Millennial women are four times more likely to have a college degree than women of the silent generation, born in 1945 or before. And 71 percent of young millennial women work, compared with 40 percent of silent generation women who worked when they were young.

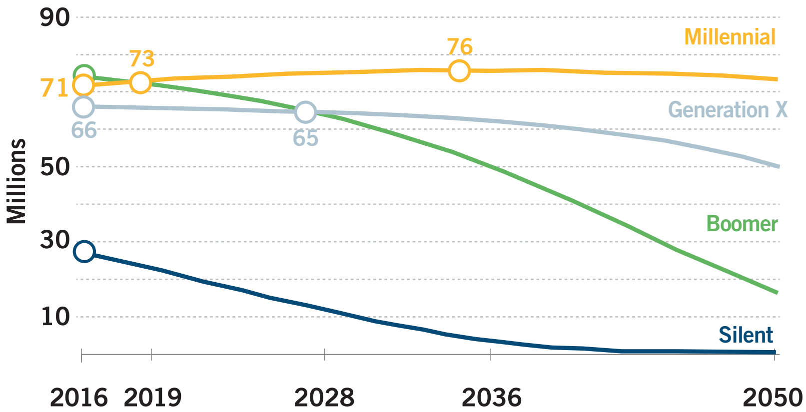
OUTLOOK: As millennials increasingly assume management roles, how are corporate cultures evolving?

Dunne: The move toward a more horizontal management structure is a big thing, and could have a leveling effect on income inequality. Because of the global world they have grown up in, this generation's understanding of different cultures and acceptance of different life choices is bound to make companies more and more inclusive and reflective of society as a whole. Outside the workplace, millennials are also changing philanthropy. Stephanie MacKay, Chief Innovation Officer at Columbus Community Center, a social services agency that helps individuals with intellectual disabilities join the labor force, has noted "a profound shift in how [younger people] think about the world, money and social impact," and that millennials "are demonstrating that they value the work they do towards social impact, rather than the money they give."

OUTLOOK: Millennials have often been characterized as a "me generation." Is that a fair assessment?

Dunne: The idea that these are entitled children of privilege may be true of some parts of this generation but it's at odds with many other aspects. For example, millennial immigrants tend to keep strong ties to their home countries, and millennials in general are likely to feel connected to their own ethnic backgrounds. More than 70 percent say they appreciate the influence of other cultures on their lives, compared with 62 percent of boomers. Millennials are also more likely than those in previous generations to think that taking care of their parents is important. They are socially concerned, and they're more likely to buy a product made by a company whose values they admire, or that supports a performance by an artist they like. They're the kind of educated consumers businesses have always wanted, and needed as employees.

PROJECTED POPULATION BY GENERATION



Source: Pew Research Center tabulations of U.S. Census Bureau population projections released December 2014 and 2016 population estimates.

Note: Millennials refer to the population ages 20 to 35 as of 2016.

The young people in this generation have also been shaped by what they lived through when they were young. My son is a millennial, and he was 10 years old and living in New York City on September 11, 2001. And you didn't need to live in New York City to be deeply affected by that. Then, during the financial crisis, when he was in high school, he saw families of his friends losing everything and he worried that the same thing might happen to us. Those were two enormous events that occurred within seven years of each other, and I don't think this generation gets enough credit for the way it has dealt with that.

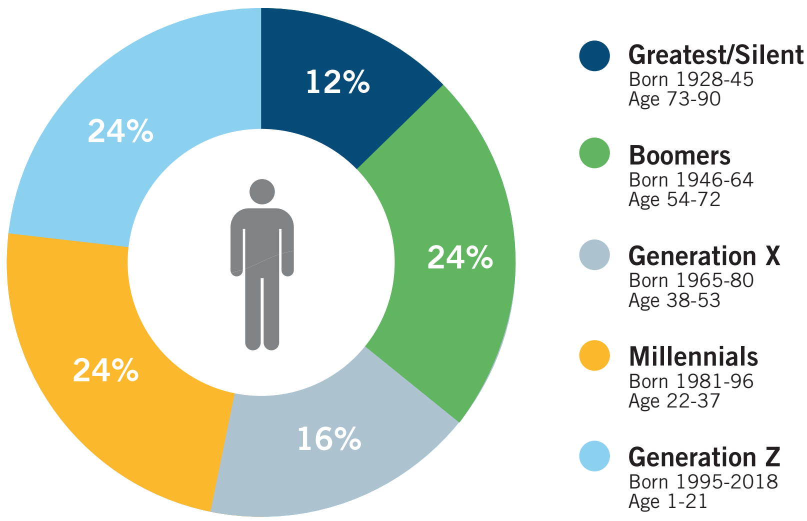
OUTLOOK: How have those events shaped how they view their economic future?

Dunne: In the wake of the Great Recession, a lot of millennials have felt some malaise about what's ahead. The Transamerica Institute recently found that 81 percent of millennial workers are 'concerned that Social Security will not be there for them,' and Pew Research reports that half expect to receive no benefit at all. Many don't have credit cards and aren't interested in buying things on credit—because they've seen how things can blow up if you're not careful. They have also been slow to form households and buy houses. A smaller percentage of millennials are married than was the case in previous generations. They do have a lot of college debt, and education and health expenses have been very high for this generation. But some of these characteristics that set them apart from previous generations are beginning to change.

OUTLOOK: In what ways?

Dunne: One of the standard assumptions about millennials is that they aren't interested in homeownership. Twenty-six percent of those age 25 through 34 were living with parents or other relatives in 2017—an all-time high for that age group. The proportion of younger millennials, ages 18 through 24, living with parents peaked at more than 50 percent in 2012, though that's declined slightly. Some studies have shown that some of this is based on finances.

POPULATION BY GENERATION



Source: Nielsen

Yet we may have gotten ahead of ourselves in using such statistics to conclude that millennials are confirmed renters. Abbe Will, a researcher at Harvard's Joint Center on Housing Studies, maintains that 70 to 80 percent of millennials want to own a home someday, and Fannie Mae reported in 2017 that 93 percent of millennials age 25 to 34 aspire to be homeowners.

The overall national homeownership rate, which peaked during the housing bubble, recently ticked up again for the first time in 13 years—and that growth is largely being driven by millennials. In 2011, when the largest group of millennials was in the age range of 20 through 24, only one in four was head of a household. But in 2016, those millennials were age 25 to 29, and 42 percent headed households. That is projected to rise to about half of the generation by 2021. We need caution here too, however. Recent reports suggest that college debt is tempering a growing interest in home ownership among this group.

OUTLOOK: How is that increasing interest in home ownership likely to affect the U.S. housing market and the larger economy?

Dunne: Building and furnishing houses has a high, 2.27 economic multiplier—meaning that for every dollar spent, in the case of housing construction, there's an average of $1.27 in additional, related purchasing, and as more millennials buy houses, that will certainly boost the economy. There's also likely to be an increasing share of millennial immigrants owning houses, since the foreign-born are more likely to open new businesses, and that should spur economic growth as well.

OUTLOOK: Is there data on how many children millennials are or want to have, on average?

Dunne: It's hard to predict how many children this generation will have, but the "total fertility rate," the number of children a woman is expected to have over her lifetime, fell from 2.12 in 2007 to 1.8 in 2017, its lowest level since 1978. Because rates tend to move with business cycles, these statistics have puzzled many analysts in light of the economic expansion. But the decline itself raises questions about the vibrancy of the expansion, i.e. why the change?

> This generation will eventually have a major impact on the economy and the country. Millennials are educated, they're vocal and they think in different ways than previous generations did."

OUTLOOK: Has the delay in homeownership been an advantage for millennials in any ways. Does it make them more mobile?

Dunne: In some cases, yes. millennials are open to moving around, and if you're not stuck in one location with a mortgage that's underwater, you can move to where the jobs are. Yet while renters have traditionally moved more often than homeowners, renters' mobility rates have been declining steeply, according to the The State of the Nation's Housing 2018, from the Joint Center for Housing Studies. So although the number of renters jumped from more than 72 million in 1996 to 83 million in 2017, the number of "renter-movers" dropped significantly.

OUTLOOK: Are economic pressures influencing the types of careers that millennials choose?

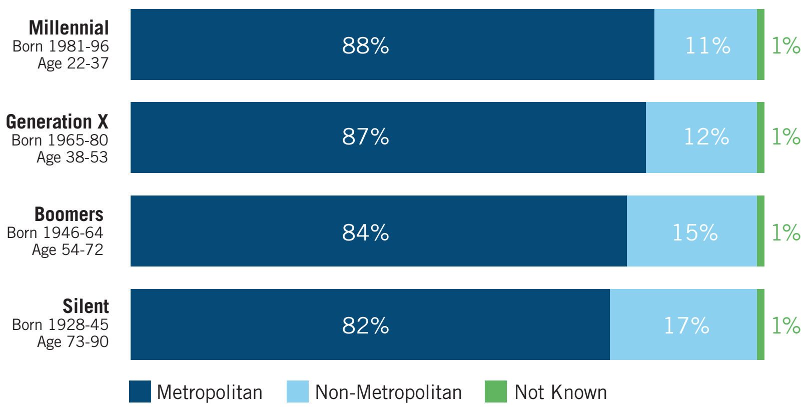
Dunne: Of course this is a diverse group, but there is evidence that growing numbers of millennials are choosing the kinds of careers they want. Yes, a few years ago, a lot of them were forced to take just any job, and that's one thing that has kept their wages down. But now, as the economy has improved, they're starting to think about what they really want to do—and if their dream jobs don't come with a high salary, they're willing to cut back on spending.

OUTLOOK: How does their status as digital natives affect this generation's viability and flexibility in the work force?

Dunne: One reason they are willing to move around more than previous generations is that so many of millennials' communities are electronic. They're able to network online, and to use crowd-funding, which is having a democratizing influence on all kinds of businesses, not-for-profits and social network organizations.

In one recent survey, most millennials said they wouldn't accept jobs at companies that didn't allow them to use social media at work. And while corporations may not like that idea, they may have to learn to live with it. If they want to have millennial customers, they're going to need to have millennials working for them, and they're going to have to accommodate their preferences. That's one more way that millennials are reinventing the culture of the corporate workplace.

WHERE THEY LIVED IN 2017



Source: Pew Research Center tabulations of the 2017 Current Population Survey Annual Social and Economic Supplement (ASEC) from the Integrated Public Use Microdata Series (IPUMS).

Note: Ages shown are as of 2017. Members of the silent generation were ages 72 to 89 in 2017. Since the Current Population Survey aggregates those ages 85 and older into one category, outcomes for members of the silent and greatest generations cannot be separately shown. Metropolitan area is defined as a core urbanized area (with at least 50,000 inhabitants) and adjacent counties with strong commuting ties.

OUTLOOK: How do millennials differ from other generations as consumers, and how does that affect their economic impact?

Dunne: They have a tendency to prefer experiences over material goods, and that can play out economically in unexpected ways. For example, Chattanooga, Tennessee, put in a municipal high-speed internet system, and a bunch of recent college grads have moved to the city just because of that. If you have a higher share of residents with college degrees, you're going to have a much lower unemployment rate. And the Pew Research Center has reported that those with college degrees are more likely to be married than those without. It's about a 10 percentage point difference, enough to make some difference in household formation. Eighty-eight percent of millennials are living in metropolitan areas, compared with about 60 percent of the silent generation. Having young, educated people moving in changes the economies of those metro areas and of the regions where they're located.

OUTLOOK: Is millennials' concern for environmental and social issues having an impact on corporations?

Dunne: Millennials want to invest in companies that have good records on ESG [environmental, social and governance] behaviors, and 60 percent say they're willing to pay more, as investors and as consumers, if something is good for the environment. That compares with 34 percent of those age 55 and over. As millennials gain in wealth and invest more, the impact of those preferences is likely to intensify in the years to come.

OUTLOOK: Millennials seem to be willing to work in nontraditional ways, often referred to as the "gig economy." Is that having a major impact on the larger economy?

Dunne: I think the importance of the gig economy has been overstated. During and after the recession, a lot of people were forced into the gig economy because they lost their jobs. It wasn't about freedom from the workaday grind as much as it was about necessity, and several recent studies have shown that most people who are in the gig economy would rather have real jobs.

"As millennials gain in wealth and invest more, the impact of those preferences is likely to intensify in the years to come."

Still, some millennial preferences really do support a move away from traditional ideas about working. Many of them came into the workforce as interns or in contingent arrangements, where loyalty is not a given on either side. They'll leave a job if they're not happy, and they don't feel they have to be on a strict career path. For instance, my son is an educational consultant, and he chose a nontraditional career path as he now works in China because he likes being there. Access to the internet means he can do his job from almost anywhere.

OUTLOOK: You mentioned that most people of this generation prefer to live in metro areas. How will that affect agriculture and other rural industries?

Dunne: For now, urban living is this generation's clear preference, which makes it an uphill battle to attract young people to rural areas or to keep them there. But if housing prices and rents in cities continue to rise, more millennials may think about exploring alternatives. And if they move to rural areas and if those areas have the broadband internet connections that are a must for millennials, then those places could gradually become more attractive as destinations for this generation.

OUTLOOK: What do the leaders of corporate America still need to learn about this generation?

Dunne: They need to know that these are people who can make real contributions. Millennials are innovative, they're eager for change and they are willing to change jobs or move to a different part of the country if that's in their best interest. They want to work for organizations that are more horizontal and promote communication and idea-sharing among workers. As this generation becomes a larger and larger part of the workforce, corporations are going to have to pay attention. I truly believe millennials will be disruptive in a good way.

Interest Rates and Economic Indicators

The interest rate and economic data on this page were updated as of 7/31/18. They are intended to provide rate or cost indications only and are for notional amounts in excess of $5 million except for forward fixed rates.

KEY ECONOMIC INDICATORS

Gross Domestic Product (GDP) measures the change in total output of the U.S. economy. The Consumer Price Index (CPI) is a measure of consumer inflation. The federal funds rate is the rate charged by banks to one another on overnight funds. The target federal funds rate is set by the Federal Reserve as one of the tools of monetary policy. The interest rate on the 10-year U.S. Treasury Note is considered a reflection of the market's view of longer-term macroeconomic performance; the 2-year projection provides a view of more near-term economic performance.

ECONOMIC AND INTEREST RATE PROJECTIONS

Forecasts courtesy of Bloomberg and Blue Chip Economic Indicators

				U.S. Treasury Securities	
2018	**GDP**	**CPI**	**Funds**	**2-year**	**10-year**
Q3	3.10%	2.40%	1.95%	2.67%	3.02%
Q4	2.80%	2.20%	2.21%	2.81%	3.11%
2019	**GDP**	**CPI**	**Funds**	**2-year**	**10-year**
Q1	2.40%	2.30%	2.36%	2.93%	3.21%
Q2	2.40%	2.20%	2.50%	3.04%	3.28%
Q3	2.20%	2.30%	2.59%	3.11%	3.33%

PROJECTIONS OF FUTURE INTEREST RATES

The table below reflects current market expectations about interest rates at given points in the future. Implied forward rates are the most commonly used measure of the outlook for interest rates. The forward rates listed are derived from the current interest rate curve using a mathematical formula to project future interest rate levels.

IMPLIED FORWARD SWAP RATES

Years Forward	3-month LIBOR	1-year Swap	3-year Swap	5-year Swap	7-year Swap	10-year Swap
Today	2.40%	2.68%	2.94%	2.98%	3.00%	3.03%
0.25	2.63%	2.85%	2.98%	3.01%	3.02%	3.03%
0.50	2.73%	2.94%	3.04%	3.03%	3.04%	3.03%
0.75	2.95%	3.04%	3.06%	3.05%	3.05%	3.07%
1.00	2.98%	3.08%	3.05%	3.05%	3.03%	3.06%
1.50	3.03%	3.08%	3.06%	3.05%	3.06%	3.08%
2.00	3.03%	3.05%	3.04%	3.04%	3.04%	3.07%
2.50	3.01%	3.04%	3.02%	3.04%	3.04%	3.07%
3.00	2.99%	3.04%	3.01%	3.04%	3.05%	3.07%
4.00	2.97%	3.00%	3.01%	3.04%	3.07%	3.08%
5.00	2.97%	3.00%	3.03%	3.09%	3.08%	3.11%

HEDGING THE COST OF FUTURE LOANS

A forward fixed rate is a fixed loan rate on a specified balance that can be drawn on or before a predetermined future date. The table below lists the additional cost incurred today to fix a loan at a future date.

FORWARD FIXED RATES

Cost of Forward Funds

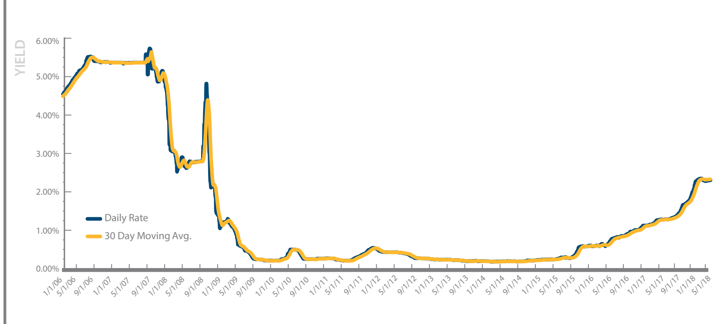
Forward Period (Days)	Average Life of Loan			
	2-yr	3-yr	5-yr	10-yr
30	5	5	5	5
90	10	8	7	6
180	18	14	11	10
365	29	24	22	17

Costs are stated in basis points per year.

SHORT-TERM INTEREST RATES

This graph depicts the recent history of the cost to fund floating rate loans. Three-month LIBOR is the most commonly used index for short-term financing.

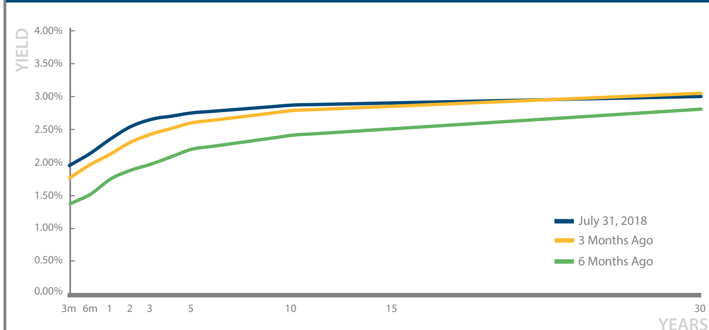
3-MONTH LIBOR



RELATION OF INTEREST RATE TO MATURITY

The yield curve depicts the relation between the cost of borrowing and the time to maturity of debt for a given borrower in a given currency. Typically, interest rates on long-term securities are higher than rates on short-term securities. Long-term securities generally require a risk premium for inflation uncertainty, for liquidity and for potential default risk.

TREASURY YIELD CURVE



COBANK UPDATE

CoBank Announces Special All-Cash Patronage Distribution

CoBank's board of directors approved a special, one-time patronage distribution as part of a broader plan to share the benefits of federal tax reform legislation with eligible customer-owners, along with earnings from significant non-recurring items in 2018.

The all-cash distribution, totaling approximately $96 million, will be made in September 2018 and is incremental to standard patronage payments the bank typically makes in March of each year. CoBank also plans to accelerate investments in its business and operating platform.

Kevin Riel

"As a financial cooperative, we're delighted to be making this special patronage distribution to our member-borrowers," said Kevin Riel, CoBank board chair. "Since tax reform was enacted in December 2017, we have been working with executive management to thoughtfully analyze how savings generated by the new law should be applied across our business. We believe the approach we've adopted will ensure that the benefits of the legislation flow first and foremost to our customer-owners, while also enhancing our capabilities and overall service delivery model."

The Tax Cuts and Jobs Act of 2017 lowered the U.S. corporate income tax rate from 35 percent to 21 percent. CoBank, which pays federal and state taxes on income earned from lending to cooperatives and other direct borrowers, saw its effective tax rate reduced by approximately one-third. In addition to tax savings, CoBank is funding the one-time special patronage distribution with earnings on significant non-recurring items, which were recognized in the first half of this year.

About CoBank

CoBank is a $131 billion cooperative bank serving vital industries across rural America. The bank provides loans, leases, export financing and other financial services to agribusinesses and rural power, water and communications providers in all 50 states. The bank also provides wholesale loans and other financial services to affiliated Farm Credit associations serving more than 70,000 farmers, ranchers and other rural borrowers in 23 states around the country.

CoBank is a member of the Farm Credit System, a nationwide network of banks and retail lending associations chartered to support the borrowing needs of U.S. agriculture, rural infrastructure and rural communities. Headquartered outside Denver, Colorado, CoBank serves customers from regional banking centers across the U.S. and also maintains an international representative office in Singapore.

For more information about CoBank, visit www.cobank.com.

Patronage payments to individual eligible customer-owners will be based on average daily loan balances in the first half of 2018. They will also vary by patronage pool, as detailed in the table below:

Type of borrower	Special patronage rate*
Agribusiness, communications & project finance	20 bps
Rural electric & water	15 bps
Affiliated Farm Credit associations	6 bps
Loan participations purchased from other Farm Credit institutions	20 bps
Non-affiliated Farm Credit and other financing institutions	4 bps

*On average daily balance of qualifying loan volume between 1/1/18 and 6/30/18.


Tom Halverson

"We have been careful to design this special patronage distribution so it aligns equitably with the economics of our various patronage pools, while still producing a meaningful benefit for all classes of eligible borrowers," said Tom Halverson, CoBank's president and chief executive officer.

Halverson added that savings from the tax law will also be used to fund new or accelerated investments in a number of important functional areas across the bank, including risk management, information technology, data management, digital business solutions and corporate social responsibility.

"In addition to the special patronage distribution, our customers will also benefit indirectly as we continuously improve our operating platform," Halverson said. "We're fortunate to be in a position to make these investments, and look forward to enhancing our ability to serve customers with excellence and strengthening our competitive position in the marketplace."