Timing retirement

A guide to determining when, and how, to retire

IN BRIEF

- Deciding when, and how, to retire is a complicated process. It requires careful evaluation of both emotional and financial considerations and the assistance of an experienced financial advisor.
- We believe there are six key risks that all investors should consider within their retirement plans. These are: longevity risk, withdrawal rate risk, inflation risk, housing-related risk, health care risk and sequence of return risk.
- To address these challenges, investing *in retirement* must be very different from investing *for retirement*. Managing investments to meet current income needs and long-term appreciation may be most effective through a "bucketing" approach in which strategies differ by time horizon.
- Once a plan is in place, it is important to reevaluate it once a year, making adjustments as needed to both spending and investment strategies.

J.P.Morgan
Asset Management

WHEN—AND HOW—SHOULD I RETIRE?

The question is often fraught and never simple. People approach retirement with a lifetime of experience and a store of accumulated wealth, but in a sense nothing can prepare them for this unique life passage. To make the transition with confidence demands careful attention to complex, interconnected issues, which must be considered from both a financial and an emotional point of view.

Individual experiences vary widely, along with family circumstances, societal norms, economic and market environments and a host of other factors. But we believe there is a basic framework for determining one's financial ability to retire. This framework includes factors that can be planned for and others that cannot be anticipated in advance of retirement, all of them informing an investment strategy that evolves over time. In our view, a successful retirement plan must address six key risks:

- Longevity risk
- Withdrawal rate risk
- Inflation risk
- Housing-related risk
- Health care risk
- Sequence of return risk

Evaluating these risks from a planning and investment perspective, with the help of an experienced financial advisor, will be essential in deciding when to retire and living in retirement with confidence. Fundamentally, these risks make it clear that investing *in retirement* is very different from investing *for retirement*. A portfolio that has been receiving regular savings, invested with a long-term strategy, must now meet two demands: current income to meet ongoing spending needs and sufficient growth in assets to keep pace with rising costs over a long time horizon.

Emotional component

Like all significant life choices, setting a retirement date and creating a vision for retirement are first and foremost personal decisions. Before someone can evaluate the financial particulars, emotional factors must be taken into account.

Among the questions to consider:

- What are your specific goals for retirement?
  - What might fill the time currently taken up by employment?
  - What do you want to accomplish/what will get you up in the morning looking forward to the day?
- If you have a spouse or life partner, do the two of you share a vision for retirement—particularly in terms of timing and the choice of a place to live?
- Do you have a strong social network—friends and peers, or children and grandchildren?
- Will you travel more or stay close to home?

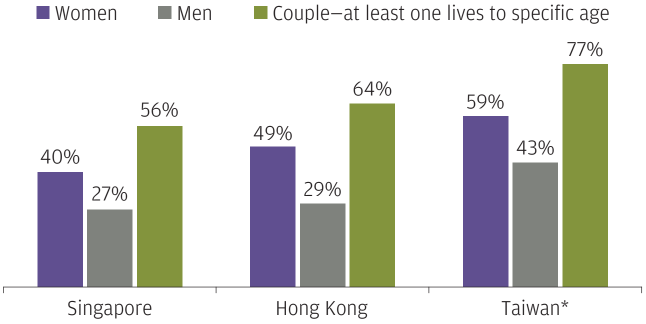
Answering these questions helps to determine the needs and wants that are central in evaluating whether a financial strategy for retirement will be successful.

Longevity risk

Anyone contemplating the timing of retirement must acknowledge one essential fact: People are living longer, especially across Asian societies (**EXHIBIT 1**). As more individuals are healthier later in life, the official retirement age (for public or private retirement benefits purposes) also is on the rise (**EXHIBIT 2**). Even as individuals retire later, this life stage is likely to last more than 20 years for many, particularly for married households, which have a better than a 50/50 chance that one spouse will live for at least another 25 years. Of course, longer lives are in many ways a blessing. But they present a financial challenge, which retirement specialists often refer to as "longevity risk," the risk of outliving one's assets. One way to mitigate longevity risk is to build a retirement strategy that plans to cover spending needs for 30 years or more, to be conservative. This is particularly important for someone who retires in good health and/or has a family history of longevity.

Living longer is a blessing in many ways, but it presents a financial challenge

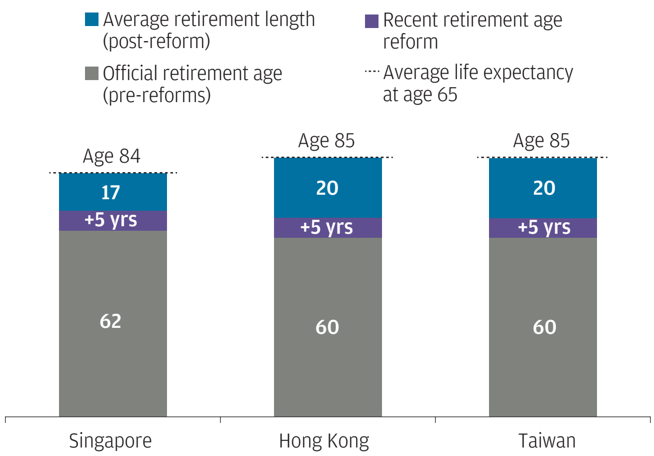
EXHIBIT 1: IF YOU ARE 65 TODAY, THE PROBABILITY YOU WILL LIVE TO 90



Source: Census and Statistics Department (Hong Kong), Department of Statistics Ministry of the Interior (Taiwan), Ministry of Trade and Industry - Department of Statistics (Singapore). *Probability to make it to "85 or older".

Retirement can span more than two decades

EXHIBIT 2: OFFICIAL RETIREMENT AGE AND LIFE EXPECTANCIES



Life expectancies represent combination of males and females.
Source: Ministry of Manpower (Singapore), Mandatory Provident Fund (Hong Kong), OECD (Taiwan).

Withdrawal rate risk

When saving for retirement, a goal of replacing 70% of pre-retirement gross income is a reasonable target. However, once someone is close to retiring, a better approach is to identify spending needs, estimate, as specifically as possible, how they will change over time, and in this way determine whether sources of income and assets will be sufficient.

In reality, few people can estimate their future spending needs with any great certainty, but the so-called 4% rule can provide a rough sense of how much wealth can be sustainably drawn down in retirement. Put simply, it suggests that a retiree can withdraw 4% of her initial wealth at retirement, grow that spending amount by inflation each year to preserve purchasing power, and still have a good chance that she will not run out of money over the next 30 years. Spending consistently more than that is likely not sustainable; similarly, investing too conservatively (for example, in a portfolio of all cash) will probably be equally unsustainable.

Unlike the 4% rule, a dynamic withdrawal strategy will adapt withdrawal rates and asset allocation in response to changes in economic and market environments and shifts in personal circumstances. This type of flexible approach will protect against longevity risk while maximizing spending over time.

In **EXHIBIT 3**, we illustrate how many years of sustainable withdrawals a typical portfolio will allow. Here, we present the median experience for Singapore, Hong Kong and Taiwan investors; the specific experience of a specific investor may be less smooth.

How many years of sustainable withdrawals are possible from a "median" portfolio?

EXHIBIT 3A: SINGAPORE & HONG KONG – 35% EQUITY/65% FIXED INCOME PORTFOLIO AT VARIOUS WITHDRAWAL RATES

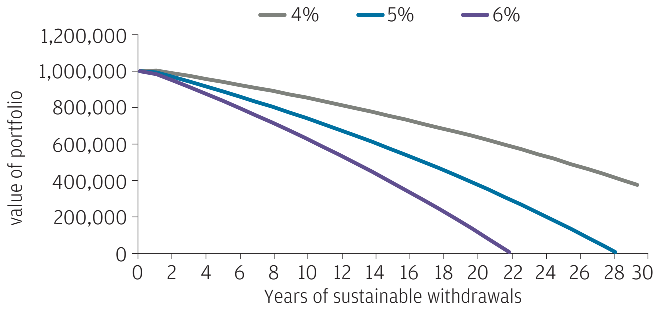
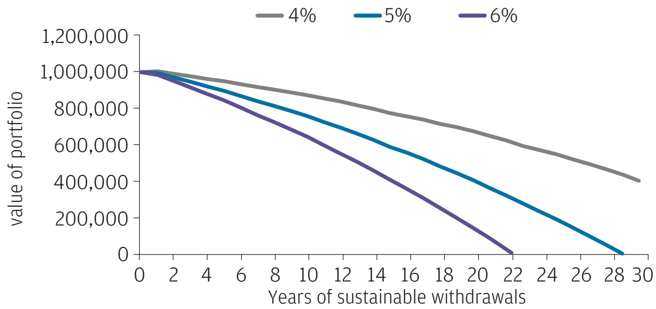


EXHIBIT 3B: TAIWAN – 55% EQUITY/45% FIXED INCOME PORTFOLIO AT VARIOUS WITHDRAWAL RATES



Source: Graphs are for illustrative purposes only and must not be relied upon to make investment decisions. The yearly withdrawal amount is set as a fixed percentage of the initial portfolio and is then inflation adjusted over the period. J.P. Morgan's model is based on J.P. Morgan Asset Management's (JPMAM) proprietary long-term capital market assumptions (10-15 years). Equity represents AC World Equity and fixed income Global Aggregate Hedged. Each graph represents the 50th percentile of 10,000 individual series 30 years in length. Given the complex risk/reward trade-offs involved, we advise clients to rely on judgement as well as quantitative optimization approaches in setting strategic allocations. References to future returns for either asset allocation strategies or asset classes are not promises or even estimates of actual returns a client portfolio may achieve.

Inflation risk

What happens when a retiree keeps withdrawing and spending at the same rate, year after year, even as prices rise at a more rapid clip than expected? It can be a serious problem. That is because over long periods of time, inflation tends to erode purchasing power—which means that goods and services gradually become more expensive (**EXHIBIT 4**). For example, a product that costs $10,000 in today's dollar will cost the equivalent of $17,758 in future dollars (in 30 years' time). Similarly, $1 million in 30 years will be able to purchase about half of what it would buy today ($557,000).

An effective investment strategy for retirement needs to include growth, as well as income-generating assets, to help protect against the corrosive effects of inflation. As the chart below shows, over a 20-year period (1995-2015), a $100,000 portfolio invested 40% in equity and 60% in fixed income, grew to $271,000 in future dollars and $177,000 in today's dollars. The same $100,000 invested in cash increased to just $162,000 in nominal terms and $106,000 in real terms.

When evaluating insurance or retirement account options that provide payouts either for a term or for life, it is critical to understand that the payout amount may not keep pace with spending needs over the course of one's retirement if the payout is fixed or adjusts at a rate lower than the rate at which goods and services increase over time. In general, inflation-adjusted payments may either require a greater level of investment (or premium) or start with a lower initial payout to accommodate rising payouts over time. To avoid shortfalls late in retirement that are caused by an erosion of purchasing power, be sure to assess the coverage these payouts may provide to meet lifestyle needs over ever-increasing life expectancies.

Housing-related risk

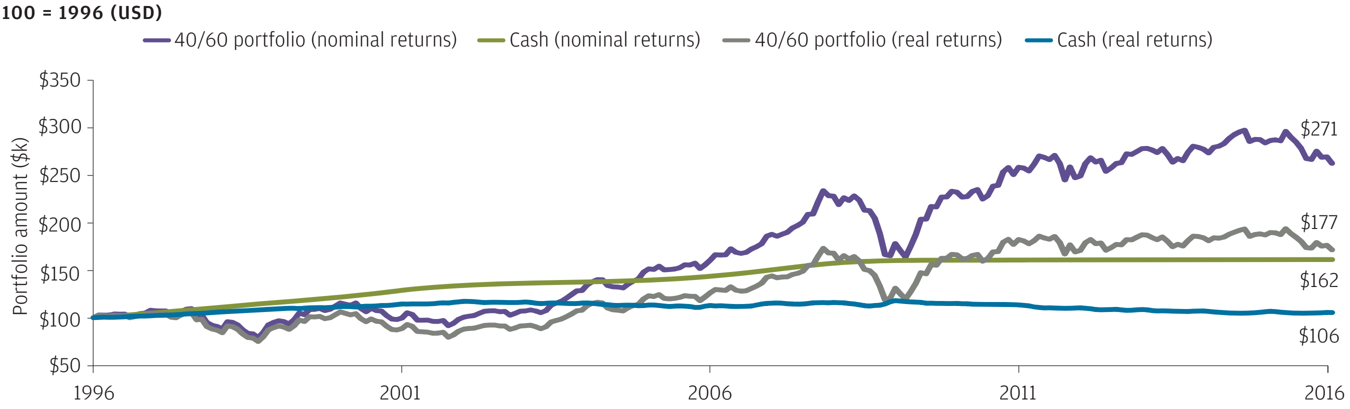
Housing is often the largest asset and ongoing expense (including mortgage payments, taxes and/or maintenance costs) in retirement. As a result, housing decisions can contribute to longevity risk if they are not handled carefully within a retirement plan.

Before they leave the workplace, some people decide to pay off a mortgage to lower their housing expenses in retirement or to secure their legacy for the next generation. This can be a useful approach, but only if it does not jeopardize long-term retirement funding—or put one in the position of being 'house rich and cash poor'. Similarly, anyone planning to realize wealth from downsizing to a smaller, less expensive home should conservatively underestimate the value of the home to be sold and overestimate the cost of the new retirement housing. Finally, maintaining a home at older ages can be costlier than people expect; the ongoing expense should be adequately accounted for in financial plans.

Purchasing real estate for rental income (or long-term investing purposes) in retirement can be a sensible choice, but it requires careful analysis. Certainly, real estate has proved a good long-term investment, as housing prices have appreciated significantly in many Asian markets.

Over long periods of time, inflation tends to erode purchasing power

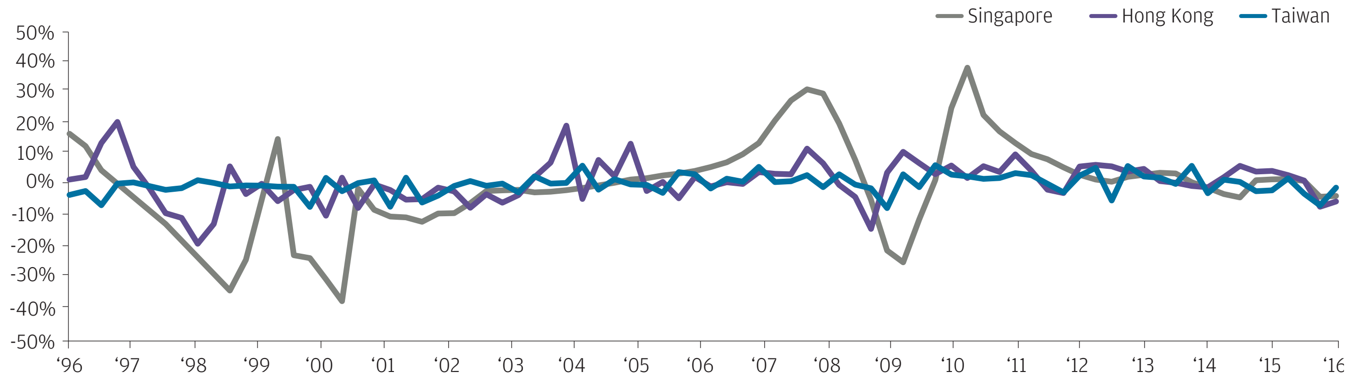
EXHIBIT 4: THE IMPACT OF INFLATION ON A $100,000 INVESTMENT; CASH VS. 40% EQUITY/60% FIXED INCOME PORTFOLIO
100 = 1996 (USD)



Source: J.P. Morgan Asset Management. This example has been included for illustration purposes only and should not be taken as investment advice. Actual investments may incur higher or lower growth rates and charges. Historical hypothetical portfolios are composed of 40% Asian equities represented by MSCI AC Asia ex-Japan Index and 60% global fixed income represented by Bloomberg Barclays Global Aggregate Index. Cash returns are captured by the Citigroup 3-month U.S. Treasury Bill index, nominal portfolios are deflated by Core CPI to account for the effects of inflation. The historical returns include only the benchmark return associated with the portfolio and does not include alpha from the underlying product strategies within each asset class, from 1 Jan 1996 to 31 December 2015.

Real estate has proved a good long-term investment, but prices can be volatile

EXHIBIT 5: ANNUAL HOUSING RETURNS OVER THE PAST 20 YEARS



Source: Rating and Valuation Department (Hong Kong), Real Estate Research Center (Taiwan), Urban Redevelopment Authority (Singapore).

But prices can be volatile, as seen in late 2015 and early 2016 (**EXHIBIT 5**). And real estate returns can be closely correlated with equity returns; as a result, property holdings may not provide portfolio diversification benefits over time.

Last, certain options may be available to access home equity in retirement to meet lifestyle needs while the retiree continues to live in the home or flat. These options are often referred to as 'equity release' or a 'reverse mortgage', and in Singapore it is an option available through a government program working in tandem with the Central Provident Fund (CPF). Similarly, Hong Kong in 2011 launched its Reverse Mortgage Program via the Hong Kong Mortgage Corporation to provide an additional option for retirees. When considering this strategy, one must understand all the associated costs, which may include accrued interest, mortgage insurance, legal fees, and counselling fees. These total expenses should be closely compared with the opportunity costs of alternative sources of funds; in this way, someone can make a well-informed decision on the benefits and trade-offs of each total wealth and bequest goal. Most important, if someone is taking on a reverse mortgage, it should be clear if the loan must be repaid in full either after the sale of the house or the death of the loan holder(s), and these requirements should be well communicated to the next generation and any individuals who may be living in the home.

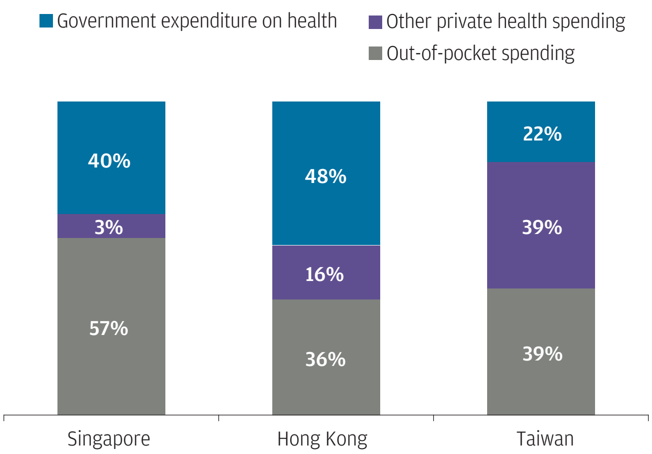
Health care risk

Because retirees use significantly more health care as they get older, a prudent approach to retirement planning will project increased personal spending from retirement savings on health care and, potentially, long-term care provided by non-family members as well.

Across Asia, private health care and out-of-pocket costs (which include premiums for insurance options that supplement publically provided care) can account for a significant percentage of total health care costs (**EXHIBIT 6**). In an ageing population, this trend is expected to continue as demographic changes strain health care systems in the region.

Private health care and out-of-pocket costs can account for a significant percentage of total health care costs

EXHIBIT 6: PROPORTION OF HEALTH CARE PAID BY PAYER



Source: Hong Kong Food and Health Bureau (Hong Kong, 2013), Ministry of Health and Welfare (Taiwan, 2014), WHO (Singapore, 2013).

Sequence of return risk

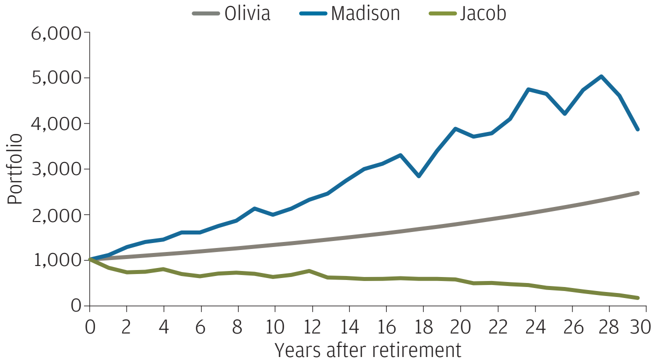
When saving and investing over long periods of time, the sequence of returns makes no difference—ending wealth reflects the long-term average of lifetime returns. When saving and investing *for retirement*, the returns experienced just prior to, during and just after the transition into retirement are particularly important because a retiree is shifting from positive cash flows (savings) to negative ones (spending). During these years, market conditions can have a significant effect on the viability of a retirement plan and the value of the estate that will be passed on.

Sequence of return risk is the risk of experiencing poor market returns early in retirement, when wealth is typically at its peak. In the same way that poor or below-average returns in the early years after full-time employment can put a retirement at risk, strong market performance during this period can act as a tailwind, making retirement funding much easier.

For this reason, managing volatility early in retirement is critically important. This can be done through diversification strategies, as well as through investment solutions that provide downside protection. As **EXHIBIT 7** makes clear, negative returns early in retirement can deliver lasting change to a portfolio when compared with a portfolio that suffers negative returns late in retirement—even when the average return over the entire span of retirement is the same for both portfolios.

Sequence of returns can make a big difference: negative returns early in retirement can deliver lasting damage to a portfolio

EXHIBIT 7: VALUE OF THE PORTFOLIO WITHIN RETIREMENT



Period	Olivia	Madison	Jacob
1	7%	14%	-15%
2	7%	21%	-7%
3	7%	12%	8%
4	7%	7%	14%
5	7%	14%	-8%
6	7%	3%	-1%
7	7%	12%	18%
8	7%	10%	10%
9	7%	17%	4%
10	7%	-4%	-3%
11	7%	10%	16%
12	7%	12%	22%
13	7%	8%	-12%
14	7%	14%	8%
15	7%	12%	6%
16	7%	6%	12%
17	7%	8%	14%
18	7%	-12%	8%
19	7%	22%	12%
20	7%	16%	10%
21	7%	-3%	-4%
22	7%	4%	17%
23	7%	10%	10%
24	7%	18%	12%
25	7%	-1%	3%
26	7%	-8%	14%
27	7%	14%	7%
28	7%	8%	12%
29	7%	-7%	21%
30	7%	-15%	14%
Average rate	7%	7%	7%
End portfolio	2,432,834	3,802,595	170,519

Source: For illustrative purposes only. Example assumes a 4% initial withdrawal amount and increased annually by 2.25%. Average rate is compounded annualized rate.

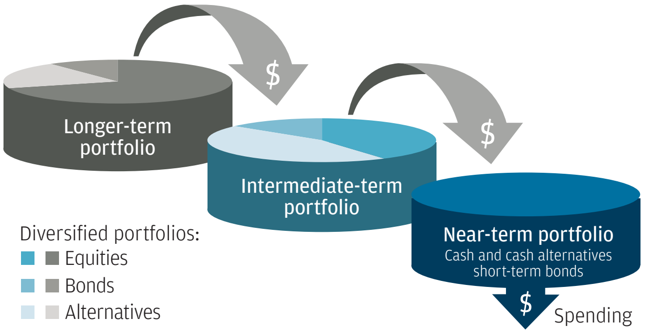
PUTTING A PLAN INTO ACTION

After weighing these risks within a comprehensive retirement plan, people must figure out how they will put that plan into action. Without the structure and discipline of a regular paycheck, retirees need to have a process in place for managing their wealth and spending in retirement.

We recommend what is known as a 'bucketing' approach, as illustrated in **EXHIBIT 8**.

In a bucketing approach, near-term, intermediate-term and long-term portfolios cover different expenses

EXHIBIT 8: THE BUCKET STRATEGY



Source: For illustrative purposes only. J.P. Morgan Asset Management. Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise. The price of equity securities may rise or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. Equity securities are subject to "stock market risk," meaning that stock prices in general may decline over short or extended periods of time. Investing in alternative assets involves higher risks than traditional investments and is suitable only for the long term. They are not tax efficient and have higher fees than traditional investments. They may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain.

*Equity, fixed income and cash are considered "traditional" asset classes. The term "alternative" describes all non-traditional asset classes. They include private and public equity, venture capital, hedge funds, real estate, commodities, distressed debt and more.

One bucket should be a near-term portfolio that holds sufficient cash and cash equivalents to cover expenses for one to three years' worth of retirement cash flow shortfall (i.e., annual expenses not covered by retirement income sources such as government pension or annuity payment) from the start of retirement. A second bucket, the intermediate-term portfolio, will cover expenses for the remainder of retirement. The long-term portfolio can be for health care or long-term care expenses late in life, or wealth that is intended to be a family legacy.

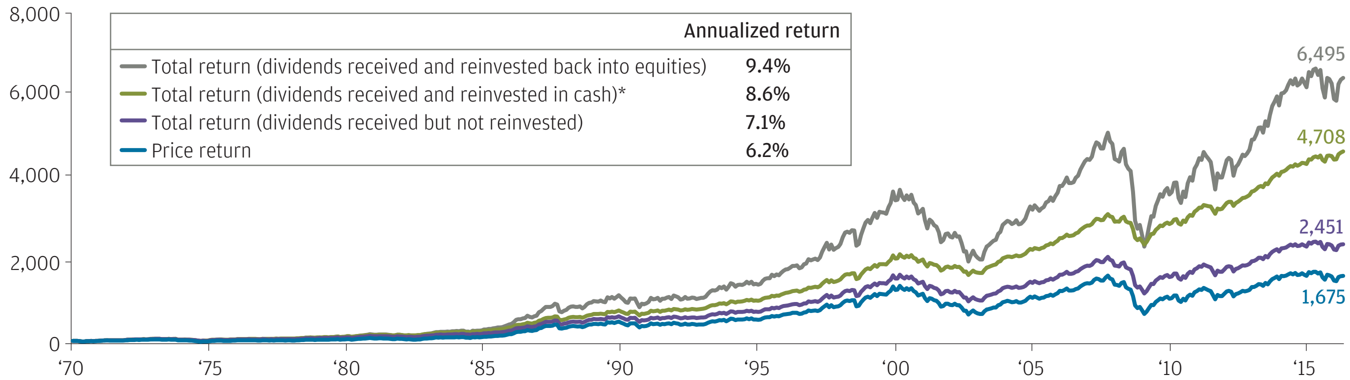
Asset allocation in the intermediate-term portfolio should provide a balance of current income to replenish the near-term portfolio and capital appreciation to keep pace with inflation over time to meet future spending needs. We emphasize that retirees should be careful not to chase yield: Securities that provide the highest level of income likely carry more market risk and may not generate the greatest total return over time, thereby diminishing the purchasing power of one's principal investment.

We caution, too, that investing in solutions that pay out a set amount—from dividends and interest, but also from capital appreciation if needed—may lead to a lower value of principal over time. This could be a good choice for someone whose investment priority is to meet current lifestyle expenses, but the prospect of reduced principal value must be evaluated over the long term if less wealth is available to meet future needs.

In evaluating income-oriented solutions, one should clarify how much of the payout comes from dividends and interest vs. capital appreciation and/or return of principal.

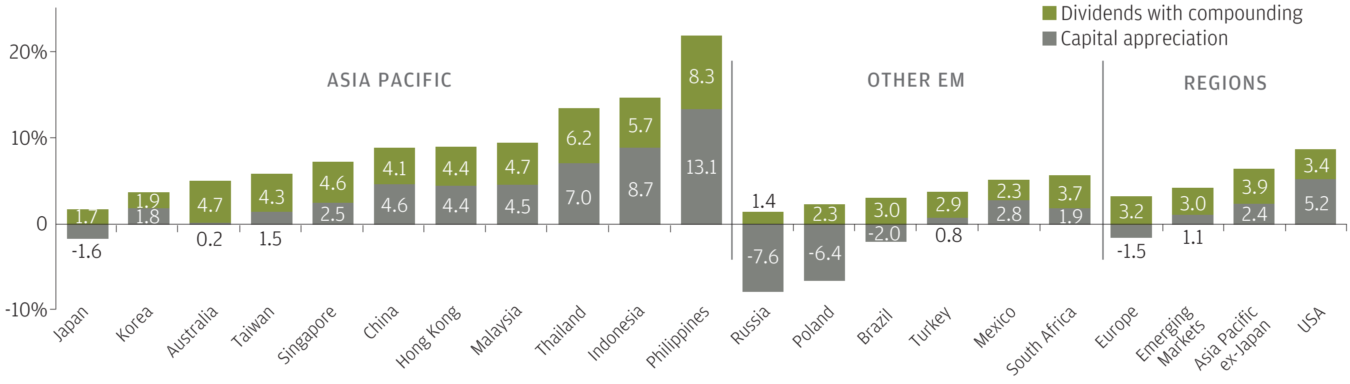
Compounding is powerful, but value can be eroded when dividends are not reinvested

EXHIBIT 9A: MSCI WORLD INDEX: PERFORMANCE UNDER DIFFERENT SCENARIOS
INDEX 100 = 1970



Source: FactSet, MSCI, J.P. Morgan Asset Management. *Guide to the Markets - Asia,* page 43. *Reinvestment in cash based on the average U.S. 3-month Treasury bill (secondary market) yield since 1970, which is 5.1% per annum. Data reflect most recently available as of 30/6/16.

EXHIBIT 9B: TOTAL RETURN: DIVIDENDS VS. CAPITAL APPRECIATION**
AVERAGE ANNUALIZED RETURNS OVER 10 YEARS



Source: FactSet, MSCI, J.P. Morgan Asset Management. *Guide to the Markets* - Asia, page 43.
**Returns are total (gross) returns based on MSCI indices in U.S. dollar terms.
Data reflect most recently available as of 30/6/16.

EXHIBIT 9 looks at total return of the MSCI indices from 1970-2015, 'unpacking' what proportion represents dividends and what share is capital appreciation. The chart highlights the power of compounding—total return is higher over time when when dividends are reinvested. It also underscores how value can be eroded when dividends are *not* reinvested, especially if principal is tapped as well.

Finally, once a plan is put in place, people should work with a financial advisor to revisit their investment strategy at least once a year. Together they should:

- Review and update spending needs over time, informed by updated sustainable withdrawal rate estimates to mitigate longevity risk
- Replenish the near-term portfolio with dividends and interest, and harvest additional funding as necessary to meet any shortfalls
- Rebalance and evaluate forward-looking investment opportunities

CONCLUSION

Contemplating retirement can be sobering, in part because there is no 'perfect' time to retire nor a 'correct' plan to put in place. Complicated issues must be examined, from both an emotional and a financial perspective. We do believe there is a basic framework for determining one's financial ability to retire. As we have discussed, that framework focuses on six key risks that demand close attention. Some risks will be easily addressed, while others will require delicate trade-offs and compromise. None can be safely ignored.

AUTHORS

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Michael I. Falcon is Chief Executive Officer of Asia Pacific Global Investment Management for J.P. Morgan Asset Management. Based in Hong Kong since 2014, he is responsible for overseeing all aspects of the Investment Management business in Asia, which operates in eight countries, with 1,700 employees and 180 investment professionals. In addition, Michael also serves as Head of the Asia Pacific Funds business and on the Global Investment Management Operating Committee, as well as the firm-wide Asia Pacific Management team. He also chairs the Investment Management Asia Pacific Operating Committee. Before relocating to Hong Kong, Michael was Head of Retirement for J.P. Morgan Asset Management, where he and his team worked closely with the firm's Global Funds and Global Institutional businesses to provide investment products, insights and administrative services that help people save for and live in retirement. Michael served as Chairman of the Advisory Board to the Center for Retirement Income Research at the Employee Benefit Research Institute (EBRI), where he also previously served as a trustee and on the executive committee. He was a delegate to both the 2005 White House Conference on Aging and the Department of Labor's 2006 National Summit on Retirement Savings. Michael holds a BS in finance from Indiana University.

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Tai Hui, Managing Director, is the Chief Market Strategist, Asia, based in Hong Kong. With over 15 years of experience, Tai formulates and disseminates J.P. Morgan Asset Management's view on the market, economy and investing to financial advisors and investors in the Asia region. With his knowledge and experience, he is able to explain and illustrate complex economic and financial issues in a digestible way, primarily via the Market Insights program. He also regularly appears on international and local financial media, including as a guest host on CNBC Asia, as well as Bloomberg TV and Reuters TV. Prior to joining J.P. Morgan in 2012, Tai served as the Regional Head of Research (Asia) with Standard Chartered Bank in Singapore, covering the economic and financial development of the Asia region, and delivering his analysis to corporate and institutional clients. Tai obtained a BA in economics from Cambridge University and a Master of International and Public Affairs from the University of Hong Kong.

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Chief Retirement Strategist

S. Katherine Roy, Managing Director, is Chief Retirement Strategist and Head of Individual Retirement for J.P. Morgan Funds. In this role, Katherine is responsible for delivering timely personal retirement-related insights to financial advisors. Focused on the retirement income-related landscape for more than 10 years, Katherine specializes in identifying themes, strategies and solutions that can help advisors successfully partner with individuals in the transition and distribution life stages. Katherine is consistently ranked as a top speaker at major industry and firm-specific conferences and events. She also has been interviewed and quoted in the financial press on a variety of key retirement planning topics. Prior to joining the firm, Katherine was Head of Personal Retirement Planning & Advice at Merrill Lynch, where she lead strategy and innovation in retirement income solutions for individuals and the retirement planning, advice and guidance programs available to integrated benefits plan participants. She also held several roles in financial planning product development, participant communications and consulting and interactive client experience initiatives. Katherine received a BA from Yale University and is a Certified Financial Planner®.

Wina Appleton
APAC Retirement Strategist

Wina Appleton, Vice President, is the APAC Retirement Strategist for J.P. Morgan Asset Management. Based in Hong Kong, she is responsible for tailoring thought leadership content for local markets and providing perspectives on retirement issues affecting the region. This includes conducting research, delivering timely retirement-related insights to institutions, financial advisors and end clients, as well as, supporting client training and content for retirement activities within APAC. Wina joined the firm in 2008 and previously served as Business Manager for APAC Institutional, supporting sales and marketing activities. She also worked in Consultant Relations and within the Chief Operating Office. Wina obtained a Master of Arts and Master of Engineering from Cambridge University and is a CFA charter holder.

NEXT STEPS

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