Changing expectations for the pace and timing of the U.S. tightening cycle have had a profound effect on global investor sentiment, positioning, asset prices, and credit spreads both this year and last. Since early 2004, the prospect of higher short-term interest rates has made investors more cautious and triggered deleveraging across a wide range of markets. This process has been orderly without posing a threat to financial stability or financial intermediaries.

Against the backdrop of a strengthening global recovery, the transition to a higher interest rate environment is a welcome and healthy development. The early unwinding of leveraged positions should help remove risk of a sharper market correction later. However, should inflation be higher than expected, the extent and duration of the tightening cycle would be much less certain. Such uncertainty could lead to an overshooting of bond yields and credit spreads, and a further deterioration in the external financing environment for emerging market countries.

Overview

The relative calm with which markets are adjusting to significant changes in expectations for short-term U.S. interest rates is attributable to three main factors.

- The U.S. Federal Reserve’s clear communication of its intentions to the market has resulted in anticipatory, orderly adjustments to speculative positions. Investors appear to be reconsidering positions motivated chiefly by the low cost of short-term funds, although the extent of deleveraging remains unclear.
- The backdrop of strong growth and rising corporate earnings, together with successful measures to strengthen corporate balance sheets in the United States and to a lesser extent in Europe, have helped support equity and corporate bond prices, notwithstanding the prospect of higher interest rates.
- The persistent output gap in the major economies has limited inflationary pressure to date and moderated expectations for the pace and degree of tightening in the United States and Europe. However, higher oil prices and an apparent reemergence of corporate pricing power are beginning to raise concerns.

Throughout 2003, heightened risk appetite and a quest for yield induced by the combination of abundant global liquidity and resurgent global economic growth underpinned strong gains in global asset prices. While improved fundamentals—in the form of favorable earnings prospects and strengthened credit quality—provided substantial support to asset prices in mature and emerging markets last year, there were also signs of speculative froth stemming in part from the expectation that short-term U.S. interest rates would remain indefinitely at exceptionally low levels. Low interest rates in an environment of economic recovery helped whet investor risk
appetite and provided incentives for leverage. Ubiquitous carry trades—short-term borrowing to fund positions in risky assets—were emblematic of this more speculative aspect of global asset price movements. Speculative positioning was evident in a number of markets.

- In their simplest form, carry trades aimed to take advantage of the steep yield curve that resulted from monetary accommodation and involved the use of the repo and swaps markets to fund positions in longer term U.S. treasury securities and mortgage-backed securities.
- Leveraged positions were also established in the U.S. high-yield corporate bond market and in emerging market bonds. These positions sought to profit from the higher yield of these bonds and the trend of steeply declining credit spreads that prevailed last year and early in 2004.
- Rapid growth in China and the rebound in U.S. economic activity fueled demand for commodities and contributed to rapidly rising commodity prices. Expectations for a continuation of this trend in an environment of ample global liquidity sparked speculative interest in commodities.
- In the foreign exchange markets, higher yielding currencies in mature and emerging markets tended to appreciate as investors reached for yield. Currencies traditionally linked with commodity price movements were a particular focus of investor interest, as were some high-yielding emerging market currencies. The U.S. dollar was the preferred funding currency for these positions.
- Asian equity markets also experienced speculative inflows, with a large number of small and relatively young hedge funds contributing to leveraged positions in local stock markets.

Market movements since mid-March 2004 have reflected a partial unwinding of these speculative positions. In this process, riskier assets, including in particular high-yielding emerging market bonds, have been hardest hit. Looking forward, there is every prospect for a continued orderly adjustment of asset prices to higher short-term interest rates in the United States and other major financial centers. However, financing conditions for emerging market borrowers are likely to remain less accommodating than in 2003 and early 2004, when primary market bond issuance by emerging market borrowers surged.

There are four main risks to the outlook.

- An unanticipated increase in inflationary pressure would call into question the pace of short-term interest rate hikes currently discounted in the market, and potentially result in market turbulence. A faster than anticipated closure of the output gap could trigger market concerns that the Fed had “fallen behind the curve” and was chasing, rather than shaping, market expectations for interest rate increases. If this were to occur, yields and credit spreads could overshoot.
- Geopolitical concerns have become a perennial and imponderable risk factor. In recent months, security concerns have put pressure on oil prices. A spike in oil prices would dampen economic activity and pressure the external accounts of oil importers.
Geopolitical concerns unrelated to the continuity of oil supplies have the potential to heighten risk aversion, leading to widening credit spreads and lower asset prices.

- In the emerging markets, rising short-term interest rates are likely to be associated, as they have been in the past, with a less hospitable external financing environment. Markets are also likely to exercise increasing discrimination among borrowers as liquidity becomes less abundant. In an environment of higher funding costs, increased investor discrimination, and more restricted access to external financing, it will be especially important for emerging market borrowers to address the factors underlying high debt levels and potentially unstable debt structures. In this environment, investors are also likely to be especially cautious in their approach to countries facing political challenges to the pursuit of strong policies. These countries would be particularly vulnerable if higher-than-expected inflation were to push up mature market bond yields.

- The orderly adjustment of global imbalances remains a medium-term challenge. Throughout much of 2003, the level of capital inflows needed to finance the U.S. external current account deficit—and the heavy tilt toward U.S. bonds as a destination for these flows—weighed on the dollar. These concerns waned as strong U.S. growth and expectations for higher U.S. interest rates contributed to an appreciation of the dollar. Nevertheless, the persistence of these imbalances remains a potential source of instability in the currency markets that could also spill over to other assets.

**Orderly Unwinding of Carry Trades Predicated on Measured Increases in Rates**

The Fed has prepared the market for U.S. interest rates to be raised from exceptionally low levels at a measured pace. The stance of U.S. monetary policy is widely perceived to be at a turning point. All such turning points are scrutinized by the markets. However, investor preoccupation with the timing and pace of the current transition has been intensified by the exceptionally low absolute level of overnight rates (which were pushed to 45-year lows to forestall deflationary pressure), the steep slope of the yield curve, the low level of short-term interest rates and of U.S. treasury yields relative to nominal GDP (Figure 1), and the perception that low funding costs have had a wide-ranging impact on asset valuations.

**Markets are discounting with near certainty that the Fed Funds rate will be increased by 25 basis points at end-June.** A further steady increase in this policy rate is expected at each subsequent meeting of the Federal Open Market Committee. Futures contracts suggest that the Fed Funds rate will reach at least 2 percent by year end (Figure 2).

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**Figure 1. GDP Growth & Interest Rates**

![Figure 1. GDP Growth & Interest Rates](source)

**Figure 2. One-Month Fed Funds Futures Rate**

![Figure 2. One-Month Fed Funds Futures Rate](source)
Tightening is expected to be initiated or to continue in other major financial centers. The Bank of England has raised rates four times since October 2003 to 4.5 percent. U.K. base rates are expected to continue to rise to 5-5½ percent by end-2005. In the euro area, the market anticipates tightening to begin sometime in the first quarter of 2005. The pace of euro rate increases now discounted is relatively slow, however, and U.S. short-term interest rates are expected to exceed euro rates before the end of this year (Figure 3). Although markets expect Japan’s zero interest rate policy to be maintained, yields on Japanese government bonds have increased in response to promising signs of stronger economic growth.

Longer-term government bond yields in the major financial centers have increased significantly since this year’s trough in mid-March (Figure 4). Yields in the United States led the increase. Futures markets and the low implied volatility of options on longer term U.S. interest rates suggest that further increases in longer-term bond yields are expected to be modest. The anticipated increase in short-term rates is expected to cause the U.S. yield curve to flatten. The U.K. yield curve is considerably flatter than those of the euro area and the United States, reflecting the relatively advanced state of its tightening cycle.

The increase in nominal government bond yields in the United Kingdom, the United States, and the euro area since mid-March 2004 appears largely to reflect rising real yields (Figure 5). Nevertheless, real yields on inflation-indexed bonds remain well below historical averages, notwithstanding stronger economic activity. The low level of short-term interest rates—which remain negative in real terms in the United States—appear for the present to be anchoring longer-term real yields. Once the tightening cycle begins, and short-term interest rates rise, real yields on index-linked bonds will likely increase as well.
At present, inflation expectations continue to be subdued, although they have increased, and remain above the actual rate of inflation (Figure 6). The pace of long-term yield increases will remain moderate so long as inflation expectations and the related inflation risk premium on longer-term government bonds remain well anchored. An unanticipated increase in inflation could call into question expectations for a measured pace of monetary tightening, increase uncertainty over the likely future level of bond yields, and boost the inflation risk premium.

The potential for further upside surprises in global growth and oil price movements have intensified market sensitivity to signs of incipient inflation. Commodity prices have received close scrutiny as an indicator of more generalized price pressure and as an area of speculative activity. In the case of oil, the confluence of strong global demand, supply bottlenecks, and the potential for security-related disruption in the oil market pushed oil prices to a record high in May (Figure 7). These fears appear to have eased with the announcement by OPEC in early June of higher production quotas.

Non-oil commodity prices—including industrial metals in particular—rose quite strongly in 2003 and early 2004, but fell precipitously on expectations that measures by China to restrain credit growth would dampen demand for commodity imports (Figure 8). The unwinding of speculative positions in commodity markets, a further manifestation of the carry trade, contributed to the decline in non-oil commodity prices.
Currency Markets Respond to Stronger Growth and Unwinding of Carry Trades

Contrary to expectations at the end of last year and notwithstanding continuing large U.S. external financing needs, the dollar has appreciated against other major currencies since early 2004 (Figure 9). Strong economic growth in the United States and the anticipation of higher U.S. interest rates appear to be the main factors underpinning the dollar’s appreciation. Nevertheless, the large capital inflows needed to finance the U.S. current account deficit are a continuing concern. The composition of these flows—which remain heavily skewed toward fixed-income securities—and the large share of U.S. government and corporate bonds held by foreigners raise the possibility that a sustained reduction in inflows could result in a combination of higher bond yields and a weaker dollar.

Speculative positions against the dollar have been reduced since end-2003, and expectations for currency market volatility have remained subdued (Figures 10 and 11). Intervention by the Japanese authorities to stem the appreciation of the yen was extraordinarily high in 2003 and early 2004. With the dollar on an appreciating trend, Japanese intervention ceased in mid-March.

This year’s decline in non-oil commodity prices affected some commodity-driven currencies (Figure 12). The Australian, Canadian, and New Zealand dollars had experienced long rallies, reflecting the impact of strong global growth on the prices of commodity exports, as well as speculative pressures. As markets began to bring forward
their expectations for U.S. interest rate increases and with doubts over the sustainability of strong commodity imports by China, speculative carry trades were reduced. The Australian, Canadian, and New Zealand dollars gave back about a third of their earlier gains.

**Deleveraging also affected emerging market currencies.** In the climate of low risk aversion of 2003, investors were attracted to emerging market currencies. These positions were motivated by higher interest rates in the emerging money markets than in the United States, and expectations of further dollar depreciation. As expectations for U.S. economic growth and the pace of Fed tightening changed and the dollar strengthened, these investments began to lose favor. In particular, speculative positions established in the non-deliverable forwards market in the expectation of a de-pegging of the Chinese yuan appear to have been unwound (Figure 13).

**Strong Fundamentals Support Mature Corporate Bonds Despite Tightening Prospects**

**Strengthening balance sheets, rising cash flows, and increased corporate profitability have underpinned improvements in credit quality this year.** The improvement in credit quality has been evidenced by ratings actions and declining corporate defaults. Credit spreads on high-grade and high-yield corporate bonds in Europe and the United States remain narrow following the marked compression of spreads experienced in 2003 and early 2004 (Figures 14 and 15). Corporate bond spreads in the mature markets typically narrow in the early stages of tightening cycles as the improvement in credit fundamentals arising from stronger earnings outweigh the prospect of higher funding costs.
Earnings Support Equity Prices

As in the case of mature corporate bond markets, mature equity market prices have been supported by rising earnings and strengthening balance sheets. The low level of implied equity option volatility in mature markets suggests that investors so far see limited downside risk to equity prices (Figure 16). Since last year, valuations have risen roughly in line with higher earnings, and earnings in the mature markets have tended to exceed analyst expectations. First quarter corporate earnings in the United States were robust and broad-based, with particularly strong gains in the materials producing technology, and finance sectors. An unusually high share of earnings of the firms included in the S&P 500 was attributable to the finance sector, which had gained directly and indirectly from the proliferation of carry trades. In Japan, equity markets have risen so far this year with signs of a deepening economic recovery.

Equity valuations, as measured by price/earnings ratios, are at or below averages since 1990 (Figure 17). However, this period includes the lofty valuations of the bubble period. Comparisons of the earnings yield of the U.S. equity market with 10-year government bond yields also suggest favorable valuation levels. It should be noted, however, that higher interest rates and input costs could put downward pressure on mature equity market valuations.

Figure 16. Equity Market Volatility

![Equity Market Volatility Graph](source)

Figure 17. Twelve-month Forward Price/Earnings Ratios

![Twelve-month Forward Price/Earnings Ratios Graph](source)

Source: I/B/E/S.
Emerging market Asian equities were hard hit by deleveraging. In addition to changing expectations for U.S. interest rates, steps by the Chinese authorities to dampen credit growth triggered a sell-off of Asian equities, which had previously been boosted in part by expectations of Chinese-led regional growth. Moreover, a weakening of the view that Asian currencies would appreciate against the U.S. dollar contributed to an unwinding of more speculative flows. Asian markets have recovered more recently with signs of continued strong growth (Figure 18).

Emerging Market Bond Spreads Widen in Anticipation of Higher U.S. Interest Rates

As highlighted in the April Global Financial Stability Report, expectations for continued abundant global liquidity were a key factor in the compression of credit spreads on emerging market bonds in 2003 and early 2004. As these expectations were revised in the course of 2004, emerging market bond spreads widened significantly. A succession of developments since the January 2004 Federal Open Market Committee has brought forward the market’s expectations of the timing and speed of Fed tightening. Since that time, spreads on emerging market debt have widened some 100 basis points, with the sell-off gathering pace in April after U.S. employment data releases significantly accelerated expectations of higher U.S. yields (Figure 19).

The sell-off in emerging market debt has led to a change in the investor base as speculative investors have sharply reduced their exposure. Though precise data are difficult to come by, the initial phase of the sell-off appears to have been led by more speculative trading accounts (such as hedge funds) unwinding highly leveraged positions. Dedicated emerging market mutual funds also experienced net outflows beginning in April, and began to allocate larger proportions of their portfolios to cash, awaiting a more stable environment. (Figure 20). However, there are anecdotal signs that such funds began to reinvest cash holdings in early June. Moreover, there
are also indications that institutional investors (who generally take long-term, strategic positions in emerging markets) remain committed to the asset class, with significant new funds still in the pipeline.

The deleveraging process hit high-yielding, liquid credits the hardest (Figure 21). In particular, the Brazilian component of the EMBI+ has had the largest negative return, year to date. In part, this reflects the high liquidity of Brazilian bonds which makes them a favored vehicle for deleveraging. Speculative investors sold the more liquid bonds of Brazil and to a certain extent Russia to hedge positions in less liquid emerging markets.

More generally, both in the rally that commenced in late 2002, and in the more recent bear market, external liquidity has been a more important driver of emerging market debt, relative to fundamentals, than in previous episodes.\(^1\) The rise in credit spreads since early 2004 was broad-based, pushing the cross-correlations of returns among emerging market debt higher (Figure 22).

The sell-off this year occurred despite generally improving credit fundamentals in most emerging markets. The credit profile of emerging markets improved in the first quarter of 2004, with rating upgrades exceeding downgrades for the third consecutive quarter in a row (Figure 23). In addition, the share of credits enjoying a positive outlook has increased. While credit quality improved across all regions, the advance was notable in Eastern Europe, which was influenced by the accession of a number of emerging markets to the European Union in May.

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Looking forward, investors now appear broadly balanced between those prepared to re-enter the market due to relatively attractive valuations and improved market technical factors and those who prefer to wait until there are firmer indications that the deleveraging process has run its course. Emerging market spreads compared with spreads on comparably rated corporate bonds have returned closer to long-term averages after having compressed to near historical lows in late-2003 and early 2004 (Figure 24). Moreover, surveys suggest that investors are approaching historically low exposures compared to their benchmark allocations. An additional positive factor stems from the successful heavy issuance in the first quarter of the year. Nonetheless, the market remains vulnerable to faster-than-expected U.S. rate hikes, as well as unanticipated credit events in key emerging markets.

**Emerging Market Access to Primary Markets Deteriorates**

After an initial surge in issuance in the first quarter of 2004, financing conditions for issuers in emerging markets deteriorated (Table 1 on page 13). The widening of emerging market bond spreads in response to the repricing of U.S. interest rate expectations undermined investor appetite for riskier assets, limiting funding options for emerging market issuers, particularly for issuers of higher-yielding paper.

**Bond market issuance slowed sharply from 2003 and from the first quarter of 2004,** when low global interest rates and investor appetite for riskier investment opportunities allowed many issuers to frontload large parts of their 2004 funding program (Figure 25). Analysts estimate that by end-May 2004, emerging market sovereigns had completed some 60 percent of their bond issuance programs for 2004 (Table 2 on page 13). Since April, however, market access has been largely restricted to high-grade issuers, and no new bonds have been issued by Latin American sovereign borrowers. In an environment of increased investor caution and rising bond spreads, several Asian borrowers delayed bond issues. More recently, however, there have been signs of a moderate increase in issuance since early June.

![Figure 24. Differentials Between Corporate and Emerging Market Spreads (in basis points)](image1)

![Figure 25. Emerging Market Gross Issuance (in billions of U.S. dollars)](image2)
Mirroring events in primary bond markets, equity issuance by emerging market borrowers has slowed in the second quarter of 2004. Issuance remains heavily concentrated in Asia, with China alone accounting for half of all new emerging market equity issuance so far this year.

After a surge in syndicated lending to emerging market borrowers in 2003 and early this year, primary market activity has slowed sharply. Market access has been particularly tight for Latin American borrowers.

Foreign direct investment (FDI) flows in the first quarter of 2004 were higher than levels in the same period last year (Figure 26). While all regions experienced an increase in FDI, these flows remain heavily concentrated on China.
### Table 1. Emerging Market Sovereign International New Issuance Estimates for 2004, Net

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<thead>
<tr>
<th>Region</th>
<th>2002 Issuance to Date</th>
<th>2003 Issuance to Date</th>
<th>2004 Issuance to Date</th>
<th>2004 Percent of Need Covered</th>
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<td>125.5</td>
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<tr>
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<td>11.6</td>
<td>4.0</td>
<td>2.0</td>
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<tr>
<td>Middle East &amp; Africa</td>
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<td>3.6</td>
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<td>0.5</td>
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### Table 2. Emerging Market Financing

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<th>2004</th>
<th>2005</th>
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<tr>
<td>Emerging Europe</td>
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### Table 3. Secondary Markets

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<th>2004</th>
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<td>MSCI Emerging Market Free</td>
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<td>-0.9</td>
<td>0.3</td>
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</table>

**Sources:** Bloomberg LP; Capital Data; J.P. Morgan Chase & Co.; Morgan Stanley Capital International; Salomon Smith Barney; and IMF staff estimates.

1/ Gross issuance data (net of US trust facility issuance) are as of May 25, 2004 close-of-business London, while amortization and net issuance data are for end-May 2004.

Secondary markets data are as of June 15, 2004 cob New York.

2/ On April 14, 2000 the EMBI+ was adjusted for the London Club agreement for Russia. This resulted in a one-off (131 basis points) decline in average measured spreads.