Asset Allocation: Risk appetite continued to plummet this week, falling to 2.7 from 3.4 last week and 5.9 at the peak on February 28th. Emerging market assets continued to underperform, and the G5 equity-bond ratio ticked down for the fourth consecutive week. Oil made new highs.

Equities: Global equities fell 2% in March and are up very slightly year to date. France, Japan, and the Nordic region had the strongest equity markets in March, while emerging markets such as Eastern Europe and Latin America underperformed. The strongest sectors were utilities, media, and pharmaceuticals/biotech; the weakest were insurance, autos, and materials. The VIX index trended higher during March from 12 to 14.1. ChevronTexaco agreed to buy Unocal for $16.4 billion in cash and stock, beating out Eni and the China National Offshore Oil Corporation in the bidding. Oil and gas stocks have outperformed the market by 24% since the start of the year.

Bonds: Bonds rallied this week. 2-year yields dropped 12 bps to 3.73% in the US and 10 bps to 2.48% in Europe. US and European 10-year yields fell roughly 15 bps to 4.45% and 3.59%, respectively. BBB LUCI credit spreads widened 7 bps on the week, and are now 17 bps above the 69 bps tight made March 9th. GM's long-dated bonds, a market focus lately, continued to hit new yield highs. Non-farm payrolls in March rose just 110,000, half the expected increase. The three-month moving average for payrolls growth is 159,000, close to trend labor force growth. The US unemployment rate fell from 5.4% to 5.2%. March ISM new orders jumped to 57.1 from 55.8 last month. US personal income (+0.3% m/m) and spending (+0.5%) data were solid and near expectations. The core PCE deflator remains at 1.6% y/y, and goods price inflation ticked down to 0.2% y/y. Euro area PMI fell to 50.4 in March from 51.9, suggesting a slowdown in European IP from the burst that occurred around December. Japan’s Tankan index was somewhat weaker than expected +14 (versus +20 expected), and the forward-looking component registered likely caution in Q2 business spending.

FX/Commodities: Since March 11 the trade-weighted dollar has risen 2.8%. The yen, which has been broadly underperforming most currencies, rose above 108 against the dollar for the first time since last October. The EURUSD fell roughly a cent to 1.282, the lowest level since early February. Meanwhile, oil surged to new highs above $58 on Monday. The CRB index rose 2.2% on the week. Baltic freight continues to trade within a narrow sideways range that is 20% below its December high and nearly 75% above last June’s fleeting low.

EMG: Emerging assets were flat on the week, and EMBI+ spreads narrowed 10 bps. Still, emerging equities remain 7% lower and EMBI+ spreads 41 bps wider since our Risk Appetite Index peaked in late February. Foreign reserves in China rose $32.7bn to $642.6bn in January and February. The rise was less than previous months and suggests capital inflows are easing, according to our EMG analysts.
The Right Remedy For a Boom

“Thus the remedy for the boom is not a higher rate of interest but a lower rate of interest!”

J.M. Keynes: General Theory: Ch 27 Notes on the Trade Cycle

Ideas matter, and at times like this, they matter more than usual. Five years after the tech bubble reached its climax, and just two years after global equity markets bottomed out, the world is awash with liquidity, corporate profits are on the moon, real interest rates are unusually low and – not surprisingly – the global economy is booming. Surely interest rates should go up, and should go up a lot.

Or should they? And if not, why not?

This week we briefly sketch two contrasting visions of how the world works, and what they imply about the “appropriate” monetary policy response to the current boom, and the ultimate destination of longer-term bond yields. We conclude that there is a very strong case for central banks not trying to pre-empt higher inflation at this point in the cycle, and a surprisingly good case for thinking that the ultimate effect of the current boom will be to produce even lower (nominal) bond yields!

But also that the markets should be pricing for a (much) wider distribution of possible outcomes for short-term interest rates over the next 6-12 months, and indeed beyond. Even God probably doesn’t know for sure what the appropriate level of policy rates for current circumstances should be, let alone Messrs. Greenspan, Trichet, Fukui and King….

To many observers the current situation feels like a potential re-run of the 1960s and early 1970s: excessively easy US monetary and fiscal policy leading ultimately to a global liquidity overhang, substantial spikes in commodity prices and inflation, followed by stagflation. Indeed, the vultures are already circling over Mr. Greenspan’s reputation, blaming him for letting the equity market bubble get out of hand in the late 1990s, and blaming him even more for sponsoring the current inflationary boom, the (global) housing bubble and the unsustainable US trade deficit, all of which they believe are bound to lead to trouble down the road.

In a previous report, we showed how similar the behaviour of US productivity, the profit share and real interest rates so far this decade has been to the early 1960s. (See GPM, November 4th 2004: updated versions of the charts are available from James Sweeney or Susan Martin). These parallels are not comforting for bond investors, and ultimately could be just as bad or worse for equity investors. Still, we noted some key empirical differences too: real wage growth and employment have so far been much weaker than they were in the early 1960s, and at least for now, measures of economic slack suggest a little more headroom for non-inflationary output and employment growth than was the case in the mid-1960s.

In short, the facts, though not quite all the facts, warn us that we might be replaying the 1960s and that as a result, we may well be in a secular bear market phase for developed bonds, equities and the dollar, and a secular bull market for commodities and some emerging market assets.
But even if some of the key outcomes still fit the 1960s bill, most of the structural architecture of the global economy has changed radically over the past 25 years. In our view, the deregulated, supply-driven and co-dependent global economy of today bears little resemblance to the 1945-1980 period, but does have a lot in common with the later 19th century and early 20th century, only with 21st century technology and demographics.

If that is correct, then we might expect a similar, though not identical set of outcomes. Namely:

- a secular trend of rapid but creatively destructive and socially disruptive global growth, accompanied by low inflation or even gentle deflation and high levels of economic migration;
- a cyclical tendency for excess savings and liquidity to be channeled into a rolling series of asset market “bubbles” and investment booms, often in emerging markets but invariably fuelled by abnormally rapid credit extension and financial tourism to the hot sector or region of the moment;
- such booms will usually be followed by a partly endogenous bust and period of financial stress, (sovereign) defaults, diminished risk appetite, heightened liquidity preference and oversupply of goods;
- before the whole sequence starts all over again, as some new frontier of dreams opens up.

Note in particular, the implication that excess liquidity and savings in such an environment end up fuelling supply-led booms rather than demand-led ones, and that even without sharp increases in short- and long-term interest rates in response to the boom, the general pattern is one of short-lived episodes of excess demand and inflationary pressure followed by periods of excess supply and even deflation.

It is no coincidence that this brief summary of the later 19th century global environment could, with hardly a word changed, serve as an equally good vignette of the environment we have experienced since the late 1980s. This is why the “Replaying the 19th Century” theme has been a leitmotif of our analysis for a decade or more.


We are not the only ones to notice. An interesting BIS paper presented at Jackson Hole in 2003 examines recent experience through two intentionally polarized perspectives, which the authors call the “continuity” and "new-environment" views.¹

In the continuity view, the recent experience of longer expansions, more volatile financial markets, and possible increases in the growth rate of underlying productivity could, with hardly a word changed, serve as an equally good vignette of the environment we have experienced since the late 1980s. This is why the “Replaying the 19th Century” theme has been a leitmotif of our analysis for a decade or more.

¹ BIS Working Papers No. 127; A Tale of Two Perspectives: Old or New Challenges for Monetary Policy?, February 2003 by Claudio Borio, William English and Andrew Filardo
According to this view, financial liberalization has meant that the financial system can more easily accommodate, and reinforce, fluctuations in economic activity. In the wake of liberalization, access to external finance is more plentiful and more intimately driven by perceptions of, and appetite for, risk. These move in sympathy with economic activity, hence the highly pro-cyclical nature of credit, asset prices and market indicators of risk, such as credit spreads. Thus, during booms, virtuous circles can develop, consisting of higher asset prices, muted risk perceptions, weakening external financing constraints, possibly an appreciating currency, greater capital deepening, rising productivity and higher profits. These processes then go into reverse during contractions.

Looking back at the experience in recent years, the new-environment view would detect the symptoms of a gradual change in the dynamics of the economy. The experiences in Japan, some countries in East Asia and, in several respects, recent developments in the United States and hence in the global economy share a common characteristic: investment-led booms that were reinforced by financial developments and that did not end up with rapidly rising inflation.

In those cases where financial imbalances grew sufficiently large and unwound in a disruptive way, financial strains emerged, helping to put downward pressure on prices. The new-environment view sees the parallel with the economic environment under the 19th century (gold standard) environment sketched above as far from purely coincidental or of little relevance for today. At that time too, inflation was generally low and expected to remain low, while financial markets were lightly regulated and globally integrated. And occasionally, new technologies (e.g., railroads, the electric motor) offered large but difficult-to-estimate returns to investors.

And as the authors note, financial imbalances were a prominent feature of the economic landscape, and often led both to international and to domestic crises with significant macroeconomic effects. Most famously of course, the US stock market and real estate booms of the late 1920s – like the more recent Japanese experience – were followed by a period of protracted economic weakness and deflation.

These competing visions of how the world works matter to investors in at least two respects: the implications for policy, and the question of whether disinflation is about to go into secular reverse, leading to well below average returns from financial assets for an extended period.

**Short-Term Policy Implications**

The BIS paper goes on to consider the different implications for policy in detail. While the continuity view stresses the reliability of traditional policy benchmarks, the new-environment view suggests that it may be worth considering assigning greater weight to the build-up of financial imbalances when calibrating policy, tightening policy not so much to pre-empt inflation as to temper the valuation and credit excesses associated with booms, and thus to dampen the downside shocks to activity and prices that tend to follow the inevitable bust.

The authors of the BIS paper summarize the policy debate as follows:

"... the two views of recent events and the dynamics of the economy suggest somewhat different policy prescriptions with regard to the identification of inflationary and deflationary pressures and the appropriate monetary policy response. These differences..."
revolve largely around the role played by financial imbalances in the policy framework. They are arguably sharper, or more controversial, in the phase when financial imbalances are building up than when they are unwinding.

While the imbalances are still building, the new-environment view might well suggest a more purposeful response with a view to restraining the cumulative process. Once imbalances begin to unwind, and particularly if they do so in an abrupt and disorderly manner, the new-environment view may lead to a somewhat prompter and more intense policy easing in order to blunt the effects of the unwinding on the aggregate economy.”

A very interesting section of their paper then goes on to consider the pros and cons of central banks responding to the emergence of financial and asset valuation excesses in somewhat pre-emptive fashion.

One of the biggest cons is the difficulty of identifying financial imbalances in advance, but they suggest that this problem is not intractable.

“... As regards identification, the new-environment view would find some support in recent research indicating that focusing on the question of whether an asset price bubble is in the making – the most common approach – may not be the best way of posing the problem. According to this research, more mileage can be gained by trying to identify the configuration of symptoms that may foreshadow future generalized financial distress, with significant macroeconomic costs. This work suggests that cumulative deviations of asset prices and aggregate private credit from historical trends, especially if also accompanied by cumulative real exchange rate appreciation, can yield reasonably reliable signals of pending financial crises .....” (emphasis added).

In short, the authors of the BIS paper seem to be advocating pre-emptive tightening, even before inflation becomes visible, in situations where an investment boom is associated with abnormally rapid credit growth and/or abnormal deviations of asset prices from trend. At first sight, the argument seems rather appealing, but current developments in both China and the US illustrate how difficult this might be to implement in practice. As the authors themselves point out, another major obstacle to pre-emptive action against financial imbalances is the political economy of tightening monetary policy when inflation is still relatively low.

“If the central bank is successful in constraining financial imbalances, it will, by definition, disappoint the expectations of many investors, and it may be blamed for that disappointment. Indeed, given the likely effects of a tightening on output and earnings, the central bank may not be able to demonstrate convincingly, even ex post, that the action was necessary. Moreover, the decision to tighten when output growth is robust but inflation appears to remain in check would be difficult to justify to the public.... if the central bank indicates that it is attempting to slow the economy in order to lower asset prices, the public might well wonder why doing so is desirable given that consumer prices remain stable.”

Oddly enough, this political constraint is clearly visible in China, despite the lack of policy “accountability” to the general public. The recent Chinese boom has been fuelled not only by a huge inflow of foreign capital but also by extremely rapid growth in bank lending, much of it to the premium property sector and to support highly imitative capacity additions in certain industrial sectors, posing the threat of excess capacity in the future. Meanwhile, despite acute bottlenecks in some areas of the economy and soaring industrial commodity prices, economy-wide inflation remains reasonably controlled.
Aggressive tightening measures could therefore only really be justified by the desire to limit the build-up in future excess capacity and bad loans (imbalance), rather than the existence of an immediate inflationary crisis. However, last year’s credit tightening was partly aborted by vigorous internal opposition from local authorities and others who were benefiting from the investment boom. And since then, the new regime of President Hu and Prime Minister Wen, concerned to consolidate their grip on power, have been rather cautious in sanctioning any macro-tightening measures, whether it be higher interest rates, currency revaluation or drastic credit controls. Instead, they have concentrated on micro-measures designed to curb the flow of credit only to the most overheated or speculative sectors of the economy, of which the recent measures taken to dampen property speculation are probably the most important. (Perhaps they are avid students of Keynes, who would have given short shrift to the pre-emptive tightening view, at least as it pertains to interest rates – see The Last Word below.)

Even more interesting perhaps, is the relevance of the continuity vs. new environment debate to US monetary policy and Mr. Greenspan’s legacy. One of the current Fed chairman’s distinguishing features is that he is a thoughtful and open-minded student of structural change in the economy, to a degree unusual among central bankers. And it often seems as though he implicitly endorses the “new-environment” thesis.

However, he is also a canny politician, and his track record seems to indicate a certain reluctance to fight “imbalance” preemptively other than by verbal warnings – such as his comments on “irrational exuberance” in the late 1990s, his more recent utterances on the conundrum of falling long-term interest rates while the Fed has been tightening, the dangers of the “carry trade”, and his musings on the long-run sustainability of the US current account deficit. He has also been careful not to endorse the idea that there is an economy-wide housing bubble.

In practice, therefore, he seems to have taken on board some of the ideas in the BIS paper about supply-led growth, but rejected the conclusions about pre-emptive monetary policy action to head off potential trouble arising from asset price inflation or financial imbalances. Rather he seems to draw the conclusion that the Fed can afford not to be overly pre-emptive about either inflation or imbalances, and instead react firmly only if and when inflationary pressures become manifest on the ground. This would make little sense in the continuity view, but makes perfect sense if the idea is that periods of excess demand tend to be short-lived and likely to be reversed endogenously, at least in part.

Seen through the lens of the “new-environment” thesis, therefore, the Federal Reserve’s shift from “measured” to “appropriate” should be seen as an indication of a pragmatic willingness to respond to increased inflationary pressure, which in turn has become more likely given the robust trend in domestic and global growth. Equally, however, it does not implicitly endorse any particular judgement about what level of short-term rates should be considered as “neutral”, where the Federal Reserve is likely to stop tightening, and how soon they might be ready to cut rates after that.

In plain English, no one knows for sure what level of rates is going to be appropriate going forward, but the Fed will certainly consider moving to 50 bp increments if and when inflation outcomes look more threatening (core PCE inflation trend steadily higher from here).
Inevitably, this makes the path and eventual destination for short-term rates less predictable and more data-dependent than before. Markets need to price for a wider range of possible outcomes, and a more volatile patch for rates and bond yields, which is what they are starting to do. This shift can also be illustrated via our global Taylor Rule framework, where one can define the plausible range of outcomes for G3+ short-rates as lying between the two paths shown in Chart 1 below.

Chart 1: G3+ Nominal Short Rate (%) vs. Taylor Rule

![Chart](image)

Source: Datastream, CSFB Estimates

The lower path illustrates the potential implication for short-rates if we get a typical cyclical slowdown in global industrial production from here combined with a gentle pick-up in core inflation that quite quickly goes into reverse, and we assume that the “equilibrium” or trend level of real short rates is permanently lower than it was before the tech bubble episode.

The higher path illustrates the more likely path if global growth stays strong, or picks up further and higher core inflation causes market participants to revise their idea of ‘equilibrium’ short-rates to something more in line with pre-bubble experience.

Note how the two scenarios converge by late 2006, reflecting the assumption that stronger global growth, higher yields and lower risk appetite will lead to a weaker level of global output by the end of next year than the spontaneous slowdown path. Thus, the widest gap between the two paths for G3+ short-rates occurs over the next 6-12 months, suggesting greater uncertainty about the path of rates than about the level a couple of years out. (Implicitly, this is a bit more of a new environment than a continuity view since it assumes that asset prices and growth will respond quite quickly to the actual and expected increase in interest rates on the stronger growth path.)

And for what it is worth, note also how the forward curve has now priced in a path more or less exactly in the middle of our two hypothetical scenarios, which leaves bond market risk looking a bit more symmetrical than it was at the beginning of this year.

What our global Taylor Rule framework leaves out, however, is the possibility that an inflation “scare” over the next several months, to which central banks respond pragmatically, might actually lead to an even more brutal global downturn and re-emergence of excess capacity than we have envisaged above. That would be an even stronger version of the “new-environment” view, and imply another deflationary phase with short-term interest rates having to return to emergency levels relatively soon, in which case long-term interest rates would probably price in a far more persistent regime of low nominal interest rates in the future, making new secular lows in 2006 or 2007.
Secular Trends

Which brings us back to the deeper question of what sort of secular environment for financial assets we are in.

Back in the second half of the 19th century, (indeed for the 200 years or so up until 1950), high quality long bond yields, then epitomized by British Consuls, ranged between 3% and 4 ½% most of the time, with rare dips below 3% and a number of brief spikes towards 6% or slightly higher, invariably during wars or extreme social unrest.

Chart 2: UK Long Bond Yield (Consuls) 1750-2005

![Chart 2: UK Long Bond Yield (Consuls) 1750-2005](image)

Note that the mean and median bond yields were 3.29% and 3.15% respectively between 1850 and 1950. Of course, between 1750 and 1914, the price level was essentially stable in both the UK and the US, with war-related spikes subsequently reversed. It was not until well after World War II that expectations of a positive inflation rate became commonplace, meaning that before the war real and nominal bond yields were in an ex post sense identical.

The continuity view would imply that there is indeed a good probability that we will replay the 1960s with inflation, nominal and eventually real yields trending higher over the next decade and maybe longer.

By contrast the new-environment view suggests that central banks will not find it too difficult to maintain inflation at about 2% p.a. or slightly lower over the longer run. That would imply a trading range for nominal long bond yields of roughly 4½% to 6½%, and a mean rather nearer 5%. An even stronger version of the new-environment view would suggest that inflation might end up undershooting the official central bank target as they underestimate the inherently deflationary bias to free-wheeling global capitalism. And/or that rapidly ageing populations and slower labour force growth might imply lower equilibrium real yields than in the 19th century. In which case, a break back into the historically typical 3% to 4½% range for nominal bond yields could certainly not be ruled out.

It hardly needs adding that we have a definite bias here: we think that the experience of the past 15 years is far more consistent with the new-environment view, and the performance of the world economy going is likely to be closer to that of the late 19th century than the 1960s, (or indeed the 1930s), unless globalization goes into dramatic reverse.
On equities, we simply note that real equity returns in the UK and the US seem to have had a long-term trend of about 6% p.a. plus or minus, and a periodic tendency to have large scale overshoots relative to trend. One particularly interesting feature of the later 19th century, however, was that the secular bull market of 1857-1882, which saw returns to rival the 1982 to 2000 period was not followed by a truly extreme overshoot below trend, even in the "Great Depression" of 1892-1896. And from 1882 to 1907, real equity returns pretty much matched their long-term trend. Though it is too big a topic to go into now, it seems to us that equities might indeed manage trend-like returns over the next decade or two but only in the context of continued low inflation, and quite possibly only in the context of lower real yields than the historical norm. But that still leaves room for considerable cyclical volatility around that trend, and still makes risky assets in general look vulnerable to any shorter-term inflation scare arising from above trend global growth.

We leave the last word to Keynes, who followed up the sentence quoted at the start with the following:

"The situation, which I am indicating is typical, is not one in which capital is so abundant that the community as a whole has no reasonable use for it any more, but where investment is being made in conditions which are unstable and cannot endure, because it is prompted by expectations which are destined to disappointment".

Or to put it even more simply: in a free-wheeling global economy such as he grew up in and as we have now, abundant liquidity and a low cost of capital typically manifest themselves in short-run over investment, asset price overshooting and accumulating potential for investor disappointment.

Excess supply, deflationary pressure and lower interest rates are likely to be the more enduring effects of this process than the opposite.
Source for all: Datastream, MSCI, Credit Suisse First Boston

* CSFB world wealth index measures performance of a number of asset classes including developed and emerging market equities, government and EMBI+ bonds as well as high yield and corporate bonds.

** CSFB risk appetite looks at historical risk/reward across a broad spectrum of global asset classes. When risk appetite is high, high volatility assets such as emerging market equities are outperforming less risky assets such as developed fixed income. Sources: Datastream, CSFB Estimates
### Regional Equity Performance - since 28 February 2005

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent Change (local currency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>-6%</td>
</tr>
<tr>
<td>Japan</td>
<td>-5%</td>
</tr>
<tr>
<td>Nordic</td>
<td>-4%</td>
</tr>
<tr>
<td>Germany</td>
<td>-3%</td>
</tr>
<tr>
<td>EMU</td>
<td>-2%</td>
</tr>
<tr>
<td>UK</td>
<td>-1%</td>
</tr>
<tr>
<td>World</td>
<td>0%</td>
</tr>
<tr>
<td>USA</td>
<td>1%</td>
</tr>
<tr>
<td>Far East ex Jap</td>
<td>2%</td>
</tr>
<tr>
<td>Emerging Asia</td>
<td>3%</td>
</tr>
<tr>
<td>Latin America</td>
<td>4%</td>
</tr>
<tr>
<td>Emerging Europe</td>
<td>5%</td>
</tr>
</tbody>
</table>

### Global Sector Performance – Five Top Sectors since 28 February 2005

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percent Change (local currency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Goods, Food, Bvgs, &amp; Pharm/Biotech</td>
<td>1%</td>
</tr>
<tr>
<td>Media</td>
<td>1%</td>
</tr>
<tr>
<td>Utilities</td>
<td>1%</td>
</tr>
<tr>
<td>Insurance</td>
<td>0%</td>
</tr>
<tr>
<td>Autos</td>
<td>0%</td>
</tr>
<tr>
<td>Materials</td>
<td>-1%</td>
</tr>
<tr>
<td>Diversified Financials</td>
<td>-2%</td>
</tr>
<tr>
<td>Tech</td>
<td>-3%</td>
</tr>
<tr>
<td>Hardware</td>
<td>-4%</td>
</tr>
</tbody>
</table>

### Cyclical to Defensives Returns Ratio

![Cyclical to Defensives Returns Ratio Graph]

### Global Financials Sector Index

![Global Financials Sector Index Graph]

Source for all: Datastream, MSCI, Credit Suisse First Boston
Global Performance Monitor

Source for all: Datastream, MSCI, Credit Suisse First Boston
US 10-Year Swap Spread Against Treasuries

Mortgage Spread

US AA Corporate Spread vs. Swaps

US BBB Corporate 10-year Spread vs. Swaps

High Yield Spread Against Treasuries

Emerging Market Bond Spread

Source for all: Datastream, MSCI, Credit Suisse First Boston
US$ Trade Weighted

Euro-USD

EUR-GBP

WTI Crude

Copper

Tin 3m

Source for all: Datastream, MSCI, Credit Suisse First Boston
Disclosure Appendix

Analyst Certification
The analysts identified in this report each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

Important Disclosures
The analyst(s) involved in the preparation of this research report received compensation that is based upon various factors, including CSFB’s total revenues, a portion of which are generated by CSFB’s Investment Banking and Fixed Income Divisions.
CSFB policy generally prohibits analysts and members of their households from having a financial interest in the securities or derivatives of issuers that are the subject of this report.
CSFB policy generally prohibits analysts and members of their households from becoming an officer, director, or advisory board member of an issuer that is the subject of this report.
CSFB and/or its affiliates may have managed or co-managed a public or Rule 144A offering of securities for an issuer that is the subject of this report.
CSFB and/or its affiliates may trade as principal in the securities or derivatives of the issuers that are the subject of this report.

Recommendation Definitions
Buy: Indicates a recommended buy on our expectation that the issue will be a top performer in its sector.
Outperform: Indicates an above-average total return performer within its sector. Bonds in this category have stable or improving credit profiles and are undervalued, or they may be weaker credits that, we believe, are cheap relative to the sector and are expected to outperform on a total-return basis. These bonds may possess price risk in a volatile environment.
Market Perform: Indicates a bond that is expected to return average performance in its sector.
Underperform: Indicates a below-average total-return performer within its sector. Bonds in this category have weak or worsening credit trends, or they may be stable credits that, we believe, are overvalued or rich relative to the sector.
Sell: Indicates a recommended sell on the expectation that the issue will be among the poor performers in its sector.
Restricted: In certain circumstances, CSFB policy and/or applicable law and regulations preclude certain types of communications, including an investment recommendation, during the course of CSFB’s engagement in an investment banking transaction and in certain other circumstances.

Risk Category Definitions
In addition to the recommendation, each issue may have a risk category indicating that it is an appropriate holding for an "average" high yield investor, designated as Market, or that it has a higher or lower risk profile, designated as Speculative and Conservative, respectively.

CSFB Credit Rating Definitions
CSFB assigns rating opinions to investment-grade and crossover issuers. Ratings are based on our assessment of a company’s creditworthiness and are not recommendations to buy or sell a security. The ratings scale (AAA, AA, A, BBB, BB) is dependent on our assessment of an issuer’s ability to meet its financial commitments in a timely manner. Within each category, creditworthiness is further detailed with a scale of High, Mid, or Low – with High being the strongest sub-category rating: High AAA, Mid AAA, Low AAA – obligor’s capacity to meet its financial commitments is extremely strong; High AA, Mid AA, Low AA – obligor’s capacity to meet its financial commitments is very strong; High A, Mid A, Low A – obligor’s capacity to meet its financial commitments is strong; High BBB, Mid BBB, Low BBB – obligor’s capacity to meet its financial commitments is adequate, but adverse economic/operating/financial circumstances are more likely to lead to a weakened capacity to meet its obligations. High BB, Mid BB, Low BB – obligations have speculative characteristics and are subject to substantial credit risk. CSFB’s rating opinions do not necessarily correlate with those of the rating agencies.
This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject Credit Suisse First Boston or its subsidiaries or affiliates (collectively "CSFB") to any registration or licensing requirement within such jurisdiction. All material presented in this report, unless specifically indicated otherwise, is under copyright to CSFB. None of the material, nor its content, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of CSFB. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of CSFB.

The information, tools and material presented in this report are provided to you for information purposes only and are not to be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities or other financial instruments. CSFB may not have taken any steps to ensure that the securities referred to in this report are suitable for any particular investor. CSFB will not treat recipients of this report as its customers by virtue of their receiving this report. The investments and services contained or referred to in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about such investments or investment services. Nothing in this report constitutes investment, legal, accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate to your individual circumstances, or otherwise constitutes a personal recommendation to you. CSFB does not advise on the tax consequences of investments and you are advised to contact an independent tax adviser. Please note in particular that the bases and levels of taxation may change.

Information and opinions presented in this report have been obtained or derived from sources believed by CSFB to be reliable, but CSFB makes no representation as to their accuracy or completeness. CSFB accepts no liability for loss arising from the use of the material presented in this report; except that this exclusion of liability does not apply to the extent that such liability arises under specific statutes or regulations applicable to CSFB. This report is not to be relied upon in substitution for the exercise of independent judgment. CSFB may have issued, and may in the future issue, other reports that are inconsistent with, and reach different conclusions from, the information presented in this report. Those reports reflect the different assumptions, views and analytical methods of the analysts who prepared them and CSFB is under no obligation to ensure that such other reports are brought to the attention of any recipient of this report.

CSFB may, to the extent permitted by law, participate in financing transactions with the issuer(s) of the securities referred to in this report, perform services for or solicit business from such issuers, and/or have a position or holding, or other material interest, or effect transactions, in such securities or options thereon, or other investments related thereto. In addition, it may make markets in the securities mentioned in the material presented in this report. CSFB may have, within the last three years, served as manager or co-manager of a public offering of securities for, or currently may make a primary market in issues of, any or all of the entities mentioned in this report or may be providing, or have provided within the previous 12 months, significant advice or investment services in relation to the investment concerned or a related investment. Additional information is subject to duties of confidentiality. Available on request. Some investments referred to in this report will be offered solely by a single entity and in the case of some investments solely by CSFB, or an associate of CSFB or CSFB may be the only market maker in such investments.

Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. Information, opinions and estimates contained in this report reflect a judgement at its original date of publication by CSFB and are subject to change without notice. The price, value and income from any of the securities or financial instruments mentioned in this report can fall as well as rise. The value of securities and financial instruments is subject to exchange rate fluctuation that may have a positive or adverse effect on the price or income of such securities or financial instruments. Investors in securities such as ADR's, the values of which are influenced by currency volatility, effectively assume this risk.

Structured securities are complex instruments, typically involve a high degree of risk and are intended for sale only to sophisticated investors who are capable of understanding and assessing the risks involved. The market value of any structured security may be affected by changes in economic, financial and political factors (including, but not limited to, spot and forward interest and exchange rates, time to maturity, market conditions and volatility, and the credit quality of any issuer or reference issuer). Any investor interested in purchasing a structured product should conduct their own investigation and analysis of the product and consult with their own professional advisers as to the risks involved in making such a purchase.

Some investments discussed in this report may have a high level of volatility. High volatility investments may experience sudden and large falls in their value causing losses when that investment is realised. Those losses may equal your original investment. Indeed, in the case of some investments the potential losses may exceed the amount of initial investment and, in such circumstances, you may be required to pay more money to support those losses. Income yields from investments may fluctuate and, in consequence, initial capital paid to make the investment may be used as part of that income yield. Some investments may not be readily realisable and it may be difficult to sell or realise those investments, similarly it may prove difficult for you to obtain reliable information about the value, or risks, to which such an investment is exposed.

This report may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the report refers to CSFB's own website material, CSFB has not reviewed any such site and takes no responsibility for the content contained therein. Such address or hyperlink (including addresses or hyperlinks to CSFB's own website material) is provided solely for your convenience and information and the content of any such website does not in any way form part of this document. Accessing such website or following such link through this report or CSFB's website shall be at your own risk.

This report is issued and distributed in Europe (except Switzerland) by Credit Suisse First Boston (Europe) Limited, One Cabot Square, London E14 4QJ, England, which is regulated in the United Kingdom by The Financial Services Authority ("FSA"). This report is being distributed in the United States and Canada by Credit Suisse First Boston LLC. In Switzerland by Credit Suisse First Boston; in Brazil by Banco de Investimentos Credit Suisse First Boston S.A.; in Japan by Credit Suisse First Boston Securities (Japan) Limited, elsewhere in Asia / Pacific by whichever of the following is the appropriately authorised entity in the relevant jurisdiction: Credit Suisse First Boston (Hong Kong) Limited, Credit Suisse First Boston Australia Equities Limited, Credit Suisse First Boston (Thailand) Limited, CSFB Research (Malaysia) Sdn Bhd, Credit Suisse First Boston Singapore Branch, and elsewhere in the world by the relevant authorised affiliate of the above. Research on Taiwanese securities produced by Credit Suisse First Boston, Taipei Branch has been prepared by a registered Senior Business Person. This research may not conform to Canadian disclosure requirements. In jurisdictions where CSFB is not already registered or licensed to trade in securities, transactions will only be effected in accordance with applicable securities legislation, which will vary from jurisdiction to jurisdiction and may require that the trade be made in accordance with applicable exemptions from registration or licensing requirements. Non-U.S. customers wishing to effect a transaction should contact a CSFB entity in their local jurisdiction unless governing law permits otherwise. U.S. customers wishing to effect a transaction should do so only by contacting a representative at Credit Suisse First Boston LLC in the U.S.

Please note that this research was originally prepared and issued by CSFB for distribution to their market professional and institutional investor customers. Recipients who are not market professional or institutional investor customers of CSFB should seek the advice of their independent financial advisor prior to taking any investment decision based on this report or for any necessary explanation of its contents. This research may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA or in respect of which the protections of the FSA for private customers and/or the UK compensation scheme may not be available, and further details as to where this may be the case are available upon request in respect of this report.

Copyright Credit Suisse First Boston, and its subsidiaries and affiliates, 2005. All rights reserved.