

http://www.ecole.org

Guest Speaker Discussion Series

Organised thanks to the patronage of the following companies Accenture Air Liquide1 Algoé² ANRT AtoFina Caisse des Dépôts et Consignations Caisse Nationale des Caisses d'Épargne et de Prévoyance CEA Centre de recherche en gestion de l'École polytechnique Chambre de Commerce et d'Industrie de Paris Chambre de Commerce et d'Industrie de Reims et d'Épernay CNRS Conseil Supérieur de l'Ordre des Experts Comptables Danone DARPMI³ Deloitte & Touche DiGITIP École des mines de Paris EDF & GDF Entreprise et Personnel Fondation Charles Léopold Mayer pour le Progrès de l'Homme France Télécom FVA Management IBM IDRH IdVectoR¹ Lafarge PSA Peugeot Citroën Reims Management School Renault Royal Canin Saint-Gobain SNCF THALES TotalFinaElf Usinor ¹ For the "Tchenical ressources and innovation" seminar ² For the "Business life" seminar ³ For the "Entrepreneurs, Towns and

Regions" seminar

(liste at november 1, 2002)

FINANCIAL CYCLONES

with

Pierre-Noël GIRAUD

Economics Professor, École des mines de Paris Author of Le commerce des promesses, petit traité sur la finance moderne, (pub. Le Seuil)

comments by

Alain BOKOBZA

In charge of Strategy, Financial Analysis Division, Société Générale Economics Professor Paris I Panthéon-Sorbonne University

Christian de BOISSIEU

discussion chaired by Michel BERRY

École de Paris du management

8th October, 2001 Report by Corentin Curchod Translation by Rachel Marlin

Overview

Modern finance, like meteorology, has devised scientific methods of forecasting and for taking subsequent courses of action. It claims to be able to predict future markets from past variations in Stock Exchange prices. From that moment onwards, financial cyclones would not be any more unpredictable for market analysts than are gusts of wind for meteorologists. Do financial 'weather forecasts' exist ? What are the data which the analysts use ? Are these data really "fundamental" ? Such questions are the basis for discussion. Pierre-Noël Giraud maintains that financial crises are unpredictable and inevitable. Christian de Boissieu asks that if we are incapable of predicting the storm, can we not at least feel it coming ? Finally, the analyst Alain Bokobza defends the work of those in the field and appeals for us to venture beyond simple weather forecasts and instead refer closely to satellite maps and analyses which accompany them.

The 'Association des Amis de l'École de Paris du management' organises discussions and distributes the minutes ; these are the sole property of their authors. The Association can also distribute the comments arising from these documents.

© École de Paris du management - 94 bd du Montparnasse - 75014 Paris tel : 01 42 79 40 80 - fax : 01 43 21 56 84 - email : ecopar@paris.ensmp.fr - http://www.ecole.org

THE TALKS

Michel Berry : Everyone knows that finance is an area where we like to turn to mathematics, and that financial reality is usually described by formulas. However, if we try to understand the underlying economic mechanisms, we realise that it is not as simple as it seems. Pierre-Noël Giraud's book, *Le commerce des promesses, petit traité sur la finance moderne*, casts doubt on a number of established ideas. We shall continue to maintain a critical approach and attempt to tackle some financial questions which recent events have made even more pertinent.

Pierre-Noël Giraud : My first point concerns the share markets. According to current popular opinion, an objective analysis firmly based on observation of the facts allows one to determine the fundamental value of a share, albeit with a certain margin of uncertainty. Every speculative bubble has to burst in the end, and share prices revert to this fundamental value. I believe that this type of analysis, which enables one to give much advice to investors such as "buy", "wait", or "sell", is fraught with difficulty.

The fundamentals : a senseless concept

Firstly, the fundamentals are too uncertain. It is true that one can strictly define the fundamental price of a share : it is the sum of future earnings converted to a current value at a non-risk (safe) rate, plus a premium. However, it is not possible to predict future earnings, one can only extrapolate them on the basis of past or current performance.

Precise calculations for uncertain results

A share whose risk premium is 3 % in a market where the safe rate is 3 %, has a Price Earning Ratio (PER) of 16 if the anticipated earnings are stable. However, this PER increases to 33 if an increase in earnings of 3 % per year is anticipated, and rises further to 100 if the increase in earnings is expected to be of the order of 5 %. Therefore, there are scenarios which are perfectly plausible and which justify the development of a large index, such as the Standard & Poor's 500 index (S&P 500), in the range of 1 to 3. As far as the share price of a new company in a recent sector such as the Internet is concerned, it is perfectly plausible for there to be scenarios which have a range of 1 to 20, or more.

The stock market prices in March 2000, far from being the result of a speculative bubble which burst causing a 'soft' stock market crash, could be justified by speculating that there would be a viable future. The analysts thought, with hindsight, that they could show the folly of the markets when they declared "*in order to justify the Amazon share price, every American would have to buy five books per day. This was not the case, and so the share was overestimated*". However, from 1995 to 1998, forecasters estimated that the e-business would amount to 5 % of retail trade in 2001. If Amazon, the e-business leader, had been able to take a considerable share of the global retail trade, then its share price would have been underestimated.

At its peak, the PER of the S&P 500 had only ever reached 35, a level which was perfectly reasonable in the light of future events where growth in the US economy was set to follow. Therefore, the uncertainty about the fundamentals brings with it a near impossibility in defining reasonable share price, unless this takes place in price ranges which are so large that they have no practical use in the end.

The effective communication of those involved

The notion of a fundamental supposes that the fundamental is not influenced by the market price. This hypothesis is obviously false. Let us take an example : three start-ups each of which has different business models go into business on the Internet. In the beginning, the investors are incapable of judging which is the best model and they place their bets equally on

all three. Let us suppose that one of the companies has a business model which is not profitable but that its President, a shrewd communicator, manages to convince the market of his company's superior business model and doubles his company's share price. With half of the capital, he can take over the two other companies, whose models are profitable, and then his original start-up actually becomes the best. The variation in share price, therefore, has an effect on the fundamental : the investors' expectations bring about real changes which justify the rise in share price on the Stock Exchange.

Imitation and an "average" view of the future

Anticipations are formed from analysis of objective facts but above all from the interpretation of these facts. However, the models of interpretation are particularly complex : they include imitation judgements – what one participant thinks about what the others think – and optimistic or pessimistic bets. Finally, there is no mechanical relationship between the facts, their variations and expectations. These different views end up by resembling each other and it is an "average" view of the future which determines the market price.

Furthermore, these "average" views can change suddenly if new information, instead of being included in old models of interpretation, affects the models themselves. The re-evaluation following the downward trend of the prospects of the New Economy, and the brutal re-evaluation in 1997 of the future of Asian capitalism are recent examples of such swings.

I am saying that the rational thought-processes of those concerned influence reality, and constitute an explanation for variations which are as powerful, if not more so, than the so-called objective factors. As is often the case, those in the field are ahead of the theoreticians. If economic forecasters are asked, they will tell you that the most relevant indicators for them are not inflation, unemployment or stocks, but indicators of consumer's or business firm's confidence.

Fundamentals and astrology : the same challenge

What is the purpose of fundamental analysis ? My answer is simple and frank : the future is unpredictable and this is deeply alarming. Fundamental analysis is part of this huge mass of services whose social value is unquestionable, and includes the Temesta and astrology : it is a formidable anxiolytic factor !

Economic policy : a shamanic efficiency

My second point concerns monetary and budgetary policy. Presidents of central banks and Finance Ministers are readily depicted as commanders of a huge machine, operating levers called 'monetary rates' or 'budgetary deficits' and influencing the economic situation. In reality, their power is essentially similar to that of a shaman : they assume the role of the shaman with his knowledge and authority, and say, for example, "*I predict that inflation is coming*" or "*the economy is going to enter into a recession*". To back up these statements, they make some sort of symbolic gesture and engage in rituals such as modification of rates, expansionist budgets and so on. Their efficiency hinges on their ability to change the expectations of those involved. These expectations constitute by far the most powerful engine behind the current economic climate.

The shaman, therefore, has to be credible. I think that this condition explains the independence of central banks. Alan Greenspan, who has one sole objective, is a great deal more credible than a Finance Minister who has multiple and various objectives related to the electoral calendar. On the other side of the Atlantic, the President of the Fed lowered interest rates nine times in one year which set them at an all-time low. From 1998 until now, the household savings ratio has fallen from 6 % to 1 %. If the rate were to rise to 6 %, American consumption would fall by 300 billion dollars, a figure comparable to the budgetary reflation plan following September 11th, which was already considered to be enormous, at 100 billion dollars. Expectations and household behaviour will prevail completely over every kind of budgetary initiative.

Financial crises : inevitable and unpredictable

My third point concerns financial crises. I think that they are inevitable and unpredictable. Generally speaking, monetary creation is always excessive. In order to be able to finance all profitable investments, banks also have to finance investments which are not profitable. The system is therefore inflationary.

Monetary policy and financial markets

However, today, commercial and financial globalisation contains "ordinary" inflation. Alan Greenspan, citing the example of "*the irrational exuberance of the markets*" in 1998, wondered if the large increase in share values was not a form of inflation which, once swept away from the goods market, would merely reappear later in the shares markets and had to be stopped. His answer was negative and I think that this was wise. In fact, nothing enables one to determine that a rise in share prices is a speculative bubble and therefore a form of inflation. Monetary policy is therefore asymmetrical with regard to financial markets : it does not intervene when they are on the rise and is very flexible when they fall.

The excessive creation of rights

A share, and moreover any type of financial asset, is a mere promise of future earnings. This is from where the title of my last book comes ("Le commerce des promesses : the trade of promises"). Share prices will only be guaranteed if future wealth measures up to what is expected of them. This is not the case because every financial system creates rights in excess of future wealth, in other words, a "*mistigri*" (Queen of Spades), because of the asymmetry of the monetary policy.

'Old Maid' and getting rid of the Queen of Spades

Every financial system at some stage gets rid of this Queen of Spades, as in the card game 'Old Maid'. After the Second World War, financial regimes were fragmented and these excessive rights were purged by inflation to the detriment of people with small amounts of savings. Today, the financial system is global and rights are purged by periodic falls in prices of the assets. This fall may be sudden, as was the case in Asia, or not, like the 'soft crash' which we are experiencing today. These crises are inevitable since the tendency to create rights in excess is inevitable. They are also unpredictable as they are affected by sudden changes in the average view of the future. With respect to market finance, we live in a world which is uncertain and volatile.

The Tobin tax : inefficient and demagogic

My last point concerns the Tobin tax which I believe is practically the worst idea imaginable for regulating global finance. It is a proposal for taxing foreign exchange transactions, at a rate of about 0.1 % to 0.25 %, and whose earnings would be applied to development aid in the Third World. ATTAC suggests a figure of 0.25 % and states that this tax would slow down speculative movements of capital.

However, the returns expected by the speculators are about 20 % as a minimum. In Indonesia, for example, the fall of the raper was as much as 80 %. How can a tax of 0.25 % in both directions of the transaction limit speculation in the face of such movements ?

An unsuitable fiscal measure

On the other hand, it is nevertheless a means of taxing capital. But is it the best way to do so ? If I am in favour of taxing capital – capital tends to be taxed less than labour, because of capital's stronger mobility – I think that there is no reason to tax movements of capital. Let us tax instead the earnings from capital ! If governments of rich countries are capable of agreeing on a Tobin tax, they can just as well agree on a floor rate of taxation of capital. It is a question

of political willpower. The same is true of the argument against tax havens which, I admit, is also one of the aims of ATTAC. It is unimaginable to say that it is impossible in Europe to control what is going on in the Channel Islands or in Monaco.

Development aid in question

Finally, there are suggestions to assign the Tobin tax to development aid. I believe that there should be some transfer of public finances from North to South : one cannot count solely on private transfers. However, the proportion of GDP donated to development is decreasing in almost all rich countries. In France, the percentage is 0.33 % whereas promises had been made for it to be of the order of 0.7 %. There is no consensus today to increase development aid. Any attempt to try to get around this political reality by creating a tax on "speculation" for development aid is simply demagogic.

Christian de Boissieu : My first comment concerns the notion of the fundamental. It is normal that financial markets rely on conventions: money is a convention – it is a social contract – and finance, an extension of money, is another one. In his first comment, Pierre-Noël Giraud talked about reflexiveness. This phenomenon was analysed by Keynes in 1936. He compared financial markets to beauty contests in which one tried to discover which woman the others contestants found the most beautiful. I obviously agree with that but I would suggest a minor variation.

From equilibrium value to the notion of threshold

Johan Robinson, a follower of Keynes, declared : "one cannot define an elephant, but if it were in the room, one would notice it !". The phenomena of overvaluation or underestimation are analogous to this elephant : one cannot define the exchange rate equilibrium, the PER equilibrium or other indicators of equilibrium, but if one distances oneself from these unknown values, it is clear that there is a problem. One knows that it will be corrected, but the timing and mechanism are unknown. Today, for example, I would not buy a company which had a PER of 150, since the likelihood of its share price decreasing is greater that the likelihood of an increase. On the other hand, I would not rule out investing in a company whose PER was 2.

The arrival of the New Economy has completely disrupted the usual barometers. It is noticeable that for companies which have losses in the first few years, the PER did not have a great deal of meaning. In trying to keep the fundamental analysis, should one consider multiples not of profits but of turnover or something else ? In reality, this is not the key question since the most important thing is to have a threshold. Even if one is not capable of defining equilibrium values, one knows which are the thresholds from which any divergence is likely to cause a problem and one can make adjustments to bring them back to where they were. Don't let's throw the baby out with the bath water : one can question the concept of equilibrium value without questioning the notions of overvaluation or underestimation. Today, the equilibrium value of the Euro is not necessarily 1.03 or 1.04 dollars but it is somewhere between 0.98 and 1.10 dollars. If the Euro dropped to 0.75, there would be a serious risk of underestimation, at least for our competitors. If it rose to 1.30 dollars, then the European aeronautical industries would have reason to worry.

Market volatility

My second comment concerns the concept of volatility. In a market economy, there has to be a certain amount of financial volatility in order to absorb shocks and enable adjustments to be made. What level is acceptable ? What are the criteria which allow one to define excessive volatility ? Are the criteria economically, ethically or politically orientated ?

Furthermore, in every system exposed to shocks, certain factors, regardless of their nature, serve as variables for adjustment. Our economic regimes distinguish themselves by the way in which they react differently to shocks. For example, no-one predicted September 11th but we had to react all the same. The question is therefore not how to predict shocks (which is often

difficult), but to determine the adjustment which is preferable at the time of the shock and whether certain economic regimes are not better than others in facing up to these shocks.

Let me give you an example : the Finance Ministers said in February 1987 (at the time of the Louvre Agreement) that they wanted to stabilise the exchange rate in order to avoid any excess of volatility in unstable times. However, in so doing, they triggered off volatility in other markets. If one says "*let us limit the instability of the exchange rate of the dollar, the euro, and the yen, in order to try to make world trade easier*", no-one will disagree. This, however, runs the risk of merely transferring the changes in foreign exchange markets to the financial markets, in other words, the exchange rates towards the interest rates. Is financial volatility not the price we have to pay in order to avoid volatility in other variables ?

Sudden crashes and slow crashes

My third comment concerns the current crash. Since March 2000, we have been experiencing a slow crash, very similar to a property crash, which in general takes two to three years to correct the excesses. There has been a downward trend for the past year-and-a-half associated with a great deal of volatility. The monetary responses to a slow crash as opposed to a sudden crash (as in 1987) are different. Therefore, today, monetary policy has become more flexible and less brutal than would have been the case if there had been a sudden crash. In the markets, the reactions of those involved in the face of a slow or a sudden crash are identical. There is a transfer towards quality – government bonds, gold, the Swiss Franc since September 11th, the dollar as a safe investment – and a transfer towards liquidity. One could question the difference between the kinds of crash and ask why those linked to Internet shares are slow. I am convinced that a theory concerning the differences and similarities between these two sorts of crash could be developed further.

Financial regulation which causes difficulties

I will conclude with some comments about the current situation. Like Pierre-Noël Giraud, I think that the image of the Head of the central bank pulling levers as a response to activity or inflation is outdated. Monetary policy consists of sending signals. One of the questions is knowing whether one should surprise those involved in economic action. Last May, the European Central Bank lowered its rates unexpectedly and the markets were so taken aback by the announcement that they interpreted it badly. One should therefore be very tactful when one makes such a declaration.

As far as the Tobin tax is concerned, the discussion has become less relevant since September 11th. Like the topics discussed at the G7 Conference, current questions are more concerned with regulation in the broad sense of the word. They have nothing whatsoever in common with this fiscal gimmick but are concerned with improving openness of information in the financial sector, and the improvement of preventative policies by tackling very technical aspects of banking regulations. The fight against money laundering or against the financing of terrorism raises questions about the functioning of our economies and governments.

As far as financial crises are concerned, I would say that they are, by definition, very difficult to predict. For the past three or four years, the IMF has been working to define the advanced indicators of crises of change. However, making these indicators work by using past data, is not the solution. These indicators can even 'predict' the past ! One is therefore helpless at predicting crises. However, in terms of managing crises, recent events in Europe are very enlightening : the European Central Bank, whose value was brought into question before the events of September 11th, reacted to the crisis by lowering its interest rates. Such a tragic event was necessary to make the ECB become pragmatic : the Bank agreed to co-ordinate its activities with the Fed and to play the role of money-lender as a last resort in reaction to markets in difficulty. This is a decision which is rather reassuring.

Alain Bokobza : Slow or not, the current crash is important. The fall in world indices had been 30 % for about a year, something which had not happened since the beginning of the

1960's. As financial analysts, we study market behaviour and develop fundamentals based on economic history.

Fundamentals : analysis and hindsight

Economic history gives us a solid framework of analysis in order to do our work. For example, to understand the current situation in certain developing countries, one has to go back to the 1980's. During this decade, the developing countries moved to systems of floating exchange rates, with the exception of Hong Kong and Argentina. Since its government did not take into account the world economic situation, Argentina found itself bankrupt and is still suffering the consequences today. The construction of fundamentals involves reverting to what has already been done : it is not as easy as simply applying a formula. For us, financial analysts, past political data constitute fundamentals.

We should resist the temptation to revolutionise fundamental analysis. For example, Internet has not called the fundamentals into question. The New Economy was merely a cyclical phenomenon of over-productivity of work, causing a temporary over-profitability in capital. By using traditional fundamental models, based on differences around the mean, one noticed that rises in share market value reached almost four times the median deviation in February 2000. In the space of eighteen months, these increases reverted to the historical average and this seemed normal to us. Those who counted the number of subscribers, books available and the number of times people clicked on the Amazon website did not carry out what I call a fundamental analysis.

We should also create some distance between ourselves and the media. Certain newspapers which have compared the debts over a period of time of the traditional telephone operators were worried that these groups had debts which were two to three times greater than their stock market capitalisation. However, in the case of debt, the only question which financial analysis asks is the ability to pay those concerned. Today, this capacity to pay is very strong. We should therefore complete the incomplete picture which the media gives.

Finally, we should integrate the rapid changes in mentality into our work. For example, in our fundamentals we take into account the recent "*share*" culture of the Europeans. For the past eighteen months, in markets which remain nervous, individuals from European countries continue invest whereas the Americans, renowned for their strong "*shares*" culture have sold 20 billion dollars' worth of shares alone in March. Some of our clients which are American pension funds are not buyers at present although the markets are not very expensive. Will they change their minds ? It is an important question.

Regulation is almost upon us

The ability to reduce market volatility will not be resolved by a G7 meeting or a Tobin tax. Every day, we can see anomalies which could easily be solved. For example, market globalisation encourages investors to go outside their domestic markets more often than they did in the past. They therefore need means by which they can compare the zones. Such tools exist : these are the national sectorial indices, such as those which are developed by Euronext Paris. However, these indices are not stable : the methodology changes all the time. Investors who seek reference points given by these indices are put off and this adds to market volatility. The regulator could play a role here.

Another example concerns benchmarking : portfolio managers take indices such as the Paris Stock Exchange index (the CAC 40 companies) as a reference, and they are graded on their ability to do at least as well as these indices. However, a European law stipulates that one cannot have a portfolio with more than 10 % in assets of the same company in order to diversify the risk. If one examines the CAC 40, one can see that TotalFina represents 14 % ! How can one do benchmarking in such conditions ? The solution is in the hands of the regulator.

To be right too early

Alan Greenspan made a speech in September 1996 about the excessive rise in Internet assets, although the ceiling had yet to be reached. Those who followed his advice and sold their shares avoided a loss in value of 65 %. At that time, few people listened to him : he was wrong to be right too early !

There is nothing to stop the analyst from stepping aside from the "average" view which was discussed earlier. By basing oneself on the fundamentals and by standing back, one notices that for the past twenty years we have been experiencing a period of disinflation. Central bankers have become independent, interest rates have fallen in particular in the Euro region due to similar agreements in economic policies. According to financial theory, shares should increase in value during a fall in rates. However, the rates today are so low that it is not very likely that they will decrease any further.

Today, once again, economists are frightening us. They talk about recession and terrorist threats. We analysts look at the fundamentals and, in spite of the popular view, we know that here in Europe we are at the nadir of a depression since the crisis of 1974 and we believe that a cheap share is a good buy.

DISCUSSION

Pierre-Noël Giraud : I would like to comment on Christian de Boissieu's talk. Is volatility harmful ? One cannot be sure. The current system is harmful to some people but beneficial to others. In order to know what to do, one has to ask oneself firstly who are the victims. Let us take the example of Korea in 1997. The rich countries changed their views about this country when they discovered macroeconomic imbalances. This led to a sudden withdrawal of capital, and a financial and economic crisis. The Korean worker suddenly lost 50 % of his purchasing power because of events for which he was not responsible. He was the victim. In this case, developing countries should not refrain from re-establishing control of foreign exchange : it is the simplest solution.

Contradictions between analysts

Alain Bokobza said that fundamental analysis is always valid. How, then, can one explain that when talking about the same company, one analyst might advise his client to sell, two others to hold and another one to buy ? I can only imagine that such differing advice is based on fundamental analysis !

Moreover, Greenspan's speech denouncing the overestimation of markets was given when the rates were at an average level. They have increased considerably since then. Today, they have come back down to the average. Logically, I conclude that the markets are overvalued. And yet, you have just said that we should have bought shares ! I think that Alan Greenspan was wrong to say that at that time or perhaps he should have said it today.

Alain Bokobza : When Greenspan made his speech in December 1996, share prices were high compared to their historical record. They were even more so by what followed. As far as the contradictions between analysts is concerned, the media often only pay attention to recommendations. However, every recommendation is based on well founded teamwork. If one is only interested in recommendations, then one will miss the most important points, the analysis and the arguments, which can be topics of discussion.

Short-term reasoning ?

Question : *Does the job of analysts not consist of considering the short-term, with an average view, even if this is irrational in the long-term ?*

A. B. : Intellectual independence is the winner in the end. Those who sold their shares in December 1996 most certainly lost out for two years, but in the end avoided losing 50 % on their Internet shares. The average view, which is derived from probability models makes markets cautious. The benchmark, which constitutes another method of analysis, encourages sheep-like movements. An alternative management method develops around macro-economic modelling in the long term. It responds to problems of traditional management and has a bright future.

Michel Berry : I think one should distinguish between fund managers who are taken as benchmarks on their yields from investments, and analysts who are judged on their capacity to be noticed by fund managers. This is why they are careful of the way in which they communicate.

A. B. : This is true, but it is not just communication. Our clients try to understand our points of view, to validate our models, but above all to follow our advice on a long term basis There is no point in having an analyst who gives a brilliant performance one day, if the following day he becomes second-rate.

Alternative management

Q.: One talks about fundamentals taking into account environmental or social variables. Is this not simply a false assessment ?

A. B. : This movement of diversification originates from the United States and has already had some influence : employing children is increasingly taken into consideration, companies are looking for durable capital, and so on. In Europe, the idea is starting to gain ground, but I cannot see any very interesting suggestions. The regulator could work on alternative indices which would represent elements other than market capitalisation.

Can the Economist advise the Prince ?

Q.: Ultimately, the economy is a science which does not control many things. Do we not give it too much importance by making economists advisors to the Princ ?

Pierre-Noël Giraud : During the past two centuries, the economy has made considerable analytical progress. I think that it is capable of giving advice concerning economic policy. Today, for example, we will not make the same mistakes as were made in 1929. The economist's opinion should not dominate : he can rarely say "*one should do this*". When an economist deals with norms, one often notices that these norms are based on valued judgements.

A. B. : I believe that economists help construct a view. Few people dare commit themselves to predict the future but economists help us do that.

Predicting the unpredictable

Q.: Will recent events augment the influence of the American economy, or diminish it ?

P.-N. G. : I think that future economic trends, which can be influenced by changes in Stock Exchange prices, are currently suspended because of serious geopolitical uncertainties. All economic questions are above all determined by these uncertainties : we do not have a great deal to say about them .

A. B. : Markets today have reached a very low level. They promote an image of recession, both in the US and in Europe. What could be worse than terrorism or wars ? Economists who are rather pessimistic will think of even worse escalations and will not buy. But if the worst does not happen, one should have bought today. This has nothing whatsoever to do with modelling, it is simply common sense.

M. B. : One can always justify financial analysis after the event, since there will always be an analyst who was right. However, for the individual analyst, his situation before the event is not very comfortable. This is why he practises recognised methods of fundamental analysis and raises inevitable uncertainties about the future just in case !

Rites and conventions

Q.: Although the metaphor of the shaman is appealing, I wonder if it is really justified !

P.-N. G.: I am not being entirely serious when I talk about Alan Greenspan being a shaman. Nevertheless, there is something in it : when he moves levers, it only has an effect if one believes him to have such an effect. It is the power of the word. To be credible, he has to be surrounded by instruments, rites, and so on. In the steppes of Central Asia, the instruments used were bear-teeth. Today, they are charts, since in order to be credible in a world which believes in science, you have to base your predictive ideas on science. However, this is just a pretence of justification, since economic science can only treat the future as if it were probable whereas the future is uncertain. There will necessarily be events whose probability of happening can be calculated. Models of interpretation of facts, supported by charts and validated by the most distinguished authorities cannot escape this unpredictability.

Q.: *Do you not think that there is an incontestable price, that which is fixed in situations where rules exist ?*

P.-N. G.: Even in situations where there are rules, the price is totally based on conventions. One can ask oneself why such conventions are accepted rather than others. What is the implicit model which one explains ? It is purely conventional. Once the convention is accepted, the law courts see that it is applied. There is nothing to say that the value which comes out of this sort of evaluation is good. Furthermore, one can think of numerous examples where this value was contradicted some months later by a change in share prices.

Q.: *How does one avoid copycat crises ? Can one avoid excessive rises and falls ?*

P.-N. G. : I do not think that one can avoid imitation, since, as Keynes showed, it is often the most rational behaviour. If it were irrational, one could make the markets more rational and everything would be better. However, this is not the case and despite this rationality, they are unpredictable.

Over long periods one can state well-founded economic laws which allow one to make predictions. However, when our interest is limited to the coming year, it is not particularly useful to know historical economic frameworks over long periods of time. In conclusion, pessimistically but realistically, I would say that variations are based on data which are as unpredictable as a terrorist attack or an American response to such an attack.

Presentation of the speakers :

Pierre-Noël Giraud : economics professor at the *École des mines de Paris* and at *Paris Dauphine* University.

Christian de Boissieu : professor at Paris I (*Panthéon-Sorbonne*) University and at the *Collège d'Europe* (Bruges). Member of the economic analysis council advising the Prime Minister.

Alain Bokobza : graduate of *ESC Rouen* (Rouen Business School) and of *Northwestern University* ; in charge of strategy in the Financial Analysis Department of *Société Générale*. He is a former stock fund manager and advises numerous international financial institutions. E-mail : alain.bokobza@ota.fr.socgen.com www.globalresearch.sg-ib.com

Translation by Rachel Marlin (marlin@wanadoo.fr)