Financial markets in turmoil, the global economy full of risks. Time to play it safe? Not necessarily – courage might still pay off.

MICRO
A financially secure life demands investment – and this is as true for the individual as it is for an entire continent.

MACRO
The financial crisis is global, markets are in turmoil, but volatility itself could be an investment opportunity for pension funds.

META
Iconic architect Zaha Hadid talks about her zest for buildings, daring to follow a path against all odds, and the risks and rewards of doing it your own way.
REAL GDP GROWTH (ANNUAL PERCENT CHANGE)

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*projected

Source: IMF’s World Economic Outlook (April 2008); excerpt shown here; complete statistics cover 1980-2013 and 205 countries, economic regions and geographic regions.
THE FIRST WORDS IN A NEW MAGAZINE ARE CRUCIAL.

They set the tone and objectives of the publication, and should capture the ideas and spirit behind its creation. That is why I write to you, with all care and consideration, the words: Be Brave.

Launching an international magazine may seem a courageous undertaking in a time of economic turbulence. After all, it is expensive, and no matter how much analysis and preparation go into development, success is never guaranteed. Yet, in full awareness of the risks, we at Allianz Global Investors have confidentially pushed ahead with PROJECT M.

WHY? FIRST, WE BELIEVE there is space for a magazine dedicated to retirement and investing issues. Many fine publications already do this. However, we believe that our global perspective, proven experience, and comprehensive network of experts and partners, in Allianz and in our markets, will provide readers with unique insights and thought-provoking ideas. You can look to PROJECT M to provide views and opinions from different perspectives and to serve as a forum of animated debate for our readers.

MORE FUNDAMENTAL, because it reflects our philosophy, pensions and retirement savings are not a short-term project. Grim as the current financial news may be, a long-term investor is aware that wild swings are part of the nature of markets. Although their causes may differ, such behavior can in principle be anticipated and planned for using strategies designed, developed and tested against sound risk models over years and decades, not weeks and months. The parameters may change, but the objectives remain clear. Having confidence in the approach, long-term investors can be brave, and adhere to their course.

AND THIS APPROACH offers another advantage. The media is often so embroiled in the immediate that longer-term trends are lost in the cacophony of sound bites and headlines. For example, take our unique cover art depicting the global real GDP growth for the past 30 years. From a global perspective, growth throughout the period has been strong. Certainly there are poor patches, such as after the dot-com bubble, but markets recovered, over-correlations rebalanced and growth powered on. Real GDP growth is discussed as part of the focus article. It is only one of the many challenging and engaging pieces you’ll find in this, the premiere edition of PROJECT M.

Yours sincerely, Brigitte Miksa

BRIGITTE MIKSA
Head of International Pensions
Allianz Global Investors
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BE BRAVE!

2008 has been a good year for bad headlines, but little else. It is now almost 18 months since the US housing bubble triggered a global credit and liquidity crisis. Many people may be nervous. But for the long-term investor, it is now time to be brave.
Any people had hoped that the subprime meltdown would be over quickly. That the repricing of risk would remain contained and be no more than a brief interruption to the benign conditions – robust growth and low inflation – that have reigned internationally for the previous five years. Such hopes were quickly dashed.

Economists, bankers and investors have realized that recovery could drag out for years and will weigh on banks, companies and consumers alike. Although the International Monetary Fund, in its World Economic Outlook in October, noted a modest recovery may begin later in 2009, it said the situation is exceptionally uncertain. So, while there are grounds to be cautious, perhaps even fearful, in the time ahead, are there reasons to be brave? For the long-term investor, the answer is yes. Why? The answer lies in the nature of long-term investing itself, as well as a belief that, as grim as many current numbers and graphs may now appear, long-term forces should ensure areas of growth and investment opportunities.

In Manias, Panics and Crashes, Charles P. Kindleberger observed financial crises have occurred at roughly 10-year intervals over the last 400 years. Examining more than 40 financial crashes from 1618 to 1998, ranging from the currency crisis of the Holy Roman Empire to the Dutch tulip bubble, the Great Depression and Black Monday, Kindleberger explained the boom/bust cycle: “What happens, basically, is that some event changes the economic outlook. New opportunities for profits are seized, and overdone, in ways so closely resembling irrationality as to constitute a mania. Once the excessive character of the upswing is realized, the financial system experiences a sort of ‘distress,’ in the course of which the rush to reverse the expansion process may become so precipitous as to resemble panic.”

The relevance to recent events is striking. Undoubtedly, as Paul Samuelson noted with uncanny prescience during publication of the fourth edition of Kindleberger’s book in 2000, many people may now be kicking themselves for not reading and re-reading this work. Yet, two questions still emerge. First, if financial crises occur so frequently, why are we surprised when they happen? James Wolfensohn, former president of the World Bank, commented in an interview that “the history of financial markets is that the crisis that comes is never exactly the same as the last one. We have an endless capacity to invent new ones.” Then again, it could simply be that in times of optimism, greed, euphoria and despair know no limits, that regardless of the trigger, the root cause remains the same. This then leads to a more critical second question. How can investors prepare for times of such financial turbulence?

In the long-term perspective, the current market turmoil should come as no surprise. Centuries of experience teach that bubbles don’t deflate slowly—they burst. Afterwards markets recover, grow and develop. A recent study of 255 recessions (defined as a year in which the rate of growth of real GDP in a country is less...
than zero) that occurred in 17 Western countries between 1871 and 2006 found that 164 lasted just one year, and the large majority were over in two.*

**BASED ON THESE FINDINGS** and the scale of the current crisis, predictions that a recovery would begin in the second half of 2008 always seemed optimistic. It could even be that 2009 will turn out worse than 2008, but a long-term investment perspective dedicated to fundamentals should have helped investors avoid many of the worst problems of the crisis. Indeed, it is important to remember that fundamentals have always prevailed in the long term and such an approach even finds opportunities in times of crises. Mohamed El-Erian, the co-CEO and co-CIO of PIMCO, and winner of the *Financial Times* Business Book of the Year award for *When Markets Collide*, has noted that the markets provide a duality of both great opportunity and enormous risk. Central to his argument is the belief that the toxic mix of conditions is causing high-quality assets to be divorced from the underlying quality. “Rather than reflecting fundamentals that will eventually assert themselves, these valuations have fallen victim to the seemingly endless disruptions in the financing of highly leveraged owners that have no choice but to dispose of assets in a disorderly fashion,” El-Erian commented. Roderick Munsters of ABP, the Dutch civil servants’ pension fund, expressed it more succinctly: “This is hunting season.” The giant €195 billion fund avoided the losses associated with subprime and is positioned to take advantage of the credit crunch. Integral to the approach of long-term asset managers like El-Erian and Munsters is the admission that predicting the precise direction of current global markets is difficult, particularly as many of the vulnerabilities in both the real economy and financial sector remain hidden. However, implicit is the belief that markets will recover and that such wild market swings can be compensated for. Munsters cheerfully admits to turning in negative

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**WORLD ECONOMIC OUTLOOK: GDP GROWTH (APRIL 2008)**

![Graph showing GDP growth](image-url)

*Source: International Monetary Fund (IMF)*

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**New opportunities for profits are overdone in ways so closely resembling irrationality as to constitute a mania.**

CHARLES P. KINDLEBERGER

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numbers because he has faith that investments will rally. When it comes, the new normal will not be as exhilarating as the recent past, but in the long term markets will rebound.

**WITH THE CREDIT CRISIS** blame game in full swing, what lessons can the long-term investor take from events of the past 18 months? In its 2008 Global Risk Report, the World Economic Forum commented that globalization has allowed greater participation in the risk economy and improved financial diversification, but it may have resulted in a systemic under-appreciation of risk. The increasing complexity of financial markets and the rate at which they are evolving make the task of avoiding and managing systemic risk extremely difficult. Plus the increasing global interconnectness has multiplied the possible pathways for the contagion of financial risk. The paradox is that “while the financial system has been made more efficient and stable in normal times, it is more prone to excessive instability in really bad times.” As a result, an awareness of risk and risk management will be increasingly viewed as a prerequisite for effective control in years ahead. Failure to do so means a repeat of recent experiences: the destruction of corporate reputations, the erosion of wealth and the collapse of institutions. Critics will be quick to note that many institutions hardest hit by the crisis have some of the largest risk management teams. However, over-reliance on limited risk assessment or particular models should be avoided. And particularly when emotions and greed override reason, it lays the groundwork for disaster.

El-Erian has also stressed the importance of risk management. He has commented that we are “exiting a world in which the difference among individual investors’ performance was essentially a function of the degree of their exposure to the most illiquid and leveraged asset classes, and entering a world where more sophisticated risk management capabilities will increasingly be the main differentiator.” Be brave: sophisticated risk management, divorced from the emotions that have characterized the markets in recent years, is an important element in the informed

* Source: Paul Ormerod, "Global Recession as a Cascade Phenomenon with Heterogeneous, Interacting Agents" (May 2008). "In no fewer than 40 out of the 136 years, no single country was in recession, and there is no example of a year in which all 17 were simultaneously in recession."
investment strategy of the long-term investor, along with proven instruments such as true diversification. This supports long-term growth.

**NO ONE IS PREDICTING** that volatility will diminish soon, or that nasty shocks may not still lie in wait. In fact, with justification, the current crisis is described as the worst since the Great Depression. Certainly, long queues outside UK and US banks evoke parallels. But then, this label has been applied numerous times since 1929. And “worst since” highlights similarities between the two eras, not differences. Between 1930 and 1933, the annual output of the American economy fell by nearly 30% and the unemployment rate hit 25%. US shares lost three-quarters of their 1928 value and did not regain it again until 1952. This catastrophic collapse remains by far the worst to ever hit the Western world since the Industrial Revolution.

In the intervening years, economies have sustained potentially devastating shocks and emerged largely unscathed. For example, on Black Monday in October 1987, stock markets around the world collapsed. In a single day, the Dow Jones Industrial Average fell by 22% alone. Yet, this failed to tip the world into recession. Central banks moved quickly to buoy credit market conditions and confidence was regained. By 1989, the Dow Jones had climbed back to the pre-panic levels. The focus on gloom and doom also means the underlying structural success, the grand themes shaping our times, are downplayed, such as the performance of the emerging economies and the massive growth of the middle class within these markets. Although the IMF expects global real GDP growth to slow significantly, from 5% in 2007 to 3.9% in 2008 and 3% in 2009, this would still be more robust than many years in the two decades until 2000 (3.1% average annual growth). Emerging markets will drive the bulk of the growth, as they have done from 2000 to 2007. Although these economies are expected to lose steam, with growth projected to drop to 6.9% in 2008-2009 (down from 8% in 2007), they have proved relatively resilient to the crisis so far. Behind these figures is one of the most astounding events of modern times: the explosion of the world’s middle class. It has been noted that about 70 million people a year are entering this wealth group globally and that the emerging markets will be home to an estimated 1.15 billion of them by 2030. The hopes, aspirations and financial power of this segment will help emerging markets continue to develop as an independent driver of growth in the decades ahead.

For brave investors, opportunities exist for the long term. However, we caution that bravery in financial terms is not so much the notion of someone rushing into a burning building without thought for the dangers. Rather it is the courage of those who remain steadfast in the face of turbulent seas, who hold their course – and nerves – while those around panic.

**STATEMENTS**

*Current markets offer great risks and great opportunities*

**MOHAMED EL-ERIAN**, co-CEO and co-CIO of PIMCO

“I believe a disciplined management approach is the most effective way to identify new opportunities, reduce risk and avoid getting caught up in volatile market cycles. I also believe that our focus on secular trends offers the greatest opportunity to add value for our clients over the long term. And every morning, I ask myself if my views are consistent with the data coming out. PIMCO and I don’t rely on what Wall Street tells us.”
In his seminal paper “Portfolio Selection,” Nobel Prize-winning economist Harry M. Markowitz demonstrated that an investor can reduce portfolio risk simply by holding imperfectly correlated instruments. He argued that diversification leads to the reduction of risk in a portfolio, but does not necessarily reduce returns. Recently, as markets increasingly move in lockstep, it seems the attendant increase in correlations could unhinge this cornerstone of portfolio theory. How relevant are these concerns? Experts at Allianz Global Investors (AGI) recently examined how stable the correlations between asset classes are, in particular how correlations behave during market downturns.

The study examines market behavior over the last 20 years based on the weekly returns of major indices. First, AGI analyzed how correlations behave over time, focusing on equity markets. More volatile than bonds, stocks are the main contributor to the overall volatility of a portfolio. The average correlation between equity markets has increased in the last two decades, reducing the overall diversification benefit. In addition, there is evidence that correlations increase during market downturns, expressing the dangerous herd behavior displayed during critical market periods. To verify this observation has a statistical basis, AGI divided the last 20 years into periods of “normal markets” and periods of economic turmoil and sharp market downturns.
AS ILLUSTRATED in the heat map (below), comparing “normal markets” (top) with “markets in turmoil” (bottom) reveals a significant increase in correlation (marked by increasing warm tones – yellow, orange, red), especially in the equity markets (represented by the central, black-rimmed, rectangular area of both maps). The areas divided by the black lines in each graph are (left to right and top to bottom) bonds, equities and alternatives. The principal factor underlying this trend is globalization, which creates greater uniformity among financial markets. As a consequence, the boundaries separating asset classes (the rectangular areas of the maps) are becoming blurred – a trend reinforced by faster dissemination of market intelligence. It would seem natural to conclude that it is no longer sufficient to disperse the investments over different equity markets. Is broadening the asset base the answer?

A SEPARATE ANALYSIS based on monthly data indicates that several other asset classes – for example, real estate or alternatives, such as private equity – display a tendency similar to that of equities. Investors are also increasingly gaining access to asset classes traditionally restricted to institutional investors and high-net-worth individuals. These days, almost anyone can invest in private equity and commodities. Investors must accept that correlations do not establish immutable regularities. Correlations, and diversification, derivatively, are stochastic. It is not good enough anymore to set up a portfolio with a strategic asset allocation confidently based on correlations thought to hold true once and for all. The developments described here do not call into question the basis of modern portfolio theory; they merely complicate its implementation. There is no reason to panic, since the diversification benefit still persists – even though at a lower level. In a world of increasing correlations, portfolio diversification remains of the essence. In order to continue to capitalize on its risk-mitigating effect, investors must learn to adjust to the new market patterns and do justice to the stochastic nature of correlations in the portfolio construction process.

ONE POSSIBLE SOLUTION: invest in new asset classes such as timber, farmland, art and other luxury collectibles. However, these asset classes should be approached cautiously. Like private equity and hedge funds of past decades, the new asset classes may be surrounded by formidable barriers to entry: often liquidity is limited, while valuation lacks transparency and is overly complicated. Some of these asset classes may be of interest mainly for players – such as university endowments – with very long-term investment horizons and little concern for immediate liquidity. Finally, dynamic asset allocation, which can control a portfolio’s risk, is a promising tool for coming to grips with volatile correlations. The evidence discussed above suggests that the investment game must be played somewhat differently. Understanding and taking advantage of the stochastic nature of correlations and diversification, prudent monitoring of the market environment and emerging asset classes, and the use of dynamic asset allocation can help investors avoid the undesirable effects of increasing correlations and stay ahead of the curve.

ON THE INTERNET
For full details on the heat maps, visit: [www.risklab.de](http://www.risklab.de)
POINTED IN THE RIGHT DIRECTION

Liability-driven investing (LDI), once considered an interesting academic idea, is now a concept essential to improving the sustainability of pension investing.

By Dr. Gerhard Scheuenstuhl

Pension funds invest in assets to meet liabilities. Since around 2000, robust asset markets and stable discount rates encourage a preoccupation with asset performance versus the specific nature of liabilities. Since then, oscillating investment markets, declining funding levels and other factors have brought home the need to structure investments so that performance relative to liabilities is the primary measure of investment success. Enter liability-driven investments (LDIs). Rather than a complete novelty, LDIs are part of the long-standing quest to improve the suitability of pension fund investments to achieve surplus coverage of pension payments. Various routes, from pure immunization to active surplus risk-baring, can be taken.

PURE IMMUNIZATION tries to establish a liability-matching portfolio aiming to avoid financial risk in the pension trust by combining assets that ideally exhibit the same sensitivities to interest rates, inflation and other variables as the liabilities themselves, so that liability cash flows are exactly covered by asset cash flows. Full immunization against surplus risk reflects the attitude of a strongly risk-averse investor and is the extreme expression of an LDI concept. A broader understanding emphasizes the explicit liability orientation of the investment portfolio, allowing for some controlled surplus risk exposure in order to potentially earn the corresponding risk premium.

THE ACTIVE DYNAMIC LDI approach embraces an even wider dimension. In line with recent accounting and regulatory requirements, portfolios promising a higher return in the long run are permissible only to the extent that short-term risks can be controlled, funding level does not fall below a certain level or regulatory stress tests are met. Based on the available risk budget (one hinging on a predefined funding level), asset allocation in dynamic LDI strategies is carefully adjusted over time. A case in point is risklab’s Dynamic Surplus Return...
Management (DSRM) LDI strategy, which is a concept to dynamically hedge liability risks by holding a portfolio whose character matches available surplus risk budgets. When risk budgets increase, the strategy is re-arranged to efficiently employ higher risk budgets and aim for return opportunities by holding a portfolio whose characteristics match the liability opportunity portfolio. Adjustments towards a liability defensive portfolio with only a small amount of tracking error relative to liabilities are made when risk budgets shrink. A DSRM-LDI Strategy typically includes both pro-cyclic and anti-cyclic elements to tune the return advantages of an aggressive strategic asset allocation with the risk advantages of a liability-matching strategy.

**A RISK-EFFICIENT LDI STRATEGY** shifts asset allocation dynamically in line with the available risk budget along a surplus-efficient frontier characterizing those portfolio allocations that earn the highest (systematic) risk premiums to compensate for the assumed surplus risk. Different surplus-efficient portfolios protect against negative market movements relative to liabilities and help resolve the conflict between long-term pension investment goals and short-term (regulatory) risk requirements. The optimal LDI strategy is selected based on the fund’s individual goals and key figures used to manage the business. Possible risks include funding-level deterioration, excessive additional contributions or violation of regulatory requirements. On the return side the fund endeavors to maximize investment returns to improve safety buffers and benefits to its members.

**CHOOSING THE DSRM-LDI STRATEGY** over a static liability matching solution can reduce pension plan funding costs. Higher surplus return expectations go along with additional mismatch and underfunding risks. The advantage of a dynamic LDI strategy lies in its active approach to monitoring risks to try to keep them within acceptable limits. Dynamic LDIs fit well into established structures using subfund set-ups for active portfolio management combined with a dynamic risk overlay component. Strategic positioning along the efficient frontier is frequently implemented with the help of several active and/or passive subfunds using fixed-income, equity or alternatives mandates that employ different, diversified asset return sources. Dynamic risk management operates within a separate overlay fund that does not conflict with subfund management. Overall, LDI solutions of this type can generate a client specific pension investment profile that satisfies the need for a close and transparent linkage between assets and liabilities.
CONFERENCE CALL: CRISES AND OPPORTUNITIES
Three experts, three opinions — and a lively exchange of investment ideas. Gerhard Scheuenstuhl talked to Professor Franklin Allen and Roderick Munsters.

PHILADELPHIA United States
FRANKLIN ALLEN, The Wharton School, University of Pennsylvania
Nippon Life Professor of Finance and Economics (http://finance.wharton.upenn.edu/~allenf/).
The co-director of the Financial Institutions Center is a noted commentator on markets and financial systems. Professor Allen has, together with Douglas Gale, published Understanding Financial Crises and Comparing Financial Systems.

HEERLEN Netherlands
RODERICK MUNSTERS, APG All Pension Group
Board member and chief investment officer of APG (www.apg.nl), which invests the €205 billion assets of the Dutch civil servants’ pension fund.
Managing the assets of the third-largest state pension fund in the world, APG has a reputation for innovation in diversification and risk management.

MUNICH Germany
GERHARD SCHEUENSTUHL, risklab
A managing director of risklab (www.risklab.de).
The company is an expert in developing innovative asset allocation and risk management solutions. Clients include pension funds, corporations, insurance companies, churches, endowment funds, investment companies, banks and family offices. The company is owned by Allianz Global Investors.
The crisis in financial markets has stirred up many ideas, including those on new investment opportunities. Gerhard Scheuenstuhl asked Professor Franklin Allen and Roderick Munsters about crises and opportunities:

Scheuenstuhl: Gentlemen, thank you for taking the time to discuss some topical pension finance issues so we can better understand what is currently driving developments in these markets. Professor Allen, you’ve published a book called Understanding Financial Crises. Can you provide us with an explanation on how we got into the current situation? 

Allen: Well, in my view, central banks bear a big part of the blame. They kept interest rates far too low for far too long. Recent BIS (Bank for International Settlements) reports are also clear in allocating some of the blame there. Excessively low interest rates caused the credit bubble and subsequent inflation.

Munsters: It is curious that the United States, the home of individualism, entrepreneurship and limited government, has recently seen so many statist interventions: Bear Stearns and so on. What happened to laissez-faire economics?

Allen: In the case of Fannie Mae and Freddie Mac, since they are government-sponsored entities, I think the government essentially had to step in. If they hadn’t, there would have been very serious problems. Not only would new mortgages have dried up, housing prices would have fallen even more. As with Bear Stearns, I think it was important they stepped in. Now, whether they have handled those cases in the best way is debatable. The other area the government has been involved in is regulations. Right now, it is not clear to me whether, if at all, regulations have helped us with the current situation. In many ways, it seems they have contributed to it. Regulation compliance takes a lot of time away from top managers, time that could have been better invested in identifying and preparing for problems.

Scheuenstuhl: So you are suggesting that the public and political outcry for more regulations and tighter risk controls is not the appropriate answer to avoid such crises in the future?

Allen: The current notion we have in the United States that the Fed should be in charge is a little ironic given that, to an extent, it caused the problem. Low interest rates caused a housing bubble. When bubbles collapse, you’ll have a crisis. It doesn’t matter how many regulations you have. The problem is that you can’t avoid the pain, but this is what they tried to do when they lowered interest rates after the dot-com bubble burst. We would have been better off having a moderate recession five years ago rather than the more serious one now. What the Fed needs to do is to stop this activist monetary policy.

Scheuenstuhl: In any case, subprime, the credit squeeze, inflation – the whole litany of woes – have resulted in bad news. Do you see light on the horizon?

Munsters: Well, these are great markets to be investing in. Many people were comfortable a year ago when markets were high and credit spreads low. The numbers looked fine, but I was wary. The situation is reversed now: risk premiums are much higher and a number of institutions are desperately looking for capital – we have that in abundance. We are putting in negative numbers, make no mistake about that. But for long-term investors, this is the moment when you should be laying your bets, when you buy your long-term holdings. This is hunting season.

Scheuenstuhl: That is a strong contrarian statement in a world where, because of regulatory investment guidelines and stress-test requirements, we generally see pro-cyclical, herd-instinct investment behavior. Where exactly is APG looking to invest?

Munsters: Across all asset classes and regions. Everywhere people are in trouble and – importantly – where we understand what is offered in terms of actual and potential risks. If you look at debts associated with subprime, you see the problems that resulted for investors who purchased supposedly triple-A rated paper. We bought nothing, because our own credit analysts felt we wouldn’t be fairly compensated for the risks and were dubious of the true dynamics. It is important to buy into areas that you understand. That holds true for today, tomorrow and in 10 years’ time.

Scheuenstuhl: Roderick, you mentioned risk. It seems to me that inflation has the potential to have more impact than people believe.
Munsters: I agree. We have been warning against an unexpected rise in inflation for a while. That has been partly behind our hedging strategy. A lot of people think inflation will fall back, believe that it will return to “normal,” that is to between 1% and 2%. I am afraid that, because of labor shortages, a more expensive manufacturing base in Asia, continuing supply and demand imbalances in raw materials, that inflation may be with us for a longer time than people imagine. I hope the ECB will react accordingly and raise interest rates. But this is a different scenario and may in itself cause problems in that the financial markets become jittery and react in unexpected ways. And that of course leads to questions about the euro.

Allen: Is there an issue? Are you questioning the stability of the euro?

Munsters: It is a question I raise quietly. In Europe, we have one currency, one interest rate policy and various competing national interests. As a result people in Italy currently pay 50 basis points more for credit than Germans, the Dutch or French. How come? What is happening? I would rather not have all of our investments in the euro zone in case, because of competing national interest, something goes wrong. I stress, I am not predicting this, but it makes sense to make sure you are diversified.

Scheuenstuhl: Which means what? Asian private equities? And is it right to expose Dutch members to risks in South-East Asia?

Munsters: Well, that’s diversification. Our expectations are that GDP growth will be higher there than in Europe for the next 10 to 20 years. So, from that perspective, we are keen to be involved there, though being true to diversification, we need to be spread across markets and regions.

Scheuenstuhl: One feature of the current environment is that it has been largely nationally contained. That is, Bear Stearns affected America, Northern Rock the UK and the Landesbanks in Germany. There has been little spillage. What will happen next?

Allen: An interesting question, especially in light of what Roderick said on the euro. Essentially anything could happen from now on, including a run on the dollar, but one of my concerns is that Europe is less prepared for the current crisis than the United States. If a large US bank like Citigroup were to go bankrupt, it is clear that the government could deal with that. It may add another 10% to 20% of GDP to the US national debt, but it could be absorbed. In Europe, you have banks such as UBS and Credit Suisse whose assets are much larger than the GDP of the Swiss government. What would happen if, for example, Fortis or UBS went bankrupt or faced a run? It wouldn’t be at all clear that the governments of those smaller countries could afford to bail such a bank out, due to their proportionate size to the GDP. If that happened, it would be catastrophic for the global financial system, but particularly for Europe.

Scheuenstuhl: So would the EU be pulled in to resolve such a situation?

Allen: The EU could solve it, but they have never actually had the political will to make an agreement on burden sharing. They’ve talked about it, but always backed away, revealing another weakness of Europe. When such events occur, as they have in the United States, you need to find a solution quickly. The structure of the European system invites procrastination.

Scheuenstuhl: Another point Roderick mentioned was competing national interests in Europe.

Allen: Definitely another weakness. I think you saw that with Société Générale. The Bank of France knew that they were liquidating these huge positions, but they don’t seem to have let the ECB and the Fed in on the information, at least not immediately. It underlines how, when it comes down to it, each country in Europe has a tendency to look after its own interests first. That may be not true of Germany, but certainly the tendency is there in other countries.

Scheuenstuhl: Gentlemen, thank you for your valuable contributions.
**IF**

**IF** the current crisis continues, will the Asian and emerging economies cushion the effect for the global economy?

**IF** all the rescues packages fail, what further interventionist steps can policy makers take to support the economy?

**IF** the outlook for economic growth continues to deteriorate, how will this affect Europe?

**IF** the current trends continue, are we likely to enter a recession – either in the US, Europe or globally?

**IF** equities continue to be volatile, are bonds a refuge?

**IF** I am looking to adapt my investment tactics, what do you suggest?

**THEN**

**THEN** Asian growth will moderate, but given the expansionary monetary and fiscal policy in play in the emerging markets, we don’t expect a recession to occur there.

**THEN** governments will start to implement support measures for the non-financial sector, such as tax cuts or government spending. Theoretically, governments could directly intervene into the real estate markets as well.

**THEN** Europe will also fall into recession. European growth is neither isolated from the US nor from the disruptions experienced in the capital markets. In addition, the European real estate market has weaknesses.

**THEN** we will enter a global recession. The emerging markets may get off lightly with growth falling only slightly below potential. Europe, the US and Japan are facing recession.

**THEN** bonds could be a safe haven. However, spread products, albeit cheap against government paper, may still not be a buy. Longer-term, if policy measures prove effective, then inflationary pressures may come back into play and bonds may suffer.

**THEN** the outlook for equities remains difficult for the short term, but they should trade strong in the longer term as valuations are attractive at these levels.
**FOCUS**

**PANIC AND GREED**

Today’s successful financial management means taming the inner caveman and rethinking traditional strategies.

A **n ideal world would be home to investors with perfect logic and reason. They would always sell high and buy low, carefully investing in a savvy mix of stocks, bonds and other instruments to complement their risk-reward profile.** They would ride out both bear and bull markets with a cool head and understand that it is next to impossible to time the swings successfully.

**AH, THE IDEAL.** If only the human brain worked that way. As a relatively young field of science, behavioral finance, has uncovered, individual investors are influenced by a smorgasbord of factors compelling them to behave irrationally where their portfolios are concerned. Though each investor is part rational economist, he is also part financial Neanderthal, motivated by a more primitive drive to survive. As financial strategist and economist James Montier laments, we are “part man, part monkey” when it comes to capital investment: overly confident and overly optimistic, we believe we can forecast presciently, attributing mistakes to bad luck and so failing to learn from them. The human brain, in a constant struggle between greed and fear – between the pursuit of reward and the desire to prevent loss – fells itself. These “anomalies” in investment decision making are actually the norm and lead to consistent inefficiencies in the overall markets.

**THANKFULLY, A BIT OF INSIGHT** can go a long way. One of the advantages of studying behavioral finance is that the more investors are aware of their own irrational behavior, the more likely they are to optimize their own decisions. By taking a more structured approach to investing – using rational models and rules that keep those primitive reactionary tendencies in check – they effectively outsmart themselves. Life cycle models of asset allocation replace most decision making by calculating asset allocation and timing based on very specific criteria: investors following this model can presumably take a more hands-off approach to portfolio management. They might also manage to resist the urge to pull all their money out of equities when the market swoons. “It takes the emotion out of it,” says Wolfgang Mader, vice president at risklab, an Allianz Global Investors subsidiary.

**MADER AND HIS TEAM** are developing life cycle models that take this structured approach further by tailoring it to an investor’s profile to achieve an optimal asset allocation. This life cycle model is designed to take into account the full arc of an individual investor’s life, including age, expectations of income and growth rates, desired accumulation, bequest motives (or what the investor desires to pass along to heirs), and other life cycle details. While typical retirement planning tools tend to stop at basic criteria like years to retirement and professed risk tolerance, the model includes additional personal details around wealth that can significantly impact the level of risk tolerance. Therefore, financial wealth and human capital are taken into account when
it comes to deriving an optimal asset allocation. Level of education and employment sector, for example, can contribute to an individual’s overall wealth in terms of human capital: someone with a higher level of education can assume a higher expected income growth rate over his or her lifetime than someone without. Likewise, a public servant may have a more reliable lifetime income stream than does an employee in the construction industry. “And if you are working in asset management and your income stream has a high correlation to the equity markets, you need to include this in your modeling process because there will be an interaction between your return and the risk attached to your income,” says Mader. In this case, your income would be considered more volatile, so you would reduce the amount invested in riskier assets.

By considering the relative riskiness of labor income, or human capital, this model offers investors a more tailored, and more optimal, allocation that will carry them through their entire life span. For example, conventional wisdom calls for reducing riskier assets post-retirement and moving them into fixed income to avoid unnecessary risk at that late stage. But your human capital is actually less reliable during your working life, since you may lose your job or your ability to work. As you move into retirement and begin receiving fixed, steady payments from your pension and defined contribution plans, the risk in your income actually decreases, says Mader. “You are then able to bear some more capital market risk. So it might be optimal to increase the allocation to assets with a higher risk profile again during retirement.”

**AND BY INCREASING,** rather than decreasing, one’s allocation to riskier assets in retirement, the investor solves another dilemma. Classic retirement planning tools only calculate up to that magical age of 65 and then focus almost solely on wealth preservation. “But you hope to have at least 20 years to go,” Mader notes. “If you have everything invested in cash, that is not optimal from a risk-return point of view. Having everything in a money market or risk-free investment doesn’t give you any risk premium.” The life cycle model offers an optimal allocation model up to the age of 120, even as it calculates the probability of one’s actually reaching that age based on mortality expectations. An individual investor could rerun the model for her or his accounts as often as necessary to make sure he or she has the optimal allocation for that period of time and set of life circumstances.

Mader and his team are currently working on building a life cycle model into retail funds. If used properly, the model has the potential to take the guesswork – and irrational impulses – out of investing for the long haul. “You want your savings to last a lifetime,” Mader says, adding that the goal of the life cycle model is to have a certain systematic exposure to assets with a higher risk-return profile. “Having this systematic approach helps give you control over these irrationalities.”

Humans are part man, part ape when it comes to capital investment. Take a close look at this Rorschach inkblot illustration. Do you find yourself? Psychologists use the Rorschach inkblot test to evaluate how people view and organize the world around them.
In the 1960s, Ed Thorp (pictured) used quantitative finance and an early high-speed mainframe computer to prove that the “gambling market” was inefficient (beatable). He later applied the same techniques to investment.
FOCUS

MASTERS OF RISK

Gambling, it has been said, is a sure way of getting nothing for something. Yet, it has also positively shaped modern approaches to risk management.

In Against the Gods, Peter L. Bernstein wrote that the “revolutionary idea that defines the boundary between modern times and the past is the mastery of risk: the notion that the future is more than a whim of the gods and that men and women are not passive before nature.”

Although humans have diced and dealt since ancient times, it was the gambling tables of Renaissance Europe that inspired the theory of probability, the core of the concept of risk. Driven by the desire to gain an edge, Girolamo Cardano, a gambler’s gambler and the most famous physician of his age, was among the first to investigate the frequency with which dice numbers were thrown. Later Pascal and Fermat applied mathematics to gaming brain teasers. In the process, they created a procedure for forecasting the likelihood of results. Over the years, mathematicians transformed this theory of probability into a powerful information tool. Graunt applied it to mortality analysis, Laplace as an aid in science, and Mendel, working with pea plants in an abbey garden, to genetics.

EVENTUALLY QUANTITATIVE TECHNIQUES of risk management emerged to become the basis of contemporary society in everything from insurance to investment, and from engineering and molecular behavior to medicine and weather forecasting. Yet, even as probability was being transformed, it was also being applied back to gambling by such innovators as Charles Babbage, the father of the programmable computer.* In the early 1960s, Edward O. Thorp, a mathematics instructor, used an early mainframe computer to apply quantitative finance to gambling and to prove that the “gambling market” was, in finance terms, inefficient (beatable). Thorp made a fortune testing and refining his strategy. In 1962, he published Beat the Dealer, which mathematically proved that by keeping track of the cards dealt, a blackjack (also known as twenty-one or pontoon) player could gain a positive return and eliminate the chance of being wiped out. Thorp inspired a generation of new players, including Bill Gross, founder of California-based PIMCO, the world’s biggest bond management firm. Then a 22-year-old student, Gross traveled to Las Vegas in 1966 and turned $200 into $10,000 in three months. Although Gross later expressed disdain for the gambling lifestyle, he acknowledged the importance of the experience. Vegas, he said, was not about the money. “I wanted to prove that you could beat the system. Then I thought about what I could do that takes the same skills. I realized that it was investing.”

HOWEVER, IT CANNOT be said that Thorp and Gross gambled. Instead, they used a method to eliminate risk. Developing a “system” had been a long-standing gambling quest, but until Thorp’s research it was accepted that a winning system for a major casino game was mathematically impossible. Yet, although it was rigorous and demanded great concentration, those who correctly applied Thorp’s approach were assured that a positive result would eventuate. A central notion popularized by the system, later used to

Allianz Global Investors
manage risk in investments, was the Kelly criterion (also known as the capital growth criterion). Devised in the 1950s to maximize the long-term growth rate of capital, it specifies how to allocate money given the choices available. It helps avoid gambler’s ruin by over-betting. In blackjack, a player runs the risk of losing their entire pot when betting more than 2% on any one deal, although bets should increase as card counting shows the edge increasing.

Thorp later applied his quantitative approach to convertible bonds and wrote *Beat the Market*. Although he has never purchased a lottery ticket in his life, the two

blackjack apply equally to equities as to bonds. First, spread your risk. Cards run hot and cold, so be prepared. Second, as far as possible know your risks. Quantify them, predict the consequences, and prepare how to react. Finally, even if you lose on a big bet, it’s important to stay in the game.

Casinos are successful because most people lose. Can you really compare your investment strategy to “gambling”?

Yes, but the key word is “professional.” Gambling is viewed negatively because the average gambler is emotional, undisciplined and often desperate. A card counter has a method to assess and evaluate the probability of future events. This probability theory is based on mathematics. Cards dealt are cyclical challenges. The blackjack player, like the professional investor, tries to develop the skill to predict the cyclical challenge to ensure success over the long term. Our bets don’t always succeed, but we win often enough to come out well ahead. 

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* Debbie Harrison, *A Victorian Hangover: Narratives of Addiction 1830-1900*
How do you judge which bets to place?
We make decisions based on secular and cyclical analysis. Secular analysis considers the long term – three to five years – and examines geopolitical, social and demographic trends to anticipate what may occur. Cyclical trends affect the market over the shorter term, such as new producer price index figures or changes in the federal funds rate. Taken together they tell us where to invest our clients’ money – domestically or internationally, more interest rate risk or less, high quality or high yield. This approach improves our ability to consistently add value over the long term.

And to avoid getting wiped out, to avoid “gambler’s ruin,” you adhere to the idea of the Kelly criterion? Big bets are crucial. You need to make them when you believe the odds are in your favor, but big bets can go spectacularly wrong. I always set aside 50 times my maximum bet to avoid significant loss through a bad streak. We apply the same principles at PIMCO with risk management being one of our highest priorities. We can and have lost bets, but we are well hedged and can stay in the game.

“Casino capitalism” is a term used by critics of the financial system. Partially this implies risk is taken too lightly. Emotion is a dangerous drug when it comes to investing. The search for higher returns allowed unregulated hedge funds and financial conduits to grow into a “shadow” economy built on leverage and cheap financing. The billions on offer inspired greed on a massive scale and people took risks that were not well judged. In my opinion, the private credit markets have forfeited their privileged right to operate relatively autonomously because of the incompetence, greed, and in instances, fraudulent activities they have displayed.

Some of the institutions hardest hit by subprime had the largest teams of risk managers. They were using the wrong models and looking at the wrong risks.

How does Minsky fit in? I see you’ve quoted him. A relatively unknown economist whose work helped us save billions. His Financial Instability Hypothesis influenced PIMCO’s Paul McCulley resulting in us developing a strategic plan to avoid the subprime meltdown well ahead of time. Minsky argued that Wall Street encourages businesses and individuals to take on too much risk, creating ruinous boom-and-bust cycles. Sounds familiar, wouldn’t you say?

Unfortunately, our time is up. Thank you.

Thank you.
1. Watch your cutlery at the Dinner in the Sky. Founder David Ghysels invites guests to dine 50 meters above the ground.

2. Smokejumper Jessie Thomas is seen here as she prepares to take flight.
1. **ASKED IF HE’S AFRAID OF HEIGHTS, DAVID GHYSELS SIMPLY SMILES AND SAYS “OF COURSE NOT.”** THE CREATIVE BELGIAN CAME UP WITH THE BOLD IDEA OF ATTACHING A DINNER PLATFORM TO A CRANE AND HOISTING IT 50 METERS INTO THE AIR.

Up to 22 adventurous diners are seated around a table with their feet resting on a platform. Everybody’s strapped into their chairs wearing four-point seat belts. “There’s practically no risk,” explains Ghysels. He and his team can transport their dinner crane to any place, as long as there is a 500-square-meter area to set it down. Once up in the sky, the chef prepares the dinner, while the fearless waiters serve drinks. “Dinner in the Sky” has been ranked by Forbes as one of the world’s top 10 most unusual restaurants.

2. **BRAVERY IS IN A SMOKEJUMPER’S JOB DESCRIPTION. SENT TO THE REMOTEST AREAS OF THE COUNTRY BY THE FOREST SERVICE, THEY PARACHUTE FROM 460 METERS RIGHT INTO THE DANGEROUS FIRE AREA. JENNIFER MARTYNUIK AND JESSIE THOMAS HAVE DONE IT MANY TIMES.**

Of the few female smokejumpers in the US, two are based in Missoula, Montana. They have fought literally hundreds of fires, equipped only with fireproof clothes, tools and pumps—and courage. The risk is high, but worth it, says Jennifer. Is she afraid? “Yes, but I have learned to deal with fear and nervousness in a positive effort, such as focusing attention on the task ahead,” she says. And she relies on past experience. “Both success and failures give guidance.” Jennifer loves being out in nature and doing her best to save it.

3. **AS A YOUNG MAN, MARIO LURASCHI WOULD DON HIS ARMOR, MOUNT HIS HORSE AND RIDE INTO BATTLE. NOW, AN OLDER, WISER VETERAN, HE IS CONTENT TO LET YOUNGER PROFESSIONALS EXPERIENCE THE THRILLS AND SPILLS OF PROFESSIONAL STUNT WORK.**

Speaking at Germany’s Kaltenberg Ritterturnier, as a group of weapon-wielding knights trot past, the 61-year-old says, “At my age I no longer ride in the rough sequences. The youngsters should do it.” Risk is a constant when working as a stuntman, but training and preparation are the best ways to prevent injuries. Plus a good horse. “I am nobody,” says the winner of the 2002 World Stunt Award. “The horse has put me in this good position. The crowd cheers me because of my horse.”

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**FOCUS**

**SWING! JUMP! JOUST!**

Many jobs require bravery. Some people throw themselves from a plane into forest fires, or joust with knights. Still others have had the courage to take a risky idea, believe in it and turn it into reality.
FOCUS

BURSTING THE BUBBLE

Those who cannot learn from history are doomed to repeat it. So what insights do Franklin Allen and George Soros have for us?

As money managers, investors and academicians sit back and try to size up exactly what brought on the subprime crisis, many turn to the annals of history for clues. The review frequently begins by taking stock of the factors typically precluding a sharp decline in financial markets: low inflation and low interest rates, highly liquid balance sheets and financial markets, excessive lending and risk taking, rising house prices and public debt, as well as a sense of euphoria. And throughout this century and the last, once the dust settles, it’s the usual *modus operandi*: People label the crisis as “the worst since 1929,” central banks intervene and regulation talk starts to heat up. But, as investors try to weather the declines, problems begin brewing elsewhere, often going unnoticed until they emerge as the next financial crisis.

**NOT A PRETTY PICTURE**, but one painted by many a market scholar, including Franklin Allen, professor of finance at The Wharton School at the University of Pennsylvania. Allen and Professor Douglas Gale of New York University co-authored the 2007 book *Understanding Financial Crises*. Allen believes the subprime woes can be traced back to US tax law and the Fed, the very organ now responsible for fixing the problem. According to US tax law, interest is tax deductible and rent is not – an incentive to home ownership or, conversely, a penalty to renting. By providing too much liquidity and holding interest rates too low for too long, the Fed caused a bubble in property prices. Money was readily available and consumers responded by taking out mortgages for 100% of the value of their homes and writing off the interest. Everything was fine until property prices began to decline.

**THE ONGOING SUBPRIME CRISIS** has many parallels to the late 1980s Japanese asset price bubble. As Allen explains, “Japan had a much more extreme version of it, but they had property prices and stock prices driven to very high levels in the 1980s because interest rates were too low ... Then they got concerned about inflation and raised interest rates. And that’s what caused the huge problems. The property prices in Japan fell 70% to 75% over 15 years and it stopped the economy growing. And they still aren’t out of it. Interest rates are at very low levels. They haven’t grown like they did in the ‘60s, ’70s and ’80s.” For Allen, with the exception of inflation, the situation in the United States is eerily similar.

“Rising inflation makes life very difficult for the Fed. They cut interest rates and they expected that inflation would just go away, but it hasn’t. If the Fed tries to combat rising inflation by raising interest rates, they risk a worse situation with the financial sector. In terms of the extent of the bubble, I’d be surprised if property prices fell 70%. In July, they were down about 16%. In Japan, 20 years after the crisis, the stock market’s value is less than a third of what it was in 1989. I don’t think it will get that bad in the United States, but it may get a lot worse in terms of unemployment and social problems. Japan didn’t do so bad in the social dimension,” says Allen.

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**NOTABLE FINANCIAL CRISES**

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<td>1720</td>
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<td>1929</td>
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Those who cannot learn from history are doomed to repeat it. So what insights do Franklin Allen and George Soros have for us?
During Japan’s so-called “lost decade,” problems in the banking sector spilled over into the real economy, just as it is doing in the United States right now. After years of experiencing growth rates among the highest in the world, the country became one of the world’s slowest-growing.

SO, HOW BAD WILL IT GET in the United States? Allen cites figures corresponding to average economic downturns following financial crisis over the last 120 years. These lasted two to three years and cost 5% to 10% of the GDP. “There is huge uncertainty out there. I wouldn’t place much weight on what the official bodies say could happen. They have been consistently wrong. Anything can happen, such as a run on the dollar or the declaration of banking holidays,” says Allen.

George Soros can also imagine a run on the dollar and says its days as the world’s reserve currency are nearing their end. But Soros has a slightly different explanation of the subprime crisis than Allen does. In his latest book, The New Paradigm for Financial Markets, the billionaire investor and philanthropist argues that problems with subprime mortgages pricked an even larger bubble: a super-bubble caused by globalization, deregulation and credit expansion. But no cause for worry, Soros argues. The icon of investors believes there is enough economic global power, and so urges people to be optimistic. He writes, “There is no reason to expect a global recession. Powerful expansionary forces are at work in other parts of the world, and they may well counterbalance a recession in the United States and a slowdown in Europe and Japan.”

The bubble bursts. If the capacity of a system is exceeded, it explodes – like this water balloon.
Chen Ping, president and general manager of the Chengdu Huifeng Diamond Tool Co. Ltd., describes herself as a hard worker. Her company is a pioneer in the manufacture of cutting tools in China.
A BIG-CITY SMALL-TOWN GIRL

As Chen points to her favorite sights in a tour of the city, she says, “I am a Chengdu person. This is where I was born and raised, started my company in 1991 by merging the state company I worked for with the company my parents founded, and this is where my family is. Chengdu is my home town.” Chengdu, one of the most important economic centers, transportation and communication hubs in Southwest China, is located only 80 km away from the epicenter of the devastating 12 May earthquake. Though it was a human tragedy in which 90,000 died or are missing, the “Hibiscus City,” with its popular teahouses, escaped the worst of the damage.

“I WAS BORN IN 1960 when China was a very poor country. Then there was the Cultural Revolution in the 1960s and 1970s, so we couldn’t study further,” Chen says. But that was a very long time ago. Now Chen Ping is president and general manager of the Chengdu Huifeng Diamond Tool Co. Ltd., a privately owned company that manufacturers cutting equipment for marble and other stones. Her parents set up the core company in 1978; she set up the company in its current form in 1991. It now has 152 employees and is the leading company of its type in China. Over 90% of its output is exported to more than 30 countries.

In Chen’s 48 years, she has witnessed many profound changes as the world’s most populous nation has emerged from poverty, old-style Communism and the ravages of the Cultural Revolution, into a strong, expanding country where “capitalism with Chinese characteristics” is the current order of the day. Parallel to China’s development, Chengdu grew as well. Since 2007 the city’s population is 1,100,000 and the average income increased by 2,648 RMD ($388) to 21,312 RMD ($3,121). Chengdu’s economy is expected to grow by 12% this year. “I’ve watched Chengdu change from a small city into a big, modern, international metropolis. Sometimes I feel like I’ve just arrived from the countryside. I don’t recognize all the places,” she says, as she drives into the elegant apartment complex where she lives.

Chen is also a member of the CPCCC, a consultative body that acts in an advisory capacity to the Chinese Parliament. “The infrastructure has developed a lot and become very practical. The people here have changed as well. They are more kind, generous and accepting,” says Chen. This is the bright side of China’s and Chengdu’s story. The other side is more concerning. The World Bank says China’s population will age within a generation. By 2011, the working population as a share of total population will peak at 882 million, then fall steadily at a rate of 0.1% to 0.4% a year. With the population graying rapidly, Chen and her son Yang Yang realize China is facing serious demographic challenges. “As far as I’m concerned, the money I put into the state plan is not enough for me to retire on. I have a classmate who studied at Berkeley. A professor there said that if you are going to rely on state benefits for retirement, you shouldn’t be at Berkeley,” Chen says, laughing. Her life has not been easy, and she has had to struggle through periods of political upheaval, while juggling career and child rearing. “I am a diligent person and pursue perfection. So I work hard and those
“After my son’s accident, I became aware of the importance of insurance. I knew I didn’t want to be a burden to anyone. I went to the CPCCC, who came up with a VIP plan for me. Working in a state-owned company, I had benefits, but very few. So when I set up my own company, I upped my contributions five-fold to make sure I get more money when I retire,” she explains.

**FAST FACTS ON CHINA**

- China’s basic pension system was established in 1997. The country’s pension reforms aim to cater for the growing number of retirees, diversified modes of employment and increasing urbanization.
- Officials estimate that, by the year 2030, care for the estimated 300 million elderly people could consume 10% of national income.
- Government data shows how the rising consumer price index has dramatically increased food prices. Some foodstuffs have risen by over 20% year on year. In June 2008, retail gasoline prices were increased by 18%, the sharpest rise ever and the first increase in eight months despite rising global oil prices.
- Cost of rice is 9 RMB/KG ($1.32), cabbage is 0.7 RMB/KG ($0.10), cucumbers are 0.6 RMB/KG ($0.09).

**CHINA BEGAN INTRODUCING** pension system reforms in the late 1990s to replace the previous cradle-to-grave social security system known to state-owned enterprises. The new system only applies to urban areas and consists of a public pay-as-you-go approach with mandatory DC (defined contribution) accounts and voluntary, occupational pensions. Both she and Yang Yang are interested in investment and private retirement plans. For those plans, they live in the perfect place: According to the 2007 Public Appraisal of the Best Chinese Cities for Investment, which assessed 280 urban centers, Chengdu was one of the top 10 cities for investment. Historically, the city has always had a strong financial link. The world’s first paper currency, the jiao zi, was issued there in 1023.
And today? Chengdu’s GDP increased by 15.3% to 320 billion RMD ($47 billion) in 2007. According to experts, growth will continue.

**YANG YANG LIKES STOCKS**, but does not feel it is the right time to invest. However, he acknowledges that with inflation rising so strongly, “if you don’t invest in something, your money will just sit there and lose value.” This would be contrary to what his grandparents did, when they started the Chengdu Huifeng Diamond Tool Co. Ltd. “In the 1990s, my father and mother decided I should get involved in the family business,” says Chen Ping. “I was working at a state-owned company at the time and my father merged it into theirs. In my day, people didn’t go into business because they were interested in something. Fate paved the road.”

A slim, youthful figure, Chen Ping is extremely welcoming and keen to talk about her experiences and offer her opinions. She is also extremely active. She loves to visit the Jinsha Museum; evenings may find her at the Shangri-La Hotel, a recently opened watering hole on Chengdu’s social scene. “I’m a woman who loves luxury on the one hand – I have racks of expensive clothes in that room over there, I like good food, handbags and the Shangri-La. But I don’t have any hobbies, maybe because of my life experiences,” Chen says. Instead, she concentrates on her son and her company. Although her energy and youthful figure belie her age, Chen knows well that one day in the future she will retire, so she wants to ensure that she has enough saved to live comfortably on. However, she does not confuse such rational thoughts with the feelings of her heart. “My biggest dream is for my son to get well again,” explains Chen before returning to the role of the perfect hostess: “Can I offer you more noodles?”
The world in which our generation lives could be described as an 80/20 world. This ratio reflects the fact that rich countries have roughly 80% of the world’s income, and developing countries 20%. A tectonic shift is underway, though, and by 2050 the world will be fundamentally different. The share of global GDP enjoyed by today’s rich countries is projected to drop to around 30%, and the share of China, India and other developing countries, such as Brazil, is expected to grow to 70%. This 30/70 ratio world will soon replace the proportion of the 80/20 world.

Demographic changes are equally daunting. By 2050, the world population is projected to have increased by 3 billion people (from 6 billion to 9 billion), with the overwhelming growth (2.9 billion) in what is now the developing world, and only 100 million in the rich countries. This will bring colossal economic, political and social change. Indeed, where we once divided the world between rich and developing, we should now consider four distinct categories: “affluents,” today’s rich countries; “globalizers,” countries that are best leveraging the global economy to grow at unprecedented fast rates; “rentiers,” countries that have natural resources but are not growing fast; and finally a set of “survivor” countries that are finding it difficult to integrate into the global economy. In 2050 the rich world will still be affluent: today’s high-income OECD countries will remain at the top. But “globalizers,” such as India and China, will experience a dramatic shift in terms of economic power and GDP per capita. This will be reflected in changes in the size of the economies – they are projected to have a 60% share of global GDP in 2050. In that year, China and India may have surpassed the United States as the world’s largest economies. Italy, for example, may not be in the top 10, while Indonesia and Vietnam could be. The “rentier” countries (see box, next page) would have around 6% to 8% of world income. Finally, the “survivors” would remain the poorest countries: today, they house about 1 billion people, a number expected to grow to 2 billion with roughly the same share of the global GDP as present. These people will be left behind, and they will be keenly aware of their plight in a world where information and communication will be even more widely available.

The fate of the poorest countries – the 30 or so countries that constitute these “survivors” – is the real question for the future. For example, whereas GDP in China is projected to grow from about $2,500 to $50,000 a year, income in “survivor” countries is expected to rise from $600 to $1,800 leaving a tremendous number of people mired in poverty. This is not just a set of figures for statisticians to play a game of projections. It is an issue affecting the very stability of our planet. And alarm bells are ringing. Food riots have recently occurred in many countries indicating that this is not a future challenge, but one affecting millions today. The conclusion is that we are not dealing effectively with poverty. Generally, donor countries and international institutions, including the World Bank, have not done a good job fighting poverty.

James Wolfensohn was the ninth president of the World Bank. In 2005, he founded the Wolfensohn Center for Development at the Brookings Institution in Washington to examine how to implement, scale up and sustain development interventions.
TAKE AFRICA: at the beginning of the 1990s, aid to Africa was $45 per capita. At the end of the decade, it was down to $36. Aid languished because the economic powers of the OECD simply lost interest until public opinion mobilized to end poverty around the Millennium. In the future, nearly a quarter of the global population will be in Africa and other poorer countries. As the rich world, we simply cannot look confidently ahead towards a comfortable lifestyle or secure pensions without considering how these 2 billion or more people living in poverty will survive and how their plight will affect the stability of our planet.

These are not just the thoughts of an idealist but of a man who fights for a better world. I have a deep concern for my children and for the next generation to come. We urgently need to address the issues of poverty and hunger because of the humanitarian drama involved. Closing our eyes to this matter won’t help at all. The world of the future will be a very different place to be in. It will be a world where “developing countries” will likely be dominant economic powers. It will be a world where the environment will take a greater share of our time and resources, where water and energy provision and politics will have a huge impact. And it will be a world where Africa will continue to have issues that must increasingly be addressed as part of our responsibilities as global citizens.

RESOURCE CURSE

Rentier states derive all or a significant portion of national revenues from oil or mineral royalties (rent). The economic irony is that many of the poorest and most troubled states have paradoxically the highest levels of natural wealth. In fact, it has been suggested that resource wealth itself, especially where it accounts for the bulk of government revenues, may harm a country’s prospects for development.
Emerging markets in Asia and central and eastern Europe (CEE) have been a favorite of investors for some time. Offering strong, if sometime volatile GDP growth, these countries provide a measure of diversification in a comprehensive portfolio and are valued because they are seen as young and dynamic. But hold that thought for a second. On closer inspection, these countries are not as young as they appear. Take China for example. The Middle Kingdom is expected to pass the United States as the world’s largest economy within the next 30 years. In the same period, China will also pass the US in terms of age. The Chinese old-age dependency ratio, the ratio of pensioners to every 100 people of working age, is projected to rise from 11 in 2005 to 39 by 2050. While this will not be as high as Western European EU members (ratio of 53), it will occur at an unprecedented rate: China will become old within one generation. Consequently, analysts describe the country as being in a race to get rich before it gets old.

Other countries within Asia and CEE face similar challenges, according to a recent working paper by the International Pensions Department of Allianz Global Investors. Entitled “Pension Trends in Emerging Markets,” the paper states Bulgaria, Slovakia and the Czech Republic are among CEE countries that will experience a speed of aging that will surpass western Europe. In Asia, Hong Kong, Singapore and Taiwan will all experience dramatic changes, but South Korea will have the most fundamental shift. There the old-age dependency ratio will rise from 13 to 64 within the next forty years. In other words: South Korea and Taiwan show the steepest increases. The speed of the aging process will challenge them to adapt to the new circumstances.

Aware of the issues surrounding old-age provision, the 18 countries examined have initiated far-reaching reforms. What is noticeable about these reforms is that they show great similarity. Obviously, significant economic, political and cultural differences exist between the emerging economies in Asia and CEE, which makes the convergence in the pension systems even more surprising. Broadly, countries in the two regions seem to be converging to the World Bank model of pension reform after having opted for a strongly funded pension pillar in the form of individual defined contribution (DC) accounts. While industrialized countries have also undergone pension reforms, those reforms that have been

### Old-Age Dependency Ratios in CEE and Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>2005</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>13</td>
<td>64</td>
</tr>
<tr>
<td>Taiwan</td>
<td>13</td>
<td>63</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>25</td>
<td>61</td>
</tr>
<tr>
<td>Singapore</td>
<td>12</td>
<td>59</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>16</td>
<td>58</td>
</tr>
<tr>
<td>Slovenia</td>
<td>22</td>
<td>56</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>20</td>
<td>55</td>
</tr>
<tr>
<td>Poland</td>
<td>19</td>
<td>51</td>
</tr>
<tr>
<td>Slovakia</td>
<td>16</td>
<td>51</td>
</tr>
<tr>
<td>Croatia</td>
<td>26</td>
<td>50</td>
</tr>
<tr>
<td>Romania</td>
<td>22</td>
<td>50</td>
</tr>
<tr>
<td>Hungary</td>
<td>23</td>
<td>48</td>
</tr>
<tr>
<td>Lithuania</td>
<td>23</td>
<td>45</td>
</tr>
<tr>
<td>Latvia</td>
<td>23</td>
<td>44</td>
</tr>
<tr>
<td>Estonia</td>
<td>24</td>
<td>43</td>
</tr>
<tr>
<td>China</td>
<td>11</td>
<td>39</td>
</tr>
<tr>
<td>Thailand</td>
<td>11</td>
<td>38</td>
</tr>
<tr>
<td>India</td>
<td>8</td>
<td>21</td>
</tr>
</tbody>
</table>

The old-age ratio displays the number of pensioners to every 100 people of working age in that country.

2015. This corresponds to a compound annual growth rate of 19.1%. Pension assets in the Asian emerging economies are projected to grow from €251.9 billion to €1,049.3 billion in 2015, a compound annual growth rate of 17.2%. The working paper states action is required to ensure that these massive build ups in assets will provide retirement security through sufficient accumulation of wealth. Financial education needs to be improved, the design of pension plans needs to take behavioral dispositions of members into account and asset managers need to provide transparent products. The paper also cautions that regulations should not overly restrict investment opportunities. If this can be achieved, the emerging markets will give their citizens a head start in the race to establish an adequate income for retirement, while ensuring they do not burden the state later.

Demography is a powerful driver of the reforms, but not the only one. In CEE, the pensions systems fostered by the socialist rule proved unsustainable in a market economy. In response, all CEE countries initiated reforms, such as increasing retirement age, reducing incentives for early retirement and establishing a stronger link between contributions and benefits. Of the eleven CEE countries, eight have also introduced a mandatory capital-funded pillar consisting of individual DC accounts. Meanwhile, Asian countries aspired to establish or expand their systems. Many had to create these from scratch as traditional family-based support systems declined in the face of industrialization, falling fertility, increasing longevity and rapid urbanization. The rush toward funded DC pensions began in the late 1990s. Since then, China, Hong Kong, India, and Taiwan have introduced DC schemes, while Thailand plans to do so. The emergence of fully funded DC systems with individual accounts echoes a worldwide shift away from defined benefit (DB) schemes. These developments will see an impressive build up of pension assets in CEE and Asia in the decades to come. Based on current data, pension assets in CEE will grow from €50.8 billion to €244.9 billion in

**PENSION ASSET DEVELOPMENT IN ASIA AND CEE**

Recent estimates show pension assets set for growth. Pension assets in CEE countries could expand by 19.1% from €50.5 billion to €244.9 billion, compared to the growth in Asia by 17.2% from €251.9 billion to €1,049 billion in 2015. The population size of the Asian emerging markets stands at 2.6 billion, while 106 million people live in the CEE.

Source: Allianz Dresdner Economic Research / Allianz Global Investors (Feb. 2008)

WORLD BANK MODEL OF PENSION REFORM

According to the World Bank, pension systems should consist of at least three pillars. The public pillar should alleviate old-age poverty through redistribution. The second should also be mandatory, provide savings and boost capital accumulation and financial market development. In principle, both occupational and private plans are possible in this pillar.

The final pillar should provide private retirement savings for those who prefer greater financial security in their old age. This multipillar approach separates the functions of savings and redistribution, while all three pillars combine to provide insurance.

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ON THE INTERNET

To download “Pension Trends in Emerging Markets,” visit:

http://publications.allianzgi.com
ASSESSING FINANCIAL CONTAGION RISK

China and Hong Kong are mostly unaffected by the US subprime crisis, but their stock markets are vulnerable to financial shocks from Western equity markets.

By Mary Wadsworth Darby

Will financial contagion spread from the US and Europe to Asian financial markets and economies? Is there a meaningful risk that the US credit crunch will destabilize China and Hong Kong as the new engines of growth for the world economy? If these risks are real, what should we do? These are vital questions for every investor, financial risk manager and executive whose business is impacted by Asia. Financial contagion is the propensity for a financial crisis affecting a specific country or market to spread across borders or trading networks. Financial crises often propagate rapidly with more devastating consequences than are attributable to simple cause and effect mechanisms. Sometimes, contagion spreads through channels of real economic or financial interdependence. Investors, having suffered a shock in one market, may reallocate their portfolios to take account of new risk preferences and new correlation assessments. Or financial agents may be so weakened that they are forced to forgo opportunities or cut back operations in an otherwise profitable market. At other times, seemingly unconnected regions or markets may be infected because of investor psychology, such as herding behavior, or asymmetric information flows that distort normal market responses to changing conditions.

CLOSE STUDY of economic data suggests that, at the beginning of the third quarter of 2008, the United States is not in recession. Housing and motor vehicle industries have been adversely affected. While housing is clearly in a cyclical downturn, rising fuel prices have hurt motor vehicles sales. But these elements have not dragged the US into recession as other areas, particularly computer electronics, have shown strong growth. Analysis of funds flows in the US shows
Stock Exchange A Share Index and the Hang Seng Index show a market linkage between the US and, to a lesser degree, European global capital and stock markets and Chinese and Hong Kong markets, especially as regards large-scale movements. These seem more attributable to psychological factors affecting investor behavior than to real economic or financial factors. Financial market disruptions can of course have economic effects as, for example, when stock market declines adversely impact loan to capitalization ratios and trigger credit tightening by lenders. So, how resistant are China and Hong Kong to financial shock? The banking and securities industries in Greater China are subject to institutional vulnerabilities that could impact their ability to resist global financial contagion. These financial systems have been strengthened. For example, studies show Chinese equity securities markets are more capable of absorbing price shocks now than 10 years ago and that bid-ask spreads have improved considerably. Capital positions of major banks have also improved, loan portfolios have been pruned and payment systems modernized. Hong Kong now has one of the most sophisticated real-time gross settlement platforms of any financial market, while China has improved its payments systems. Nevertheless, in China in particular, the broker-dealer industry remains relatively under-developed and under-capitalized and risk management is generally weak. Also, the Chinese stock markets suffer excess volatility.

INVESTORS, RISK MANAGERS and executives need to take account of these vulnerabilities in scenario assessment and stress-testing. Studies of the response of leading U.S and European global investment banks to the subprime credit crunch reveal weaknesses in risk management systems that relied too heavily on misleading historical correlations and out-dated paradigms. In addition, risk was compartmentalized rather than assessed on a comprehensive institution-wide basis. These mistakes ought not to be repeated. —
SOLVENCY REGIME
BAD NEWS FOR DB SCHEMES

Debbie Harrison, Senior Visiting Fellow of the Pensions Institute, London, examines two recent reports on Solvency II.

While the impact of proposed European Union solvency rules might be minimal for insurance companies, defined benefit (DB) pension schemes – which have very different risks and liabilities from insurers – could face a substantial increase in costs. These are the conclusions of two recent reports on “Solvency II,” a major project commissioned by the European Commission to develop an EU-wide monitoring framework for insurance companies, which may also be applied to retirement funds. The new framework is intended to replace existing national legislation from 2010 onwards.

THE MAIN CONCERN FOR insurance companies is that Solvency II, which advocates risk-based regulation, would limit the scope for equity investment and reduce returns. However, a paper published by Antoon Pelsser et al. argues that it is possible to meet the solvency requirements without a significant impact on the expected return for the insurance companies and their policyholders.* The paper uses a volatility-switching model to examine the interaction between the insurer and the regulator. It demonstrates that readjustment to a conservative portfolio need only apply for short periods throughout the contract, after which insurance companies will be able to switch to a higher risk asset allocation. For DB pension schemes the outlook is more pessimistic. If the EU were to apply to all retirement funds the solvency rules drafted in mid-2008, this could increase costs significantly for the sponsoring employer, according to a study by risklab. The quantitative study, which evaluates the impact of risk-based funding requirements on generic DB structures, shows that schemes currently 100% funded under IAS19 will be only 65% funded under Solvency II. It also shows that meeting the funding gap could impose an unacceptable burden on many scheme sponsors. This would force sponsors to consider a range of options, including increased funding, a change in asset allocation, and a move to a risk-sharing structure. Risk sharing is likely to be the most effective method of bridging the funding gap between IAS19 and Solvency II, the study says. Of the various structures that share risk between the sponsoring employer and scheme members, potentially the most effective – the employer’s right to cut benefits – will also be the most unpalatable for scheme members and labor organizations.

While the risklab study does not comment on the appropriateness of Solvency II for retirement funds, it is to be hoped that it will demonstrate to the EU the unintended consequences of applying rules based on insurance company risks and liabilities to DB schemes.


ON THE INTERNET
To download the risklab report, visit www.risklab.de
REGULATION AND RISK SHARING IN OCCUPATIONAL PENSION SYSTEMS

Juan Yermo is a pensions expert who observes the market closely for the OECD. In this article, he outlines developing trends in the wide field of pension plans.

Traditional, final-pay defined benefit (DB) plans are a dying breed. The latest OECD inquiry into risk sharing in occupational pension plans has found that in countries where the move to pure defined contribution (DC) arrangements is being resisted, the private sector is increasingly covered by pension plans of a hybrid or collective defined contribution kind. Hybrid pension arrangements and other plans with risk sharing features offer greater flexibility in regards to pension promises. Risk sharing makes pension promises less onerous, which increases the affordability and sustainability of DB-like promises for sponsoring employers. For employees, risk sharing avoids the move to “pure” DC arrangements where the individual shoulders all risks. However, for risk sharing to function, its features need to be carefully designed and disclosed to all stakeholders. In a recent publication, the OECD distinguishes between four types of hybrid plans:

Conditional benefit plans: Benefits are calculated as in a traditional DB plan but there is an element of conditionality tied to the performance of the fund, the member’s longevity expectations or other factors.

Cash balance plans: Benefits are calculated based on a notional individual account that earns a specified rate of return, which can be a fixed percentage, the return on an index tracker fund or the return on several funds selected by participants. Benefits may be paid as a lump sum or converted into an annuity.

Nursery plans: Benefits are calculated on a DC basis up to a certain age and on a DB basis afterwards.

Floor or underpin plans: Benefits are the higher of a DC and a DB formula. Of the hybrids, conditional benefit plans may present the highest degree of risk sharing between companies and employees as benefits can be adjusted according to the plan’s financial situation.

Cash balance plans also lower risks to sponsors relative to traditional DB plans, since the interest credit is generally modest and the initial pension amount is normally adjusted for longevity and interest rates at retirement. The risks that are borne by sponsors are even lower when participants

### MAIN DB BENEFIT DESIGN REGULATIONS IN SELECTED OECD COUNTRIES

<table>
<thead>
<tr>
<th>Country</th>
<th>Vesting</th>
<th>Benefit</th>
<th>Revaluation</th>
<th>Indexation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>Immediate</td>
<td>Annuities</td>
<td>NA</td>
<td>CPI-wages (80%-20%)</td>
</tr>
<tr>
<td>Germany</td>
<td>Max. 5 yrs</td>
<td>Flexible</td>
<td>Not required</td>
<td>Inflation</td>
</tr>
<tr>
<td>Japan</td>
<td>20 yrs-annuities; 3 yrs-lump sums</td>
<td>Flexible</td>
<td>Not required</td>
<td>Not required</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Immediate</td>
<td>Annuities</td>
<td>NA</td>
<td>RPI 5% cap</td>
</tr>
<tr>
<td>United States</td>
<td>Max. 5 yrs</td>
<td>Flexible</td>
<td>Not required</td>
<td>Not required</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Max. 2 yrs</td>
<td>Annuity (2/3)</td>
<td>RPI 2.5% cap</td>
<td></td>
</tr>
</tbody>
</table>

Source: “Funding Regulations and Risk Sharing,” OECD (April 2008)
In collective DC plans, risks are shared among workers and pensioners, while the sponsoring employer simply commits to a fixed contribution. However, collective DC plans turn pension funds into standalone entities resembling insurance companies. It remains to be seen whether such plans will remain under their own regulatory framework or whether they will be treated as insured DC arrangements.

Risk sharing can be further enhanced under any of the arrangements if employees are required to make contributions, which can vary depending on the plan’s solvency. Pension plan regulations can alter risk sharing arrangements and shift risks in one or the other direction. Two main types of regulations are member protection and funding rules. In some countries, like Italy, occupational DB plans are no longer allowed. At the other extreme, unprotected DC plans are prohibited in Belgium, Germany and Switzerland.

Risk sharing in pension plans is also affected by funding rules. For example, in the United States, the high tax on excess assets in case of plan termination (50%) is a main reason why employers prefer to convert them into cash balance plans. A conversion into DC arrangements would be treated as a termination of the DB plan and trigger the 50% tax on excess assets. Minimum funding requirements can also drive plan design. Some countries regulate pension funds like insurance undertakings, effectively ignoring any possible recourse to capital from the sponsoring employer in case of underfunding. This means plans become DC from the perspective of the sponsor, as it commits only to a fixed contribution rate over time, shifting risks to the pension fund or insurer.

The OECD Risk Sharing Study also considers the trend towards risk-based funding regulations. Well-designed funding regulations help promote high levels of benefit security at a reasonable cost to members, sponsoring employers and other stakeholders. By tak-
ing into account the nature of benefit promises and, in particular, the specific risks guaranteed, as well as the way those are shared between different stakeholders, risk-based funding regulations may help better address the balance between benefit security and cost.

**THE THREE MAIN RISK FACTORS ARE:** the nature of risks (market, biometric, operational) and the guarantees offered under different plan designs; the extent to which benefits are conditional or can be reduced; and the extent to which contributions may be raised to cover funding gaps. In addition, the strength of the guarantee from the sponsoring employer(s) and of insolvency guarantee arrangements should be assessed when designing funding requirements. One important implication is that plans with strong risk sharing features (conditional indexation, nominal benefit cuts as last recourse, and flexible contribution policies) may have lower funding needs than traditional DB arrangements with mandatory indexation. Given the value of risk sharing in occupational pension provision, funding regulations should be adjusted to reflect the nature and distribution of pension risks.

**FROM THE LABS**

Women have money, earn money and love the security money brings. Yet, although they will control 60% of the wealth in the US by 2010, the majority of successful women don’t regard themselves as financially secure.

**WOMEN ARE FROM VENUS …**

Even when it comes to finance, or so it seems. According to Women, Money and Power, a study by Allianz Life of North America, a world of differences separates the sexes when it comes to finance. While women today are better educated, enjoy successful careers and are expected to control 60% of the wealth in the US by 2010, they still remain financially insecure. About 90% of women surveyed said they felt "somewhat" or "not at all" financially secure and almost half expressed fear of becoming financially destitute. So what is causing this insecurity? Find out in the next edition of PROJECT M.

**WESTERN EUROPEAN PENSIONS**

Trends and growth Since the mid-1990s, most Western European governments have launched pension reforms aimed at reducing the generosity of the state pension system and encouraging pensions savings. In its latest study, Western Europe Pensions 2008, International Pensions, a research unit of Allianz Global Investors, examines the main trends in Western European pension markets, analyzes the design of pension systems and how pension assets will develop.

**ON THE INTERNET**


INVESTING IN VOLATILITY

In the attempt to diversify their asset allocation more broadly, investors are inspiring a search for alternative investments. Volatility, as a measure of “uncertainty,” is itself one such investment opportunity.

In recent years, volatility-related risk was a less conspicuous issue in financial markets because “uncertainty” had reached an all-time low. With the current financial crisis, matters have changed dramatically. Virtually all financial markets have suffered turmoil, and volatility has soared as a consequence. Declining stock prices have created a surge of volatility that implies a pronounced market slump, but that could also create opportunities for portfolio managers. In this situation, they can take advantage of volatility by systematically incorporating it into their portfolios.

“IN THE INSTITUTIONAL SPACE there is growing investor demand for volatility to be used not only as a risk measure or for hedging purposes, but also as a new asset class,” says Dr. Reinhold Hafner, a managing director at risklab. There are two reasons for this. First when volatility is used as an asset class, it has historically provided an attractive return opportunity to investors, even though the performance of the volatility asset class is suffering in the current environment. Second, it helps diversify existing asset classes.

How can one implement this approach? The standard methods are based on option strategies, such as long positions in straddles or strangles. However, to establish and maintain a lasting volatility position, it is necessary to make frequent, cost-intensive adjustments to the portfolio weights. “A more effective instrument to trade volatility from an investor’s perspective is variance swaps,” says Hafner. Variance swaps represent a special type of forward contract. Closing a variance swap for an exchange of payment refers to the difference between the variance that is realized during the swap’s lifetime and the swap rate of the underlying determined at the outset of the deal. The swap rate corresponds to the expected realized variance. The latter, in turn, is calculated based on the average of all actively traded option prices of a given maturity and is closely linked to the implied volatility. The difference between the variance to be realized and the swap rate of the variance is generally referred to as the risk premium of variance or volatility (variance risk premium).

TO ACHIEVE MAXIMUM DIVERSIFICATION in an equity portfolio, (implied) volatility has to be purchased, since implied volatility movements and stock price movements are highly negatively correlated. Such a strategy provides “protection” and may be advantageous in environments with extreme volatility spikes and equities plunges. However, in the long run, such a “protection strategy” is costly. Historically, the negative variance risk premium has overcompensated for the diversification effect and the provision of tail risk insurance. “So, from a long-term investment rather than protection perspective, it is more advisable to systematically sell volatility,” says Hafner. Relying on this philosophy and encouraged by significant research, risklab has developed a strategy that provides efficient access to the variance.

DEFINITION OF VOLATILITY

“Volatility” is from the Latin volare, “to fly” (Merriam-Webster’s Collegiate Dictionary, 11th Ed.). It measures price fluctuations in a given time period. Fundamentally, there are two kinds of volatility: historic volatility, based on the past prices of the underlying instrument; and implied volatility, or the degree of price fluctuations the market expects to occur to an instrument in the future. The estimated value may diverge significantly from historic volatility, if momentous changes are expected.
risk premium and volatility as an asset class (VPT strategy). “The objective of this strategy is to earn the variance risk premium (beta), which on average is markedly negative by systematically short-selling variance swaps, in a fully rules-based way,” explains Dr. Bernhard Brunner, co-responsible for designing and implementing the VPT strategy.

“The preferred financial instruments for VPT are variance swaps on stock indices with maturities of less than three months, as the variance risk premium tends to be more negative for shorter maturities than for longer maturities,” adds Brunner. Even though volatility is an attractive asset class in the long run, it has risks. This is obvious in the current market where short-term realized volatility has reached unprecedented levels causing substantial losses in these type of short variance strategies. In that sense, the volatility asset class shows a highly skewed risk/return profile. This raises the question of whether the negative risk premium will exist in the future. “We think so,” answers Brunner, “as the main driver for the negative risk premium is the structural excess demand for out-of-the-money put options. And anticipated changes in regulations as a result of the financial crisis may mean many institutional investors are forced to buy even more protection than in the past, which in turn makes the risk premium even more attractive.”

“AS THE STRATEGY IS purely derivatives based, it can be customized to the individual risk/return preferences,” explains Hafner. When calibrated to achieve an equity-like return in the long run, the downside risk of the volatility asset class is significantly lower than that of equities in “normal times” and similar in magnitude in situations of extreme crisis, like now. “Considering average correlations ranging from 0.5 with stocks to -0.2 with bonds, we are talking about an interesting investment opportunity for long-term investors.”
HADID’S FUTURISTIC CONCEPTS have been the subject of vivid discussion since the 57-year-old started her career after wrapping up her studies in Baghdad and London. “I’m trying to discover – invent, I suppose – an architecture and forms of urban planning that do something of the same thing in a contemporary way. I started out trying to create buildings that would sparkle like isolated jewels; now I want them to connect.” What drives the Baghdad-born Hadid is the urge to find out where the limits are and what is within the realm of possibility for an architect. Hadid’s professional breakthrough did not come until after she had turned 50. She now runs an architectural office in London, employs more than 150 people and in 2004 became the first woman to win the Pritzker Prize – the “Nobel” of architecture. In the laudation she was praised and, perhaps more importantly, understood. “Her architectural career has not been traditional or easy,” the judges acknowledged. Zaha Hadid’s earliest designs were not actually built. In 1994 she won the competition to build the Cardiff Bay Opera House, but Wales was not ready for her futuristic constructions and decided on a very basic concert house instead. Back then, Hadid was devastated. Today she says: “If it doesn’t kill you, then you’re no good. I mean, really – you have to go at it full time. You can’t afford to dip in and out.”

Zaha Hadid is good, no doubt about that. Numerous other projects did get built, including the Rosenthal Center for Contemporary Art in Cincinnati, Ohio, which the New York Times described as “the most important new building in America since the Cold War.” The BMW Central Building in Leipzig followed, and her latest work is a bridge across the Ebro River for the Expo in Saragossa, Spain. “I don’t design nice buildings – I don’t like them. I like architecture to have some raw, vital, earthy quality,” she says.

One of her harshest critics recently said that Hadid’s buildings “hug the earth and seem to fly away at the same time.” She smiles. “I can be my own worst enemy as a woman.” The former “paper architect” is now inundated with projects. Does this limit her imagination or creativity? “Of course not!” she replies. “Actually we’re having fun now.”