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FIDELITY INTRODUCES INDUSTRY-FIRST GLOBAL RETIREMENT SAVINGS GUIDELINES

New Global Retirement "Rules of Thumb" Leverage U.S. Framework to Provide Workers in the U.K., Germany, Japan, Hong Kong and Canada with Age-Based Savings Milestones

BOSTON, Nov. 14, 2018 — As workers around the globe are asked to assume greater responsibility for their retirement savings, Fidelity[1] is introducing the industry's first international retirement savings guidelines to help multinational companies and their employees in the U.K., Germany, Japan, Hong Kong and Canada begin to understand how much money needs to be saved for retirement.

Designed to engage workers with clear, simple "rules of thumb" to help keep their retirement savings on track, the global guidelines[2] can serve as a starting point for a broader retirement planning discussion and are intended to address two of the most common retirement-related questions from workers: "How much do I need to save for retirement?" and "Am I on track to save enough?"

"Fidelity's commitment to engaging workers and providing retirement guidance to tens of millions of U.S. workers over the past 30 years has enabled us to create the first set of global retirement guidelines to help millions more around the world," said Kevin Barry, president of workplace investing at Fidelity Investments in Boston. "Importantly, these guidelines can be part of an innovative international benefits program and can help employers monitor and encourage good retirement savings habits in a consistent manner across their regional workforces."

The global retirement savings guidelines, which leverage a U.S. framework also known as "10X" or age-based savings guidelines, are based on two metrics every worker knows – their age and salary. This provides workers a straightforward approach to understanding how much they should have in savings, as a multiple of their salary at specific age milestones.

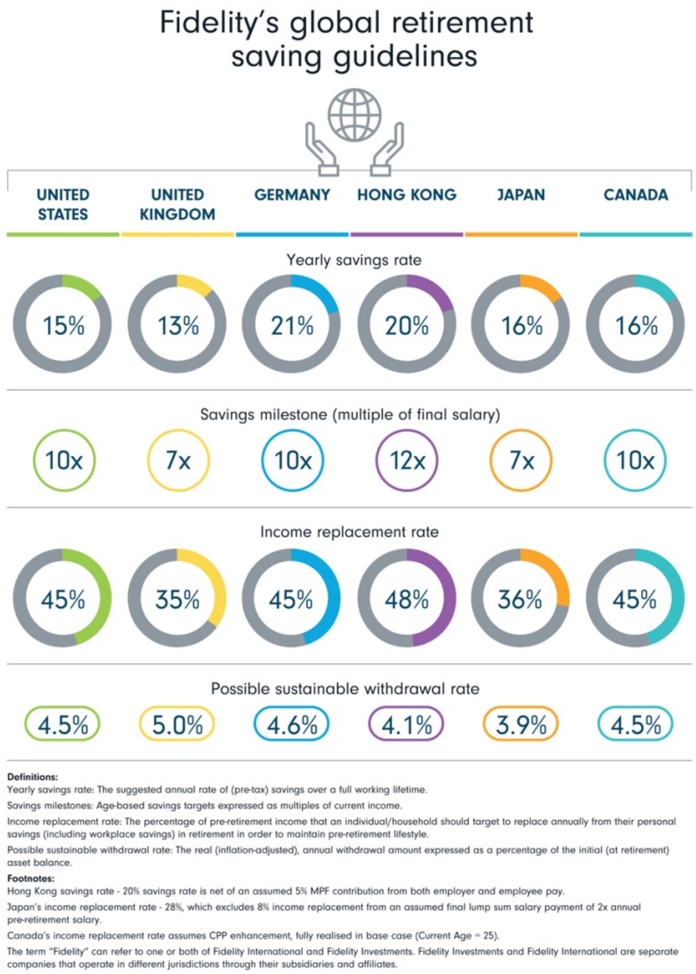
Based on the positive response to these retirement guidelines among American workers and employers, Fidelity's growing roster of multinational clients have asked for similar guidelines for their employees in other geographic regions as they move from defined benefit pension plans to defined contribution plans. Fidelity's new set of retirement savings guidelines are based on a consistent global framework that, when combined with locally-relevant financial and demographic assumptions, can help multinational companies develop a benefit platforms that can help meet the needs of a global workforce.

"Planning and saving for the future is a challenge facing workers globally," said Carl Gagnon, Assistant Vice President of Global Retirement Programs at Unum Group, a leading provider of financial protection benefits in the United States and United Kingdom. "Having an international savings framework for the employees that is locally relevant will help put our workers around the world on the path towards reaching their long-term savings goals."

Retirement Age, Investment Returns and Other Factors Can Impact Global Savings Rates

Fidelity's global retirement savings guidelines are based on several key assumptions[3] and calculate a suggested annual savings rate[4] and age-based savings milestones for each country. The guidelines also include a target income replacement rate[5] and a probable sustainable withdrawal rate, which helps workers understand how much they may be able to withdraw from their savings each year without running out of money in retirement.

Here is what the retirement savings guidelines look like in other parts of the world:



- **United Kingdom.** The guidelines for workers in the U.K. are to save a total 13 percent of their annual salary each year and aim to have saved 7X their salary by retirement. This will put them on track to replace 35 percent of their pre-retirement income, which Fidelity estimates, when combined with a government pension, may enable them to maintain a pre-retirement lifestyle throughout retirement. Fidelity's guidelines for U.K. workers are based on a 5 percent sustainable withdrawal rate in retirement.
- **Germany.** Certain savings guidelines for workers in Germany are similar to those for U.S. workers. Workers in Germany are encouraged to aim to have saved 10X their final salary upon retirement, which will replace 45 percent of their pre-retirement income. The 4.6 percent withdrawal rate is consistent with the 4.5 percent withdrawal rate for U.S. workers. However, German workers are encouraged to save 21 percent of their salary each year.

- **Hong Kong.** Workers in Hong Kong are encouraged to save 12X their final salary and have a suggested savings rate of 20 percent[6], which will put them on track to replace nearly half (48 percent) of their pre-retirement income. Hong Kong workers' 4.1 percent sustainable withdrawal rate is the second lowest only to Japan. The savings milestones are higher than the U.S. guidelines for several reasons, including the assumed retirement age in Hong Kong is earlier, the expected lifespan is longer and the assumed investment returns are on the lower end of the spectrum.
- **Japan.** Workers in Japan have a suggested savings rate of 16 percent of their annual salary, which is similar to the savings rate for U.S. workers, but Japanese workers are estimated to only need to aim to save 7X their ending salary and replace[7] 36 percent of their pre-retirement income. Workers in Japan have the lowest probable sustainable withdrawal rate (3.9 percent) due to the lowest expected long-term investment returns among the regions.
- **Canada.** The retirement savings rate for workers in Canada is only slightly higher than the rate for their U.S. counterparts. The suggested savings rate for Canadian workers is 16 percent and with a target of saving 10X their final salary, which will replace nearly half (45 percent) of their pre-retirement income. The suggested withdrawal rate of 4.5 percent is in line with the U.S.

"Defined contribution retirement plans are becoming the primary retirement savings vehicle for most U.S. workers and increasingly are being implemented worldwide, so it's more important than ever for workers from every region to understand what steps they need to take to ensure they are saving enough," continued Barry. "We believe Fidelity's new global retirement savings guidelines will have a positive impact on the retirement savings efforts for millions of workers around the world."

About Fidelity Investments
Fidelity's mission is to inspire better futures and deliver better outcomes for the customers and businesses we serve. With assets under administration of $7.4 trillion, including managed assets of $2.6 trillion as of September 30, 2018, we focus on meeting the unique needs of a diverse set of customers: helping more than 28 million people invest their own life savings, 23,000 businesses manage employee benefit programs, as well as providing more than 13,000 financial advisory firms with investment and technology solutions to invest their own clients' money. Privately held for 70 years, Fidelity employs more than 40,000 associates who are focused on the

long-term success of our customers. For more information about Fidelity Investments, visit https://www.fidelity.com/about.

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[1] The term "Fidelity" can refer to one or both of Fidelity International and Fidelity Investments. Fidelity Investments and Fidelity International are separate companies that operate in different jurisdictions through their subsidiaries and affiliates.

[2] Guideline values can vary based on changes to such factors as retirement age, retirement lifestyle and life expectancy. Actual guidelines for any individual/household may vary.

[3] Fidelity's guidelines are based on the following information**:**

INCOME REPLACEMENT RATE

Income Replacement is the level of retirement income expressed as a fraction of pre-retirement income for an individual or a household. More specifically, Income Replacement Rate is defined here as the amount of pre-tax annual income in retirement divided by pre-tax occupational income in the year prior to retirement in current real dollars. This includes savings sourced from defined contribution, state/government benefits and defined benefit where available. While it is impossible without an in-depth interaction to determine the actual income replacement rate an individual will require in retirement, Fidelity generally targets a range of income replacement rates, based on pre-retirement income levels that cover planning though age: U.S. = 92, UK = 92, Germany = 91, Hong Kong = 94, Japan = 93, Canada = 93

The income replacement targets are based on the following data sources:

U.S.: Consumer Expenditure Survey 2011 (BLS), Statistics of Income 2011 Tax Stat, IRS 2014 tax brackets and Social Security Benefit Calculators.

UK: Office for National Statistics Income, 'The Effects of Taxes and Benefits on Household Income, 2014/15'. 'Family Spending 2014' compendium.

Germany: German: Federal Statistical Office (Destatis): Sample Survey of Income and Expenditure (EVS)

Hong Kong: Census and Statistics Department (Censtatd). Quarterly Report on General Household Survey 2016 .Data from Household Expenditure Survey 2014-15

Japan: Ministry of Internal Affairs and Communications, 2014 National Survey of Family Income and Expenditure Survey.

Canada: Statistics Canada, 2016 Survey of Household Spending.

The income replacement targets for each region assume no private pension income and retirement and state pension claiming ages as follows: U.S. = 67, UK = 68, Germany = 67, Hong Kong = 65, Japan = 67, Canada = 65. Also, in certain regions – US, UK, Canada, Germany, and Japan, the longer an individual works (within certain age eligibility limits) , the more time State/National pension benefits can accrue and the greater the monthly/annual pension benefit, resulting in lower target values. Earlier retirement/claiming ages (within certain age eligibility limits) in the U.S., UK, Canada, Germany, and Japan are associated with lower state benefits and higher income replacement target values.

We use a Monte Carlo simulation-based approach to estimate potential growth of account balances through retirement, relying on certain market performance assumptions. The analysis is based on historical market data to project a range of potential outcomes for various hypothetical retirement income portfolios under different market conditions. Monte Carlo simulations are mathematical methods used to estimate the likelihood of a particular outcome based on market performance historical analysis.

SAVINGS FACTOR

The savings factor is a multiple of current salary that an individual should aim to have saved by a given age. Fidelity developed a series of salary multiplier targets corresponding to different ages assuming the following for each region:

Retirement Age: U.S. = 67, UK = 68, Germany = 67, Hong Kong = 65, Japan = 67, Canada = 65

Annual Savings Rate: U.S. = 15%, UK = 13%, Germany = 21%, Hong Kong = 20% *, Japan = 16%, Canada = 16%

Annual Real Wage Growth: U.S. = 1.5%, UK = 1.75%, Germany = 1.75%, Hong Kong = 2.0%, Japan = 1.75%, Canada = 2.0%

Planning Age (Life Expectancy): U.S. = 92, UK = 92, Germany = 91, Hong Kong = 94, Japan = 93, Canada = 93
Personal Income Replacement Target: U.S. = 45%, UK = 35%, Germany = 45%, Hong Kong = 48%, Japan = 36% **, Canada = 45% ***
* Excludes 10% (5% employer, 5% employee) annual Mandatory Provident Fund (MPF) contributions.
** Total personal replacement rate is 36%, including 8% income replacement from an assumed retirement lump sum payment (RLSP) of 2X annual final salary.
*** Assumes Canada Pension Plan (CPP) enhancement, fully realized by base case Current Age = 25
The personal replacement income targets are expressed a percentage of pre-retirement income and assume no private pension income. Fidelity developed the salary multipliers through multiple market simulations based on long-term historical market data and assuming a generic age-based asset allocation roll-down, with a lifetime average equity allocation of roughly 50% equity.
For the purposes of generating savings factors and other retirement guidelines in the UK, Germany, Hong Kong, Japan, and Canada, rates of return associated with the 80th percentile (80% of simulated outcomes were greater) were used to evaluate the accumulation phase (savings and investment growth during one's working life) and associated retirement guidelines – yearly savings rate and interim savings (X) factors, while rates of return associated with the 90th percentile were used to evaluate the decumulation (retirement) phase (investment performance and withdrawals in retirement) and the associated retirement guidelines – Probable sustainable withdrawal rate and the final savings factor (representing the required savings balance at retirement). U.S. guideline values are based on returns associated with the 90th percentile simulation outcome across both accumulation and retirement. The final Savings Factors (salary multipliers) for each region are as follows:
Final Savings Factor (Salary Multiplier): U.S. = 10x, UK = 7x, Germany = 10x, Hong Kong = 12x, Japan = 7x *, Canada = 10x
* Total Savings milestone is 9x and includes an assumed retirement lump-sum payment of 2x annual final salary.
Savings Factors are based on simulations which in turn are based on long-term historical market data. These simulations take into account the returns and volatility that a typical age-based (target date) asset allocation might experience under different market conditions.
The analysis assumes a level of diversity within each asset class consistent with a market index benchmark that may differ from the diversity of your own portfolio. Please note that the projections do not reflect the impact of any transaction costs or management and servicing fees.
Volatility of the stocks, bonds and short-term asset classes is based on the historical annual data by region as follows:

U.S.: From 1926 through the most recent year-end data available from Ibbotson Associates, Inc. Stocks (domestic and foreign) are represented by Ibbotson Associates SBBI S&P 500®* Total Return Index, bonds are represented by Ibbotson Associates SBBI U.S. Intermediate Term Government Bonds Total Return Index, and short term are represented by Ibbotson Associates SBBI 30-day U.S. Treasury Bills Total Return Index, respectively.

UK: From 1990 through the most recent year-end data available from Bloomberg and Datastream. Stocks (domestic and foreign) are represented by MSCI All Countries World Total Return Index, bonds are represented by Barclay's Aggregate Total Return Index (Value Hedged (GPB)), and short term are represented by the 3 Month GPB LIBOR rate, respectively.

Germany: From 1990 through the most recent year-end data available from Bloomberg and Datastream. Stocks (domestic and foreign) are represented by MSCI All Countries World Total Return Index, bonds are represented by Barclay's Aggregate Total Return Index (Value Hedged (EUR)), and short term are represented by the 3 Month EUR LIBOR rate, respectively.

Hong Kong: From 1990 through the most recent year-end data available from Bloomberg and Datastream. Stocks (domestic and foreign) are represented by MSCI All Countries World Total Return Index, bonds are represented by Barclay's Aggregate Total Return Index (Value Hedged ($HK)), and short term are represented by the 3 Month HIBOR rate, respectively

Japan: From 1990 through the most recent year-end data available from Bloomberg and Datastream. Stocks (domestic and foreign) are represented by MSCI All Countries World Total Return Index, bonds are represented by Barclay's Aggregate Total Return Index (Value Hedged (JPY)), and short term are represented by the 3 Month JPY LIBOR rate, respectively.

Canada: From 1934 through the most recent year-end data available from Bloomberg and Datastream.
Stocks are represented as follows: Canadian Equity: TSX 300, US Equity: Fama-French market value-weighted index (1987 – present, Developed Market ex-Canada prior to that date), Ex-US-Canadian Equity: MSCI ACWI (1987 - present, MSCI EAFE prior to that date). Canadian Bonds: FTSE TMX Canadian Universe Bond Index (1982 - Present, and Canadian 10Y Treasury prior to that date), Canadian Cash: Canadian T-Bill (3 month)

It is not possible to invest directly in an index. All indices include reinvestment of dividends and interest income. All calculations are purely hypothetical and a suggested salary multiplier is not a guarantee of future results; it does not reflect the return of any particular investment or take into consideration the composition of a participant's particular account. The salary multiplier is intended only to be one source of information that may help you assess your retirement income needs. Remember, past performance is no guarantee of future results. Performance returns for actual investments will generally be reduced by fees or expenses not reflected in these hypothetical calculations. Returns also will generally be reduced by taxes.

[4] Suggest annual savings rate includes both employee and employer contributions.

[5] The income replacement rate for each region represents the percentage of pre-retirement income that Fidelity estimates will be required to come from personal savings in order to maintain a pre-retirement lifestyle throughout retirement (when combined with state pension). The value may vary across regions based on differences in expenditures, taxation, and the level of income replacement from state pension, among other factors.

[6] Hong Kong savings rate – 20 percent savings rate is a net of an assumed 5 percent Mandatory Provident Fund, often abbreviated as MPF, contribution from both employer and employee. MPF is a compulsory retirement saving scheme for residents in Hong Kong.

[7] Japan's income replacement rate is 28 percent, which is net of 8 percent income replacement from an assumed final lump sum salary payment of 2X annual pre-retirement salary.