

More than a Midsummer Night's Bad Dream

The global economy continues to struggle against the uncertainty and lack of confidence prevalent since the financial storms of August 2007. The depreciation of subprime assets, with its epicentre in the US, is being replicated in the stock markets, the money markets, and the credit markets throughout the world. Indeed, it is still too early to discount, with any measure of confidence, a worsening of the situation. Decoupling theory has no place here – through commercial channels, investment flows and risk premiums, this economic deceleration will continue to hit the economies of Europe and emerging markets such as Asia – China in particular – and Latin America.

The macroeconomic prospects for 2008-09 that form the central stage of our Euro zone model point towards a clear reduction in growth and a resistance to lowering inflation. The growth in GDP will continue below its potential, in the region of 2% in 2008 and 1.6% in 2009. If the global crisis worsens, then Euro zone growth will slide further towards 1%. In any case, inflation will remain above the 2% threshold.

So, what's going wrong?

It's gloomy news all round as the growth forecasts of the world economy have been consistently revised downwards since the financial crisis exploded last summer. It seems that if this climate of global economic imbalances continues to prevail we could face an altogether worse situation.

What's happening to the world economy?
Who will pay for the subprime crisis?
What is a fair share value in an economic crisis?
When will the US economy recover?

Sovereign funds, investors or invaders?
What price will emerging markets pay?
What about the food shortage?
What's the forecast for the Euro Zone?
What will happen over the next year or so?

1. The international financial system continues to be bogged down in the troubles that first abruptly arose in August 2007 and which look set to worsen during the rest of 2008.
2. The US economy is tittering on the edge of recession.

3. The economies of the European Union and Japan are increasingly feeling the effects of the US economy's deceleration, reducing the possibility of transcontinental decoupling.

4. The imbalances in savings and investment, reflected in the current account deficits/surpluses, are not being corrected.

5. Monetary policies are exacerbating the depreciation of the dollar and the appreciation of the Euro.

6. Global inflation is being driven by the rising price of oil and other raw materials.

7. Speculation in the futures markets, together with other factors that are propelling the increasing food prices, herald the advent of a humanitarian crisis on a global scale.

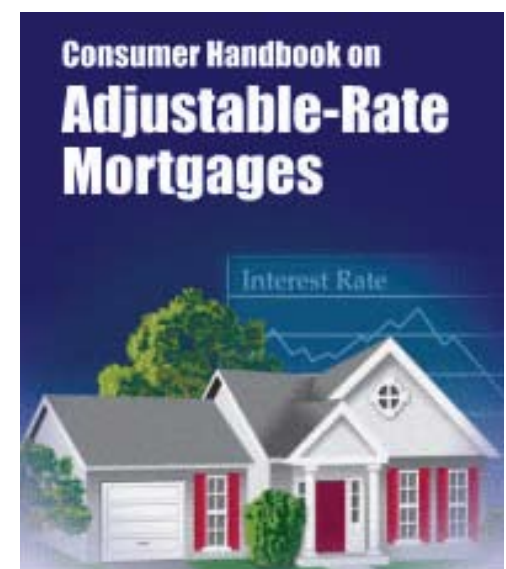
8. Emerging markets will suffer from reduced global consumption and from higher risk premiums.

9. China's overheated and inflationary economy is heading towards a crash.

10. The progressive deterioration of the global economic situation is not being abated despite governmental financial policies designed to stimulate growth, steps taken by the central banks, and warnings from international organisations.

The growth forecasts of the global economy are being revised downwards. There is no decoupling. From the epicentre in the US, deceleration is spreading to Europe, China, Latin America and other emerging markets.

So the outlook for 2008-09 appears to confirm the view of economists as the bringers of bad news.



GLOSSARY OF A FINANCIAL CRISIS

Subprime (mortgage): An ARM (adjustable-rate mortgage) granted to low-income families with no credit history (no income, no job, no assets), with variable interest rates and negative amortization for the first two or three years (“incentive” or “teaser” rates)

Originate-to-Distribute: Banks’ business model in which the lending entities transfer the credit risk to the market (world-class or investment banks) by securitising the credit through complex financial products.

Buy-and-Hold: Banking model in which the entities use the securitization of credit as a source of finance in the money markets, retaining a significant portion of the credit risk on the balance sheet.

Asset-Backed Securities (ABS): Securities derived from securitization of loans (companies, consumers, car loans and student grants).

Residential Mortgage-Backed Securities (RMBS): Derivative bonds from the securitization of mortgages.

Collateralized Debt Obligation (CDO): Structured financial product, an investment-grade security backed by a pool of bonds, loans and other assets. They are formally issued as held-to-maturity products and their value is determined through the mark-to-model mathematic model.

CDO of ABS: A CDO where the securitized portfolio is made up of bonds from pre-existing ABSs. They are new and complex, difficult to evaluate, and based on securitized bonds with different risk levels (super-senior, mezzanine, equity).

Collateralized Loan Obligation (CLO): CDO of company loans, leveraged buy-out, etc.

Collateralised Bond Obligation (CBO): CDO of corporate or high-risk bonds (junk bonds).

Credit Default Swap (CDS): A swap designed to transfer the credit exposure of fixed income products between parties. The buyer of a credit swap receives credit protection, whereas the seller of the swap guarantees the credit worthiness of the product. By doing this, the risk of default is transferred from the holder of the fixed income

security to the seller of the swap.
Synthetic CDO: A form of CDO that invests in CDSs or other non-cash assets to gain exposure to a portfolio of fixed income assets. Synthetic CDOs are typically divided into credit tranches based on the level of credit risk assumed.

Monoline: A business that focuses on operating in one specific financial area. A monoline insurer provides guarantees to issuers that enhance the credit of the issuer. These insurance companies first began providing wraps for municipal bond issues, but now provide credit enhancement for other types of bonds, such as mortgage backed securities and collateralized debt obligations. Issuers will often go to monoline insurance companies to either boost the rating of one of their debt issues or to ensure that a debt issue does not become downgraded. The ratings of debt issues that are securitized by credit wraps often reflect the wrap provider’s credit rating. The main advantage of monolines is that these companies have specialized skills and provide expertise beyond that usually expected from companies covering many different financial areas.

Hedge Fund: An aggressively-managed portfolio of investments that uses advanced investment strategies such as leverage, long, short and derivative positions in both domestic and international markets with the goal of generating high returns (high in absolute or relative terms). Hedge funds are most often set up as private investment partnerships that are open to a limited number of investors and require a very large initial minimum investment, and often require investors keep their money in the fund for at least one year. For the most part, hedge funds (unlike mutual funds) are unregulated because they cater to sophisticated investors. In the U.S., laws require that the majority of investors in the fund be accredited - they must earn a minimum amount annually, have a net worth of more than \$1 million, and a significant amount of investment knowledge. Similar to mutual funds, where investments are pooled and professionally managed, but hedge funds have far more flexibility in investment strategies.

Asset-Backed Commercial Paper (ABCP): For many corporations, borrowing short-term money from banks is often a laborious and

expensive task and the desire to avoid banks has led to the widespread popularity of commercial paper. Commercial paper is an unsecured, short-term loan issued by a corporation. It is usually issued at a discount, reflecting current market interest rates. Maturities on commercial paper are usually between one and two months. The difference between ABCP and CP is that instead of being an unsecured promissory note representing an obligation of the issuing company, ABCP is backed by securities. Therefore, the perceived quality of the ABCP depends on the underlying securities, and the liquidity risk may be very high.

Structured Investment Vehicles (SIVs) aka Conduits: A pool of investment assets that attempts to profit from credit spreads between short-term debt and long-term structured finance products such as asset-backed securities (ABS). Funding for SIVs comes from the issuance of commercial paper that is continuously renewed or rolled over; the proceeds are then invested in longer maturity assets that have less liquidity but pay higher yields. The SIV earns profits on the spread between incoming cash flows (principal and interest payments on ABS) and the high-rated commercial paper that it issues. SIVs often employ great amounts of leverage to generate returns.

Sovereign Wealth Funds (SWF): Pools of money derived from a country’s reserves, which are set aside for investment purposes that will benefit the country’s economy and citizens. The funding for SWFs comes from from central bank reserves that accumulate as a result of budget and trade surpluses, and even from revenue generated from the exports of natural resources. The types of acceptable investments included in each SWF vary from country to country; countries with liquidity concerns limit investments to only very liquid public debt instruments. Some countries have created SWF to diversify their revenue streams. For example, United Arab Emirates (UAE) relies on its oil exports for its wealth; therefore, it devotes a portion of its reserves in an SWF that invests in other types of assets that can act as a shield against oil-related risk. The amount of money in these SWF is substantial - as of May 2007, the UAE’s fund was worth more than \$875 billion, while the total estimated value of all

The United States: The end of the “bad incentive” economy?

Over the last few years, US banks and non-trust entities (small, under-capitalised and unsupervised) sold off their credit products (mortgages, consumer credit, etc.) to commercial and investment banks, which turned them into securities in a downward cascade of opaque held-to-maturity financial products.

The conversion of these loans (non-liquid assets) into securitised bonds (liquid assets) enabled the entities to receive financing from international financial markets allowing them to continue the expansion of their credit activities. The rating agencies evaluated the packaging and structuring of those credits in financial ratings, assigning them the maximum rating AAA.

The securitised bonds (CDO, CLO, CBO – Collateralised Debt/Loan/Bond Obligations, respectively), guaranteed by the monoline insurers, spread the risk between the global investors (banks, SIVS - Structured Investment Vehicles or conduits, hedge funds, asset managers, treasuries, insurers, and pension funds). The volume of business realised by this “originate-to-distribute” model grew exponentially between 2003 and 2007.

The gradual deterioration of credit discipline on the part of the credit-issuing entities (the originators) in a low-interest environment, led to the appearance of subprime and Alt+A loans that did not meet the criteria of prudent financing, such as loan-to-value and debt-to-income ratios or documentary evidence of income. Additionally, the interest-free period of adjustable-rate mortgages (ARMs) was extended to up to two or three years (teaser rate, negative amortization).

The fear that followed the deep and prolonged recession that began in 2001 (with the stock market crash following the burst of the technology bubble, the big business scandals such as Enron et al, and the 9/11 attacks on the US) induced the Federal Reserve to rapidly drop interest rates from 6.5% to 1%. Contrary to forecasts, the US economy began a steady recovery in 2003, with abundant and cheap credit, high levels

of consumer debt and job creation.

From June 2004, the rise in interest rates from 1% to 5.25% - a move by the Federal Reserve to counter inflation - changed this environment of cheap and plentiful liquidity, channelled from the world markets to the credit needs of American families and businesses. The bubble was about to burst.

The mortgage slow-down began, particularly in the high-risk subprime area and, as a result, the housing market entered the current phase of near-stagnancy. New development permissions have halted and the slowdown of promotions and residential house sales have led to a rapid drop in prices. Consequently, recurrent re-mortgaging previously based on the continued increase in the value of a house no longer allows the renegotiation of unpaid credit.

In mid-2007, the rating agencies had to lower the rating of Asset-Backed Securities (ABS) that contained underlying lines of credit with poor repayment prospects. As a consequence, some banks felt obliged to offer financing contingent on their SIVs or to liquidate them and take the losses on their balance sheets.

Lack of confidence, uncertainty, fear!

Since August 2007, the world institutional investors' lack of confidence in the underlying assets of these financial products (covered bonds, ABS, LBO debt) provoked their sale and initiated a downward spiral in value that is causing heavy losses. The nervousness of investors over the true risk of underwritten securities led to a cautious preference for liquidity and a move towards quality (Treasury Bills), accentuating the reduction of profits in the short- and long-term realised on public debt securities.

Liquidity tensions spread to the interbank markets, opening a spread of the Libor and Euribor with respect to the official interest rates of the Central Banks and the public debt bonds issued by the Treasury. The price of risk had boomed.

Hedge funds, the funds of funds and other financial structures, highly leveraged and with little

risk-diversification, meant that the stigmatised Asset-Backed Commercial Paper (ABCP) issues did not find favour in certain financial markets.

The stock markets of the US (S&P 500) and Europe (Eurostoxx 50) started to see marked fluctuations in the price of shares in banks and other financial institutions, because the investors considered that the banks' business model of “originate to distribute” would reduce in volume and experience pressure on profit margins in subsequent years.

Regulators have encouraged the depreciation of assets in the balance sheets of those banks with exposure to structured products linked to credit risk transfer. The regulators did not want the banks to delay recognising the losses by transferring the depreciated bonds to the held-to-maturity investment portfolio. These write-downs have caused a veritable shake-up in many large groups such as Citigroup, Merrill Lynch and UBS, and their shareholders have demanded the dismissal of the management teams and a change in corporate strategy.

This financial turbulence has revealed that the international banking system has more than just a liquidity problem. The investment banks and big commercial banks suffer from weak balance sheets and under-capitalisation. For some banks, contributions from sovereign funds have allowed the partial reconstruction of their capital base, allowing them to continue offering credit but this is not the case for many others.

Write-downs have provoked a free-fall in the share prices of investment banks, revealing a problem of under-capitalisation. Their shareholders have demanded the dismissal of the management teams and a change in corporate strategy.

Liquidity tensions and uncertainty about the solvency of financial intermediaries have caused the tightening of credit, not only on offer to individuals and businesses but also to leveraged buy-out operations (LBO).

If the monolines fall, I lose everything

Some monoline insurers are subject to reduced ratings by the rating agencies, negatively affecting their guarantees, as well as the rating and market value of the insured financial products. During the last few years, the US monolines have diversified into structured financial products through securitizations in synthetic CDOs and other derivatives with super-senior (AAA) tranches. Lately, it has been revealed that they were based on assets of very poor credit quality, meaning that the monolines will have to meet the insured guarantees in the case of the bonds remaining unpaid. This situation has provoked sales of degraded bonds, as their cover by the monolines or through Credit Default Swaps (CDS) could be compromised if the volume covered is very high and the depreciation very pronounced. This brings into question whether this concentration of assured risk in a limited number of monolines poses a danger to the risk coverage. Additionally, their capital belongs, in part, to international banks that cover their risk through CDSs, the counterparty of which are the monolines themselves.

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Investors are penalising the entities that participated in the originate-to-distribute model by shunning their shares in the stock markets and this is reflected in the CDS spreads of the principal banks and monolines in the US. By contrast, the traditional buy-and-hold banking model, without portfolio exposure to CDO and similar products, has not experienced such a pronounced depreciation.

Ben Bernanke's Federal Reserve: a life-support machine?

The central banks are liberally using their range of tools to inject liquidity and

WHO WILL PAY FOR THE SUBPRIME CRISIS?

1. Originating entities (banks and lenders): Simply put, the pursuit of high lending volume took priority over risk management. The result has been losses and drops in share prices.
2. Investment Banks: Their opaque and complex mathematical models (mark-to-model, etc.) have led them further and further away from efficient and transparent markets (mark-to-market), with hugely-depreciated assets leading to large, rapid and costly recapitalization... not to mention damage to their reputations.
3. Monolines: Lowered ratings directly impact their core business. They will have to repay investors, leading to losses and drops in share prices.
4. Credit rating agencies: The incompatibility between the functions of assessment and assignment of rating has led to damaged reputation and a reduction in business.
5. Corporate management: Retributions and incentives linked to financial results at the expense of risk management have led to increasingly complex and risky products. The results have been dismissals at high levels and overall reduction in staff.
6. Commercial banks with SIVs/conduits: They will necessarily reduce their investment bank activities (originate to distribute) in favour of the traditional buy-and-hold model, while trying to capture capital and expensive financing over the mid- to long-term.
7. Independent hedge funds: Having to include risk premiums, they will have greater difficulty in justifying their role. Lack of access to central bank liquidity could result in insolvencies.
8. Investors (insurance companies, pension and investment funds, treasuries, asset managers): Low interest rates drove them to sophisticated high-return products, without having properly evaluated the risk of the underlying assets.
9. Private Equity: LBOs have led to the originators being left with large debts (pipeline risk).
10. Financial system supervisors: Largely in the dark about the extent of new operators (hedge funds etc.) and necessarily limited to their own territories, they are already facing reforms towards more effective supervision.
11. Central Banks: The instruments available to them to provide liquidity do not cover all the agents in the chain and, what is more, any massive injection of liquidity can compromise their central objectives of keeping a restraining hold on inflation.

relax monetary tensions, to the point of increasing the proportion of funds in long-term refinancing. The Federal Reserve ("the Fed") and the Bank of England have increased the collateral and the number of counterparties permitted in liquidity operations. Nevertheless, the ECB has not relaxed its strict policy of high-quality collateral.

The bail-out of Bear Stearns, done through JPMorgan but led and backed by the Fed, represents a 'before' and 'after', with this intervention being called the end of the old capitalist system.

In particular, the Federal Reserve reformed its liquidity provision system in December 2007 by offering fund loans to the commercial banks through auctions known as Term Auction Facility (TAF). These were held anonymously in order to avoid any reputational damage to the entities involved. In March 2008, the Fed introduced Primary Dealer Credit Facility (PDCF) which also gives investment banks and other entities access to the discounted open market operations, despite having no supervision over them. The Fed has also increased the volume, the duration and the collateral of the securitised mortgages in guarantee of its Treasury bond loans through the new Term Security Lending Facility, to which the investment banks also have access.

These instruments provide liquidity of one month with very low penalties. And finally, the Fed has reduced the spread between the discount and the official rates, extending these loans to 90 days and increasing the number of instruments that may be accepted as guarantee.

The bail-out of Bear Stearns, done through JPMorgan but led and backed by the Fed, represents a 'before' and 'after', with this intervention being called the end of the capitalist system that existed for many decades, and also the oxygen that may breathe new life into Wall Street.

The Fed, the ECB and the Bank of Switzerland have established lines of cooperation through reserve swaps to satisfy the dollar demands of the commercial banks.

For its part, the Bank of England stepped in to rescue Northern Rock, Britain's fifth mortgage lending entity, although Northern Rock was subsequently nationalised in 2008 following two unsuccessful take-over bids in which both bidders failed to guarantee the repayment of tax-payers' money. The Bank of England has subsequently further assisted the banking system in the face of fears over liquidity problems by allowing the exchange of mortgage assets held in banks' balance sheets for Treasury bonds of the highest credit quality.

The Fed lowered the federal funds interest rate from 5.25% in July 2007 to 2.00% in April 2008. The greater fall in short-term rates against long-term caused a shift in the performance curve of public debt.

In any case, as is well known and often quoted, "monetary policy is like a string" - it can be easily pulled to slow down an "overheating" economy, but not effectively "pushed" to stimulate it in a situation of low economic expectation such as that currently faced. In fact, the policy of reducing interest rates has barely mitigated the long-term financing costs in the corporate and mortgage markets.

The basic economics of the US are driving the dollar into depreciation against the euro: an economic cycle in downturn, the difference in dollar/euro interest rates, and an elevated deficit in the current account balance.

Similarly, very few operation agreements are being reached in the private sector through the voluntary renegotiation of mortgages and postponements (Paulson Plan, Lifeline Project).

The Fed is running out of options, and its interest rate policies are driving the dollar into depreciation, particularly against the Euro: an economic cycle in downturn, the difference in dollar/euro interest rates, and an elevated deficit in the current account balance, the financing of which depends on the daily influx of some 2,000 million dollars from abroad. This weakness of the US treasury could exacerbate domestic inflation. The dependence on energy imports at record high prices and the effect of imports from China could present an unmanageable dilemma for the Fed - to drive recovery or fight inflation?

Nevertheless, despite this redrawing of the financial map, the US economy still maintains a certain brisk level of activity thanks largely to the competitiveness and financial solidity of many of its companies.

To conclude, the next quarters will see a new trial between the schools of economic thought: the confidence of Milton Friedman's bargain hunters, enabling market rapidity and flexibility, versus the caution of John M. Keynes's rigidities, looking forward (in time, if not in optimism) to the point where the market re-establishes equilibrium through the loss of many entities and investors who were unable to maintain solvency.

WHAT IS THE FAIR VALUE OF A SHARE IN AN ECONOMIC CRISIS?

The financial crisis has sparked the debate over the valuation rules that oblige a financial system and its listed companies to assign a Fair Value to their assets.

The International Accounting Standards Board (IASB) in its "International Financial Reporting Standards" (IFRS) and the Federal Accounting Standards Board (FASB) in its US General Accepted Accounting Principles (USGAAP) define Fair Value as the price at which an asset can be exchanged or a debt repaid in a voluntary transaction between two un-related and well-informed parties. Thus the balance sheet and the P&L should reflect the true value of a company without taking into account the latent appreciations and depreciations derived from the difference between historic values and market prices.

This mark-to-market rule incentivises credit expansion during the growth phase of the cycle, and its contraction during recession. The cyclical nature of Fair Value worsens when there is no stable or liquid market, as happened since August 2007.

In the current environment of falling prices, the Fair Value obligation results in faster price adjustments, facilitating restructuring and a rapid recovery, but it also aggravates the interbank liquidity tensions and can lead to solvency problems. This can put investors off if they are forced to consider the losses from previous market drops. By the same token, as the current situation demonstrates, an investor's incapacity to manage or refinance his debts or increase his guarantees (margin calls) leads to creditors selling off assets at reduced prices (fire sales).

The transition from Basel I to Basel II will remove the need for arbitration of the capital rule in terms of minimum capital, as well as the securitization of such assets, irrespective of the levels of risk. In Basel II (pillars 1 and 2) the Basel Committee on Banking Supervision (BCBS) has also tried to reduce the inconveniences of these cycles, derived from the linking - in a stricter and more accurate way - of the capital requirements of the credit entity to the risk level assumed by the probability of non-payment during the distinct phases of the cycle (Saurina, J. & Trucarte (2007) An assessment of Basel II procyclicality in mortgage portfolios, *Journal of Financial Services Research*, vol. 32, n° 1-2, and Jiménez, G. & Saurina (2006) Credit cycles, credit risk, and prudential regulation, *International Journal of Central Banking*, vol. 2, n° 2).

WHEN WILL THE US ECONOMY RECOVER?

The unavoidable and oft-repeated questions concern the nature, depth and duration of the crisis. Here we summarise four of the most-common scenarios:

SOFT AND BRIEF

This is the most optimistic vision, holding that the lack of confidence will evaporate in the coming months thanks to a reduction of risk premiums, expansive monetary policy, the Fed's reduction of interest rates, and the package of fiscal stimulants from the Bush administration.

DEEP AND LONG-LASTING

The vision that has the most adherents, at least in the financial analyst community, has the crisis continuing throughout 2008-09, due to the gravity of the real estate crisis, with prices still falling as late as 2010. The knock-on effects are vast, impacting not just housing and private credit but also commercial and industrial credit, stock markets, employment and inflation.

TRANSITORY DOUBLE-DIP RECESSION

While the previously-mentioned measures might cause an upturn, forecasters of a Double-Dip Recession fear that the upturn may be only temporary before heading back down into further recession. The danger here is that confidence is then even further undermined, making a subsequent recovery all the more difficult.

ECONOMIC DEPRESSION

Full-blown economic depression has few defenders, but is worth noting. Nevertheless, it seems an unlikely scenario, given the measures taken and being taken to stimulate the economy, the financial solidity of many US companies, and the lower dollar leading to decreasing imports and increasing exports and the subsequent reduction in trade deficit.

China and emerging economies: "May you live in interesting times"

It is said that, in China, the phrase "May you live in interesting times" was used as a curse. These are indeed interesting times, and particularly for emerging economies. The fall in economic activity in the US and Europe is having a certain knock-on effect on these economies, as much on China as on other smaller open economies; Latin America in particular is seeing a change in the flow of commerce and experiencing lower exports.

The rising price of oil, raw materials and foodstuffs will result in global inflation in the medium term, affecting current accounts and even social stability, especially in those emerging economies that don't export commodities.

Indeed, those countries recently characterised by high levels of growth and well-being, such as China, India,

Vietnam and so on, may soon be living in extremely "interesting times".

China in particular is suffering from an over-heated economy that may soon crash. Double-digit growth rates have resulted in inflation marching towards 10%, with the forthcoming Olympic Games only acting as more fuel to the fire. It came as no surprise then when Prime Minister Wen Jiabao declared the fight against inflation to be his number one priority. The People's Bank of China has frequently raised its interest and deposit rates, which may threaten investment.

Inflation is at its most dramatic in foodstuffs, with the price of pork soaring by over 50% in the last year and many millions of Chinese in rural areas unable to pay for their basic dietary requirements. This social instability has led many to question the wisdom of the Communist Party's leadership. As a consequence, the XVII Congress of the party approved a transition from the growth model based

on direct foreign investment and export – that exclusively benefited coastal areas – to an economic model that also drives domestic consumption and spreads economic wellbeing throughout the interior rural provinces.

The yuan/renminbi continues its upward path against the dollar, from its fixed exchange rate of 8.28 yuan to the dollar during 1994-2005, to the current level of around 7 yuan to the dollar, signifying a decreased competitiveness in exports. The changes in salary levels and in labour relations are also affecting decisions of industrial localisation in favour of other countries such as Vietnam.

In the short term, the biggest problem could come from a crash in the Chinese stock market, which is increasingly linked with the international market cycles. Furthermore, the high subscription to IPOs by Chinese families in the last few years could induce a painful adjustment by the end of 2008.

THE FOOD CRISIS

International organisations such as the UN's FAO (Food and Agriculture Organization) and the World Bank have warned of an impending crisis if the price of basic foods continues to increase at the current rate. The causes are fairly clear:

1. Many emerging or transition countries such as China and India are consuming increased amounts of meat, placing huge pressures on the supply of cereals and other animal feed.

2. Biofuels also account for a very large proportion of maize (for bioethanol), and wheat, soya and rape seed oil (for biodiesel) which would otherwise be destined for animal feed. In the US, for example, 25% of the maize harvest goes towards 3% of the nation's gasoline consumption. Nevertheless, President Lula of Brazil – the world's second-largest producer of bioethanol – has denied that biofuels are contributory factors in the food crisis.

3. The reform of the EU's Common Agricultural Policy, de-linking subsidies from production, has reduced many farming and agricultural surpluses.

4. Climate conditions such as drought and increased costs of energy and fertilizer in big producing nations, such as Australia and the Ukraine, are clear price-drivers.

5. The financial crisis has diverted speculation away from the stock and money markets and into commodities futures, with many investors trying to cover their previous losses by playing a risky double-or-nothing futures game.

6. Raw-material exporters (wheat from Russia and the Ukraine, soya from Argentina, rice from India, Vietnam and Egypt), concerned about feeding their own people first, are imposing restrictions on their exports.

The rising price of food worldwide will have the biggest impact on emerging importer countries, while public financing of food subsidy programmes will increase their trade deficits. And, of course, as global warming decreases the water supply, the ratio of local production to local consumption (food self-sufficiency) will dramatically shift in countries like China and India.

SOVEREIGN FUNDS: INVESTORS OR INVADERS?

Enormous surpluses in a country's current account – generated by exports of raw materials, etc. – and the large flow of capital to developing economies during the expansion cycle of the world economy have combined to allow the accumulation of enormous assets in those countries.

These assets have led to the constitution of Sovereign Wealth Funds (SWF) which are managed by each country's own government. These came about to look for opportunities in a situation of market capital adjustment of corporations and banks in developed countries. Nevertheless the continued depreciation of assets and the dollar has slowed the initial impetus.

Shareholders and executives of companies with financing needs (Citigroup, Merrill Lynch, UBS) have been very glad of the contributions of the sovereign funds. On the other hand, western governments fear the lack of transparency of their accounting information, ownership and public management, the true long-term strategic objectives and the lack of reciprocity. This explains, for example, the protectionist reaction to the Chinese CNOOC's attempts to acquire the US Unocal Oil Company, or the attempt of DP World (Dubai) to manage US ports through P&O.

Are they stabilising funds in the face of volatile income from raw material export? Are they pension or savings funds for future generations? Are they funds that provide better return than currency reserves? Are they funds to finance the economic development of their countries? Or are they the investment arms of authoritarian regimes with geopolitical intentions?

It is too soon to tell – the smoke still hasn't cleared after the crash between the sovereign funds of the new state capitalism of developing countries of the 21st century, and the companies based on American and European private capital of the 19th and 20th centuries.

The Euro Zone: Once more, a dilemma between Inflation and growth

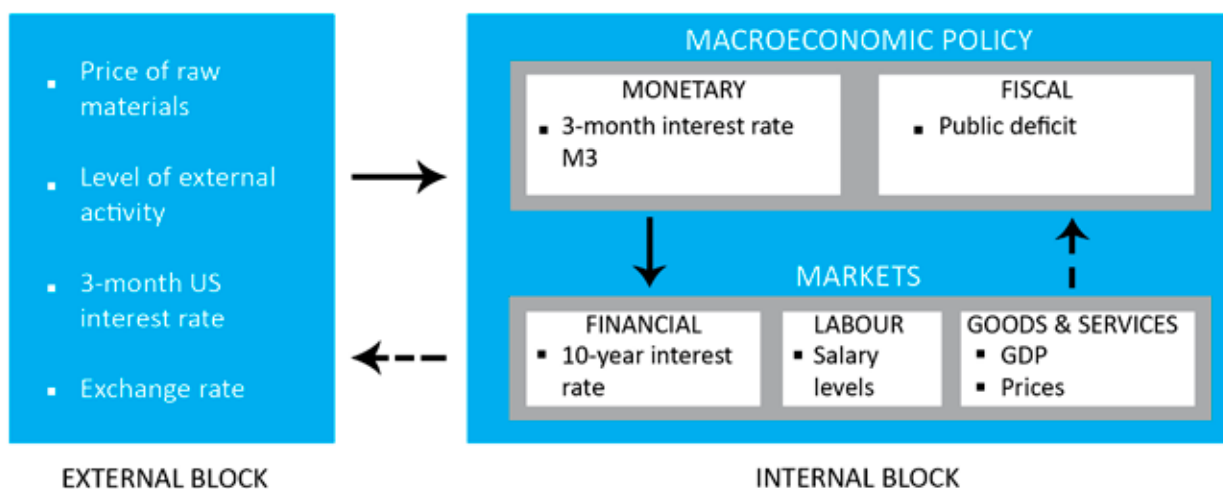
The European Central Bank (ECB) is once again faced with the same dilemma, as it had during the first half of the decade, when inflation in the Euro Zone exceeded the 2% limit and overall growth was minimal, even dropping below 1%.

On this occasion, the ECB made inflation the priority when, in December 2005, it increased its interest rate from 2% to 4%, despite opposition from countries in the Euro Zone as well as international institutions.

The financial crisis of summer 2007 put a stop to any further attempts at bringing the zone's monetary stance back on track. The ECB had planned additional increases to between 4.25% and 4.5% at the end of 2007, but the high level of uncertainty in the financial markets led them to leave it at 4%, where it currently remains.

Nevertheless, the events of the last six months have created a complex environment in which, once again, the dilemma is between inflation and growth. Inflation in the Euro zone was at 3.6% in March 2008; the highest since the introduction of the Euro. At the same time companies' and consumers' confidence is decreasing, along with growth prospects, leading to calls for the ECB to follow the Fed's example and lower the rate. However, the ECB will stick to its central objective of controlling inflation – only a serious further deterioration in the economic situation together with the prospect of inflation remaining at or below its mid-term objective of 2% could induce the ECB to lower the rate... and we do not foresee either of these circumstances occurring in the next two years.

MACROECONOMIC MODEL OF THE EURO ZONE



The 11 macroeconomic indicators that the model contains are grouped into two principal blocks as shown above which represent, on the left, the external and, on the right, the internal evolution of the Euro Zone.

The external block summarises the international environment of the Euro Zone through four indicators:

- 1 The price of raw materials
- 2 The level of activity external to the Euro Zone
- 3 & 4 The external monetary conditions, represented by the interest rate of the US money market and the exchange rate between the Euro and the dollar.

The internal block is sub-divided into two:

- 1 The evolution of macroeconomic policy, with two measures:
 - a) Fiscal indicator: public deficit
 - b) Monetary indicators: short-term interest rate and the aggregated M3 money-supply measurement
- 2 The evolution of the markets, with four measures:
 - a) Long-term interest rate
 - b) Salary level
 - c) Price level
 - d) GDP

The structure of the model facilitates the analysis and quantification of the impact of various international

and macroeconomic policy scenarios can have on the growth and inflation of the Euro zone.

In econometric terms, the model is a Bayesian analysis of a vector-autoregressive model. Using the conventional notation in regression analysis, this can be expressed as follows:

$$Y_t = X_{t-1} \beta + \varepsilon_t$$

$n \times 1$ $n \times 1$

where the random value $\beta | X_{t-1} \sim N(0, \Sigma)$ and

The vector Y_t contains 11 macroeconomic indicators ($n=11$) and each equations contains k coefficients corresponding to the $m=4$ delays in each of the n indicators and to the non-random value Z .

$$X_{t-1} = \begin{pmatrix} X'_{1,t-1} & 0' & \dots & 0' \\ 0' & X'_{2,t-1} & \dots & 0' \\ \dots & \dots & \dots & \dots \\ 0' & 0' & \dots & X'_{n,t-1} \end{pmatrix} \quad X_{t-1} = \begin{pmatrix} Y_{t-1} \\ Y_{t-2} \\ \vdots \\ Y_{t-m} \\ Z_t \end{pmatrix} \quad i = 1, \dots, n \quad \beta = \begin{pmatrix} \beta_1 \\ \beta_2 \\ \vdots \\ \beta_n \end{pmatrix}$$

From a Bayesian perspective, β is a random vector whose distribution a priori $\beta | X_{t-1} \sim N(\beta_{t-1}, \Omega_{t-1})$ is updated with each new simple datum to generate the distribution a posteriori $\beta | X_{t-1}, Y_t \sim N(\beta_t, \Omega_t)$. The resulting distribution when the entire sample is processed is used to generate the forecasts in distinct scenarios.

FORECAST SCENARIOS

CENTRAL

External Block	2008	2009
Rise in price of raw material	5%	5%
World growth	3.5%	3.5%
Federal Reserve interest rate	2%	2%
Exchange rate €/ \$	0.7-0.65 €/ \$	0.7-0.65 €/ \$

Internal Block

	2008	2009
ECB interest rate	4%	4%

ALTERNATIVE

	2008	2009
World growth	2%	2%

Source: the authors

The habit of thinking of the European Union as a joining of economies rather than a single economic area continues unabated, there may be good reasons.

The member states are sovereign countries that continue to manage a large part of their own political economy, which gives rise to peculiarities and resulting segmentation of the European market.

Nevertheless, 15 of the member states share a common currency and monetary policy, making up the so-called Euro Zone. The ECB, headquartered in Frankfurt, dictates the monetary conditions to which all members of the zone are subject. It does this while monitoring the evolution of prices in the entire zone, not just in one country. Therefore, the short-term interest rate that one member state might hope for does not depend on its own economy, but rather the aggregated economic conditions of the zone. It is for this reason that any analysis of the zone must always be as a single economic area.

FORECASTS OF INFLATION AND GROWTH: A RETURN TO THE PAST

Our central scenario incorporates a slow-down of the world economy and maintains the status quo of the monetary and salary levels in the Euro Zone.

Beginning with the external block, the scenario supposes that during 2008 and 2009 the price of raw materials will grow by 5% and, in line with recent forecasts by the IMF, the level of world activity will grow by 3.5%. The Federal Reserve interest rate will remain at around 2% and the Euro/dollar exchange rate will be in the range of 0.7 to 0.65 Euros to the dollar.

In the internal block, the scenario maintains the current monetary policy in the Euro zone, with the ECB interest rate at 4% and liquidity growth in the region of 5% annually. Finally, the scenario incorporates an annual salary growth of 2% throughout the timeframe of the forecast.

Maintaining the interest rate at 4% during 2009 adheres to the anti-inflationist stance of the ECB, which we foresee prevailing until inflation is completely under control. In any case, a reduction to 3.75% in 2009 would not affect our forecasts.

Compared to the central scenario, the alternative scenario considers the possibility of a drastic deceleration in the world activity growth rates, going from the central scenario's 3.5% to an annual 2% during 2008-09.

FORECASTS OF GROWTH AND INFLATION IN THE EURO ZONE

CENTRAL SCENARIO

Deceleration of global growth

	Growth in GDP (%)	Inflation (%)
2005	1.7	2.2
2006	2.9	2.2
2007	2.6	2.1
2008	2.0	3.0
2009	1.6	2.5

Source: the authors

ALTERNATIVE SCENARIO

Greater deceleration of global growth

	Growth in GDP (%)	Inflation (%)
2005	1.7	2.2
2006	2.9	2.2
2007	2.6	2.1
2008	1.8	3.0
2009	1.3	2.3

Source: the authors

The central scenario clearly forecasts a decline in Euro zone growth and a resistance to inflation dropping. Growth is shown to be below potential, at around 2% in 2008 and 1.6% in 2009. Inflation is not predicted to drop below 2.5%, leaving it above the mid-term objective of the ECB

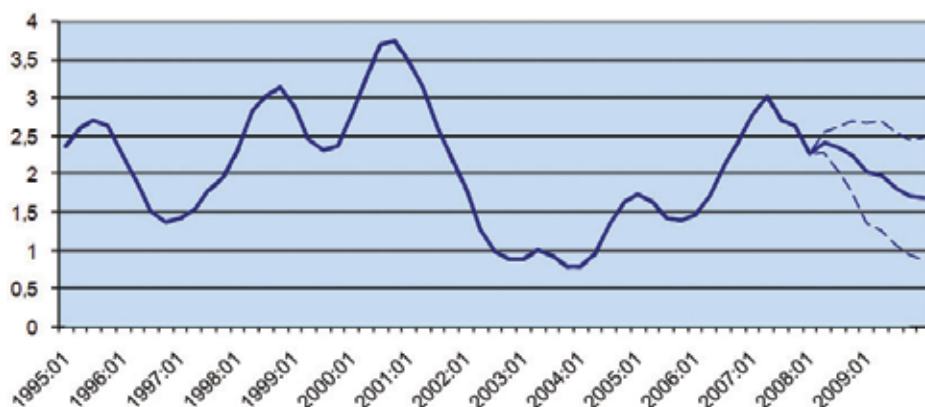
The possibility of a substantial reduction in world growth translates to a Euro zone growth reduction of between two and three tenths, to around 1% in 2009. Inflation will drop, but only slightly, in 2009.

Taken together, the forecasts present a situation similar to that experienced during the first half of this decade, with low economic growth and levels of inflation that make it difficult for the ECB to consider lowering rates.

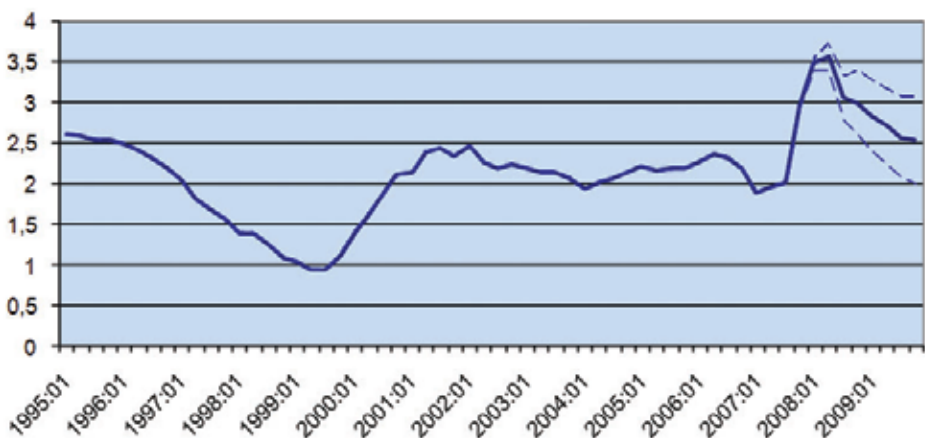
The veteran member states of the EU that haven't adopted the Euro ended 2007 with a variety of macroeconomic results. The UK experienced the greatest growth (3%) followed by Sweden (2.6%) and Denmark (1.8%). Denmark's growth is almost exactly half that of 2006, the cause being principally the slow-down in the residential sector. This shows a clear trend towards the general zone deceleration forecast for 2008 and 2009, with these three countries forecast to experience, for the first time in recent years, growth rates that are actually lower than the Euro zone.

The 12 countries that have joined the EU since 2004 (Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia) continued to grow in 2007, at a rate of over 6%. The forecast for 2008-2009, however, projects a substantial reduction of the average growth rate to around 4.5%. This reduction will be mainly due to a drop in aggregate demand; which drives the growth of these economies and is fuelled by foreign capital. The continuing credit crisis will further reduce this demand and thus further adversely affect the flow of foreign capital.

PERCENTAGE GROWTH IN THE EURO ZONE
Central scenario



PERCENTAGE INFLATION IN THE EURO ZONE
Central scenario



ABOUT THIS PUBLICATION

This Overview is based on ESADE's Economic Report, number 7, produced by the Department of Economics. This article was written by Prof. Fernando C. Ballabriga and Prof. F. Xavier Mena. The original document was produced with the support of KPMG and ESADE Alumni. If you would like any further information on ESADE, our Department of Economics or our professors, please contact our International Communications Department through Katie Carr (Katie.carr@esade.edu +34 912 526 850) or Colin McElwee (colin.mcelwee@esade.edu +34 932 086 162).

ABOUT ESADE

Founded in 1958, ESADE Business School (www.esade.com) has campuses in Barcelona, Madrid and Buenos Aires. Known for its highly international outlook and dynamism, ESADE is one of the world leaders in business education. Each year, more than 6,000 participants take part in Executive Education, MBA and undergraduate programs in ESADE. In recognition of its international scope, *The Wall Street Journal* ranked ESADE as the world's top international business school in 2006 and 2007. ESADE currently has a network of 35,000 alumni occupying positions of responsibility in businesses around the globe.

