Fall 2008

Wealth Management

Stay confident in your retirement dreams

Solid planning through all market environments can help you prepare for the next stage of your life

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Investors who are considering retiring today face an unknown few years ahead of them resembling nothing they've seen in the past / **page 18**

Years of economic research have produced an impressive array of investment theories / **page 22**

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In brief

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To our clients,

We have witnessed unprecedented events in the U.S. financial system and, concurrently, the markets. The situation is unsettling and this financial crisis has leapt to the top of the American public's list of concerns. Unfortunately, when it comes to investing, a number of deep-rooted and understandable human tendencies can put investors at risk when it comes to saving and investing for their lifetime goals.

With the markets behaving in this unexpected fashion, it is important for all of us to keep focused and not let our emotions take control. We believe your Financial Advisor is the best asset you have to help you navigate through the new challenges and complexities of pursuing your investment objectives. In order to help make your wealth work for you, we provide our Financial Advisors with the most comprehensive tools and resources so they can deliver the individual guidance you need with the highest standards of excellence.

For many people, one of their more significant concerns is being able to plan successfully for retirement. In this issue of *Wealth Management* magazine, we are proud to feature clients who developed essential partnerships with their Financial Advisors and who share how they prepared for and are now enjoying fulfilling 'second lives'. We also explore the new rules of investing, planning and budgeting for what may be a retirement that lasts decades.

As always, we remain committed to building personal relationships with our clients, shaped by an understanding of your needs and objectives and a dedication to help you succeed through all markets in all seasons.

We hope you find this publication helpful and that you will speak with your Financial Advisor to discuss these matters in more detail.

UBS Wealth Management US

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Is it time to assess your retirement planning?

Recent market activity has been unprecedented. As a result, many investors are concerned how the changes in the markets have affected their plans for retirement. Is your plan still on track to help you meet your goals? Now may be a good time to sit with your Financial Advisor to talk about your plan.

An important place to begin is to focus on where you are now and where you hope to be in retirement. You and your Financial Advisor can talk about your financial picture today, including an overview of all your retirement assets and personal investments, as well as any critical issues that may impact your plan.

To get started, your Financial Advisor can conduct a Retirement Goal Checkup to create a focused assessment of where you are in reaching your goal to retire when and how you want to. With a plan in place, you can prepare for retirement with more confidence, through any market cycle. You have the power to shape what your retirement can be—from securing the essentials to living each day to the fullest.

To learn more, speak to your Financial Advisor about the Retirement Goal Checkup.

Funds of hedge funds may help your retirement portfolio

Many investors do not consider allocating a portion of their retirement portfolio to a fund of hedge funds (FoHF)—a hedge fund that invests in other hedge funds.

This may be due to perceptions rooted in the events that first brought hedge funds to the general public's attention: the mid-to-late-90s tech boom and bust and the implosion of Long-Term Capital Management. Some recent headlines concerning single-manager hedge fund failures have added to these concerns.

But these events may deter investors from looking more closely at multi-strategy or "diversified" FoHFs, which are part of the alternative investment asset class that includes hedge, private equity and real estate funds. These FoHFs offer potential portfolio diversification benefits and may be suitable for a retirement portfolio, where the goals of long-term capital appreciation and protection are inherent. Today, this type of investment is available to a broader array of potential investors.

FoHFs seek to generate long-term returns that may be less correlated to market performance than traditional investments, while mitigating risk to one's overall portfolio by seeking to capture opportunities throughout the economic cycle. The diversified FoHF manager allocates capital based on the individual characteristics of each fund and its strategy and the ability of each to complement the other funds and strategies in the portfolio. Capital is reallocated as appropriate on an ongoing basis. In many cases, FoHFs are the only way to access single-manager hedge funds that are closed to new or individual investors. Additionally, the minimum investment amount typically required by a FoHF is significantly less than the minimum required by a single-manager hedge fund.

Investing in a FoHF may also offer diversification by sector, geography, market and leverage exposure and investment style. It may also help offset a portfolio's overly concentrated allocation to a single stock or to equities or fixed income generally. There are also risks associated with Alternative Investment Funds. Please speak with your Financial Advisor to see if FoHFs are appropriate for you.

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Alternative investment funds are not mutual funds, and are not subject to the same regulatory requirements as mutual funds. The funds may engage in leveraging and other speculative investment practices that may increase the risk of investment loss. They can be illiquid, they may not be required to provide periodic pricing or valuation information to investors, they may involve complex tax strategies and there may be delays in distributing tax information to investors. They generally are subject to investment management fees and performance-based allocations, and other fees and expenses, all of which will reduce profits. There is generally no secondary market for the interests of the funds, and none is expected to develop. Interests of a fund are not deposits or obligations of, or guaranteed or endorsed by, any bank or other insured depository institution, and are not federally insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board, or any other governmental agency.

Why the future of taxes makes estate planning critical today

The 2001 Economic Growth and Tax Relief Reconciliation Act (EGTRRA) is due to lapse in 2011 if Congress does not vote to make its provisions permanent. This leaves the long-term federal estate tax outlook uncertain for affluent investors.

EGTRRA's provisions significantly changed income and estate tax rates and enhanced incentives for contributions to retirement and education-related plans. What may EGTRRA's scheduled "sunset" in 2011 possibly mean to you? It means that between now and 2011, changing tax rules make estate planning even more critical for individuals and families. Here's what you need to know:

- EGTRRA provides temporary relief from the federal estate tax until 2010 by raising the amount of the estate tax exemptions, lowering the top estate tax rate and entirely eliminating the estate tax for one year only in 2010. However, unless Congress extends EGTRRA or creates new legislation, pre-2001 effective estate tax rates and exemptions will be in force again in 2011.

- Under EGTRRA, the federal credit allowed for state-level estate taxes was fully phased out by 2005. Elimination of the federal credit meant that some of the states collected zero estate taxes, which may have been a major hit to their treasuries. Since then, many states have established new regimes that differ from the federal one. These actions mean that estate plans may have to take into account two different estate tax regimes.

- Even if Congress acts to repeal the federal estate tax beyond 2010, EGTRRA includes a provision that changes income tax basis step-up rules following repeal. Until 2009, the income tax basis for non-retirement assets is stepped-up to asset values on the decedent's date of death. This means that beneficiaries pay capital gains tax only on the posthumous asset appreciation. But in 2010, the same year that the estate tax will be repealed, only the first $1.3 million of appreciation will be stepped up (plus an additional $3 million for assets passing to a surviving spouse), and any appreciation exceeding that threshold will be subject to capital gains tax when beneficiaries ultimately sell the inherited assets.

While the ultimate fate of the federal estate tax, and the unlimited step-up of basis at death, cannot be known now, you may nevertheless want to seek the advice of your tax advisor in developing practical solutions to the potential issues you may face.

Potential changes in federal and state estate tax structures can present new legacy planning obstacles for affluent individuals.

Enjoying a strong second act

Meet UBS clients who have all reached their goals for retirement, the result of planning ahead to create fulfilling futures.

Growing numbers of American retirees are enjoying meaningful and inspiring "second acts." They rejoice in retirement as an opportunity for adventure, a chance to reinvent themselves, seek out new interests or be more dedicated to current ones, and they relish the freedom of time to explore their goals.

They also built a financial plan for retirement to make sure it would be that way. Work is hardly a contradiction in retirement today. As people wind down successful careers, they often gear up for their life's true work—and spend decades to achieve it. Some embark on creating a legacy of charitable giving. Others shuck the suits and pull on the work gloves, building dream homes and gardens. And many simply dabble, challenging themselves with one new interest after another.

But long, active retirements take careful financial planning. "Retirement is not a shoot-from-the-hip proposition," says UBS Financial Advisor David Greger. "We're much more scientific than we were before in helping people envision what they want to do in retirement and then defining the steps they need to take to achieve those goals, from wealth management to estate planning to charitable giving."

Russ and Paula Ruggiero

Paula and Russ Ruggiero recall exactly when they made a pact to retire at age 55. The year they turned 40, both their fathers died while in their 60s—Paula's father had been retired only six months—and, with such a harsh reminder of the fragility of life, the couple vowed that they would quit working while they were young and healthy.

Even as they raised four children in Houston, the couple saved in earnest. "At one point, we were the proud owners of five vehicles with insurance premiums that cost far more than our mortgage," says Paula, 60, who taught high-school math. "But we knew we wanted to retire early, so we bought Toyotas instead of Lexuses." Estimating that they could live comfortably in retirement with an income that replaced 100 percent of his salary as an engineer for ExxonMobil, Russ periodically ran spread sheets to gauge how their accumulating assets would meet their income needs in retirement based on various scenarios of market performance. And as retirement drew closer, he developed a budget to monitor where they spent their money. "As our children finished college and left home, money loosened up quite a bit," says Paula.

Paula and Russ Ruggiero enjoy using their kayaks to discover the wonderful vistas that abound in the Catskills region of New York.

Into the home stretch, however, the bear market of 2000 to 2002 took more than a nibble out of their nest egg, forcing the couple to modify their plans. Paula left teaching for good at age 55, according to schedule, but Russ worked for another 3½ years to rebuild their savings, retiring a little more than a year ago at age 58½.

Never once have the Ruggieros second-guessed their decision to retire early. That's why they made certain to plan carefully.

As Russ continued working, Paula was in charge of test-driving the retirement they had envisioned together. "I had to learn how to get into vacation mode," she says. "It's a wonderful feeling, but figuring out how to use this new leisure time doesn't come naturally, which surprised me. You have to work at it," which, for Paula, meant learning how to knit, spending time with her mother in Houston, trying yoga, and furnishing the second home the Ruggieros bought in 2004 on a lake in Athens, New York, near her brother's residence.

Seeking guidance

Eager to join his wife in retirement and complete the remodeling of their "fix-it-upper" cabin on 80 feet of waterfront in New York, Russ met with his Financial Advisor of four years, Paul Oakley, and Oakley's CFP partner, Ralph Autuore, to consult with them regarding his financial projections and seeking confirmation that retirement was indeed in reach. "I was most concerned about the assumptions I had made on the future rate of inflation," says Russ. "If you're retired for 30-odd years and your inflation projections are off by a percent or so, that will have a significant cumulative effect on your assets."

According to Oakley, Russ's calculations were realistic, but the assets in his 401(k), which included a sizable amount of ExxonMobil stock, weren't well diversified, putting the Ruggieros at risk of losing income during market downturns. Understanding their goals and lifestyle objectives, Oakley offered an asset allocation strategy: he recommended that the Ruggieros add new asset classes to their portfolio, such as structured notes—alternative securities that offer a premium above the performance of a stock index as well as downside protection—to help limit losses to principal. "We were heavily into equities and needed diversification, but we didn't know how to go about investing," admits Russ. "We needed a plan for this and Paul, after analyzing our portfolio, suggested we gain exposure to more sophisticated investment options, and, as a result, we can now take the ups and downs in the market more in stride."

To further manage risk, Oakley also advised Russ to unwind the appreciated position of ExxonMobil stock he held in his 401(k) by using a tax-advantaged strategy called net unrealized appreciation (NUA). By moving the stock into a taxable brokerage account prior to rolling his 401(k) into an IRA and taking an NUA election, Russ paid ordinary income tax on the stock's cost basis, not its current market value. And when he sells the stock, he'll owe the long-term capital gains tax of 15 percent, including on any future appreciation of the shares, instead of liquidating the stock in an IRA and paying ordinary income tax on the distributions.

Paula and Russ both received pensions, but Russ took his as a lump sum payment and rolled it into an annuity for its income and death benefits. A pension provides only a partial death benefit to a surviving spouse and nothing to the children, whereas the annuity provides a full benefit to the spouse and can preserve money for the heirs. The annuity also dovetails with the Ruggiero's retirement plan, which was designed to be flexible with options to continue growing assets. "During the first few years of retirement, we can slowly pare down their concentrated stock position to generate income, which will allow their tax-deferred IRAs to continue growing," explains Oakley. "And by waiting to tap the annuity, the value increases so the guaranteed income will be higher."

“The current downturn in the stock market is somewhat concerning, but we built a cushion into our retirement plan for events like this.”

– Russ Ruggiero

Leslie Lehmann

As former director of the Oregon Forest Resources Institute, a state organization with a mission to encourage environmentally sound forest management, Leslie Lehmann worked hours she couldn’t even begin to add up. “With a small staff, there wasn’t a lot of back-up support, which made my job very demanding,” says Leslie, who lives in Portland with her husband, Clark Worth. And although Leslie found her work satisfying, she had scant time to help care for her father, who has dementia, and to fulfill her responsibilities as the trustee for family property in Central Oregon that also needed attention. So she retired this year. “I just needed more flexibility in my week,” she says.

Enjoying the time

In the year since Russ retired, three of the couple’s children got married and he’s made considerable progress on the cabin. He also plays tennis three times a week and kayaks on the lake when the mood strikes. Once he finishes the house, Russ plans to investigate volunteer work, possibly for Habitat for Humanity. In the meantime, the Ruggieros have traveled to Australia and New Zealand and have set their sights on river cruising in Europe as well as taking a cruise to Antarctica. Traveling between their homes in Texas and New York also allows them to see all of their children, who live in four different states along the route, at least twice a year.

Another dream is buying a power boat big enough to live aboard, which Russ admits is more to his liking than Paula’s. “We’re still negotiating that one,” he laughs. “We’re finding that retirement is an evolving process and we’re figuring it out as we go along,” says Russ. “We want to explore all our options.”

All options, that is, except returning to full-time employment. Never once have the Ruggieros second-guessed their decision to retire early. “The current downturn in the stock market is somewhat concerning, but with Paul’s advice, we built a cushion into our retirement plan for events like this,” says Russ. “And although the indexes have come down significantly, our assets have suffered far less, which is due to the asset allocation Paul helped us set up. So we’re fine financially and enjoying ourselves.”

Leslie Lehmann appreciates the piano as a beautiful instrument, one she enjoys playing everyday. She can make it sound better than most.

Lehmann's other passion is gardening, where she derives much satisfaction in seeing the big blossoms that form during the Portland summers.

"It would have been unwise of me to start figuring out my finances after I retired, instead of before."

– Leslie Lehmann

When she broached the subject of retirement with her husband, Leslie quickly found that Clark had no interest in entertaining the idea of not working. As the president and owner of a business consulting company, Clark "is engaged in his work, loves it, and isn't ready to think about retirement." But Leslie was ready and wanted a financial roadmap to help ensure that her "exciting but also a little scary" passage into retirement was a smooth one. "I'm a long-term thinker and my approach is to set a long-term goal and move in that direction," she says. "It would have been unwise of me to start figuring out my finances after I retired, instead of before."

Planning ahead

Leslie made it a point to meet with her Financial Advisor, David Greger, to build a financial plan for retirement, taking into account her assets and objectives. "We established her goals, which included setting aside money for a future wedding for the couple's daughter, remodeling their home and traveling," says David, who has been her financial advisor since 1992. "Then we determined the amount of retirement income she would need to live the lifestyle she wants and how she'll generate that income from pensions, investment assets and, eventually, social security. After the market downturn last fall, we revisited the projections and concluded that, even with conservative estimates of investment returns, she could still retire."

For Leslie, not retiring wasn't a choice, given the state of her father's health. But knowing that her financial future is secure, regardless of present or future market conditions, helps to provide her peace of mind. And the equanimity extends to her solo transition to retirement while Clark continues working. "We've always had a mixture of independence and interdependence, which works for us," says Leslie. "And, having juggled two careers and a family, we've had a life history of negotiation about how we spend our time."

Pursuing her passions

Not that Leslie expects much downtime during retirement. Coming from a musical family and performing since she was five, Lehmann sings and plays the piano, organ and harpsichord. Currently, she plays in ensembles at church services and weddings and sings in her church choir. She's hoping that retirement will afford her even more opportunities to perform. Leslie also relishes her role as grandmother to her son's two-year-old and newborn daughters, who live nearby. Additionally, she's wants to spend more time at a house in Provence, France, which Leslie and Clark own with several other Portland families.

Leslie also isn't discounting the idea of working part time "to stay engaged in meaningful issues that are important to Oregon." With a career spent in public policy and education—Leslie taught political science at the university level, worked for former Oregon Governor Tom McCall as a policy analyst, served on the Oregon State Board of Higher Education and worked in the private sector—she already has been approached with offers of consulting work and short-term projects. "It's important to stay flexible and be open to possibilities, since there may be several phases to retirement," says Leslie. "I can't imagine not diving into things that are challenging and making a contribution to things that matter, whether I get paid for it or not."

"In retirement, we have the time to fully understand the needs of the community, so instead of giving money and walking away, we can now monitor how the gift is being spent."

– Pat Rebele

Rowland and Pat Rebele

"We're busier now than we ever were when we were actively working," says Rowland Rebele, 77, as he dashes off yet another e-mail message, entreating a fellow parishioner to contribute to the building of a new Episcopal church campus in Aptos, California. The former newspaper publisher and his wife, Pat, are so philanthropically inclined during their retirement that they sit on several nonprofit boards and committees and make charitable gifts, both in California and abroad. Their charitable work easily consumes 30 hours a week. "It's not that we don't enjoy other activities, such as playing tennis and golf, because we do," says Rowland. "But this is work I truly love."

Pat Rebele, 78, shares the same sentiment as her husband, "I didn't grow up with a lot of money, so I'm still amazed I am in a role now where I can willingly give some money away." The Rebeles find that retirement allows them to get more actively involved in the organizations they support. "We now have the time to more fully understand the needs of the community, and instead of giving money

Contributing back to the community is priority number one for Pat and Rowland Rebele, who are clearly proud of the family shelter that bears their name.

Children smile everyday as they play in the safe and nurturing environment provided with the help of the Rebeles and other donors.

"You receive an unbelievable amount of psychic dividends when you make gifts to organizations you care about. There is true joy in the act of giving."

– Rowland Rebele

and walking away, we can monitor how the gift is being spent," says Pat. By serving on the board of a battered women's assistance group, for example, Pat says she feels confident that her donation will be well spent. And when she expressed her disappointment that an endowment to another organization wasn't being used to fulfill the mission she had envisioned, the nonprofit took steps to address her concerns.

Among the gifts that make the Rebeles the most proud are being the lead donor for the Rowland and Pat Rebele Family Shelter, a $5.5 million project that enlisted financial support from 2,000 people in the Santa Cruz community, thanks in part to the Rebeles' fundraising, and has served 200 homeless families since it opened four years ago. Another is an endowment made to Stanford University to provide internships for up to 25 journalism students a year at newspapers around the world. Pat and Rowland also endowed a chair at the University of California Santa Cruz, where Pat is an alumna, resulting in the university's art history division becoming an independent department.

Additionally, after serving as the president of the board of the Santa Cruz County Symphony for five years and being a donor for 30 years, Rowland now goes into fourth- and fifth-grade classrooms, along with a musician, to talk about classical music and the parts of the orchestra prior to all the students attending a free concert.

The Rebeles also enthuse about the milling machine they bought to enable women in an African village to sell ground millet after hearing about the need from a friend's daughter who is in the Peace Corps. Another gift was inspired by the physician daughter of a pastor they met who needed medical equipment for her hospital in Guatemala. "Those gifts weren't large, but they made a huge difference in the lives of many people," says Pat.

An IRA strategy

To help build a source for funding their charitable gifts, Pat and Rowland developed a plan with their long-time Financial Advisor, David Greger, which primarily entailed putting money away in IRAs. By strategically allocating their IRAs, Greger has helped the Rebeles grow their retirement assets—and increase the amount they give to charity. David explains, "We've built their asset allocation to include U.S. and non-U.S. equities, and the growth we've seen in the international markets has provided significant gain for them."

"We're very happy with the performance of our IRAs and the gifts it allows us to make," says Rowland. Revenue from the businesses he still owns also contributes to the couple's annual giving.

Additionally, by donating the annual required minimum distributions from their IRAs directly to charity, the couple doesn't have to pay income tax on the distributions. (Congress has extended that tax provision for 2008 and 2009.)

Easing off the gas

While the Rebeles now have plenty of time to pursue their humanitarian efforts, they previously led demanding entrepreneurial lives. Initially working side-by-side when they bought their first weekly newspaper in tiny Coalinga, California, and then a second in Chula Vista, the Rebeles ultimately built a publishing company of eight newspapers in Colorado, Illinois, Minnesota, Wisconsin, and California. Along the way, Rowland also branched out into a few other businesses that today continue to be run primarily by his partners. By age 60, Rowland was an absentee owner, free to check in on his enterprises on his own schedule. Plus, the last of the newspapers was sold five years ago. "It's so great not to be chained to the office," says Rowland, who now spends about eight hours a week on his business ventures.

The Rebeles have a goal to donate nearly their entire estate to charity before death. Rowland says, "Our philosophy is to set aside funds to take care of our three grown children in the event of any life emergencies. But we don't intend to leave them a big inheritance, which they understand. We'd like to give away virtually all of our money before we die so that the charities can benefit sooner and we can see the effects of our gifts." Each of his children, Rowland notes with pride, are engaged in their own philanthropic causes.

Although the Rebeles prefer to spend their money to help the needy and on their community rather than to enhance their own lifestyle, they do allow themselves one extravagance—taking extended trips abroad. The sojourns started in 1978, when they spent a year with their three children living in a 16th-century gentleman's house, a property of Hever Castle in Kent, England, the childhood home of Anne Boleyn. Eighteen years later, the couple spent a year in Italy, just south of Florence, followed by a year in the Dordogne region of France in 2003. And when they went to Europe for a month recently, they scouted out living in Germany for a year. "We love the people, the culture, the languages, museums, concerts, and just traveling around," says Rowland, who, along with Pat, wrote stories about their travels for the weekly newspapers they owned.

For the Rebeles, spending their retirement giving back is a natural coda to a life distinguished by financial and personal successes. "We feel blessed that we've been given so much—good genes from our parents, a fine education, and an intact family life," says Rowland. "And we want to help those who haven't had those advantages." But giving has also made their lives richer, he admits "You receive an unbelievable amount of psychic dividends when you make gifts to organizations you care about, and we've met a lot of wonderful people through our giving. There is true joy in the act of giving." /

The new rules of making your wealth last

For preserving assets in challenging markets, the rate at which you make withdrawals to fund your retirement matters significantly. UBS experts offer some recommendations.

Market activity this year has proven to be different than any in recent memory. In these sobering times, it is important to comprehensively assess all of your wealth strategies. One of these strategies will be your personal spending policy during retirement—and today can be a critical time to consider what spending rate is most likely to provide you real wealth preservation. If you support your lifestyle from a fixed asset base, the rate at which you spend will be more important than ever.

Market volatility and soaring food, healthcare and other costs are real threats to maintaining predictable levels of retirement spending. It can be difficult or impossible to recoup losses if a retirement portfolio is affected by poor market performance and/or depleted by accelerated withdrawals. For example, if a $1 million portfolio plummets to a value of $800,000, a withdrawal rate of 4%, or $40,000, will be reduced to just $32,000.

These losses can mount exponentially. Lower portfolio returns during the first five years of retirement, for example, can significantly increase the chance that a portfolio won't last over a lifetime. If drawdowns are more than what the portfolio is earning, that risk is even greater. "Those first five years can heavily determine whether your money is going to hold out for you," says Ed O'Connor, a managing director and head of retirement services at UBS Wealth Management US.

There are financial planning, asset allocation and a mix of investment solutions and strategies that can help hedge the risk of down markets, potentially avoid cash flow funds running short, and create a cushion against rising inflation. The sooner the planning process starts, the easier it will be to make financial adjustments to meet changing retirement needs. Ideally, retirement income solutions should be part of a lifetime financial plan, says Mark Kordes, a managing director and head of financial planning at UBS Wealth Management US. However, the rules of the game change dramatically as wealth accumulation transitions to a distribution strategy. "Distribution planning requires a shift in thinking and understanding the new rules," he says.

During the accumulation phase of saving and investing for retirement, one of the major risks is market fluctuation,

People often do not consider how their spending needs may change in retirement.

Kordes says. But that risk and an array of other issues, such as inflation, the rate of drawdowns and the timing of your distributions (known as "sequence of returns"—see sidebar on page 15) must be addressed in the distribution phase of retirement.

To combat these and other risks, O'Connor recommends a four-step approach for turning accumulated wealth into an income stream for life.

Focusing on being able to cover essential expenses is priority number one for retirement income planning.

1

Establish your retirement spending goals

People often do not consider how their spending needs may change in retirement. Retirees' consumption patterns tend more towards food, energy and healthcare, sectors of the economy currently experiencing significant price volatility. Premiums for long-term care insurance, for example, can be a significant expense that's essential to consider. It's also important to factor in other unforeseen costs, such as increases in federal, state and property taxes.

Retirement income planning first focuses on generating enough money to cover essential expenses. Expenses are categorized as essential or discretionary in what Kordes dubs a "needs, wants and wishes" analysis. Discretionary expenses, from hobbies to vacations to buying a new car every three years, he says, can be adjusted to enhance the plan's probability of success.

2

Customize your nest egg

Today, customization is important since retirees can no longer rely on the simplicity of just two sources, pensions and Social Security, to finance their future years. Kordes explains, "We're usually working with a variety of income sources and accounts, which present different risk/reward scenarios as well as tax considerations." The goal is to devise an asset allocation and distribution strategy that closely matches one's expenses and other liability details to his or her income sources and manage risks posed by market performance, inflation, longevity and sequence of returns.

An important factor in how far assets can go in distribution is the drawdown plan. One consideration is tapping the right combinations of retirement sources to minimize taxes. The second is devising a withdrawal rate schedule. Past research has found withdrawal rates of 3% to 4% will keep a $1 million portfolio, for example, going for a lifetime. But a rigid formula may not always be appropriate and different variables or tradeoffs may need to be considered to increase the success rate of your retirement portfolio. Typical tradeoffs may be postponing retirement, increasing cash reserves, changing asset allocations and altering discretionary expenses.

3

Choose your investment strategies during the phases of the wealth life cycle

A key part of the "investing for retirement" process is developing a solid framework for addressing financial decisions during each of the three stages of the wealth life cycle: accumulation, transition and distribution. The transition phase—the countdown—holds a particular perplexity as investors still need to invest for growth to support a long retirement but also need to scale back risk because a significant market drop just before retirement can potentially devastate a portfolio. Determining the right and prudent course is a challenging judgment to make.

The accumulation period

Essentially, before their 50s, most people are in the accumulation phase, building their wealth to meet specific goals such as buying a house or vacation home and financing children's college expenses. Investing and saving for retirement is sometimes viewed as a lower priority, yet solid steps should be taken during your peak earning years to significantly boost you're assets. Good financial advice is important each step along the way as earning power increases and the efficient management of growing wealth becomes a priority.

While you are in the accumulation phase, it is not too early to at least keep a tentative retirement timetable in mind when thinking about asset allocation. "If you're 20 to 30 years from retirement, you can consider investing a sizable amount of your assets in equities," says Markus Winkler, head of portfolio construction for UBS Wealth Management US. "At the same time, it's important to carefully diversify your assets both across asset classes and on a global basis. For example, the opportunities of international investing are considerable but are still often overlooked. Alternative asset classes can also play an important role for risk management, namely for clients who feel uncomfortable with aggressive equity allocations." Please keep in mind, however, that there are additional risks associated with international investing.

The risk of withdrawing money during stock market declines

The timing of retirement distributions and what's known as "sequence of returns" is an important consideration for people in the distribution phase of their retirement. Market conditions—bull or bear—in the first few years of retirement can have a significant impact on whether or not a nest egg lasts throughout the full retirement period.

If you are fortunate enough to retire at the beginning of a strong bull market, like in the 1990s, your savings might easily last. But if you retire during a bear market, you may find it tough to meet your total retirement income needs.

The 'timing of distributions' concept is demonstrated by the portfolio illustrated in charts A and B (right) during both the accumulation phase (saving/growing retirement assets) and the withdrawal phase (using savings and investment income to fund retirement). The portfolio assumes that the client will take $50,000 distributions annually (5% rate) during the withdrawal phase.

Chart A:
Accumulation phase

When clients are accumulating wealth, their key focus is average returns over a period of time. So in the accumulation phase example, it doesn't matter whether clients have positive returns in the beginning or in the end, so long as they end up with the same average returns. Regardless of the sequence, they will mathematically end up with the same outcome.

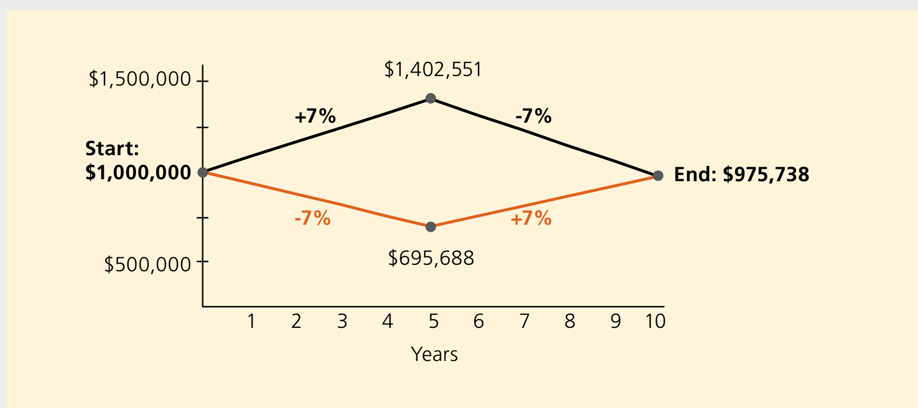
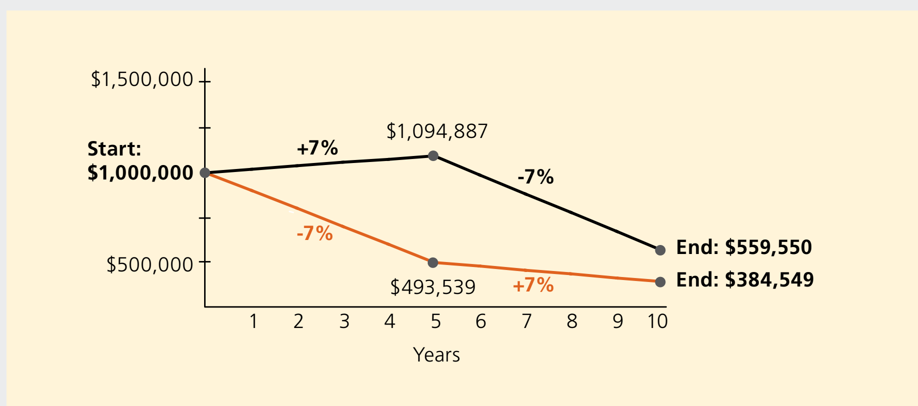


Chart B:
Withdrawal phase

However, in the withdrawal phase example, when withdrawals are made makes a significant difference. The impact of market downturns early in the retirement transition phase significantly reduces the funds available for retirement. Sequence of returns affects the success or failure of a retirement income plan.



Building a safety net for the early distribution phase of retirement

While no one investment product will suit every investor, here are some strategies that can help you manage some of the risks as you prepare for those critical first few years of retirement.

Short-term fixed income investments

For investors whose priority is to minimize volatile returns in their portfolios during the early stages of retirement, there are a number of short-term fixed income instruments that can reduce the risk exposure of your principal. Generally regarded as highly liquid and less affected by the performance of the markets, these include U.S. Treasury Bills, U.S. Treasury inflation linked securities (TIPS), FDIC-insured CDs, and FDIC insured bank deposit accounts. While appropriate for investors seeking short term security, these instruments may not provide returns sufficient to keep pace with inflation.

Annuities

While the details vary greatly from one variable annuity to the next, most annuities offer minimum income guarantees or principal guarantees, regardless of investment performance. Depending on your needs and timeframe, you might decide that guaranteeing your principal investment or an annual income is appropriate for your situation. Your Financial Advisor can help you understand the different benefits and select the appropriate product from over 20 annuity company products represented at UBS. Remember that all annuity guarantees are based on the claims-paying ability of the insurance company. The income benefits and principal guarantees are provided for an additional cost.

Structured CDs

Structured CDs are another option that may allow you to maintain the security of your investment at maturity and have the potential to earn market returns. They can be linked to a broad range of underlying investments, from equities to commodities and currencies, among others. Regardless of market conditions, your initial investment in a structured CD is FDIC-insured (up to statutory limits) ensuring that you will receive 100% of your invested capital at maturity. This combination of protection and market-linked returns can give investors the opportunity to grow their assets with less market risk than traditional investments.

In selecting these investments, however, investors should contact their Financial Advisors about specific offerings. Structured CDs are not traditional bank CDs. They are subject to market risk in addition to interest rate risk if they are sold prior to maturity. They do not pay fixed interest payments at prevailing market rates or may not pay any fixed interest payments. They may be subject to IRS Treasury regulations that apply to contingent payment debt instruments. Please note that any payment on structured CDs is subject to the credit risk of the issuer.

Fixed income securities are subject to market risk and interest rate risk. If sold in the secondary market prior to maturity, investors may experience a gain or loss depending on interest rates, market conditions and the credit quality of the issuer.

TIPS are not as widely traded or as well understood as Treasury fixed-principal securities, and market conditions may result in larger bid-asked spreads than the bid-asked spreads for fixed-principal securities with the same time to maturity.

CDs present certain investment risks that you should discuss with your Financial Advisor prior to making an investment decision. In addition, you and your legal advisor may contact the FDIC concerning insurance coverage on CDs at 1-877-275-3342 or visit their website at **www.FDIC.gov**

Investors are advised to consider the investment objectives, risks, and charges and expenses of the variable annuity and its underlying investment options carefully before investing. The applicable variable annuity prospectus contains this and other important information about the variable annuity and its underlying investment options. Read it carefully before investing or sending money. Products and features are subject to state availability.

Before investing in structured products, you should carefully read the detailed explanation of risks, together with other information in the relevant offering materials, including information concerning the tax treatment of the investment.

During the accumulation phase, there is also still time to try to recoup from poorly performing investments. Market fluctuations are usually the biggest risks threatening a portfolio and adjustments can be made through asset allocation. One way to address volatility is to invest in products that do not move in tandem with equities, such as commodities. "Over longer time periods, the importance of a well-thought-out strategic asset allocation cannot be overstated. While adjustments to the asset allocation are always an option, this should occur in a disciplined way, cutting out emotional factors," comments Winkler.

Transitioning: Ten years before retirement

Ten years before retirement, the countdown begins. An asset allocation review is also essential at this time to see whether your portfolio is designed to have the opportunity to grow to generate an estimated future level of retirement income. Perhaps your mix of stocks, bonds or other vehicles must be adjusted to help pursue better results. "But stay cautious with ideas of suddenly becoming too aggressive with your investments," recommends Winkler.

It may also be time to consider investing for downside protection and building liquidity. If your wealth is concentrated in real estate or other more illiquid assets, it may be time to consider shifting some of that wealth into something that's income producing.

If you have been an aggressive investor, it may be time to think about a slight portfolio makeover. Bad market downturns during this 10-year period can hit your portfolio hard and have a lasting effect during your entire retirement. Consider pulling out of your riskiest investments and placing more of your assets in bonds. "As you move forward in your investment time horizon and the accumulation phase gets shorter, downside risk management becomes more important," says Winkler.

Transitioning: Five years before retirement

The five years before you leave your job are a critical transition period for investing. At this point, investors need to get specific about their retirement needs, putting numbers together to shift from an accumulation to a distribution mindset.

It may also be time to review your investment strategy and to make any adjustments that may help you pursue a realistic retirement income estimate. Start thinking with your Financial Advisor about an asset allocation mix and a portfolio that can finance your regular needs once you leave work. Consider how to transition your existing accounts into this newly positioned portfolio over the next few years with minimum disruption to the originally selected investment strategy. That includes an assessment of your total asset allocation, including your investment portfolio and all retirement accounts and the potential addition of downside protection to maintain income sustainability. Plus, you may want to take steps to build up your cash reserves for the day when you no longer receive a pay check. Generally, six months to one year's worth of cash reserves as a safety net is recommended.

During the transitioning phase, investors should also review their IRAs and other retirement accounts to address tax and legacy strategies based on their age. You may want to consider converting a portion of an IRA to a Roth IRA in the near future, which, as long as you're at least age 59½, will provide tax-free retirement income once it is open for five years. Currently, your annual income must be $100,000 or less to convert to a Roth IRA, but that restriction disappears in 2010. Since Roths have no mandatory distribution limits after age 70½, a requirement for traditional IRAs, they are one way to leave a tax-free legacy to heirs. But conversions also carry tax consequences.

Retirement day

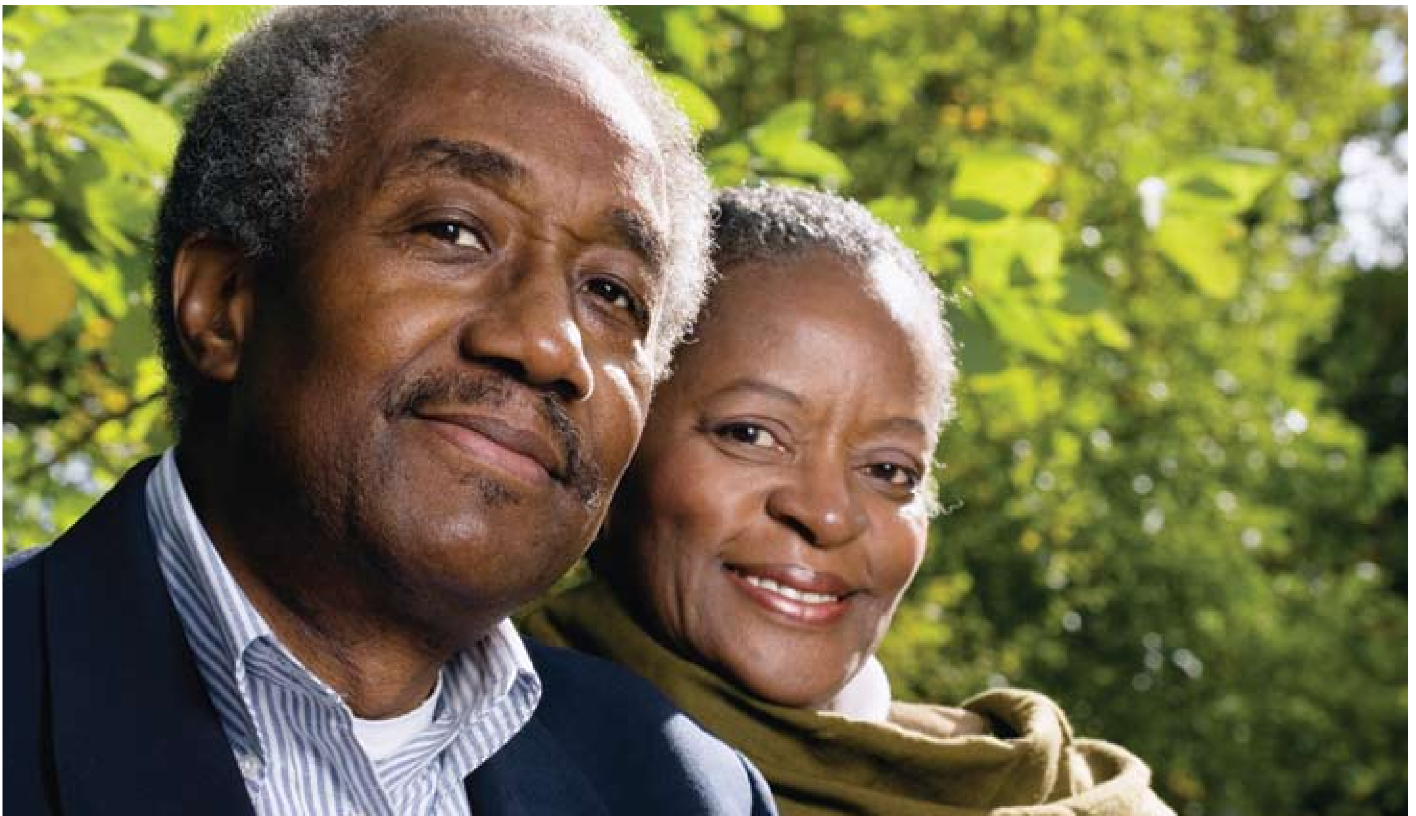
As a new retiree, you have the question of how to invest in retirement. Winkler advises, "Diversification continues to be vital. New retirees should perhaps look at having at least 10% to 20% of their portfolios in equities or equity funds, depending on their individual circumstances. They will still need to pursue growth to help protect their purchasing power throughout retirement."

4 Monitor your plan:

A systematic annual review and possible adjustments of the numerous variables that go into a retirement income plan are important for sustaining success. A good plan also accommodates mid-course corrections during retirement years if clients find they are spending too much or needlessly constraining their lifestyles.

From a long-term perspective, diversifying and maintaining a more cautious withdrawal level should work out well for the longevity of your wealth. Planning well in advance of your retirement can help your chances of outliving your assets. /

When deciding to retire, you can't ignore the economy



Is this the time to retire?

If you're one of the millions of Americans who are considering retirement in the near future, this is a reasonable question. In fact, a new study by the American Association of Retired Persons (AARP) found that more than a quarter of baby boomers, ages 45 to 54, said they had postponed their retirement plans because of the recent economic downturn.

The uncertainty over retiring today is understandable. Though many Americans may still be sitting on large gains from homes, stocks and other financial instruments bought years ago, the recent market turmoil has led to worries that their investments will diminish to the point that they won't have enough money to get through retirement.

But keep in mind a recessionary economy doesn't have to upset a lifetime of careful financial planning. One bad year doesn't mean you're going to need to change your life plans or your investment strategy. However, events like these often trigger strong emotions, and emotions often throw the best laid retirement plans off course. Our feelings can cause us to do precisely the wrong thing at exactly the wrong time, like getting 100% out of the market when we suffer losses. Longer lives and higher healthcare costs, however, are just a few of the reasons why investors will continue to need a degree of market exposure in their portfolios as they age.

Investors thinking of retiring soon face an unknown few years ahead of them that could resemble nothing they have seen in the past.

"Fortunately, there are more ways today than there have been in the past to preserve this exposure and still help retirees manage market risks," says UBS research strategist Robin Miranda. "Investors should look at their retirement risks comprehensively, even though the economic outlook and current market volatility do concentrate the mind specifically on the investment portfolio. For starters, all assets, including home and business valuations, debt positions, bank accounts, insurance coverage and income sources should be reviewed before making portfolio decisions. After a thorough review, investors may find they have more options than they expected."

Miranda also notes that investors who are thinking of retiring soon should understand that the next few years are full of unknowns as far as the economy and markets are concerned, so it is important to control what you can control. If retirees can build in a few more years for their money to work for them, such as by working longer or cutting expenses, the right thing to do is to stay diversified and not lose patience with their equity investments. "That will leave you well placed for the next upturn in the markets," she says.

Nonetheless, Mike Ryan, head of UBS Wealth Management Research—Americas, does suggest investors take a defensive position with their portfolios given today's global economy. He explains, "We believe the financial markets are not yet fully prepared for a global downturn in economic growth, so we advise investors to adopt a defensive portfolio stance, with reduced exposure to equities, particularly in cyclical sectors and in emerging markets."

Taking an early retirement

Despite today's market volatility, some employees are considering an accelerated timetable for their retirement as more companies opt to offer early retirement packages. It's important to value the financial sufficiency of these offers, considering some packages are usually finite in the benefits they give you. Your Financial Advisor can work with you to evaluate whether the terms work financially so that you don't face the risk of outliving your wealth.

Early retirement packages, for example, usually include salary and benefit terms based on length of service, and in the latter case, age. Deciding if it's more advantageous to take the payout as a lump sum or as a continuation of a salary is a crucial decision. There are pros and cons either way. The continuation of a salary, for example, may prolong the continuation of benefits, while a lump sum provides protection from a failing company. And keep in mind the Internal Revenue Service rules about early distribution of retirement plans. Someone who is over age 55 and terminated from a job can withdraw from employer retirement plans without incurring the 10% penalty for early withdrawals.

A key issue may also be how long health benefits are extended, particularly if you're in your 50s and Medicare eligibility is a decade away. You may be paying significant health insurance premiums out of pocket going forward. How much you hold of your company's stock and if your compensation includes stock options can also be an important consideration, particularly in a time of stock market uncertainty. Stock options, for example, usually have to be exercised within a narrow window after retirement, from 30 to 90 days. If your company's shares are in a slump, you may be looking at lower values for your options due to dwindling profits.

Extending your career

Many pre-retirees do make the choice to work longer. A recent AARP survey, for example, found two-thirds of respondents plan to work beyond retirement age, and many retirees have entered second careers. The advantage is being able to invest your retirement package, move into another job and continue to earn a salary and additional benefits.

Deciding when to retire is not an easy decision, but these issues may help you think it through. Let your thoughts about them sit for a while, talk to your Financial Advisor, and use the information you have and your intuition to make a decision. /

Eyeing a recovery of the housing market collapse

The current financial crisis, engendered by the bursting of the housing bubble and the subprime mortgage predicament, is both broad and deep. With all its pervasive threats, the crisis is causing many Americans to be nervous about their ability to keep up with their investment plans for the future—particularly, their retirement.

As a result, based on observation of investment behavior, risk aversion is at high levels. But the severity of the markets does not necessarily mean that long-term investors should completely shift away form their originally intended investment strategies.

Historically, financial crises, such as the housing downturn, have ultimately reversed themselves and created brighter macroeconomic outlooks. By drawing upon UBS analysis of this U.S. housing collapse and historical similar events, investors can begin to form informed views of where to position their portfolios when the economic healing eventually starts to take place. The recent UBS Wealth Management Research—Americas (WMR) report, *Crawling from the rubble: How long will it take to pull out of the housing market collapse?* (September 26, 2008), analyzes six housing and credit crises that occurred at the beginning of the 1990s in six different countries. It then uses that historical information to project how a U.S. recovery from the current housing market bust and credit crunch will take shape.

Observing the 1990s

The beginning of the 1990s was characterized by a global recession, with significant consequences for several economies. Among them, six were largely due to the bursting of a real estate bubble: the U.S., Japan, the United Kingdom (U.K.), Switzerland, Sweden and Finland.

The cause of the bubble in each of these markets was similar, each being the result of an expansion of credit due to easier institutional or regulatory frameworks. Yet the outcomes of each were different. The U.S. and the U.K. experienced heavy, but brief, recessions before their sharp recoveries—graphically represented as a V-shaped recession. Sweden and Finland were drawn into a deep, prolonged recession with a slow but eventual trend upward into recovery—the U-shaped recession. Unfortunately for Japan and Switzerland, their real estate crises prompted nearly a decade of stagnation, defining their recession as L-shaped.

It all began with lax lending standards

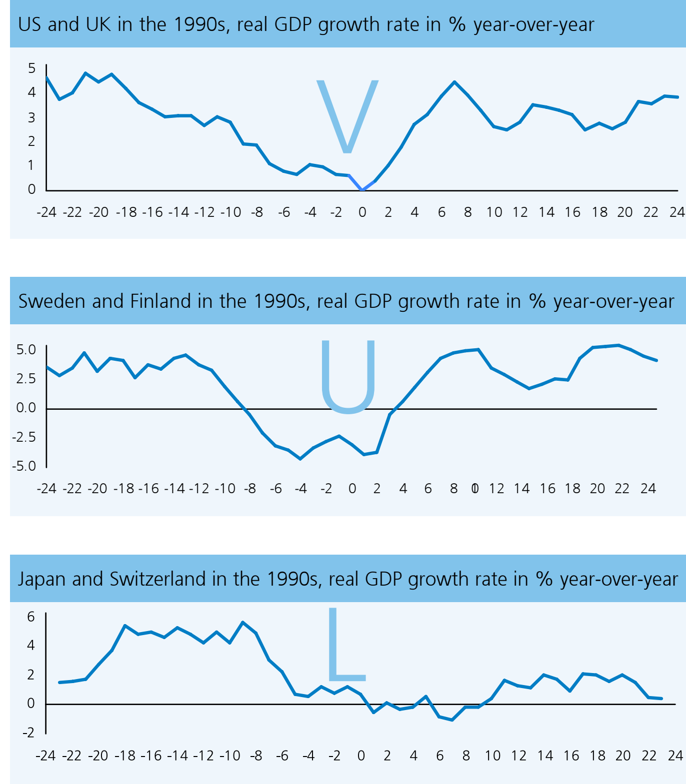
The credit expansion that kicked off the crises for each of these countries in the 1990s was provoked by three factors:

- Financial innovation
- The easing of lending standards
- Less stringent liquidity requirements

Looking into past experience, one notices that U-shape types of recession occurred where the credit expansion was the largest. But even in the economies with the "smallest" credit expansion, they were still confronted with significant growth rates of credit over a rather long period of time. Once the bubble burst, the credit expansion moved towards credit stagnation in the case of L-shaped scenarios or towards credit recessions in the case of U-shaped scenarios. In the case of V-shaped scenarios, only a slowdown in credit expansion was seen.

The current U.S. credit expansion has not yet corrected in the way it has in the past. This seems more in line with a V-shaped type of recession.

The three types of recessions 24 quarters (six years) before the lowest point of recession and the 24 quarters after the lowest point.



Source: IMF and UBS WMR, as of September 26, 2008, level = real GDP per capita

What credit expansion fuels

An excessive credit expansion leads primarily to three phenomena:

Housing and real estate prices propelling too far upward

The housing bubble over the last couple of years in the U.S. is comparable in the order of magnitude to the Swiss or the Swedish real estate bubbles of the 1990s. It is clearly less extreme than the bubbles seen in Finland, the U.K. or Japan (average yearly real price increase above 20% in the last two years before the peak). The U.S. bubble is comparable in the order of magnitude to the bubbles that have started to correct, or are still ongoing, in the U.K., France and Spain. It seems that within the U-shaped scenarios, the house prices were “overshooting” (the correction went deeper, but the recovery was more rapid) than in the V-shaped and, especially, the L-shaped recessions, where it took a period of almost 10 years on average to see positive year-on-year (y/y) real price growth.

A construction boom and bust

A housing bubble usually implies a construction boom. However, with the exception of Finland, the construction boom starts to correct before the housing prices have reached their peak, four quarters on average. The same can be observed in the U.S. today. Housing starts and building permits have begun to correct approximately two and a half quarters before the house prices reached their peak. In the third quarter of 2007, they were down roughly 40% from the peak.

A consumption boom and bust

In the report’s opinion, easy credit and positive wealth effects due to the appreciation of real estate property also led to excessive consumption. On average, real consumption growth rates before the crisis in the 1990s were around 4.2% y/y and around 2.6% y/y after the crisis. However, the correction was much more pronounced in the L-shaped situation, where the crisis led from a 3.4% y/y real trend growth in consumption to a meager 1.2% y/y. The current consumption growth rate in the U.S. has barely corrected on a y/y basis. In this sense, the current U.S. situation seems more in line with an L-shaped scenario than with a U- or V-shaped scenario.

The U.S. conclusion

According to the report, it seems very likely that the U.S. will end up in a U-shaped type of evolution, with a prolonged period of sub-trend growth. WMR’s prediction of the U-shaped scenario—avoiding long-term stagnation—is to a large degree premised on the fast action of the U.S. government and the easing of monetary policy.

One observation for investors to contemplate as they take this information into consideration for their financial planning, is that in U-shaped economies, equities tend to outperform after a crisis.

In fact, the potential for attractive returns is already emerging given the severity of recent sell offs. Since the recovery is expected to be a long, drawn out stretch of subdued growth, WMR recommends a defensive positioning for one’s equity investment strategy, looking for sectors and companies with stable earnings. Yet as always, investing in an event-driven equity market should be dictated by an investor’s time horizon and risk tolerance.

For more information regarding the UBS investment guidance resulting from this analysis, please contact your Financial Advisor. /

For a full copy of the report, log onto www.ubs.com/onlineservices and click the Research tab. Two sources of UBS research are available to UBS clients. One source is written by UBS Wealth Management Research (WMR). WMR is part of UBS Global Wealth Management & Business Banking (the UBS business group that includes, among others, UBS Financial Services Inc. and UBS International Inc.), whose primary business focus is individual investors (“Private Clients”). The other source is written by UBS Investment Research. UBS Investment Research is part of UBS Investment Bank, whose primary business focus is institutional investors.

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Turning theory into practice

How advances in economic thought have helped investors make sense of the financial markets.

Investing is a perplexing business, and never more so than in the past decade. Private investors have been treated to a technology boom and bust, followed swiftly by a difficult period of falling equity returns and low interest rates. Then a global economic and market recovery segued into turmoil in the equity and credit markets.

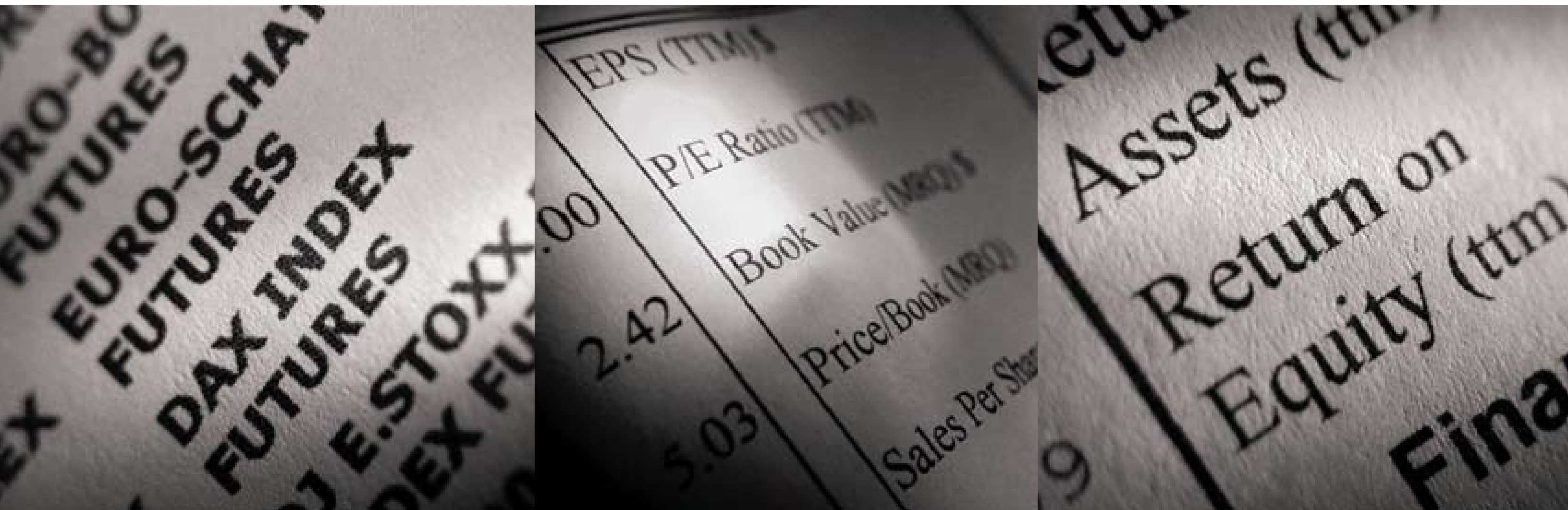
How investors and the institutions that serve them react to these market cycles seems unpredictable. But it really isn't. Investor and market behavior has been the subject of intense academic study over the past century. And the advances made in these studies are soon translated into new investment philosophies and styles. Understanding the evolution of investment styles allows private investors to better comprehend their own approach to investing, as well as the advice they receive.

Since the 1950s, the investment landscape has changed out of all recognition. Some of this change is attributable to the development of markets. Fifty years ago sophisticated investors concentrated their efforts on the stock markets; bonds were low-yielding investments, thought appropriate for risk-averse investors, but offering little opportunity to those seeking significant returns. Today, both sophisticated and unsophisticated investors have access to the widest possible range of markets and instruments, from the traditional stocks and bonds to non-traditional investments and derivative products across the globe.

In the 1950s and 1960s, the most successful investors were active investors. Many, such as the U.S. investor Warren Buffett and the Hungarian stockpicker André Kostolany, adopted a fundamental approach. Buffett's investment style combined aspects of both value and growth investing with a distinct contrarian overlay (see glossary on page 25). He had early success by choosing companies in under performing industries and making a commitment to hold these investments for the long term or until a certain pre-identified stock price was reached. Kostolany identified a link between the economy and eventual stock market success. He was an early investor in German companies after the Second World War and benefited from the subsequent economic boom.

Identifying familiar concepts

As these investors were succeeding in the real world, economists were examining data on investment performance, trying to identify mathematical models that explained the behavior of securities. Some of the most influential thinking on investing came out of this work, primarily the well-known concepts of portfolio diversification, the capital asset pricing model (CAPM) and the efficient markets hypothesis. The ideas sound complex, and indeed they are, as is the math that was used to prove their validity. But in fact, each of these three concepts is very familiar to private investors.



Understanding different investment theories and being well-informed of the markets can help you pursue successful investing.

The efficient market hypothesis is associated with the idea of a random walk, which suggests that the past performance of markets is no indication of future performance.

Harry Markowitz, who with his colleagues won a Nobel prize for economics for his work on portfolio theory, first postulated the value of portfolio diversification in 1952, and refined the idea for the rest of his career. When a private investor is told that it makes sense to hold a range of securities in a number of different markets, this is because Markowitz proved that by holding a number of uncorrelated assets, an investor may achieve a better return with less overall risk. Portfolio diversification is the flip side of CAPM, which is essentially a method that an investor may use to identify whether a security is fairly valued.

Prior to the work started by Markowitz, markets were seen as unsystematic and unpredictable. The mathematically based theories of Markowitz and those that followed him sparked a revolution in investing, sending researchers in search of an overall theory that could explain market movements. In a theory that evolved from his Ph.D. thesis, Eugene Fama seemed to have come up with the answer: the efficient markets hypothesis. He argued that at any given time, security prices reflect all available information, that they are in fact efficient.

All known information

This idea lays down the gauntlet in front of the active investor. How can an investor identify stocks that will outperform if in fact all known information is reflected in the prices? If a market is efficient, no information or analysis will allow an investor to outperform the market or the market benchmark. In fact, Fama's analysis put forth three kinds of efficient market—weak, semistrong and strong. These three differ in that weak efficient markets reflect past data; semistrong markets, all publicly available information; and strong markets, all information, public or private. When the efficient markets hypothesis was broadcast into the popular investing imagination, however, these distinctions were overlooked. The importance of this point will become apparent later.

The efficient market hypothesis is associated with the idea of a random walk, which suggests that the past performance

of markets is no indication of future performance. This familiar phrase reflects the thinking that if prices reflect all known information, then tomorrow's price will reflect only tomorrow's news and be independent of today's price changes.

So what do random walks and efficient markets have to do with how real people invest? Quite a lot it turns out. Rather than risk failure by pursuing an active investing strategy through individual security selection, the efficient markets hypothesis suggests that a better investment course, particularly for a non-professional investor, is to invest in a way that mirrors the behavior of a market, which is to act as a passive investor. Since the first index fund was launched in the early 1970s, this investment style has taken hold across the investment world, with both individual and institutional investors embracing the technique. Passive, or index funds, promise the return of a market index, up or down, for a minimal cost.

But active investors haven't disappeared, which suggests that the efficient markets theory doesn't tell the entire story. Indeed, Fama's original theory holds a clue. There are different flavors of market efficiency. Theorists have spent years debating the actual efficiency of real markets and the idea that stock market movements are at least partially predictable. Many empirical studies have determined that, not surprisingly, markets are not entirely efficient ever and some markets are much less efficient than others. As far as investors are concerned, this suggests that there is still room to identify and profit from anomalies in less-than-efficient markets.

Irrational investors

The efficient markets proponents focused on the price movements of securities as evidence of the rational behavior of markets and by extension, investors. Another branch of financial economics has been reconsidering this assumption, trying to identify how and why some investors are more successful than others. Their research revealed that, in fact, investors are far from rational. Rather they are routinely irrational and inconsistent. These observations, documented systematically by theorists that combined expertise in psychology and economics, such as Daniel Kahneman, Richard Thaler and Amos Tversky, have led to the development of the new discipline of behavioral finance.

Kahneman and Tversky opened up the field in 1979 with their paper on prospect theory, which found that individuals are more distressed by prospective losses than they are happy with equivalent gains. Meir Statman investigated further and found that investors are motivated by a fear of regret, which in investment terms often means investors shy away from selling a security that has lost value because it will involve acknowledging an error in judgment. Investors avoid the feeling of regret even as they are losing more money.

The irrational behavior of investors has offered a wide seam of investigation for behavioral theorists, notably Richard Thaler. The economist has documented an entire series of anomalous investor behaviors that he believes can be exploited for investor gain. These include the January effect, which describes the premium that investors received for holding a security in January, and the status quo bias, which describes the desire of investors for things to remain the same.

Behavioral theory provides a rationale for active investors, or in today's jargon, for those investors seeking alpha. Rather than speaking of active versus passive today, many investors separate investment returns into two attributes: beta, or the return attributable to the market, and alpha, which is attributable to manager skill. Part of the reason for this changing terminology is technology. Thanks to the increased use of derivatives, it is possible to gain beta from one market and alpha from another.

As behavioral finance ideas have taken hold, the efficient markets theorists have been seen to re-examine their long-held beliefs. This doesn't mean that they have given up on the idea, far from it. Rather most acknowledge the idea that markets can be somewhat irrational, partly because of the activities of poorly informed—or irrational—investors. In essence the two movements seem to be finding bits of common ground. As behaviorist Robert Shiller has argued, because markets are unpredictable that does not mean they are efficient.

For private investors, the theory may seem too complex to have much application to their own portfolio. But that probably isn't true. It's important to understand the pervasiveness of the efficient markets hypothesis, even if only to note that not all markets are as efficient as each other. This knowledge can inform a different approach to investing in a large liquid market such as the U.S. stock market rather than a small emerging bond market.

Researchers have found that people are willing to take more risks to avoid losses than they are to realize gains.

Behavioral finance theory sheds some very important light on how investors react on a day-to-day basis. One development is the tendency to characterize private investors by their risk tolerance, identifying behaviors that might not be immediately evident. An investor's background and past experience can play a significant and sometimes not-very-rational role in the investment process. Researchers have found that people are willing to take more risks to avoid losses than they are to realize gains. Faced with sure gain, most investors are risk-averse, but faced with sure loss, investors become risk-takers.

Acknowledging the fallibility of humans as investors has opened up new avenues of investment product development. Rather than simply relying on investors to choose the right investments at the appropriate risk tolerances, investment management firms now offer a range of products that take the guesswork out of the process. An absolute return mandate, for instance, takes as its starting point the idea that investors do not wish to lose money. By constructing a portfolio that is designed to pursue positive returns in most market conditions, this type of mandate is attractive to an investor that feels loss keenly.

The past 50 years have seen many developments in financial economics, investing and markets. Private investors are reaping the rewards of these developments in the panoply of new products and solutions available to help them invest more profitably. /

Demystifying investment styles

When discussing styles of investing, most explanations rely on an either-or approach. Stocks and bonds go up and down, and investment styles go in and out of favor, so most investment professionals view style as twin faces of the same driver.

Active versus passive

In theory, an active investor rejects the efficient market hypothesis and believes in making money through security selection. Passive investors in contrast believe that a portfolio that mirrors the behavior of a market offers the best opportunity for higher long-term returns. In practice, it is possible to invest anywhere along the active-to-passive continuum, depending on risk tolerance.

Value versus growth

A value investor looks for bargains, for example, securities in industries that are out of favor or ones that are trading below their book or liquidation values. Growth investors, in contrast, seek to invest in companies where earnings are likely to increase at above-average rates.

Multi-style investing

The returns on value stocks and growth stocks are not correlated, thus offering investors an opportunity to gain diversification by holding a portfolio of stocks that has a value and a growth component.

Small cap versus large cap

Because of the cyclical nature of stock market investing, history shows that at some points stocks with large capitalizations outperform so-called small caps. Over the past century, small caps have outperformed large caps, though small cap stocks are more volatile and riskier.

Contrarian investing

Some investors reject the idea of embracing an investment philosophy, preferring to focus simply on the swing of fashion and investing against it. Thus, at times, a contrarian investor would choose growth stocks, when value investing is fashionable. Or small caps when large caps reign.

Preserving paradise

Biologist Illar Muul builds trails between the treetops and develops second homes in the rainforest. To preserve this ancient habitat, he puts it to sustainable use through ecotourism.

The man in the khaki suit slows his pace where the path to the river splits off from the track. He stops by a lemon tree, wipes the sweat from his brow and points out a new building site amid the lush jungle vegetation. "This is where the first house will be," he says.

The man in the Costa Rican jungle is Illar Muul, founder and president of Integrated Conservation Research (ICR), a U.S.-based not-for-profit organization that seeks to protect endangered rainforests through economic incentives. This is an important mission, given that 16 years after the landmark Rio Earth Summit, the world's remaining reserves of forest are still being devastated at an alarming rate.

Even in Costa Rica, which has a reputation for good environmental practices the balance between man and nature is under threat. Although this country has brought in strict laws to keep a quarter of its land in pristine condition, the last three or four years have seen a big rise in demand for second homes, holiday homes and apartments around the many national parks and protected areas. As a result, construction is booming, particularly on the Pacific coast, with devastating consequences for the country's interior. In a bitter paradox, more and more people are coming to Costa Rica to find a piece of paradise but end up contributing to its destruction.

The Estonian-born eco-pioneer, now aged 70, has vast experience as a researcher, consultant and businessman. "I began studying biology at a young age," he says. "In those days, I used to research and collect birds, snakes and butterflies." Muul's early interest turned into a lifelong passion. Among other achievements, he can today claim to be one of the world's foremost experts in flying squirrels. However, Muul is no crank or naïve do-gooder, but a pragmatic idealist. As he cannot hold back the socio-economic tide in Costa Rica or anywhere else, Muul's aim is to demonstrate that there are profitable ways to resolve environmental problems. "We need to make the tropical rainforests so valuable that it no longer makes sense to destroy them," he believes.

"We need to make the tropical rainforests so valuable that it no longer makes sense to destroy them."

A green voice in the U.S. Army

Muul is the author of a number of books and numerous studies and scientific articles on environmental issues, including environmental protection and green tourism. He has lectured at the University of Michigan, was for decades a popular speaker at international conferences, and has advised governments all over the world, along with institutions such as the World Health Organization (WHO), the UN, the World Bank and the Smithsonian Institution in Washington, DC. Between 1965 and 1987, he worked as a

By building bridges across rainforests, Illar Muul uses tourism to preserve biodiversity. His projects also make a profit as they solve environmental problems.

Muul's vision is of clean, economically viable tourism to protect the natural world from speculation and profiteering.

researcher for the U.S. Army's Walter Reed Army Institute of Research, examining the environmental impact of combat situations. He spent nine years in South East Asia, mainly Malaysia, Indonesia and Thailand, where he was asked to study diseases such as malaria and AIDS and their causes.

He also made his name around the world constructing canopy walkways crossing the tops of giant rainforest trees, an area he pioneered. He set up ICR in 1988 after hanging up his army uniform. Given his academic connections and broad experience in tropical research, Muul seemed to have any number of career options open to him, but as an unconventional naturelover—he says he has a 'green heart'—he chose practice over theory. "I could certainly have continued working as a researcher, but I preferred to actually implement what I already knew."

Determined to save the rainforest

Muul constructed his first canopy walkway in the Malaysian Sabah rainforest in 1988. This pilot project in the Kinabalu National Park proved an economic success. The walkway, located in a remote nature reserve, attracted 1,200 visitors in its first year, rising to 10,000 just four years later. Today, more than 200,000 tourists a year flock to the national park, and one in three walk through the canopy of the giant primeval forest on the system of boardwalks, wires and suspended bridges designed by Muul.

He moved on to build canopy walkways in China, Indonesia, Peru, Costa Rica, Ghana and Guyana. All of these projects have achieved profitability within just a few years, with the biggest financial success to date coming at an ICR project in Ghana. This walkway in the Kakum National Park brings in some 60,000 visitors and more than $1 million per year, on one-off construction costs of just $250,000. According to Muul, these figures bear out his belief that using forests for sustainable tourism affords the best protection for them. "The national park's income is much higher than the amount the Ghanaian government could have received from issuing lumber licences," he calculates.

Muul has never regarded constructing jungle walkways as a business venture, but rather as a service to nature and an opportunity for local people to earn income. "It takes regular income to create the long-term incentive needed to conserve the forest," he explains. For him, the greatest satisfaction is in "seeing something corrected". Muul, who is remarkably fit for his age, lives a frugal life despite all his business success. He still prefers to sleep under canvas and put the saved accommodation costs into one of his many projects. "Because I know that the rainforest can be saved, I

Beauty brings destruction on itself as people trigger a construction boom that threatens Costa Rica's rainforests on the Pacific coast and eats further and further into the interior.

put this objective above all else," he says. "I have no desire to end up a Don Quixote-style gallant failure."

ICR frequently works with local volunteers. As Muul explains: "In everything we do, we give our local partners the feeling that this is their work and their own project, not our work and our plans." Wherever possible, he likes to befriend his neighbors and win them over to his philosophy. A good example is Ernesto Staiger, who has a 40-hectare farm in Costa Rica. "Illar is honest through and through, even if some of his ideas can sound a bit fanciful," attests Staiger. But ever since Muul explained to him the necessity for biological corridors in the survival of many wild animals, Staiger intends to let teak trees with a market value of more than $500,000 stand, rather than chopping them down. "He wants to practice sustainable farming on his 40-hectare patch," says Muul, who is delighted at his neighbor's change of heart. "That is worth as much as if he had donated $1 million to ICR."

Creating a patch of paradise together

Muul is now planning his first fully integrated conservation project right next to Staiger's farm, just a few hundred meters from the Carara National Park. An environmentally sustainable model settlement is to be constructed on 18.6 hectares of former farmland that ICR acquired 18 months ago. The project includes four to six airy bamboo bungalows, a visitor restaurant and a central 'eco park' with local plant and animal species. Muul's vision is of clean, economically viable tourism to protect the natural world from speculation and profiteering. His deep regret is that we are consuming our biological heritage rather than preserving it. Muul has already erected a board alongside the dirt track offering 'plots with ocean view', with prices at between $120,000 and $150,000. "Together, we will build a corner of paradise here," he promises. "The first plots of land we sell will pay off our loans, and the proceeds from subsequent sales will go towards buying the land that still divides what we own from the national park."

Despite his age, Muul has no intention of slowing down or retiring altogether. He firmly believes that there are now the financial resources, proven technology, scientific data and professional expertise to save the rainforests. All that is lacking is coordination between different groups of people in possession of these four items, and their desire to work together. As he bemoans: "Instead of agreement about the big picture, there is too much nitpicking over small differences."

In order to give a boost to his latest project, Muul first wants to build an open-air walkway here, on the banks of the Rio Tarcolitos. In this setting, home to a handful of ancient giant trees, you can see a puma slink by at night, while monkeys gambol in the treetops by day. As Muul gazes pensively at the flow of the river, a blue butterfly alights on his shoulder for a moment. Muul is delighted: "If a butterfly lands on you, that means you are welcome." /

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