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Next Month:
The Global Economy in 2003: First Half Review and Second Half Outlook

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Will Real Rates Really Stay Low?

Long-term real interest rates across the developed countries have fallen to levels not seen in over two decades. Markets now expect real rates to stay well below the average of the last two decades —for years to come. We expect to see rates at 2.0%-2.5% over the next year or two

Real bond yields in the major economies are now at the lowest levels since the early 1980s. This has already had important consequences for asset markets, underpinning the fall in major bond yields to multi-year lows and driving a search for yield and carry across asset classes. It is also the main reason why our estimates of equity risk premia have risen, since real equity returns have not improved. Whether these remarkably low real rates will persist is a critical question. If real yields move significantly higher, bond prices will fall sharply and equity valuations could quickly look stretched.

We think real rates are unlikely to return to the levels of the last two decades soon, for two reasons. First, major central banks are becoming anxious to create inflation, not to crush it. With plenty of excess capacity in the global economy, generating inflation will not be easy. It may require real rates to stay below their 'equilibrium' levels for some time —probably longer than is commonly assumed.

Second, the equilibrium real interest rate, which balances savings and investment, may itself be lower now than in the last two decades. One legacy of the post-bubble adjustment is persistent pressure to increase savings and restrain investment. This could keep real rates low, despite rising government deficits. High leverage in the private sector could also deter central banks from tightening aggressively.

Unless the world economy turns sharply worse, real yields are still likely to head modestly higher. Simple models suggest a 2%-2.5% range for G7

real 10-year yields over the next couple of years. This is above current levels but well below the averages of the last two decades. We warn, though, that a continued buoyant trend in equity markets could ultimately lead to more significant upward pressure, eating at the rally's own foundations.

How Unusual Are Today's Rates?

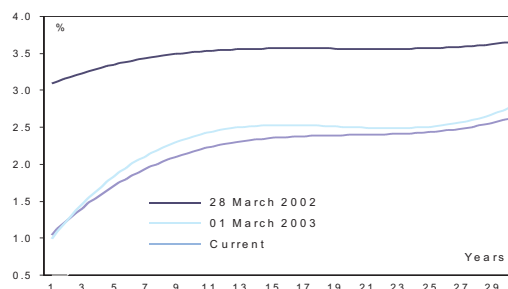
Are current real yields unusually low? Certainly a long period of 2%-2.5% real yields would be a sharp break from the recent past. Outside Japan, long-term real interest rates in most major markets averaged close to 4% between 1980 and 2000.

On a longer view, however, a 2%-2.5% real yield looks less unusual. In the 1950s and 1960s, real 10-year rates in the US averaged 1.4%, despite real GDP growth of over 4%. Between 1900 and 1950, real long-term yields averaged less than 1%, though they fluctuated hugely over that period.

So is the current environment more like the 1980s and 1990s or closer to the experience of earlier periods? That turns on the question of what determines the shifts in real yields over time. Economists generally think of real interest rates in two parts. The average real rate is the rate that balances investment and savings when the economy is at full capacity. Monetary policy drives real rates over the cycle around that average.

This combination of fundamentals and policy helps to explain the shifts in real rates over the last few decades and, in particular, why real rates were higher in the 1980s and 1990s. Strong underlying investment demand at a time of lower desired savings put upward pressure on real rates. In the 1980s, rising government deficits put downward pressure on savings. In the 1990s, increased private investment and reduced private savings were relatively more important. Policymakers trying to crush inflation kept real rates higher than they would otherwise have. By contrast, when inflation accelerated in the late 1960s and 1970s, real rates were lower than they should have been.

US: Term Structure of Real Rates



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Will Real Rates Really Stay Low?

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Creating Inflation Will Take Time

Central banks are now trying to generate inflation, not to kill it. For the first time in decades, policymakers in the world's three largest economies face a significant output gap and core inflation that is lower than they would like it to be. This is a novel situation. Closing output gaps and raising inflation is likely to take a significant period of above-trend growth. With the major economies still facing headwinds, a long period of low rates may be needed to restore vigorous growth.

How long? A simple and highly stylized example gives some clues. Assume that the US output gap is currently around 2.5% and that inflation falls by roughly 0.3ppt per year for every percentage point by which output falls short of potential (a rule that appears to have been roughly true in the past).

In this example (which we stress is a sketch not a forecast), even if the economy grows at 4% between 2005 and 2008, real rates might need to stay well below their equilibrium levels for a long period of time. Excess capacity creates a tendency for inflation to fall; using up that spare capacity takes strong growth.

Policy will eventually need to be tightened, but the pressure to raise rates will be slow in coming. Even over a 10-year horizon, the real short-term interest rate in this example is on average 70bp below its 'equilibrium' rate of 2.5%, implying lower longer-term rates. This is despite the fact that the economy actually grows above trend through the period. And the unusual risks of deflation, which we do not account for here, suggest that policymakers may want to keep real rates even lower, as they now appear to be doing.

Further information on the topics in this report is available on the GS Financial Workbenchsm. For access, please go to www.gs.com/ceoconfidential

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Equilibrium Real Rate May Be Lower

The second reason why long-term yields may stay lower is yet another legacy of the late 1990s bubble. In the post-bubble world, with low capacity utilisation and low returns on investment, incentives to invest are still weak. At the same time, companies as well as individuals in many economies still need to increase savings to compensate for declines in wealth. This is particularly true in the US, where the private sector is still in deficit and well below its long-term average. If that gap needs to narrow more, as our US economists believe, savings will need to rise further and investment to fall.

Another side of the same coin is the push to contain or reduce leverage. Household debt levels are unusually high in many economies; corporate leverage is also historically high. The process of deleveraging reduces the demand for capital, helping to keep real rates low. Moreover, high degrees of household and corporate leverage are likely to weigh against aggressive rate increases.

Of course, there are also forces working in the other direction. Government deficits are increasing again, both in cyclical and structural terms. The G7 government deficit has returned to levels not seen since the early 1990s, and the US outlook is now for deficits as far as the eye can see. In addition, provisioning for rising pension costs as baby boomers move from 'prime saving' years into retirement could put upward pressure on real interest rates in many rapidly ageing countries.

2%-2.5% Real Rates for a While

Using a simple model based on investment and savings in the US and the G7, we expect to see real rates of 2%-2.5% in the G7, slightly lower in the US, for another year or two. Using our central economic projections, the models suggest that real long-term yields will drift upwards only slowly. In effect, the tug of war between higher deficits and lower investment demand will be won by the latter. With the output gap high and core inflation so low, we do not expect real long-term rates to rise significantly even beyond our forecast period. But the much more positive recent

trend in equity markets cannot continue indefinitely without affecting real yields. Continued strong equity returns and accelerating investment—or a much sharper deterioration in public finances—would ultimately push rates significantly higher.

The World of Lower Real Rates

Lower real rates do not necessarily signal much lower longer-term growth. The perception that bond and equity markets are 'in conflict' may thus be overdone. If markets believe global policymakers will keep interest rates low for a prolonged period to underwrite a growth recovery and reverse the downtrend in inflation, then lower yields and reasonable growth need not be inconsistent.

Persistently low real rates would have important implications for asset markets:

- Any bond sell-off over the next few quarters may be limited.
- Higher-yielding and riskier assets may remain relatively attractive.
- An environment of lower real yields is likely to mean lower financial asset returns across the board. Companies and individuals may need to think hard about how much to save for retirement. Corporate pension liabilities will look larger, and individuals' assessments of their own savings needs are also likely to rise.

While real rates may not move sharply higher, they are even less likely to move lower unless the economic outlook worsens significantly. But the combination of rapidly rising equities and low or falling real rates is not sustainable indefinitely. If equity returns continue to improve at recent rates and the recovery is more solid than we expect, real rates will rise. That dynamic could eventually cap both the recovery and the equity rally. ■

Euroland Corporate Interest Rates Are Falling Sharply

Corporate debt remains relatively high in Euroland, and rising interest-rate spreads offset most of what policy easing there was in 2001 and 2002. But average interest rates are now falling sharply and will free up close to 1% of GDP in corporate cashflow during the course of 2003

In Europe, as in the US, corporate indebtedness rose rapidly during the boom. At the end of 1997, non-financial corporations (NFCs) owed around EUR2.7tn, or 47% of GDP, in loans and bonds. Since then, Euroland corporates have made significant progress in reducing the rate of borrowing. The ‘financing gap’ of NFCs in the three largest EMU countries—the difference between their income and spending—fell from 7.8% of sectoral GDP in 2000, to just 0.7% last year.

While its growth rate may have slowed, however, the stock of debt in Euroland is still remains relatively high, compared to past levels. Together, loans and bonds rose to 59% of GDP during 2001, remaining at that level through the course of last year.

Some commentators are concerned that high indebtedness will continue to hamper recovery in Euroland. In a recent report, the IMF said that ‘the rebuilding of corporate balance sheets in the aftermath of the equity market bubble will continue to weigh on investment plans and employment, and hence on growth.’

Interest Rate Cuts Not Passed On to Companies

Corporate indebtedness is not as high in Euroland as it is in the US, where NFCs’ total interest-bearing liabilities are worth 67% of GDP. Borrowing is also higher in the US: the financing gap of NFCs in the US amounted to 1.5% of GDP, twice that in Euroland.

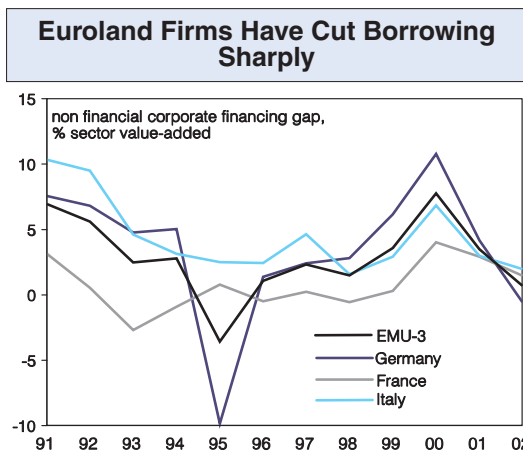
But the IMF’s concerns are still reasonable: typically, the overhang of debt built up during a cyclical boom is one of the key factors suppressing corporate spending during the subsequent downturn, as profitability and confidence decline. Typically, too, easier monetary policy helps to soften this effect, as long as cuts in official rates are passed on to companies. Lower interest payments themselves ease pressure on balance sheets, allowing more room for investment spending to grow.

For much of the past two to three years, however, this appears not to have been happening. Risk-free rates have certainly fallen. The ECB may have begun easing policy later than the US Fed, but three-month rates still declined significantly in the first two years of the downturn, averaging 3¼% last year, after 4½% in 2000. Long-term bond yields also fell, over the same period, from 5½% to 5%.

More likely, rising spreads are to blame. Two direct sources of interest-rate data confirm this:

The spread on corporate bonds rose by 60bp in 2001 and a further 30bp in 2002. The rise in spreads dominated any decline in government yields: corporate bond yields rose by 20bp in each year.

Spreads on bank loans also appeared to rise significantly during the first two years of the downturn. On loans with a sub-one-year duration, banks charged Euroland NFCs more in 2001 than they had in 2000, despite the fall in short rates. Average rates on short-duration loans did fall last year, but by less than the three-month interbank rate. There was a similar widening of the spread between rates on long-duration loans and government bond yields. Weighting these by their shares in NFC balance sheets, we estimate that the average spread between banks’ corporate loan rates and their own cost of finance rose by around 50bp between 2000 and 2002.



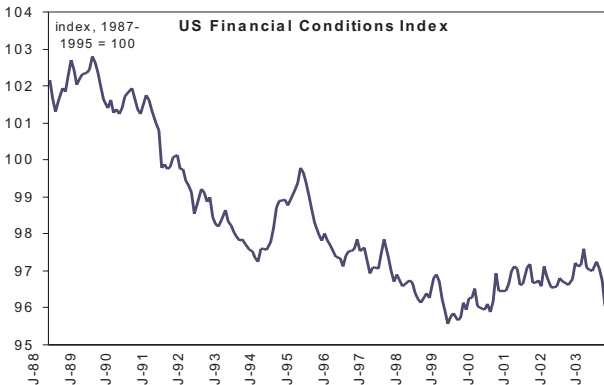
But actual interest payments have been relatively slow to come down. In Euroland, most interest-bearing debt (over 80% of it) is bank loans, and of that, a good part is short-term (around one-third is of less than one-year maturity). So the 1¼% drop in short rates should have been at least as important as the ½% fall in bond yields. In fact, on our estimates, the effective interest rate—NFCs’ aggregate interest payments relative to their total interest-bearing debt—was just over 7% in 2002, compared to 7½% in 2000, a fall of only 40bp.

Together, given the relative sizes of bonds and bank loans in overall corporate debt, average spreads widened by around 60bp between 2000 and 2002. This would explain why actual interest payments remained relatively high, despite falls in the risk-free interest rates. Combined with the relatively slow degree of policy easing by the ECB, higher spreads significantly impaired corporate cashflow in Euroland in 2001 and 2002, thanks to the relatively high level of corporate debt.

As far as payments on bonds are concerned, companies can only exploit the fall in yields if they refinance (or swap) their existing debt. Capital market frictions, preventing refinancing, could help to explain the relative insensitivity of NFCs’ interest payments in 2000-2002. But this is unlikely to be that important a factor, given the relative unimportance of bonds in firms’ total liabilities.

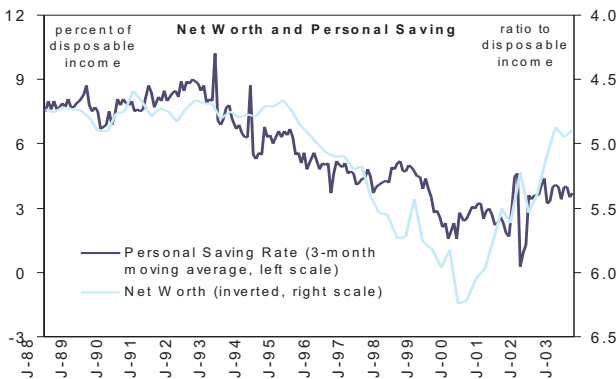
If interest-rate spreads had remained unchanged in 2001 and 2002 then non-financial corporate cashflows would have improved by around EUR25bn, relative to the out-turn, close to ½% of GDP.

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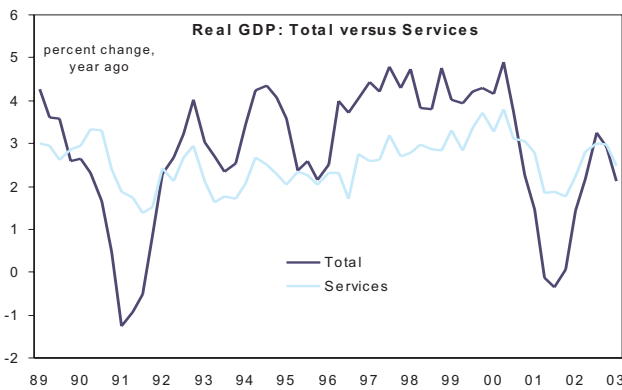
US Financial Conditions Index Signals Easier Conditions

- The Goldman Sachs Financial Conditions Index has eased by more than one percentage point over the past three months. The easing has been broad-based, with long-term corporate bond rates declining, the dollar depreciating and the equity market rebounding.
- Nonfinancial debt growth should abate somewhat in the coming quarters as households and firms continue to repair their balance sheets. Accordingly, we expect private sector debt to grow 6.2% in 2003, down from 7.0% growth in 2002.



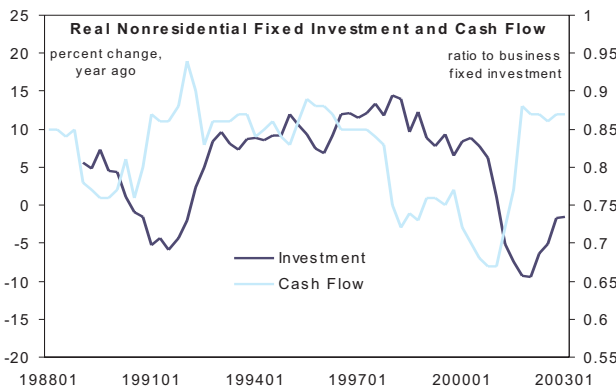
Rising Household Saving Will Keep Consumer Spending Modest

- We anticipate meager real consumer spending growth of 1.5% in the second quarter of 2003. Our medium-term forecast calls for higher growth, averaging about 2.5% through the end of 2004.
- Low interest rates will continue to depress real financial asset returns, forcing households to rely on increased saving to prop up their net worth. The expected rise in household saving means that consumption will grow more slowly than disposable income.



Manufacturing Sector May Benefit from Dollar Weakness

- Though recent manufacturing data indicate some improvement, manufacturing output is still contracting. Our forecast calls for an increase in output through the next year, fueled primarily by faster demand growth and improved trade competitiveness.
- If the dollar continues to depreciate, the manufacturing sector would benefit. This would stand in sharp contrast to recent years in which manufacturing has shrunk sharply as a share of overall economic activity.



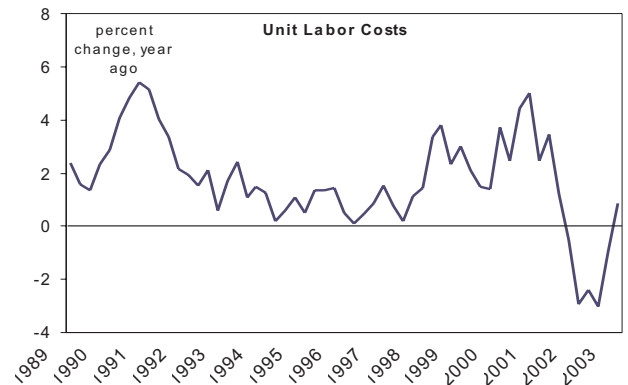
A Moderate Rebound For Business Fixed Investment

- Business fixed investment contracted at a 4.8% (annualized) rate last quarter. Our forecast calls for continued contraction in the second quarter, with recovery in the third and fourth quarters of 2003.
- Easing corporate credit and low interest rates should provide support. However, extremely low capacity utilization rates and sluggish demand imply that only a moderate rebound is likely.

Source: Goldman Sachs.

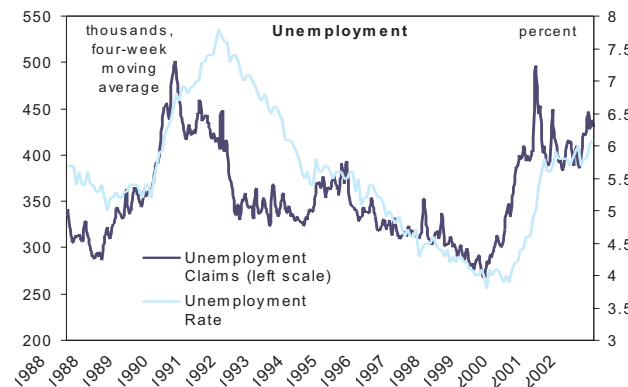
We See Low Risk of ‘Corrosive’ Deflation

- Inflation as measured by the core CPI is at its lowest level in nearly 40 years. With the economy retaining significant slack, inflation is likely to fall further over the next 18 months.
- That said, the disinflation gradient should be mild. Although broad-based price indices could start drifting down in the next two to three years, the risks of ‘corrosive’ deflation—involving expectations of continuing significant declines—still appears low.



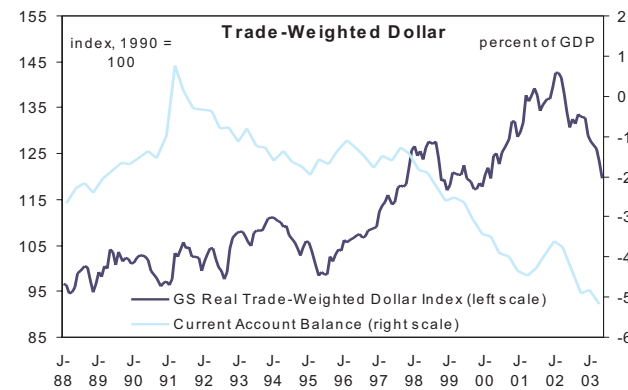
Labor Market Weakness Poses a Key Downside Risk

- Nonfarm payrolls have declined by 342,000 in the past six months and have reported declines in four of the past six months overall, an event that rarely happens outside recession. Further weakness in labor market data will not go unnoticed by the Fed.
- We expect the labor market will remain soft through 2004. Our forecast calls for the unemployment rate to rise to 6.5% by the end of 2004.



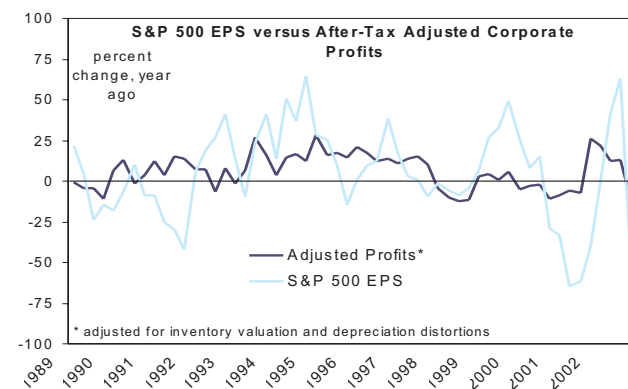
Dollar Weakness Not Yet Enough to Spark a Turnaround in the Trade Balance

- The recent 10% decline (as measured by the Federal Reserve Board’s real broad trade-weighted index) in the dollar from its peak in 2002 is large enough to prevent further trade balance deterioration, but it is unlikely to generate improvement quickly.
- This is because the decline only reverses a small portion of the dollar’s earlier rise. Moreover, the Federal Reserve’s model of the US economy suggests that the dollar depreciation has its greatest impact in the second year.



Corporate Sector Profits Still Struggling

- The first quarter of 2003 saw after-tax corporate profits decrease by 4.4% from the previous year. We expect second-quarter growth to be flat.
- Depressed financial asset returns will continue to put pressure on pension fund finances—requiring a diversion of cash flows and having negative implications for profitability.



Source: Goldman Sachs.

THE WORLD IN A NUTSHELL

	Outlook	Key Issues
United States	The recent easing in financial conditions should help the economy accelerate from its current 1%-2% growth rate over the next year or so. But we still expect the average growth pace to fall short of the 3% long-term trend both this year and next. Households will remain a drag on growth, despite the recovery in the equity market and the drop in long-term interest rates. Following one more 50 basis points cut next week, we expect the Fed to stay on hold through 2004.	Our best estimate is that the latest federal tax cut package will provide stimulus of about \$70 billion in 2003 and \$50 billion in 2004. Fiscal policy will turn restrictive in the second half of 2004, raising the possibility that the economy in 2003-2004 will look similar to 2001-2002. Following a period of weakness, fiscal stimulus and lower interest rates may result in an impressive growth pickup that then gives way to a renewed slowdown as the temporary boost peters out.
Japan	Corporate profits continue double-digit growth even though sales are declining and growth has eased. With declining revenues becoming a well-established trend owing to protracted deflation, corporate profits depend largely on the sustainability of restructuring, as reflected in the Goldman Sachs Restructuring Index. Corporate profits in FY2003 will be largely driven by manufacturing sector profits.	There is no reason for the BOJ to sterilize the increased liquidity created through yen-selling intervention given the rapid, successive increases it has made in the current deposit account target. In fact, a strong correlation can be observed between the amount of intervention and base money growth since the adoption of quantitative easing.
Europe	We expect Euroland GDP growth to rise to an above-trend rate of 2.6% in 2004, and the French economy should lead Euroland's cyclical recovery in 2004. This will be the result of a benign fiscal stance, low real interest rates, and a competitive position on export markets which will make the appreciation of the euro relatively easy to live with.	Historical evidence suggests that Euroland can accelerate without a strong US recovery. Correlations between the growth cycles in the two regions are weaker than many think. When the two have moved together, it is generally the result of common shocks. The biggest risk is of a shock specific to Europe—such as continued sharp euro appreciation without an offsetting domestic policy response.
Non-Japan Asia	Expectations of near-term reflation in Asia on the back of a weaker US dollar are premature. Trade-weighted currency depreciation in Asia has been moderate. Since early 2002, the Asia trade-weighted index has gone down 5%. Two things matter more than the currency: better prospects for improving global demand and enhanced pricing power for Asian exports. Both remain largely a 2004 story.	We revise our Renminbi exchange rate forecast on our view that the trading band will be widened—to 5% on a 6-month horizon and 10% on a 12-month horizon—around the current managed spot. Our new 6-month and 12-month forecasts are Rmb8.07/US\$1 and Rmb7.86/US\$1. The US dollar's on-going weakness is a catalyst in spurring the 'regime shift' in Rmb management.
Latin America	In Mexico, the central bank's preemptive and persistent tightening of monetary policy is reducing both actual and expected inflation. At the same time, real GDP growth has not rebounded. Risks for growth are skewed to the downside. The central bank may have completed its tightening cycle, but the beginning of an easing cycle depends on a stronger drop in actual and expected inflation.	Brazil's new administration has stabilized the economy and continues to gain credibility, largely through tighter financial policies and the delivery of social security and tax reforms to Congress. Brazil could see modest growth in the second half, followed by an expansion of 3.0% in 2004. We think bolstering growth will require stronger policies, including an increase in domestic savings.
Central and Eastern Europe, Middle East and Africa	Our enthusiasm for Central European convergence has taken a big hit. The EU's insistence on Central European foreign exchange staying within a narrow band prior to joining EMU means that the risk of delays has risen. Also, policy confusion in Hungary and Poland lead us to expect 12-18 months of 'wandering in the wilderness' for many Central European asset prices.	For South Africa to halve its unemployment rate over the next ten years to 15% will require economic growth of 5% per annum. Many of the necessary policies are already in place to achieve this, but more should be done to remove uncertainty about rates of return on capital, to reduce the volatility of the rand, to increase labor market flexibility, and to encourage FDI and skilled labor immigration.

KEY ECONOMIC AND MARKET FORECASTS					
	GDP (%)	Consumer Prices (%)	3M Rate Forecasts* (%)	Bond Yields** (%)	Exchange Rate Forecasts
US	2003: 2.0 2004: 2.5	2003: 2.2 2004: 1.2	3m: 0.9 12m: 0.9	Current: 3.4 12m: 3.5	-- --
Japan	2003: 1.0 2004: 0.2	2003: (0.2) 2004: (0.1)	3m: 0.1 12m: 0.1	Current: 0.5 12m: 0.6	3m \$/JPY: 115 12m \$/JPY: 111
Euroland	2003: 0.7 2004: 2.6	2003: 1.9 2004: 1.3	3m: 1.7 12m: 2.7	Current: 3.7 12m: 4.7	3m EUR/\$: 1.18 12m EUR/\$: 1.26
UK	2003: 2.0 2004: 3.0	2003: 3.0 2004: 2.5	3m: 3.9 12m: 4.4	Current: 4.0 12m: 4.8	3m GBP/\$: 1.66 12m GBP/\$: 1.70
Non-Japan Asia	2003: 5.7 2004: 6.6	2003: 1.1 2004: 1.2	3m: 5.0 12m: 4.5	Current: 7.0	3m \$/KRW: 1210 12m \$/KRW: 1100
Latin America	2003: 0.8 2004: 3.2	2003: 11.3 2004: 11.2	3m: 5.0 12m: 5.2	Current: 8.2 12m: 10.1	3m \$/MXN: 10.30 12m \$/MXN: 10.75
Central and Eastern Europe	2003: 3.6 2004: 4.5	2003: 4.5 2004: 3.0	3m: 4.8 12m: 4.5	Current: 4.8 12m: 4.6	3m EUR/PLN: 4.50 12m EUR/PLN: 4.40

* 3-Month Rates: Euroland: average of Germany and France; Non-Japan Asia: Korea; Latin America: Mexico; Emerging Central Europe: Poland.

** Bond Yields: US: 10-year Treasury note; Japan: 10-year JGB; Euroland: average of Germany 10-year Bund and France 10-year OAT; UK: 10-year Gilt; Non-Japan Asia: Korea 5-year sovereign; Latin America: Mexico 5-year sovereign; Emerging Central Europe: Poland 5-year sovereign.

Euroland Corporate Interest Rates Are Falling Sharply

Continued from page 3

Indebtedness has Plateaued

Two developments are reversing these trends. First, corporate indebtedness is declining. Recent data show that the ratio of NFC debt to GDP was flat through 2002, at 59% of GDP.

Also, in response to rising equity markets, some firms—especially those with relatively low credit ratings—are beginning to substitute new equity for debt.

Average Corporate Interest Rates Falling Sharply

Second, and more importantly, corporate interest rates have been declining rapidly, and look set to fall further in the near term.

Risk-free interest rates have fallen sharply. The ECB has cut the refi rate by 1¼% over the past six months, and we expect another ½% of cuts by the end of 2003Q3. This implies a significant fall in three-month rates, of around 125bp in 2003 as a whole, compared with last year.

Global bond markets have also rallied significantly through the first half of this year. We expect average bond yields too to fall by around 1¼% this year, relative to 2002, matching the decline in short rates.

Corporate spreads have narrowed sharply since their peak last fall. Corporate bond

yields are currently 90bp above government bond yields, 50bp below the average in 2002. Our forecast, for the US, at least, is for corporate bond spreads to narrow by a further 20bp by year-end.

Spreads on bank loans may also have peaked. This is harder to judge because the data are not as timely and, up until March at least, implicit spreads on corporate bank loans appeared still to be rising, judging by the ECB data. The gap between sub-one-year rates and three-month Libor stood at 3¼% in 2003Q1, 40bp higher than the average spread in 2002.

But there is a good correlation in the data between the spread on bonds and that on bank loans, albeit with a lag. On our estimates, given the narrowing of bond spreads over the past six months, spreads on bank loans are also likely to have fallen in recent months, reflecting the same improvement in the risk environment.

Bond yields fell by ½% between 2000 and 2002, and short rates by over 1%. But rising spreads offset most of the effects. Now, risk-free rates are coming down sharply and spreads are narrowing. We expect risk-free rates to be 1¼% lower in 2003 than in 2002, and average spreads to improve by ¼%.

Not all of this will be felt immediately, if firms are constrained from refinancing in bond markets. But the average interest rate paid by Euroland firms, just over 7% in

2002, is likely to fall to by at least 1%, to around 6%, in 2003. Given the high starting point, the fall during the course of the year is likely to be even sharper. We expect average interest rates to fall by 1½% in the year to 2003Q4. This would take interest gearing—the ratio of interest payments to NFCs' profits—to 17%, the lowest in the 12-year history of the series.

Improved Cash Flow Good for Investment

Some commentators, and even some members of the ECB, have wondered whether monetary policy is effective in Euroland. As far as household finances and spending are concerned, the US economy may be more responsive to policy easing than the Eurozone. The relative flexibility of the mortgage market, and the greater willingness of US households to gear up their balance sheets, means that falling rates quickly feed through to higher consumer spending growth in the US.

But the same benefits may now be accruing to non-financial companies in Euroland where, unlike in the US, corporate debt exceeds that of households. Despite relatively high levels of debt, falling interest rates are likely to take actual interest payments, relative to profits, to an all-time low by the end of this year. We expect Euroland investment spending to stabilise in the second half of 2003, and to grow by 3.7% in 2004. ■

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US Corporate Balance Sheet Repair: An Update

In a 'flow' sense, most of the corporate balance sheet adjustment of the past few years is probably behind us. In a 'stock' sense, however, balance sheet repair probably has quite a bit further to go

Although the financing gap—the difference between investment and cash flow in the nonfinancial corporate sector—remains moderately positive, the credit markets are sending strong signals that the substantial adjustment seen to date may be sufficient.

Although the long upward trend in corporate leverage has ended, the experience of the early 1990s suggests that outright declines in leverage are likely.

Linking flows and stocks, our analysis implies that the financing gap will probably stay positive, but is unlikely to expand significantly until leverage has come down more noticeably. This means that business investment will have a broadly neutral impact on the economy over the next couple of years (although we still expect a bounce in spending in the second half of 2003).

The first-quarter flow-of-funds report showed a modest decline in the financing gap—the difference between investment and cash flow in the nonfinancial corporate sector—to \$80 billion (0.8% of GDP) from \$95 billion. The reason for the narrowing was a sharp 11.1% (annualized) decline in capital expenditures including inventories, which exceeded the 4.8% (annualized) drop in corporate cash flow seen last quarter.

These declines may well mark the end of the downward adjustment in capital spending. First, the following table shows that the extent of the financial adjustment so far has been very substantial already, with a decline in the financing gap by about 80% from the highs of late 2000. The counterpart of this decline has been a sharp decline in corporate debt growth. (In practice, the financing gap is usually filled mostly by debt issuance, with net equity issuance playing a smaller role.)

Second, the slowdown in debt growth has led to a stabilization in several widely used measures of leverage and indebtedness. For example, the ratio of credit market debt to the replacement cost of tangible assets—a measure that we like because it is

unaffected by valuation changes—has stabilized in the last year, after rising throughout the prior seven years. Thus, the decline in the borrowing and spending flows is starting to affect debt stocks as well.

Third, the easing of credit availability since last fall—illustrated most vividly by a 400-basis-point rally in high yield spreads—shows that the markets are much more comfortable with a corporate sector that still runs a small financial deficit.

We have therefore abandoned our long-standing expectation that the financing gap will need to close fully and now believe that the adjustment of corporate borrowing and spending flows to the post-bubble environment may well be over. This means the corporate sector adjustment is no longer a constraint on the economy, and this is one reason why we expect growth of close to 3% over the next year.

Nevertheless, in a 'stock' sense, the balance sheet repair process probably still has considerably further to go. That is, it still seems likely that the major leverage measures will decline significantly in coming years. The blueprint for this is the period of the early 1990s. From 1990 to 1994, the debt/tangible assets ratio declined by 4.1 percentage points. It seems plausible that firms will need to engage in a similar adjustment in the current environment, which is marked by a hangover from a much more extreme investment bubble.

For this to happen, it is not necessary that either debt growth or the financing gap fall further. After all, in a more normal economic environment, cash flow and tangible assets usually grow over

time. But it is necessary that debt growth remain below the growth rate of the capital stock and—unless there is a pronounced turn toward net equity issuance—the financing gap stay fairly close to current levels.

This implies that—beyond the bounce in spending that we expect for the second half of 2003—the corporate sector will provide neither significant stimulus nor restraint to the overall economy. For the corporate sector to provide genuine stimulus, firms would need to increase their spending faster than their income—in other words, they would need to target an increasing financing gap. If they just push up spending in line with income growth, they merely recycle their income without providing genuine stimulus. Even that, of course, is quite a bit better than the environment of the past few years. ■

Balance Sheet Adjustment in the US Nonfinancial Corporate Sector			
	Financing Gap (% of GDP, annual average)	Debt (% ch yoy, yearend)	Debt Level/ Tangible Assets (%, yearend)
1980	2.8	8.4	28.3
1981	2.7	11.0	28.5
1982	0.8	11.6	29.7
1983	0.7	8.4	31.9
1984	1.8	14.3	35.1
1985	0.7	13.1	37.8
1986	0.7	13.9	41.8
1987	0.4	12.2	44.1
1988	-0.1	10.7	45.6
1989	1.0	8.9	46.5
1990	1.0	6.2	46.8
1991	0.4	0.4	45.1
1992	0.6	-0.5	44.2
1993	0.8	1.3	43.0
1994	0.7	4.3	42.7
1995	1.1	7.6	43.9
1996	0.6	7.0	44.6
1997	1.1	7.3	46.2
1998	2.0	12.0	49.7
1999	2.4	11.5	52.1
2000	3.4	9.9	53.1
2001	1.4	6.5	54.9
2002	0.8	2.5	55.2
2003 Q1	0.8	1.7	55.2

Source: Federal Reserve Board.