

NEWS

CENTER FOR
FINAN
CIAL
STUDIES

2/05

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Editorial

A Need for Capital Markets Marketing

Dear Members, Colleagues and Interested Parties,

Let us assume an unusual perspective and pose the question: What are capital markets from a purely linguistic point of view? What are their emotional connotations? A trite question, without political-economic significance? By no means. For many important argumentative battles are publicly fought, and often won, on the back of the fear of, for example, altered ownership structures among German firms. Let us remember the frequently cited necessity of protecting important firms from being attacked by hedge funds, or from being taken over by foreign competitors. Whereas it was primarily banks and stock exchanges that were putting forward this argument until recently, today automobile manufacturers are falling victim to this campaign of fear.

This is a campaign and not a fact because there is no scientific evidence for the dangers mentioned. Let us take the example of “short-term orientation”, a characteristic of investment funds and a supposed sign that the fund in question is not really interested in the welfare of the firm. In fact the intended holding

period of a share is unrelated to the length of the investment horizon that determines the market price of the share. Even a short-term investor can only make a profit if she is able to find a new investor the next morning, who is willing to buy her stock for a higher price – which in fact requires the buyer to be convinced of the lasting success of the company. The capital market and its innate long-term orientation provides for both the increased value of the firm and the speculator’s profit.



And what about the interests of the employees, the interest in protecting jobs and income earned from employment? The capital markets can also offer a vision here: the vision of co-ownership. The key to capital-supported employee co-determination may be found in pension funds. Such funds collect the savings

capital of employees, bundle it and acquire shares in large and small firms on the market. Some funds demand and receive a seat on the supervisory board - a capital-backed and adequate form of co-determination. With the positive side-effect that the increased value of the firm, whether this is demonstrated by higher wages or higher profits, ultimately lands in the pockets of present and future pensioners.

This is one reason why financial economists are pushing so strongly for a sustained expansion of capital markets and for a changeover to capital-based provision for old age. The Center for Financial Studies will deal with the issues of the development of the capital market even more in the future. This is exemplified by Michael Haliassos’ research program on “Household Wealth Management” (see this newsletter), by a new research project on banking structures in Germany, and by collaborating in the construction of a new Financial Center Monitor for Germany, led by the Land Hesse. We will cover the results of these and related research in future editions of this newsletter and in our working paper series (www.ifk-cfs.de/English/homepages/h-cfsworkingpaper.htm), to contribute to a realistic view of the capital markets in the general public debate.

Best greetings,

Jan P. Krahn (CFS Director)

New CFS Research Program: Insurance and Risk Transfer

The aim of this program area is to contribute to our understanding of the objectives and the implications of risk transfer between (re-)insurers, banks, corporations, and markets. Regulation (e.g., Basel II, Solvency II), the development of new risk transfer methods (e.g., credit derivatives, asset backed securities, cat bonds, captives etc.) and the awareness of the need to actively manage risk and to integrate risk management with other areas of the firm, such as real investment, capital structure, and organizational decisions, require a broad perspective in pursuing the agenda. Our research thus combines the areas of insurance and risk management, corporate finance and banking, as well as organization.



Research will be conducted within the framework of international collaborations. Beyond the presentation and publication of the obtained research results we also wish to initiate a dialogue with researchers, practitioners, and regulators through CFS *seminars*, *workshops* and *conferences*.

Research will focus on two main areas:

- Alternative Risk Transfer
- Integrated Risk Management

Alternative Risk Transfer

Work in this area will be concerned with the investigation of alternative risk transfer techniques as used by banks, insurers, and corporations such as credit derivatives, asset-backed securities, multi-line insurance, and cat bonds. We analyze the structural and economic differences between alternative methods of transferring and retaining risk and how their use affects the real economic activities of market participants.

Integrated Risk Management

Work in this area integrates the choice of alternative methods of risk transfer, real investment projects, and capital structure. Firms can retain or transfer risk. Retaining risk (self insurance) can be facilitated by adjusting the capi-

tal structure or through the use of a captive. Risk can be transferred using insurance, derivatives, subsidiaries and special purpose vehicles combined with limited liability, special contractual arrangements with customers and suppliers etc. We analyze firms' reasons for transferring and retaining risk, what methods of risk transfer they use, and how they organize the risk management process.

PROGRAM DIRECTOR

- **Christian Laux** (University of Frankfurt and CFS)

FELLOWS

- **Alexander Mürmann** (Wharton School, University of Pennsylvania)
- **Achim Wambach** (Universität Erlangen-Nürnberg)

Christian Laux and Achim Wambach organized a CFS *research conference* on "Risk Transfer between (Re)Insurers, Banks, and Markets" as a kick-off meeting for this program area. The conference brought together some of the most renowned researchers in this area, including, among many others, **Franklin Allen** (Wharton School), **Ron Anderson** (London School of Economics), **David Cummins** (Wharton School), **Neil Doherty** (Wharton School), **Günter Franke** (Universität Konstanz), and

Martin Hellwig (Max Planck Institute, Bonn).

A first set of research in this program area deals with the benefit of index or parametric triggers in the presence of adverse selection and the role of insurance brokers.

In the paper "ART Versus Reinsurance: The Disciplining Effect of Information Insensitivity" **Silke Brandts** (Bain & Company) and **Christian Laux** suggest a novel benefit of "Alternative Risk Transfer" (ART) products with parametric or index triggers. When a reinsurer has private information about his client's risk, outside reinsurers will price their reinsurance offer less aggressively. Outsiders are subject to adverse selection as only a high-risk insurer might find it optimal to change reinsurers. This creates a hold-up problem that allows the incumbent to extract an information rent. An information-insensitive ART product with a parametric or index trigger is not subject to adverse selection. It can therefore be used to compete against an informed reinsurer, thereby reducing the premium that a low-risk insurer has to pay for the indemnity contract. However, ART products exhibit an interesting fate in our model as they are useful, but not used in equilibrium because of basis-risk. The research was presented and discussed at the CFS *re-*

search conference “Risk Transfer between (Re)Insurers, Banks, and Markets”, the Global Finance Conference in Dublin, as well as at the annual meetings of the German Finance Association in Augsburg and the Financial Management Association in Milan.

In the paper “Insuring the Uninsurable: Brokers and Incomplete Insurance Contracts” **Neil Doherty** and **Alexander Mürmann** (both Wharton School) show how insurance markets can provide an orderly mechanism by which policy holders can receive transfers for losses that are non-verifiable and, possibly, were never anticipated when coverage was written. Examples include the asbestos claims that have cost the insur-

ance industry tens of billions of dollars, the sudden appearance of toxic mold in insurer claims, various forms of “cyber loss”, and possibly the 9/11 losses which, despite the war exclusion on many policies, were not disputed by insurers and reinsurers. The authors propose that brokers play a central role in extending insurance markets to cover non-verifiable losses. It is normal for brokers to “own the renewal rights” on the book of business they place with the insurer. This means that the broker is free to recommend to its clients that they renew with the current insurer or switch to a rival. Indeed, the insurer revokes any right to directly solicit any business placed through the broker. This pro-

vision vests the broker with considerable hold-up power that leads to more complete insurance markets. The research was presented and discussed at the CFSresearch conference “Risk Transfer between (Re)Insurers, Banks, and Markets”, the Risk Theory Society meeting, the Insurance, Mathematics and Economics Congress, the World Risk and Insurance Economics Congress, as well as at the Wharton School and the University of Ulm.

Both contributions are available as CFSworking papers (www.ifk-cfs.de/English/homepages/h-veroeffentlichungen.htm)



Christian Laux

(University of Frankfurt and CFS)

New CFS Research Program: Household Wealth Management

The past two decades have witnessed increased participation of households in a broader range of risky assets than before, including both financial and real assets, as well as increased participation in consumer debt, including uncollateralized credit card debt. Increased involvement in assets arose mainly because of asset price upswings in the 1990s; because of the demographic transition that is forcing households to save more for retirement; and because of government policies related either to privatization or to the provision of tax incentives, so that people participate in newly established individual retirement saving schemes.



In the context of this program, coordinated by Michael Haliassos (University of Frankfurt and CFS), a team of scientists collaborate in the program area “Household Wealth Management” and study the way in which households decide which assets to hold, how often to trade them, what proportion of their wealth to devote to each asset, how to finance their spending through borrowing, and

how to combine assets of various types and riskiness with debts. They also look at the macro implications of such portfolio choices, for issues such as the distribution of wealth or the financing of retirement in the face of the demographic transition.

Research is conducted within the framework of international collaborations with researchers from universities and

central banks. A formal channel through which many of these interactions are effected is the Research Training Network on the Economics of Ageing in Europe (AGE), sponsored by the European Union. The CFSresearch program was launched with a May 2005 conference of this network (see page 22 of this CFSnewsletter), co-sponsored by CFS.

In particular three topics are in the focus of interest:

General Equilibrium Effects of Increased Asset Market Participation

Studies the consequences of the spread of equity culture and of risky asset holding more broadly

Risky assets, such as stocks, are held by pools of heterogeneous households. Households are self-selected into these pools according to certain characteristics that make them more or less likely to participate in the risky asset. As the participation margin spreads, we would expect the demographic composition of the participant pool to change. This

can have important consequences for how the stock market and other risky asset markets operate, e.g., in terms of volatility or in terms of total demand. The composition of non-participants also changes, correspondingly. Both pools (participants and those not participating yet) are relevant for financial practitioners, who are interested both in how the market behaves, and in how to attract further customers. The market practices of the changing participant pool are also relevant for observed consequences of spreading participation in terms of wealth distribution and of asset returns.

Credit Card Debt

Studies the portfolio composition of households that revolve credit card debt.

Households have been observed in the data to revolve high-interest credit card debt, but accumulate at the same time substantial assets for retirement. Moreover, they have been observed to accumulate substantial liquid assets at low

interest rates which could have been used to pay off high-interest credit card debt. These and other portfolio peculiarities of credit card debt revolvers are difficult to explain with our usual models of borrowing behavior and call for a deeper analysis of the psychology of credit or debit card holders and how this impacts on their economic behavior.

Economics of Ageing

Studies issues arising from the demographic transition in Europe and the United States towards a larger population share of aging households.

This research is carried out in interaction with the other nodes of the AGE Research Training Network, including IFS/UCL, Tilburg, Mannheim, DELTA, Salerno, Venice, Copenhagen, RAND, and Banca d'Italia. It focuses on issues of saving and portfolios, health, and retirement choices of an ageing population, including adequacy of assets and other provisions for retirement in European countries and in the US.

PROGRAM DIRECTOR

- **Michael Haliassos** (University of Frankfurt and CFS)

FELLOWS

- **Yannis Biliass** (University of Cyprus)
- **Christopher Carroll** (Johns Hopkins University)
- **Dimitris Georganakos** (University of Frankfurt)
- **Luigi Guiso** (Ente per gli studi monetari, bancari e finanziari "Luigi Einaudi")
- **Tullio Jappelli** (University of Salerno)
- **Nicholas Souleles** (Wharton School, University of Pennsylvania)

COLLABORATORS

- **Carol C. Bertaut** (Board of Governors of the Federal Reserve System)
- **Michael Reiter** (Universitat Pompeu Fabra)

The following CFSworking papers offer some first results:

- **Y. Biliass, D. Georganakos, M. Haliassos (2005):** Equity Culture and the Distribution of Wealth (CFSworking paper No. 20).
- **C. D. Carroll (2005):** The Method of Endogenous Gridpoints for Solving Dynamic Stochastic Optimization Problems (CFSworking paper No. 18).

On Forecasting Exchange Rates

by CFS Program Director Michael Binder (University of Frankfurt and CFS)

As weary as economists are of seeing their research being evaluated on the basis of the performance of the forecasts that their models imply, there is nevertheless considerable agreement that the hallmark of the best empirical macroeconomic research is that it can be helpful in both understanding the consequences of policy changes and in forecasting the probability distribution of future macroeconomic outcomes.

In few areas have economists historically performed as poorly at forecasting as in forecasting nominal exchange rates. Rogoff (2002), for example, likened the profession's unsuccessful efforts at forecasting major currency exchange rate movements to (old day) weather forecasting in the army, where a general supposedly told his weather forecasting team: "I appreciate being informed that your forecasts are no better than random, but keep sending them on, as the army needs your predictions for planning purposes."

Two immediate questions arise: Is it actually critical to have high quality exchange rate forecasts? And: If the tale about weather forecasting in the army is an age-old one, why is it still appropriate for today's state-of-the-art exchange rate forecasting? In other words: Why have economists attempting to predict exchange rate movements not been able to match the advances in weather forecasting made by meteorologists?



The first question – as to why it is critical to have good exchange rate forecasts – can be answered quite readily. There is a wide range of decision problems for which exchange rate forecasting is central. Among the most immediate ones are at the microeconomic level the decision problems of individual investors considering to purchase/sell foreign currency denominated assets. Among the macroeconomic decision problems for which exchange rate forecasting is central are monetary policy decisions based on (implicit or explicit) inflation targeting.

The second question – as to why economists forecasting exchange rates have not been able to match the advances in weather forecasting made by meteorologists – is a good bit more subtle to answer. In this article, I will describe current state-of-the-art methods for exchange rate forecasting as well as some of the efforts of the CFS research team in International Economics to improve exchange rate forecasting. At the end of the article I will return to the issue of possible lessons we might draw from the success of meteorologists. It will be best, though, to start by briefly outlining the four main forecasting models that currently tend to be employed by currency forecasters.

One class of exchange rate forecasts are “random walk” forecasts. Underlying these forecasts is the idea that all contemporaneously available information about future exchange rate movements is reflected in the current value of the exchange rate, and that all future events leading to future exchange rate movements are purely random from the perspective of today. The best forecast of the exchange rate at any future date is then today’s value. While “random walk” forecasts are probably the simplest forecasts one might imagine and generally have as poor a forecasting performance as any non-expert hearing about the idea for the first time would conjecture, “random walk” forecasts of the fluctuations of major currencies have in practice been rather hard to beat. See, for example, **Sarno and Taylor** (2002) for a more detailed discussion of this.

A second class of exchange rate forecasts is attempting to link predicted future exchange rate movements with predicted future movements in certain key macroeconomic variables. This sounds simple enough, but why should there be a predictable component in the future movements of key macroeconomic variables that in turn would also affect the exchange rate? Even casual observers of the global economic environment are aware that there are regularly sizeable imbalances in both the distribution of saving and asset holdings and of relative prices across countries. It stands to reason that such imbalances will eventually be corrected and will then lead to adjustments in nominal exchange rates. Thus the second class of exchange rate forecasting models aims to capture the equilibrium relations between the exchange rate and certain key macroeconomic variables. These equilibrium relations also include parity

relations such as purchasing power parity (predicting nominal exchange rate fluctuations to offset movements in countries’ relative prices) or covered interest parity (predicting exchange rate fluctuations to offset movements in countries’ real interest rate differentials). While of considerable macroeconomic appeal, exchange rate forecasting in this second class of forecasts has been quite underwhelming in performance, to put it mildly still, except possibly on a very long-term basis for specific pairs of currencies. Should this dismal performance be surprising? Upon a little reflection, it will become apparent that the pitfalls of this second class of forecasting models are to be found in the detail: Using – as has typically been the case – macroeconomic aggregates available at monthly or quarterly frequencies only, it would actually be quite surprising to be able to predict exchange rate fluctuations on a weekly or even daily basis. Furthermore, many of the equilibrium relations that macroeconomic theory suggests are long-term equilibria. Imbalances in, say, the distribution of saving and asset holdings across countries do typically take a considerable period of time to result in correction. Whether and when equilibrium relations that are suggested by macroeconomic theory are reflected in actual exchange rate data will also depend on certain features of the overall macroeconomic environment. Deviations from purchasing power parity, for example, are sufficiently costly only when there are continued and/or very large price changes. In the jargon of economists, then, we should think of equilibrium relations mattering possibly only conditionally on the state of the macroeconomic environment. The state of the macroeconomic environment itself varies over time, and key variables which matter today (such as gross flows of financial capital) may have played no more than a very limited role in the past. Thus, it is a very subtle and challenging task to determine the proper macroeconomic equilibrium relations that matter for forecasting a specific exchange rate series at a specific point in time. Broad-brush approaches should not be expected to yield quality exchange rate forecasts.

A third class of exchange rate forecasts is based on linking exchange rate fluctuations to insights about price determination in financial markets from microeconomic theory. Trade on foreign exchange markets obviously is not only related to news about macroeconomic variables, but also occurs after different types of private information have become available to some of the market participants. How these market participants will respond to this information is also likely to differ across participants, depending on a broad range of characteristics of the participants. Not to be forgotten among the characteristics influencing market participants’ reaction to new information is the organizational structure of the market place that they are trading in. **Lyons** (2001) provides a quite detailed account of

the microstructure approach to exchange rate determination following these microeconomic theory considerations. While microstructure based empirical exchange rate models have so far not proved to consistently yield exchange rate forecasts of acceptable accuracy, some microeconomic variables argued by this literature as being critical to exchange rate forecasting – specifically order flows – are nowadays much sought after when computing exchange rate forecasts.

The fourth and final class of state-of-the-art exchange rate forecasts are those based on “technical analysis”. Technical analysis models arrive at exchange rate forecasts by mechanically extrapolating past patterns of exchange rate fluctuations into the future. For these models to consistently yield high-quality forecasts, exchange rate fluctuations will need to occur in sufficiently frequent and regular up- and downswings. Under certain environments this may be the case, though likely not accidentally but as a function of the underlying macro- and microeconomic variables.

Forecasts of exchange rate fluctuations based on the second and third classes of approaches – linking future exchange rate fluctuations to the dynamics of certain macro- and microeconomic market variables – have in most economic environments performed rather poorly, and typically even poorer than “random walk” forecasts. The CFS research team in International Economics has nevertheless set out to develop a framework for exchange rate forecasting that combines the second and third classes of approaches in a hybrid framework. Compared to random walk and technical analysis forecasts, there is sound economic reasoning underlying these two classes of approaches, and the lack of success to date in using the second and third classes of approaches is likely due to these approaches not having been implemented yet in the proper conditional form. Within a hybrid framework, the CFS research team is paying specific attention to the following factors:

- The equilibrium relations through which macro- and microeconomic market variables matter for future exchange rate predictions are conditional on a wide range of factors characterizing the individual foreign exchange markets as well as the global economic environment. For example, in joint work with M. Hashem Pesaran at the University of Cambridge and Sunil Sharma at the International Monetary Fund (**Binder, Pesaran and Sharma, 2005**) I document how one of the key macroeconomic parity relations, purchasing power parity, is conditional on features of the global economic environment. This characterization requires a large cross-country data set containing sufficiently numerous observations on a wide range of such environments, as well as novel econometric techniques suitable for filtering such panel data sets’ common features from idiosyncratic dynamics. It should not be unde-

restimated how challenging and time-intensive the task of documenting the major conditionalities central to exchange rate forecasting is.

- As recently documented in **Andersen, Bollerslev, Diebold and Vega (2003)**, working with high-frequency databases measuring both economic news and corresponding exchange rate fluctuations has enormous potential. The CFS hybrid framework is therefore a mixed frequency model, aiming to be of relevance both for daily and weekly predictions as well as those that are of a more medium- to long-term nature (of several months or even years).
- The formation of expectations by the participants in exchange rate markets is central to the transmission of the arrival of economic news to decision rationales. As too little is still known about this transmission, the CFS research team is placing great importance on advancing the use of survey expectations for purposes of exchange rate determination. As there is only very insufficient data available on the evolution of expectations of foreign exchange market participants across different macro- and microeconomic environments, this part of the CFS work will also require primary data collection from cooperating market institutions.

It is precisely at this point then that we can return to the second of the two questions posed at the beginning of this article: Why have economists attempting to predict exchange rate movements not been able to match the advances in weather forecasting made by meteorologists? I would argue that if current efforts at CFS and elsewhere to improve upon the quality of exchange rate forecasting - inter alia through the collection of large data sets on the evolution of expectations of foreign exchange market participants - were given even a small fraction of the resources available to meteorologists for satellite-based data collection, then we would be on a much faster track to making **Rogoff’s (2002)** age-old army tale an age-old tale with regard to exchange rate forecasting as well.

REFERENCES

- Andersen, T.G., T. Bollerslev, F.X. Diebold and C. Vega (2003)**, Micro Effects of Macro Announcements: Real-Time Price Discovery in Foreign Exchange, *American Economic Review*, 93, 38-62.
- Binder, M., M.H. Pesaran and S. Sharma (2005)**, Common Features in Exchange Rate Dynamics in the World Economy Using Dynamic Heterogeneous Panel Data Models (in preparation).
- Lyons, R.K. (2001)**, *The Microstructure Approach to Exchange Rates*, Cambridge: MIT Press.
- Rogoff, K. (2002)**, Managing the World Economy, *The Economist*, August 1st.
- Sarno, L. and M.P. Taylor (2002)**, *The Economics of Exchange Rates*, Cambridge: Cambridge University Press.

Monetary Policy in a Low Inflation Environment

by CFS Fellow Klaus Adam (European Central Bank)¹



A secular decline in inflation and nominal interest rates has occurred in many industrialized economies over recent decades. Provided this drop in inflation is permanent, one should expect nominal interest rates to remain at low average levels for the foreseeable future. Low values for the nominal interest rate, however, generate their own specific problems. In particular, they increase the likelihood that monetary policy is unable to reduce nominal rates as much as desired because nominal interest rates cannot fall below zero.²

In this essay I summarize the findings of academic literature and of my own research studying the conduct of monetary policy in an environment where the zero lower bound on nominal interest rates is potentially relevant. I first discuss the policy problem generated by the lower bound and then present some of the solutions that have been suggested.

The Monetary Policy Problem

The preferred policy instrument of many leading central banks, including the ECB, is a short-term nominal interest rate. While short-term nominal rates are relatively easy to control, they are largely irrelevant for most economic decisions. Consumption and investment decisions, for example, seem to be driven by medium to long term interest rates (and many other factors). Interpreting long rates as the compound of future short rates shows that economic decisions are driven by both current and expected future policy decisions. Furthermore, what matters for private sector decisions is the real interest rate, which requires subtracting expected inflation from the nominal interest rate.

The previous observations imply that monetary policy must use the short-term nominal rate to affect the long-term real interest rate. This is relatively straightforward: For any level of expected inflation the desired real interest rate can be implemented by choosing an appropriate path for the future short-term nominal interest rate. There is,

however, one exception. When nominal interest rates are low already, policy might not be able to prevent an increase in real interest rates generated, for example, by a negative shock to expected inflation, because doing so might require setting short-term nominal interest rates below zero. Since negative nominal rates are not feasible, a drop in expected inflation can thus lead to undesirably high real interest rates. This will most probably depress output. The fall in output in turn will put downward pressure on prices and potentially confirm the initial drop in expected inflation. The zero lower bound thus generates the possibility of permanently falling prices, zero nominal interest rates, and low output levels, a situation typically referred to as a 'liquidity trap'.

Possible Solutions I: Interest Rate Policy

How can monetary policy deal with the constraint that nominal interest rates

cannot fall below zero and the potential threat of a liquidity trap?

Imagine a situation similar to the one in the United States in January 2003: Nominal interest rates are low but still above zero; economic activity is weak and current and expected inflation rates subdued. Suppose additional adverse shocks hit the economy in such a situation. How should monetary policy react to these additional shocks? Should one keep the powder in the keg, i.e., react less strongly and save some 'ammunition' for the future, or should one aggressively reduce interest rates, possibly all the way to zero?

Almost all research finds that a more aggressive interest rate reduction is called for in response to adverse shocks, once nominal interest rates are in the vicinity of the zero lower bound. This conclusion is reached for rather different reasons in a variety of models. Adam and Billi (2004a), for example, argue that agents understand that the lower bound possibly constrains monetary policy in the future. Additional shocks make reaching the lower bound more likely and induce the private sector to reduce inflation ex-

¹ Views expressed represent exclusively the author's own opinions and do not necessarily reflect those of the European Central Bank.

² Negative nominal rates imply that debtors have to pay back less than they borrowed. Since paper money offers a zero nominal return, credit supply by private agents is zero at negative nominal rates.

pectations. This increases the perceived real interest rates and amplifies the initial shock. To counteract the amplification, monetary policy should react more aggressively than usual. Similar results have been obtained in **Reifschneider and Williams** (2000) who study the FRB/US model and by **Kato and Nishiyama** (2004) and **Orphanides and Wieland** (2000) who employ small-scale stylized models.

Note that a more aggressive policy response to negative shocks might bring about zero nominal interest rates earlier than a policy that would react sluggishly to additional shocks. The fact that the zero lower bound is reached, however, is in itself not a sign of inappropriate policy but may instead simply reflect that policymakers reacted with the appropriate vigor to a sequence of adverse shocks.

Now suppose that despite vigorous easing, the situation has deteriorated further and short-term nominal interest rates have reached their zero lower bound. This generates a new situation that has been extensively discussed in literature, e.g., **Krugman** (1998), **Jung et al.** (2001), or **Eggertsson and Woodford** (2003). The basic conclusion obtained is that policy can still effect economic outcomes, because what matters for economic decisions is a longer-term real interest rate rather than the short-term nominal rate. The long-term real rate can still be affected by policy even if short-term nominal rates cannot be lowered any further. Policymakers can, for example, make (binding) announcements on how they intend to conduct short-term nominal interest rate policy in the future³. To the extent that these announcements are credible, they will affect longer-term nominal rates and thereby the corresponding real interest rates. In particular, the economic literature suggests that in a liquidity trap poli-

cy should promise to raise interest rates rather slowly and to tolerate in the future, for a limited time span, an inflation rate that lies above the usual target values. Low nominal rates in the future and higher expected inflation will both reduce the real long-term interest rate and help the economy out of the liquidity trap. Quantitative studies for the U.S. economy, e.g., **Adam and Billi** (2004a) or **Reifschneider and Williams** (2000), suggest that this policy approach is quite effective.

An important precondition for the previous approach to work is that the private sector believes the central bank announcements about the conduct of future monetary policy, i.e., it requires central bank credibility. Credibility is important because once the economy has left the liquidity trap, the central bank loses its interest in letting inflation increase above the usual target values, as initially promised. Quantitative studies show that if the private sector anticipates that the central bank will renege on its announcements, the welfare costs generated by the zero lower bound increase markedly, e.g., **Adam and Billi** (2004b).

A number of contributions have investigated how a non-credible central bank might (re)gain the required credibility in a situation with zero nominal interest rates. No simple solutions seem to be available. **Krugman** (1998) and **Eggertsson** (2003) argue that monetary policymakers care about reducing the real level of government debt because of the tax distortions associated with having to serve the debt. Increasing public debt levels may therefore generate an incentive to deliver on the promised inflation rate. The experience in Japan, however, casts doubts on the relevance of this proposal. **Svensson and Jeanne** (2004) suggest engineering a change in the central bank balance sheet that would imply negative net worth, should the central bank re-

nege on the announced excess inflation rates or increase nominal interest rates faster than initially indicated. The difficulties likely to be associated with both of these proposals highlight the importance of having gained credibility before the economy has reached the zero lower bound, e.g., by having delivered in a timely and accurate fashion on promised policy goals in the past.

Possible Solutions II: ‘Unorthodox Monetary Policies’ and other Instruments

Besides interest rate policy, literature discusses a range of alternative policy instruments for getting out of a liquidity trap (or avoiding it altogether). These are briefly discussed in this section.

Quantitative easing policies, i.e., policies that increase the stock of money via open market operations, have repeatedly been suggested as an alternative to interest rate policy when short-term nominal rates have reached the zero lower bound, e.g., **Orphanides and Wieland** (2000). The quantitative impact of such easing policies is difficult to estimate and theoretical considerations suggest that their impact is possibly zero: In a liquidity trap open market operations exchange one zero return asset (money) for another (bonds of various maturities). **Eggertsson and Woodford** (2003) provide forceful additional arguments as to why other ‘unorthodox’ monetary policy measures, e.g., the purchase of real assets by the central bank, may be equally ineffective for escaping a liquidity trap.

The use of exchange rate policies has been advocated by **Svensson** (2003), who suggests implementing a significant devaluation followed by a peg at

the depreciated exchange rate. Currency depreciation stimulates the economy directly by giving a boost to export- and import-competing sectors. More importantly, however, a depreciated exchange rate implies a higher price level in the future, provided purchasing power parity adjustments occur. Exchange rate depreciation may therefore induce private-sector expectations of a higher future price level and create the desirable long-term inflation expectations that are a crucial element of escaping from the liquidity trap. However, as is the case with interest rate policy, credibility to maintain the peg is crucial for this policy approach to work: Once inflation has become positive there are again strong incentives to allow for an appreciation of the currency. Moreover, the tacit consent of major trading partners is likely to be a prerequisite, as such policies might have non-negligible beggar-thy-neighbor effects, e.g., **Coenen and Wieland** (2003).

Fiscal policy provides further instruments that are potentially useful for escaping a liquidity trap but has received attention only relatively recently. **Auerbach and Obstfeld** (2004) propose a scheduled increase in consumption taxes, that is intended to induce agents to anticipate consumption purchases. **Eggertsson and Woodford** (2004) consider a model where taxes have supply side effects only and find that a temporary increase in taxes increases inflation rates and helps to generate the desired inflation expectations. Overall, the academic literature analyzing the role of fiscal policy in a liquidity trap is still in its infancy.

Conclusions

Even if short-term nominal interest rates have fallen all the way to zero, monetary

policy is far from being ineffective: Monetary policy can still influence longer-term real interest rates, which matter most for economic decisions. Engaging in credible promises about the conduct of future policy allows the generation of inflationary expectations that lower real interest rates and help the economy

to escape the liquidity trap. Yet, without central bank credibility such a policy is not feasible. Credibility is therefore key for a central bank that seeks to successfully operate in a low inflation environment where nominal interest rates are low on average and might occasionally come close to zero.

REFERENCES

- Adam, Klaus** and **Roberto M. Billi** (2004a), Optimal Monetary Policy under Commitment with a Zero Bound on Nominal Interest Rates, ECB Working Paper No. 377, forthcoming *Journal of Money Credit and Banking*
- Adam, Klaus** and **Roberto M. Billi** (2004b), Optimal Monetary Policy under Discretion with a Zero Bound on Nominal Interest Rates, ECB Working Paper No. 380
- Auerbach, Alan J.** and **Maurice Obstfeld** (2004), Monetary and Fiscal Remedies for Deflation, University of California, Berkeley Mimeo
- Clarida, Richard, Jordi Galí,** and **Mark Gertler** (2001), Optimal Monetary Policy in Open versus Closed Economies: An Integrated Approach, *American Economic Review Papers and Proceedings*, Vol.91, pp. 248-252
- Coenen, Günter, Athanasios Orphanides,** and **Volker Wieland** (2004), Price Stability and Monetary Policy Effectiveness when Nominal Interest Rates are Bounded at Zero, *Advances in Macroeconomics*, Vol. 4(1), article 1
- Coenen, Günter** and **Volker Wieland** (2003), The Zero-Interest-Rate Bound and the Role of the Exchange Rate for Monetary Policy in Japan, *Journal of Monetary Economics*, Vol.50, pp. 1071-1101
- Eggertsson, Gauti** (2003), How to Fight Deflation in a Liquidity Trap: Committing to Being Irresponsible, IMF Working Paper 03/64
- Eggertsson, Gauti** and **Michael Woodford** (2003), Optimal Monetary Policy in a Liquidity Trap, NBER Working Paper No. 9968
- Eggertsson, Gauti** and **Michael Woodford** (2004), Optimal Monetary and Fiscal Policy in a Liquidity Trap, Princeton University Mimeo
- Jung, Taehun, Yuki Teranishi,** and **Tsutomu Watanabe** (2001), Zero Bound on Nominal Interest Rates and Optimal Monetary Policy, Kyoto Institute of Economic Research Working Paper No. 525
- Kato, Ryo** and **Nishiyama, Shinichi** (2004), Optimal Monetary Policy When Interest Rates are Bounded at Zero, forthcoming in *Journal of Economic Dynamics and Control*
- Krugman, Paul R.** (1998), It's Baaack: Japans's Slump and the Return of the Liquidity Trap, *Brookings Papers on Economic Activity*, Vol.49(2), pp. 137-205
- Orphanides, Athansios** (2004), Monetary Policy in Deflation: The Liquidity Trap in History and Practice, Federal Reserve Board Mimeo
- Orphanides, Athanasios** and **Volker Wieland** (2000), Efficient Monetary Policy Design Near Price Stability, *Journal of the Japanese and International Economies*, Vol.14, pp. 327-365
- Reifschneider, David** and **John C. Williams** (2000), Three Lessons for Monetary Policy in a Low-Inflation Era, *Journal of Money Credit and Banking*, Vol. 32, pp. 936-966
- Svensson, Lars E. O.** (2003), Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others, *Journal of Economic Perspectives*, Vol.17(4), pp. 145-166
- Svensson, Lars E. O.** and **Olivier Jeanne** (2004), Credible Commitment to Optimal Escape from a Liquidity Trap: The Role of the Balance Sheet of an Independent Central Bank, Princeton University Mimeo

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Bank Regulation and Capital Holdings

by *Elena Carletti (CFS post-doc researcher)*



Broadly speaking, banks can be defined as institutions granting long-term loans and receiving short-term deposits from the public. Because of the maturity mismatch between assets and liabilities, and given the strong information content of their assets, banks are exposed to crises, affecting both individual institutions and the system as a whole.

The concern for a stable banking system, together with that for the protection of consumers/depositors, provides the motivation for numerous special regulations and supervisory activities in the banking sector, as well as safety net arrangements in the form of deposit insurance and lender of last resort facilities.

Over time minimum capital requirements have become the most important way of regulating banks. Their main role is that of assuring banks are managed in a safe and sound manner. Given the existence of deposit insurance, banks have easy access to deposit funds. If they do not have any capital, banks have an incentive to take on excessive risk. If the risk investments pay off, their shareholders receive the payoff. If the investments fail, the losses are borne either by depositors or by shareholders. Forcing banks to hold capital should then reduce their incentive to take risks as it shifts some of the losses onto shareholders. But because equity capital is typically more costly than other forms of funding, banks try to minimize its use. This is why there is a need for regulation imposing minimum capital requirements. The prime examples are the Basle accords and the widespread adoption of these rules in many countries.

One important question is how effective is capital regulation. Despite the lively debate accompanying the new Basle accord, in practice banks' capital holdings seem to be much higher than the regulatory minimum. Moreover, they seem to have varied over time independently of the regulatory changes. For example, capital ratios at US banks declined from around 40-50% in the 1840s to 6-8% in the 1940s, a level at which they remained till the end of the 1980s (Berger et al., 1995). More recently, US banks have again increased their capital holdings, reaching a

level that is 75% in excess of the regulatory minimum (Flannery and Rangan, 2004). Similarly, most European banks now have excess capital, with tier 1 ratios significantly about target (Citigroup, 2005).

Why do we observe these fluctuations in banks' capital holdings? Do they serve any point if they are not binding? Given that capital adequacy standards were not in existence during much of the nineteenth century, and have not fluctuated much

since their inception, it is hard to find a regulatory rationale to explain movements in banks' capital holdings.

In a recent paper with **Franklin Allen** from the University of Pennsylvania and **Robert Marquez** from the University of Maryland (**Allen, Carletti and Marquez, 2005**), we propose a new explanation of banks' capital holdings and capital regulation. Our starting point is to incorporate two important features of the banking industry into a model of capital regulation. First, we recognize that banks' capital structures may have implications for their ability to attract clients (and in particular borrowers). Second, we consider that banks perform an important role as providers of funds and producers of information to the firms and investment projects they finance. As already mentioned at the beginning, this is one of the basic functions banks perform in the economy.

In such a context, we find that even if raising capital is costly, banks may not minimize on the amount of capital they hold, implying that capital requirements need not be binding if banks operate in a competitive market. Specifically, when banks have to compete to attract borrowers (that is, when credit markets are very competitive), they have an incentive to hold capital as one way of committing themselves to monitoring firms and increasing the value of the investment projects they finance. In fact, the more capital banks hold, the greater the losses banks' owners will face if loans are not repaid, and thus the greater the banks' incentive to monitor firms. Given that capital is costly, however, banks may not be able to hold the amount of capital firms would like them to hold. In such a case, firms may want to provide further incentives – through the interest rate on loans – for banks to monitor them. That is, firms may want to forego part of their revenues and offer higher loan rates to banks in exchange for greater monitoring. This result leads us to conclude that market discipline can be imposed not only from the liability side, as has been stressed in the literature on the use of subordinated debt, but also from the asset side of banks' balance sheets.

If the competitiveness of credit markets requires banks to hold capital to attract borrowers, capital regulation might not be binding. A regulator (maximizing social welfare) will in general choose a different level of capital than that obtained in the market equilibrium. And in particular when the cost of capital is high relative to the cost of deposits, capital regulation will imply minimum requirements that are below the amount the market will require. The reason for this is that firms do not fully internalize the cost of capital for banks, and therefore require high amounts of capital as a way for banks to commit them-

ves to monitoring. Then, any capital requirement set by a regulator would not be binding, and competition for borrowers would lead to banks holding greater amounts of capital than is socially optimal.

The implications of our analysis are consistent with some recent empirical facts, including the capital buildup of banks in a period like the 1990s when the competitiveness of the credit markets seems to have increased substantially. Moreover, we should observe market disciplining stemming from the asset side of banks' balance sheets, as **Kim et al. (2005)** find in the context of Norway. Finally, concerning firms' sources of funds, our analysis predicts that bank monitoring is of greater value to firms with high internal agency problems, that is to firms whose managers' and shareholders' interests diverge. By contrast, firms where monitoring adds little value should prefer to borrow from an arm's length source of financing. If capitalization improves lenders' rating and reputation, these results are consistent with the finding in **Billet et al. (1995)** that lenders' "identity", in the sense of their credit rating, is important in determining the market's reaction to loan announcements.

Overall, our analysis puts forth a new motivation for banks' capital holdings, which is consistent with the possibility that banks hold capital in excess of the minimum regulatory requirements despite such capital being more costly than deposits. Understanding the relationship between capital holdings and bank regulation is essential to understanding the role of capital regulation and the effectiveness of the current regulatory apparatus. There is still need for further research, both theoretical and empirical, on this important policy issue.

REFERENCES

- Allen, F., E. Carletti and R. Marquez** (2005), *Credit Market Competition and Capital Regulation*, CFSworking paper 2005/23
- Berger, A.N., R.J. Herring and G.P. Szego** (1995), "The Role of Capital in Financial Institutions", *Journal of Banking and Finance*, 19, 393-430
- Billett, M., M. Flannery and J. Garfinkel** (1995), "The Effect of Lender Identity on a Borrowing Firm's Equity Return", *Journal of Finance*, 699-718
- Citigroup Global Markets Industry Report** (2005), *Equity Research: Europe Banks*
- Flannery, M.J. and K.P. Rangan** (2004), *Market Forces at Work in the Banking Industry: Evidence from the Capital Buildup from the 1990s*, mimeo, University of Florida

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CFS*conference readers*

“Capital Markets In the Long Term: Demography, Economic Development and Funded Pension Systems”

After the great success of last year's conference “**Capital Markets In the Long Term: Demography, Economic Development and Funded Pension Systems**” jointly organized by Allianz Group and the Center for Financial Studies we are pleased to present you today the reader.

The focus of the discussion at the conference on September 23, 2004 was on

the long-term impact on capital markets and pension systems. The speakers tried to identify the direction and magnitude of potential changes as well as the likelihood of an eventual asset melt-down.

The conference's objective was to combine insights from academia with those from the financial community in order to provide a more comprehensive out-

look on capital market developments.

If you wish to receive book “**Capital Markets In the Long Term: Demography, Economic Development and Funded Pension Systems**”, please let us know.

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CFSmonographs

The German Capital Market Before World War I - Years of Rapid Industrial Expansion, Crisis and the Efficiency of the German Stock Market up to 1914



In the monographs at issue the years of rapid industrial expansion and crisis between 1871 and 1875 are empirically examined, along with the ensuing period up to the World War I. On the basis of selected aspects, the author investigates the question of whether, from its infancy and over time, a development from a less efficient to an efficient and fully integrated market can be observed. At the same time the applicability of selected aspects of modern capital market theory regarding prices on the primary and secondary stock markets between 1871 and 1914 is examined.

The historical market index HIMAX 1871-1914 forms the basis of the empirical analysis of the period of rapid industrial expansion. This share index was calculated in conjunction with the work at issue on the basis of data collected on six German stock exchanges, in the form of both a price and performance index. On the basis of the HIMAX 1871-1914 it is possible not only to empirically analyze the first era of “German capital mar-

ket history”, but also to fill the index gap which existed between the year 1876 and the foundation year of the Deutsches Reich. The established database makes it possible for this work and other future investigations to carry out long-term analysis of the monthly development of the German stock market from its beginnings up to the outbreak of the World War I.

ISBN 3-8314-2616-3, © 2005 by Fritz Knapp Verlag GmbH, Frankfurt am Main

After her studies of Communication Sciences in France, Anja Weigt (née Wodrich) took a Business degree at the University of Frankfurt in 1997, with Credit and Financing, Economics IT and Economic French as her focal subjects. From 1998 to 2001 she worked as a Researcher at the Center for Financial Studies in Frankfurt. Since 2004 she has been working for an international PR agency in the field of Corporate and Financial Communications.

Venture Capital in Germany and the Neuer Markt: An Empirical Study



For a long time the German stock market and the venture capital market were regarded as underdeveloped, particularly in comparison with the Anglo-American markets. In the mid-1990s, however, there were clear signs of an increase in the significance of equity financing in general and in the financing by venture capitalists of young, innovative growth companies in particular. At the same time as the Neuer Markt, the market segment for growth companies on the Frankfurt Stock Exchange, an IPO boom was triggered; supply of and demand for venture capital rose significantly. This work outlines the development of the German stock and venture capital markets

over the last 60 years and analyzes what prevented such a development for so long, and what then made it possible.

Furthermore, within the framework of the CFS Monograph XXII and based on an extensive set of data, all the IPO-companies on the Neuer Markt and all parties involved in the IPOs will be examined, applying modern option-price theory and statistical procedures, with particular emphasis on the following three aspects: a) The proceeds of the issue in comparison with its direct and indirect costs, focusing on the costs of underpricing and greenshoes, b) the certification function of venture capitalists and issuing banks at the time of the IPO and c) the longer-term performance of companies financed by venture capital in comparison with

those not financed by venture capital.

The findings of this work are interesting and informative, partly because they differ significantly from the findings of similar studies in the USA. For interested parties who would like to draw lessons from the collapse of the New Economy, the information contained in this monograph and its findings provide an indispensable foundation for further analyses.

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Stefanie A. Franzke graduated in Business Administration from the University of Frankfurt. Her focal areas of study were Credit and Finance, Marketing, Money, Currency and Foreign Trade. She has been a member of the CFS staff since 1998.

CFScolloquium series

Basel II und die Konsequenzen für das Risikomanagement / Basel II and its Impact on Risk Management

Forward Looking Management of Operational Risk

The management of operational risk should, in the opinion of Clemens Börsig, Chief Financial and Chief Risk Officer of Deutsche Bank AG, orient itself towards the procedure for controlling credit risk. According to Basel II, operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.



On the occasion of the CFScolloquium on June 8, 2005 Chief Financial and Chief Risk Officer at Deutsche Bank AG, **Clemens Börsig** made the case for forward looking management of operational risk on both an individual risk and portfolio level. Due to Börsig, the weakness of the current discussion is that

operational risk is mainly analyzed on an aggregated basis and from a historical viewpoint. The standards already achieved for the management of credit and market risk could easily be created for the management of operational risk by orienting them towards the procedures used to control credit risk.

In recent years operational risk for banks, i.e. losses incurred as a result of bank robberies for example, or due to computer failure or the misconduct of individual managers, has increased significantly. The discipline concerned with the management of this risk is, however, still in its infancy, Börsig emphasized. As a consequence of the new equity capital regulations from Basel II, banks will be obliged to support operational risk with equity capital in the future. As a result of this the interest in the efficient management of this type of risk is increasing. Thus it is conceivable that a market for trading this type of risk will evolve in a similar way to that in which a liquid market for the trading of credit risk has come into being in recent years. There has always been operational risk in the banking business. However the amount of risk and the possible loss resulting from it has increased sharply. Examples are large-scale fraud in the

field of online banking (phishing) and the risk posed by multi-party lawsuits. The settlement of a lawsuit brought by Worldcom shareholders cost Deutsche Bank \$325 million.

According to Börsig, banks need a standardized process for the company as a whole in which data is systematically analyzed for underlying operational risk and quantified according to a standardized evaluation system. Furthermore this process should also include a binding cost/benefit analysis of possible risk-reducing measures and a clear decision-making structure with regard to the acceptance of residual risk. The introduction of such a stringent process for operational risk represents virgin territory for the banks. However banks do have great experience of standardized evaluation processes and the consistent control of risk in the field of credit.

Efficient management of operational risk requires the foresighted estimation of possible losses, in a similar way that the management of credit risk is linked to expected losses, according to Börsig. There are many challenges facing the development of such models. This is especially true for the category of operational risk where losses occur very rarely but are very large. Börsig cited the September 11 terrorist attacks on the financial center in New York as an example of this.

In spite of these difficulties Deutsche Bank has begun setting up databases and developing new management systems, the Chief Financial and Chief Risk Officer said. Initially a relatively simple rating system for operational risk will be used. This system will then gradually be refined, as happened in the case of credit risk models.

Felizitas Thom (CFS staff)

The Stability of the Financial System is Strengthened by Basel II

In his speech at the CFSScolloquium Edgar Meister, Member of the Executive Board of the Deutsche Bundesbank, stressed that Basel II has a positive effect on the stability of the financial system. The principle of national accountability for supervision guarantees the necessary proximity of the supervisor to the institutions.



Edgar Meister regards the new standards resulting from Basel II as an important milestone. At the CFSScolloquium on May 11, 2005 Meister chose risk in the financial system and the challenges for banking supervision and central banks as his central themes. In his opinion the framework for Basel II represents

the result of negotiations that guarantee banks' adequate provision of equity and set in motion important improvements in risk management. Thus the new standards have a positive effect on the stability of the financial system.

According to Meister, the high quality of national banking supervision continues to form the basis of structural stability in the banking system. Moreover, the principle of national accountability for supervision guarantees the necessary proximity of the supervisor to the institutions. Particularly in view of the continuing structural and legal differences from country to country, national banking supervision is the most satisfactory solution.

Meister emphasized that international finance and banking markets had become extremely efficient. At the same time interconnection and integration of national financial systems have also increased in recent years. The high efficiency and dynamism of the financial markets could, however, also have a downside. Susceptibility to disruption may increase as the risk

of contagion rises. Crises could thus spread more easily, as the financial crises in the 1990s showed. Meister advised against combating unsatisfactory developments in the financial markets with the general use of measures involving interest rates. In order to make a real difference, an increase in interest rates of such magnitude would be required which would have a tangible effect on the development of the economy.

Meister regards the continually high oil price among other things as a potential danger for financial stability. It takes spending power away from the consumer and puts pressure on firms' profit margins and on the price development in the economy as a whole. Imbalances in foreign trade such as the US current account deficit also pose risks. In the medium term there might occur shocks in this field.

Hedge funds increase the efficiency of markets and the whole financial system on the one hand. On the other hand their activities are very hidden, thus making it difficult for market participants and supervisory bodies to assess the risks to banks in relation to hedge funds and possible systematic risks. Because of the lack of supervision hedge funds would create vacuums in the domain of the supervisory authorities and which would spread out beyond it, according to Meister. Therefore it is important that hedge funds' counterparts, in particular the banks, keep a close watch on their risk and attempt to limit it.

On the whole, however, Meister regards the financial system as robust enough to be able to deal with any individual risks which might occur.

Felizitas Thom (CFS staff)

CFSSforum

The Euro: Ready for a Global Role?

Adam S. Posen, Senior Fellow at the Institute for International Economics in Washington DC regards the Euro as a limited success. In his speech the editor of the book "The Euro at Five: Ready for a Global Role?" made four suggestions as to how the Europeans can drive forward the international significance of the Euro.

The basic hypothesis put forward by **Adam S. Posen**, Senior Fellow at the

Institute for International Economics in Washington DC and editor of the book

"The Euro at Five: Ready for a Global Role?", is that the Euro has been a li-

mitted success and offers Germany especially very little, both in a positive and a negative sense. In the CFSlecture on June 15, 2005 he presented his assessment of the development of the Euro up to now and his forecast for the fledgling currency. He regards the significantly lower interest rates in many countries, for instance Italy, as one of the merits of the common currency. The integration of the European capital markets has also been given a boost. The introduction of the Euro has, however, neither contributed to the pushing through of structural reforms in Europe, nor has it increased the discipline of the member states in the field of financial policy, Posen emphasized. According to Posen the hypothesis of the limited success of the Euro is confirmed by looking at the worldwide distribution of currency reserves. The Euro comprises 19.7% of the reserves, slightly more than the share of the old German Mark, and significantly less than that of the Dollar with

63.9%. In the long term Posen expects the domination of the Dollar to fall, but does not expect the Euro to profit from this significantly. Posen expects the Japanese currency above all to be among the winners.



Posen made four suggestions as to how the Europeans can drive forward the significance of the Euro. He called for a more wide-ranging integration of the European financial markets together with a strengthening of supervision of the financial markets. According to Posen the Europeans should pool their votes at the IMF, in order to strive towards a more important role in international monetary matters. A united Europe carries more weight than it needs and could even concede votes to Asian countries such as

China, not, of course, without asking for anything in return.

Above all the stagnating economies in the big countries of the Eurozone could pick up speed by pursuing a more active macroeconomic policy and relaxing monetary and financial policy. Posen called for a reduction in the key interest rate. A financial policy which is intended to bring about prompt repayment of state deficits is not recommended by Posen for the Europeans. Even though such a policy worked in the USA in the late 1990s and later in Scandinavia, it has no implications for Europe, Posen explained. The lack of flexibility of the European economy does not allow a comparison with the USA. And Scandinavia, with its small, but very open economies, is a special case which provides no lessons for Germany. Overall, Posen concluded that monetary policy alone does not guarantee economic success.

Felizitas Thom (CFS staff)

Fractal Eye Turns to the Behaviour of Financial Markets

“Risk Managers underestimate Risk”. In the opinion of Benoit Mandelbrot we all take more risk than we assume to do. This was the main statement of the CFSforum Mandelbrot held on May 17, 2005. As the originator of fractal geometry the Sterling Professor of Mathematical Science and IBM Fellow fights against the use of obviously misleading models in financial risk management.

If someone builds an earthquake-proof tower, he says, the building should not only survive the average earthquake but the most powerful one imaginable in the area in question. In contrast, the typical models used to manage market risks in banks all assume the normal distribution to describe the world - a distribution which has been proved only to be able to model the changes in market behavior during normal times and which is almost useless to model extreme events. The only reason for this seems to be, that for the normal distribution almost every

necessary result can be calculated analytically, while one has to use more time-consuming and sophisticated numerical methods like Monte-Carlo-Simulation to derive the same results for more complex distributions.

In “The (mis)behavior of financial markets”, Mandelbrot’s latest book, the author recommends no longer using models that are essentially based on the normal distribution, but turning to models that use different and maybe more realistic assumptions, in particular fractal geometry, where parts of the world are

assumed to be self-similar, and which he considers especially to describe the tail of any risk-related function better than the normal distribution.

Mandelbrot does not claim that fractal models can make better predictions than others, but he assumes that with his models it would be possible to analyze risks more deeply and one would be able to gain a fundamental understanding of the risks one is going to take.

*Christof Reese
(CFS staff and Capgemini Deutschland GmbH)*

Joint Lunchtime Seminars

The Joint Lunchtime Seminars Series are a series of weekly research lectures inviting academics from other institutions to present their research in the fields of Monetary Economics, Macroeconomics, Finance and Econometrics. The speakers comprise both well-established senior researchers as well as those at the assistant and associate level from all over Europe and the United States.

Originally started in January 2001, the weekly presentations have become a fixed entry in the diary of many members of research institutions and central banks located in Frankfurt. As a result, seminars are usually accompanied by lively debates and subsequent discussions.

The Joint Lunchtime Seminars are organized by Klaus Adam (European Central Bank), Heinz Herrmann/Sandra Eickmeier (Deutsche Bundesbank) and Volker Wieland (University of Frankfurt and CFS)/Günter Beck (University of Frankfurt).

Oct. 26, 2005 **Evaluating the New Keynesian Phillips Curve: Evidence for Canada**

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Elena Carletti (Center for Financial Studies)

Sept. 21, 2005 **Monetary Policy with Single Instrument Feedback Rules**

Pedro Teles (Federal Reserve Bank of Chicago)

Sept. 14, 2005 **How Large Are Returns to Scale in the U.S.? A View Across the Boundary**

Thomas Lubik (The Johns Hopkins University)

Sept. 07, 2005 **Monetary Policy, Learning and the Speed of Convergence**

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Aug. 31, 2005 **Macroeconomic Shocks and Foreign Bank Assets**

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Jörg Rocholl (University of North Carolina at Chapel Hill)

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Peter Egger (ifo, Institute for Economic Research)

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Felix Kübler (University of Mannheim)

May 4, 2005 **Job Displacement Risk and the Cost of Business Cycles**

Tom Krebs (Brown University, Providence)

CFSresearch conferences

Fair Valuations: Modern Principles for Carrying out Valuations

On June 15, 2005 the German Shareholders' Association in conjunction with the Center for Financial Studies and the magazine Die Aktiengesellschaft (The Stock Corporation) held a symposium in Frankfurt on the subject of "Modern Methods of Corporate Valuation". Eric Nowak (University of Lugano and CFS Fellow) was responsible for structuring the content of the symposium.

The Revised Version of the Idw-Standard

The reason for the event was the publication of the revised version of the Principles for Carrying Out Corporate Valuations by the Institute of Auditors (IdW) by the IdW itself. The new regulations are intended to replace the previous standard (IdW S1). One central contentious issue, besides the derivation of the basic rate of interest, was the correct determination of a risk premium on top of the basic rate. The method favoured by the IdW produces risk premiums of between 5 and 6%. Accordingly investing in stocks provides, in the long term, a 5-6% higher return than investing in long-term (secure) German federal bonds. However this assumption must be critically analyzed, because a study by the DAI in March 2004, for example, showed the nominal performance of the German stock market for the period 1870 to 2004 to be 6.8%. If the long-term average interest rate of 5.5% for secure bonds is deducted from this, however, the risk premium implied by the IdW cannot be upheld.

With regard to the valuation of corporations, particularly in the context of transfer of profit contracts and squeeze-out procedures, the draft is quite explosive: The revision of the standard will lead to lower corporate values being determined. Sample calculations have shown reductions of up to 20%, which ultimately represents a lot of money when calculating indemnity entitlements for minor shareholders in such situations.

In the face of an increasing number of such measures and potential conflicts of interest between the bodies, major shareholders and their advisors on the one hand and minor shareholders on the other hand (e.g. T-Online, Celanese, Wella), the SdK began actively representing the interests of the minority shareholders and was able to gain CFS as a competent partner for the specialist symposium.

The goal of the event was to inform the participants of the most recent academic findings on corporate valuation and to

discuss, objectively and critically, modern principles of corporate valuation in general and the revised version of IdW S1 in particular. Renowned experts, namely **Ekkehard Wenger** (University of Würzburg), **Richard Stehle** (Humboldt-University, Berlin), **Olaf Ehrhardt** (University of Witten/Herdecke) and **Claudio Loderer** (University of Berne) made themselves available.

Following on from the experts' informative speeches, a wide-ranging and lively panel discussion took place. The panel received reinforcement from **Günther Gebhardt** from the University of Frankfurt. The panel discussion was particularly characterized by the controversial, hard but fair and often amusing exchange of opinions between Wenger and Stehle. The latter was required to explain the reasons for his rethinking on the previously propagated risk premium of 2.6% to the current level of 5.5%. His most recent remarks on market risk premium, which lead to lower corporate valuation, have ultimately been incorporated into the revised version of the IdW principles.

Naturally no agreement could be reached within the framework of the symposium about the correct method of corporate valuation. However it was clear that the draft at issue is founded on many problematic assumptions and valuation premises, which will provide much potential for conflict in future, if they are put into practice in unaltered. The IdW would be well advised to thoroughly revise the draft at issue.

It may be hoped that the IdW puts into practice its suggestion, made at the end of the discussion, to hear out the SdK within in the framework of the final revision of the standard. The publication this year in a special pamphlet of the magazine The Stock Company of the results of the discussion and the speeches held should be helpful.

*Eric Nowak (Universität Lugano und CFS),
Harald Rotter (SdK Schutzgemeinschaft der Kapitalanleger e.V.)*

Risk Transfer Between (Re)Insurers, Banks, and Markets

Credit Risk Transfer, Collateralized Loan Obligations, Securitization, and Alternative Risk Transfer are forms of risk transfer that banks, insurers and reinsurers have developed in the last few years, to pass on risk to other institutions, e.g., other banks, other insurers or reinsurers, or to the market directly.

The market for credit risk transfer is estimated by Fitch Ratings to have had a contractual volume of \$3 billion at the end of 2003, and the British Bankers' Association predicts an increase to \$8.2 billion in 2006. A large part of the transactions takes place between banks, but insurers and reinsurers are also involved to a considerable degree.

By means of Alternative Risk Transfer (ART) in the form of, for example, cat bonds or securitization of insurance contracts, insurers and reinsurers can pass on specific risk directly to the capital market or other institutions. Due to reduced capacity on the insurance market, a sharp increase in transaction volume for these products was expected, which has, however, not materialized so far.

ART contracts for insurers and reinsurers and credit risk transfer contracts show structural similarities with insurance contracts. Thus the new products are leading to an alignment of the instruments of risk transfer of the insurance and banking sectors. In principle the new products have great potential for efficient risk allocation. However critics warn that many transaction partners do not understand the basic risk structure and that the transactions can have a negative influence on the ability of the banking system to function and raise systemic risk.

The developments pose a number of important questions for the participants in the capital market. What implications does the high volume of credit risk transfer have for the ability of the banking sys-

tem to function: the allocation of loans, the banks' controlling function, the stability of the banking system? What do we know about the transfer of credit risk in the banking and insurance sectors - volume, motives, implications? Do participants in the capital market understand the risk structure and is it included in ratings? What challenges to regulatory and supervisory authorities will be presented by the developments? These questions are of great practical relevance.

Christian Laux from the University of Frankfurt and **Achim Wambach** from the University of Erlangen-Nuremberg therefore organized the CFSresearch conference "Risk Transfers Between (Re)Insurers, Banks, and Markets" in cooperation with the Stiftung Geld und Wahrung, to further the interchange between leading academics and practitioners from the fields of banking and insurance.

Leading international academics came together on the Campus Westend of the University of Frankfurt to discuss research projects with each other and with practitioners. The topics included the effect of credit risk transfer on the behaviour of banks with regard to the allocation of loans, implications for systemic risk in the banking sector and issues of regulation, problems of gauging and transferring operational risk, the work of reinsurers and brokers and risk transfer contracts.

Gunter Franke (Universitat Konstanz), **Arno Gerken** (McKinsey), **Stuart Lewis** (Deutsche Bank) und **Paul Wollny**

(Ge Insurance Solutions) discussed various aspects of the topic as a panel.

Other contributors were **Franklin Allen** (Wharton School), **Ron Anderson** (London School of Economics), **Stefan Arping** (University of Amsterdam), **Christina Bannier** (University of Frankfurt), **Silke Brandts** (Bain & Company), **Hans-Peter Burghof** (University of Hohenheim), **Elena Carletti** (CFS), **Fabio Castiglionesi** (Universitat Autonoma de Barcelona), **Gabriella Chiesa** (University of Bologna), **David Cummins** (Wharton School), **Stephen Diacon** (University of Nottingham), **Neil Doherty** (Wharton School), **Ralf Elsas** (University of Frankfurt), **Falko Fecht** (Deutsche Bundesbank), **Ingo Fender** (BIS), **Benedikt Goderis** (University of Cambridge), **Marcel Grandi** (Munich Re), **Denis Gromb** (London Business School), **Hendrik Hakenes** (Max Planck Institute, Bonn), **Frank Heine-mann** (University of Munich), **Martin Hellwig** (Max-Planck-Institute, Bonn), **Thomas Kaiser** (KPMG), **Gyongyi Loranth** (University of Cambridge), **Janet Mitchell** (National Bank of Belgium), **Alexander Murmann** (Wharton School), **Georg Noldeke** (University of Bonn), **Charlotte Ostergaard** (Norwegian School of Management und Norges Bank), **Christine Parlour** (Carnegie Mellon), **Rudiger Reissaus** (University of Erlangen-Nuremberg), **Eva Terberger** (University of Heidelberg) and **Wolf Wagner** (University of Cambridge und Tilburg).

*Christian Laux
(University of Frankfurt and CFS)*

International Research Forum on Monetary Policy

This year saw the third staging of the International Research Forum on Monetary Policy. The conference took place in Frankfurt on May 20–21, 2005, and was hosted by the European Central Bank (ECB). Since its creation in 2002 by the ECB, the Board of Governors of the Federal Reserve System (FRB), the Center for German and European Studies at Georgetown University (CGES), and the Center for Financial Studies, the Research Forum's goal has been to encourage research on monetary policy issues that are relevant from a global perspective. To this end the forum regularly organizes conferences held alternately in the euro area and the United States. This year's conference was organized by Ignazio Angeloni (ECB), Matthew Canzoneri (CGES), Dale Henderson (FRB) and Volker Wieland (University of Frankfurt and CFS).

The event started with opening remarks by **Jean-Claude Trichet** (ECB), and **Donald Kohn** (Federal Reserve Board) and **Otmar Issing** (ECB) delivered the luncheon and dinner speeches. As in previous years, the audience consisted of researchers from leading universities, international organizations, and central banks, but also included financial market observers from private sector firms and representatives of the financial press.

In the first research contribution, **Klaus Adam** (ECB) and **Roberto Billi** (CFS) analyzed monetary and fiscal policy interactions in a dynamic general equilibrium model when policy-makers lack the ability to credibly commit to policies *ex ante*. They identified the policy biases emerging from sequential and non-cooperative decision-making and assessed the desirability of installing a central bank that is conservative in the sense of Rogoff (1985). The authors found that in the absence of monetary commitment, independently of whether fiscal policy can commit, a conservative monetary policy completely eliminates the steady-state distortions generated by a lack of monetary commitment and may even eliminate the losses associated with a lack of fiscal commitment.

Willem Buiter (European Bank for Reconstruction and Development) employed a standard dynamic stochastic equilibrium model with price rigidities to study the inflation rate associated with optimal monetary and fiscal policy. His most important result is that in the New Keynesian models considered by Woodford, there are no robust welfare-economic arguments for price stability as an objective of monetary policy. Instead, in these models, optimal inflation policy confirms the core inflation rate generated by the price-setter's rule.

Next, **Robert Tetlow** and **Brian Ironside** (both Federal Reserve Board) presented their work on real-time model uncertainty. They examined how the properties of the Federal

Reserve Board model that is used to explain the US macro economy have changed over time and how the optimal policies have changed alongside. The authors found that time variation in the model's properties was substantial and stress that policies should thus be designed to minimize the implications of model misspecification.

James Bullard (Federal Reserve Bank of St. Louis) and **Eric Schaling** (University of Johannesburg) studied determinacy and learnability of a rational-expectations equilibrium in a two-country version of the New Keynesian model due to Clarida, Gali and Gertler (2002). These countries might be viewed as the US and Europe, or as regions within the euro zone. Comparing their findings to known results for closed economies, they showed that open economy considerations in fact may play an important role for the degree of aggressiveness the policy-maker should optimally adopt in his decisions. Their outcomes highlight that topics like exchange rate targeting or international monetary policy cooperation might have to be reconsidered.

Should the central bank raise or lower interest rates, and by how much, in response to a productivity shock? This was the question that **Rochelle Edge** (Federal Reserve Board), **Thomas Laubach** (Federal Reserve Board and OECD) and **John Williams** (Federal Reserve Bank of San Francisco) analyzed. Employing a two-sector DGE model, they showed that shifts in long-run productivity growth have sizeable and highly persistent effects on the real economy and on inflation which is consistent with the experience in the 1970s and 1990s. The optimal response of a central bank with respect to interest rates depends on whether a shock is perceived as temporary or permanent. In the former case, the optimal response is to lower interest rates, in the latter, to raise them.

Antonio Fatás, **Ilian Mihov** (both INSEAD), and **Andres Rose** (University of California at Berkeley) investigated the

effect of quantitative targets for monetary policy on inflation and business cycle volatility. Using macroeconomic panel data they found that both employing and meeting quantitative targets for monetary policy is systematically and robustly associated with lower inflation. Although the exact form of the monetary target also matters to some extent, it proves to be less important than having a quantitative target to start with. Thus, their research confirms the current consensus that central banks should independently pursue well-defined goals in a transparent fashion.

Michael Ehrmann and **Marcel Fratzscher** (both ECB) instead took a closer look at the communication strategies of the Fed, the Bank of England, and the ECB, and evaluated their relative effectiveness. As it turns out, each communication strategy has to be assessed in light of the respective committee's decision-making process, and there is significant variation in these two aspects between the three institutions. Rather diplomatically, the authors found that in terms of policy predictability and market responsiveness, the Fed and the ECB did equally well despite the difference in their strategies. The upshot is that for deciding on the most effective strategies for communication and for decision making, there may simply not be a unique optimal choice.

Nicoletta Batini, **Alejandro Justiniano** (both International Monetary Fund), **Paul Levine** (Surrey University), and **Joseph Pearlman** (London Metropolitan University) empirically examined model uncertainty in a two-bloc DSGE model with incomplete exchange-rate pass-through, and looked at the welfare implications of coordinating the two monetary rules. Based on their model estimates, the authors compared inflation forecast-based interest-rate rules by the Fed and the ECB, both under policy coordination and independence, respectively. The paper concluded that current inflation rules perform better than forward-looking rules, and that the gains from coordination are modest.

The lunch break was followed by an appraisal of the connection between exchange-rate policy and optimal nominal exchange-rate volatility. **Michael Devereux** (University of British Columbia) and **Charles Engel** (University of Wisconsin) interpreted exchange-rate policy as a trade-off between real exchange-rate smoothing to avoid distortions in consumption allocations, and leaving sufficient room for terms-of-trade adjustments to facilitate expenditure switching. The optimal policy trade-off would then determine nominal exchange-rate volatility, whose optimal level was found to be significantly lower than under a policy based on terms-of-trade considerations only.



Photographer: Breitingner / Copyright: ECB

Ramsey-optimal fiscal and monetary policy in a medium-scale model of the U.S. business cycle was the subject of **Stephanie Schmitt-Grohé** and **Martín Uribe** (both Duke University). The authors incorporated a number of rigidities in their model and found that optimal monetary policy appears to pursue price stability. A further result was that under an income tax regime, they obtained an optimal inflation rate of half a per cent that is surprisingly stable despite the frictions present in the model. The competitive equilibrium implemented by simple monetary and fiscal rules resembles that attained by a Ramsey policy, with almost identical welfare levels. Allowing for differential tax rates on capital and labor, the paper also found that optimal fiscal policy prescribes a large but highly volatile subsidy for capital.

Michel Juillard (CEPREMAP), **Philippe Karam**, **Douglas Laxton** (both International Monetary Fund), and **Paolo Pesenti** (Federal Reserve Bank of New York) concluded the conference by using a DSGE model of the U.S. economy to evaluate a welfare-based interest-rate rule. In maximizing the unconditional mean of utility, their rule was shown to be close to the Taylor efficiency frontier. Had this rule been used in practice for monetary policy guidance, it is claimed that the high inflation rates of the 1970s would have been avoided and the boom and bust cycles would have been less severe. The authors also evaluated the welfare consequences of excessive business-cycle variability for the U.S. and found them to be small, yet significant.

The complete conference program including papers can be found at: www.ecb.int/events/conferences/html/int-forum3.en.html



*Julia Le Blanc/
Marcus Pramor (both CFS staff)*

The Sixth RTN Workshop on Economics of Aging in Europe (Age)

The Sixth Workshop of the RTN on the Economics of Aging in Europe was held in Frankfurt on May 12-14 2005. It was hosted by the University of Frankfurt and sponsored by the European Union Marie Curie Research Training Networks and the Centre for Financial Studies, under its new program on Household Wealth Management. The conference organizer was Michael Haliassos of the University of Frankfurt and Program Director at CFS.



The first day of the workshop, Thursday May 12th, was devoted to training lectures for the young researchers of the AGE Network. The first lecture was given by **Orazio Attanasio** (University College London) on “Global Demographic Trends and Social Security Reform” (co-authored paper with S. Kitao and G. Violante). Their work focused on the issue of the sustainability of PAYG systems and the transition to a privatized pension system. They explored the implications of different ways to pay for pensions and/or the transition for the welfare of different cohorts. Then, they presented how their results were affected by considering an open versus a closed economy. They showed that demographic trends make the current social security system unsustainable, but different policy reforms have different intragenerational distribution consequences. Their main conclusion was that privatizing the social security system has large implications and might be very costly for some generations.

The second lecture was given by **Deborah Lucas** (Northwestern University)

on “Investing Public Pensions in the Stock Market: Implications for Risk Sharing and Asset Prices” (joint work with J. Heaton). They used a computational general equilibrium OLG model with many heterogeneous agents, calibrated to examine the various implications of pension investment policy changes similar to those currently under consideration in the U.S. They showed that predicted assets returns are fairly insensitive to whether stocks are held in the social security trust fund, independent of the details of policy implementation. However, the implications for risk sharing and welfare are quite sensitive to the details, and sometimes counter-intuitive. According to their analysis the risk redistribution goals



can be accomplished by program rules that mimic financial derivatives (as an alternative to costly private accounts).

“How Do Household Portfolio Shares Vary with Age” was the third invited lecture, given by **Stephen Zeldes** (Columbia University) (joint work with J. Ameriks). They examined the ques-

tions of how should portfolio allocations change with age and how do portfolio allocations change with age. In addressing the second issue, the authors explored the relative importance of age, time and



cohort effects using US household level data. Their main finding was that there is no evidence supporting gradual decline in equity shares with age. There was only limited indication of people shifting completely out of equity around retirement as they begin to withdraw or annuitize their accumulation.

The second and third days of the workshop were devoted to contributed papers. The first paper was on “Understanding Saving and Portfolio Choices with Predictable Changes in Asset Returns”, and it was presented by **Christian Gollier** (University of Toulouse). The author described how existing results on household portfolio literature can be generalized to non-CRRA preferences. He also explored why unintuitive results hold when RRA is less than unity. He showed that both savings and portfolio choices are affected by the expectation of changes in the future opportunity set. The second presentation was on “Preferences and the Dynamic Representative Consumer” by **Christos Koulovatianos** (University of Vienna). He presented a model that leads to a representative consumer with a time-separable utility function, in a single-commodity-type deterministic dynamic environment, in the presence of consumer wealth-, labor-productivity, and preference heterogeneity. He showed that when the rates

of time preference are heterogeneous across consumers, a representative consumer exists if, and only if, the momentary utility functions of all consumers are exponential.

The next paper was on “Risk-Return Preferences in the Pension Domain: Are People able to Choose?” and given by **Maarten van Rooij** (Central Bank of the Netherlands) (joint work with C. Kool and G. Prast). They investigated respondents’ attitudes toward DB and DC pension schemes using data from Dutch households. In addition they explored whether respondents have consistent preferences with respect to portfolio choices for retirement saving. They found that the vast majority of households is in favor of compulsory saving for retirement and opts for a DB pension system. They also showed that given investor autonomy, agents face problems in bringing choices in line with their preferences.

“How Do Risk Attitudes Change with Wealth? Nonparametric Evidence from a Hypothetical Gamble” was the fourth paper, presented by **Juergen Maurer** (Institute for Fiscal Studies). The main aim of his study was to illuminate the relationship between risk aversion and wealth, using households’ response to a hypothetical gamble and nonparametric estimation techniques. He found that absolute risk aversion declines slowly with wealth.

The next presentation was on “Using Stated Preferences Data to Analyze Preferences for Full and Partial Retirement” given by **Arthur van Soest** (RAND and Tilburg University) (co-authored with A. Kapteyn and J. Zissimopoulos). They described an experiment with measuring retirement opportunities as perceived by the respondents, as well as preferences for retirement. For the latter, re-

spondents evaluated how attractive they found a number of virtual, simplified, retirement trajectories involving early retirement, late retirement, and gradual retirement with different corresponding income paths. The data on preferences were used to estimate a stylized structural model of retirement decisions. They found that people are reasonably satisfied with retiring at the benchmark age and that there is no strong preference for phased retirement. In addition if late retirement were to be made more attractive by providing financial incentives, these incentives should be quite strong and should exceed by far the actuarially fair adjustments.

Rob Euwals (CPB and IZA) presented the next paper on “Early Retirement Behavior in the Netherlands: Evidence from a Policy Reform” (co-authored with D. van Vuuren and R. Wolthoff). Using Dutch panel data, the authors estimated hazard rate models for early retirement. They found evidence that the policy reform induces workers to postpone early retirement. They showed that the transitional scheme has already led to average retirement postponement by 8 months, which will become almost a year once the transition is completed.

Carolina Fugazza (Center for Research on Pensions and Welfare Policies) presented a paper on “Investing for the Long-run in European Real Estate: Does Predictability matter?” (joint work with M. Guidolin and G. Nicodano). The authors derived optimal portfolio shares under excess return predictability and parameter uncertainty, including real estate in the menu of assets. They found that the weight for real estate is between 10% and 30% for intermediate values of RRA and that the welfare costs of ignoring real estate are increasing with RRA and planning horizon.

The last paper was on “Temperant Portfolio Choice with a Correlated Background Risk” given by **Hector Calvo** (DELTA) (joint work with L. Arrondel). They investigated the impact of income risk on the demand for risky assets using data on French households. They showed that the probability of stock market participation increases for those with negatively correlated incomes while they did not identify any effect with regard to those with positively correlated or uncorrelated incomes.

On the 3rd day of the workshop, May 14th, the first paper was on “The Forgone Gains of Incomplete Portfolios” presented by **Monica Paiella** (Ente Luigi Einaudi). She estimated a lower bound to the forgone gains of incomplete portfolios, which are in turn a lower bound to the entry costs that could rationalize non-participation to financial markets. She showed that such estimated bound can provide a heuristic test for the cost-based explanation of limited financial market participation, since high estimates would imply unrealistically high participation costs. The main finding was that the participation cost explanation of limited stock market participation can not be rejected.

“The Impact of Interest Rate Subsidies on Long-Term Household Debt: Evidence from a Large Program” was the second paper, presented by **Ernesto Villanueva** (Universitat Pompeu Fabra) (co-authored with N. Martins). They explored whether mortgage interest rate subsidies affect the demand of long-term household debt, utilizing Portuguese micro data. They concluded that borrowing among groups on the margin of home-ownership responds to interest rates incentives. The next paper was on “Varying Life Expectancy and Social Security” given by **Antoine Bommier** (University of

Toulouse) (joint work with M. Leroux and J. Lozachmeur). They showed that heterogeneity of life expectancy plays a key role in the design of social security. In their framework the social optimum is obtained when individuals living longer retire later and consume less than short lived individuals.

The fourth paper was on “Obesity, Health and Socio-economic Status: an International Comparison” presented by **Pierre-Carl Michaud** (CentER, Tilburg University) (joint work with A. van Soest). They studied the association between obesity, health, use of health care, and socio-economic status and explored some explanations for the cross country differences. Their empirical findings based on SHARE data from 10 European countries and HRS from the US. Their main conclusion was that only a small share of the difference in average body mass index between the U.S. and

Europe can be explained by differences in health behaviors and food consumption.



Tullio Jappelli

The last presentation was on “Demand Patterns around Retirement: Evidence from Spanish Panel Data” by **Mette Lunde Christensen** (CAM and IFS). She examined demand patterns before and after retirement, using a Spanish panel data set on household expenditures, in which households are followed across the retirement threshold. She found no evidence for an income fall for the retiring households. She also examined the

effect of retirement on budget shares. She found no significant effect on any commodity groups, with only exception being the fall in share of medicine expenditures.

The following academics contributed to the conference as discussants of presented papers: **Bernd Fitzenberger** (University of Frankfurt), **Dimitris Georgarakos** (University of Frankfurt), **Christian Gollier** (University of Toulouse), **Tullio Jappelli** (University of Salerno), **Arie Kapteyn** (RAND), **Dirk Krüger** (University of Frankfurt), **André Masson** (DELTA), **Jan van Ours** (Tilburg University), **Mario Padula** (University of Salerno), **Arthur van Soest** (RAND and Tilburg University), **Dimitrios Tsomocos** (Oxford University) and **Ralf Wilke** (ZEW).

*Michael Haliassos
(University of Frankfurt and CFS)*

CFS Summer Schools “Empirical Research in Banking and Corporate Finance” and “Learning in Macroeconomic Models: Recent Advances and Policy Applications”

The CFS Summer Schools took place on 15-22 August, 2005 at the Training Center of the Deutsche Bundesbank in Eltville/Rheingau, and included classes on both finance and macroeconomics.

CFS Summer School on “Empirical Research in Banking and Corporate Finance”

Jan Pieter Krahn (University of Frankfurt and CFS) and **Ralf Elsas** (University of Frankfurt) organized this year’s Corporate Finance Summer School at the Training Center of the Deutsche Bundesbank in Eltville/Rheingau, featuring **Jay Ritter** (University of Florida) and **Philip E. Strahan** (Carroll School of Management, Boston College), two renowned scholars in corporate finance, as lecturers. The summer school focused on key aspects of empirical research, with special emphasis on empirical research in banking and financial markets. Philip E. Strahan covered the first half of the summer school

with his lectures on the banking aspect, starting with the basic question “What is special about banks?” and the seminal articles by Diamond and Dybvig (1983) and Fama (1985). He stressed that the original role of banks - to provide credit financing - had declined over time while the provision of liquidity to clients and security issuance had gained importance. In his lectures, he also followed this time trend, starting with banks as information providers and its support in empirical studies, then moving on to





liquidity provision, security underwriting and interaction between banking, law and economic performance.

In his paper-based lectures, Strahan strongly focused on the empirical issues in the various articles and highlighted strengths and weaknesses of the analyses. The underlying data sample, endogeneity problems and omitted variables were crucial and recurring aspects. Using existing research, he taught the participants how to critically evaluate empirical studies and how to spot issues which offer promising avenues for paper improvements or new research.

In various special sessions, Strahan also addressed more fundamental issues of academic research. Together with the students, he discussed questions like “What is good (empirical) research?”, “How do you develop ideas?” and (most critically for any academic career) “How do you get papers published?”. Using both anecdotal evidence and personal experience, Strahan provided a service to the participants of considerable value to them, as these issues are rarely taught in standard courses.



The second half (and corporate finance part) of the course was taught by Jay Ritter who focused on detailed discussions of endogeneity problems in empirical studies, the potential issues arising when measuring long-term abnormal returns in financial markets and the more

recent issues arising from behavioral finance and capital structure literature. By redoing existing empirical studies, he illustrated how the use of alternative techniques and/or specifications greatly influences the robustness of results.

Ritter subsequently illustrated the implicit rebalancing assumption behind the use of CAARs (cumulative average abnormal returns) and urged the students to think about frequency issues, benchmark choices and alternative methods (such as the regression approach of Fama and French 1993) when using abnormal returns in their own studies. In the final part of his lecture, Ritter then looked at behavioral finance literature with

special emphasis on firms’ capital structure and the influential Baker and Wurgler (2002) paper on the market timing of firms issuing debt or equity.

Due to the outstanding caliber of the scholars and their lectures, the summer school was considered a great event by the 42 international students attending. In addition, many used the opportunity of having a high-caliber, interested audience to present and discuss their own work, both in organized and spontaneous sessions. Last but not least, the beautiful surroundings of the Eltville region provided a superb backdrop for an enjoyable week of socializing and the exchange of ideas.

Patrick Herbst (University of Frankfurt)

CFS Summer School on “Learning in Macroeconomic Models: Recent Advances and Policy Applications”

This year’s macroeconomic summer school featured a most distinguished faculty comprising **Seppo Honkapohja** (University of Cambridge), **Ramon Marimon** (Universitat Pompeu Fabra), **Timothy Cogley** (University of California, Davis), and **Volker Wieland** (University of Frankfurt and CFS). The lectures covered both the theoretical and the empirical aspects of the role of learning and expectations formation in understanding macroeconomic and financial phenomena. A further aspect was the application of learning concepts to policy design. The participants consisted of 30 international students coming mostly from universities and central banks.

The first lecturer, Seppo Honkapohja, treated monetary policy from the viewpoint of bounded rationality and adaptive learning. He discussed how learning was used to assess the plausibility of rational expectations equilibria (REE), to select among the equilibrium when there are multiple REE and to model dynamic paths outside an equilibrium. Honkapohja also showed how this approach has recently been used to yield new and important implications for theoretical and empirical research in monetary policy.

Ramon Marimon provided a broad survey of current developments in the learning theory in macroeconomics. First revising some of the basic elements that led to the “rational expectations revolutions”, Marimon continued his lecture by exploring the links between learning and credibility. His particular emphasis was on the



presentation of the empirical evidence, both experimental and historical, that is consistent with non-ad-hoc learning models but can hardly be explained with traditional rational expectations equilibrium models. In the last part of his lecture, Marimon outlined how learning can help policy design and, in turn, help to explain observed outcomes and practices, often at odds with existing classical, or new-Keynesian, theories.

Presenting his own work on learning of policymakers, Timothy Cogley argued that central bank learning can explain the dynamics of the US postwar inflation rate. He also touched the question if and to which degree experimentation characterizes optimal monetary policy in the presence of uncertainty. In addition, Cogley discussed the role that learning can play to explain the behavior of asset prices. Finally, a practical session in the computer lab allowed students to get some hands-on experience in Bayesian learning by replicating some of Cogley's results.

Volker Wieland introduced participants to a theoretical framework that can be used to analyze the joint learning and decision-making of macroeconomic policymakers under imperfect

knowledge about the economy. As applications of this framework Wieland presented his work on monetary policy after the German unification. Further topics of his course included monetary policy under uncertainty about the natural unemployment rate as well as monetary policy under uncertainty about inflation-output tradeoffs and the possibility of discretionary inflation bias. Finally, he provided valuable insight into numerical methods for solving the joint learning and decision problem of the central bank and gave the participants the opportunity to work with and extend a numerical algorithm for a baseline learning and control problem.

Another important element of the Summer School were six paper presentations by participating students, all addressing topics dealing with learning in macroeconomic models and ranging from monetary policy to asset pricing. These presentations contributed to a lively and research-oriented atmosphere at the Summer School that is likely to shape the future work of many of the participants.

*Julia Le Blanc (CFS staff), Günter Beck
(University of Frankfurt and CFS)*

The ECB and its Watchers VII

On Friday, June 3, 2005 the 7th installment of the CFS trademark conference series “The ECB and its Watchers” took place in Frankfurt. The conference was organized by Volker Wieland (Center for Financial Studies) and brought together 20 distinguished speakers from banks, think tanks, central banks and academia for an open discussion with ECB officials regarding current challenges faced by European policymakers. Registered conference participants comprised 170 professionals from the financial community, central banks and academia and about 60 media representatives.



As in previous years, the conference featured presentations by various ECB watchers with a direct response from **Otmar Issing** (European Member of the Executive Board of the European Central Bank (ECB)). In the afternoon, an additional panel on Monetary and Fiscal Policy debated the political economy of the Stability and Growth Pact. A third panel was dedicated to a debate on monetary policy and central bank communication.



In his welcome address **Volker Wieland** emphasized the uniqueness of this event in terms of bringing together central bank critics and central bank decision makers for a public exchange of opinion. He explicitly thanked both **Otmar Issing** and **Lucas Papademos** (Vice-President of the ECB) for their willingness to participate in the conference and thereby making this exemplary case of central bank communication possible.

ECB Monitoring

The first panel, chaired by Volker Wieland, gave various ECB watchers the opportunity to express their views about the current stance of monetary policy in the Eurozone. **Jordi Gali** (CREI, Universitat Pompeu Fabra, and CEPR)



rejected recent public criticism of the ECB that it had not placed enough importance on economic growth. To underpin his opinion he pointed out that the expected real interest rate in the Eurozone had been below its “natural” level of 2% for most of the time since the introduction of the euro. Likewise, actual interest rates in the Eurozone had been almost always below the level that was implied by a Taylor rule. He provided evidence that longer-term expected inflation rates had remained below 2% throughout the last 6 years and argued that this could be considered the result of a successful monetary policy by the ECB. However, it could also be the case that a structural change had occurred that had lowered the natural rate. This could lead to problems if market participants did not recognize the shift and required an expansionary monetary policy that would not be appropriate for the new situation.



Giancarlo Corsetti (European University Institute, and CEPR) stressed that an important lesson from the European currency turbulence in the early 1990s was that credibility and good policy making cannot be imported, but must start “at home”. He pointed out that the introduction of the euro had occurred in a favorable international environment characterized by sustained high growth in the U.S. and a strong dollar. However, the scenario has changed in the meantime. In particular, he argued that persistent high U.S. current account deficits could be a threat to international growth and stability prospects. Amongst the

questions that European policymakers face in this situation are whether Europe is ready to fend off important threats to European prosperity from an unbalanced world economy, and whether there is a need for the ECB to change the conduct of its monetary policy in the face of the risk of global instability.



Daniel Gros (Centre for European Policy Studies) focused on long- to medium-term trends in his presentation. He showed that stabilization policy in the U.S. had been much more active than in the Eurozone in recent years. As major reasons for the relative output growth decline in Europe Daniel Gros identified insufficient investment growth and a relative total factor productivity decline. However, he also emphasized that not all EMU member countries had exhibited a weak economic performance. In particular, smaller countries have had GDP growth rates comparable to that of the U.S. He expressed concerns that the concentration of policy on short-run developments in Europe had led to the build-up of problems such as rising debt ratios or a monetary overhang. These problems were aggravated by emerging intra-area differences that might eventually lead to political pressure on the ECB.

Similarly to Jordi Gali, **Joachim Fels** (Morgan Stanley) stated that financial market participants who had criticized the ECB for reacting too sluggishly to changes in the economic environment had been wrong. He suggested that the major reason for the market participants’ misperception was that the ECB’s



words and actions had not been aligned and that markets were often more influenced by words than by actions. He praised the ECB for being predictive and suggested that the ECB's monetary strategy was considerably better than that of many other central banks.



William Dickens (Brookings Institution) presented evidence from the International Wage Flexibility Project. The results show that in the U.S. and Canada large downward nominal rigidities exist, whereas in Europe there are both countries with large and small downward nominal rigidities. Moreover, the findings suggest that countries with considerable downward nominal wage rigidities exhibit less downward real wage rigidities. William Dickens argued that while U.S. and Canadian central banks can reduce equilibrium unemployment by maintaining moderate rates of inflation, the ECB may not be able to yield such an effect as the EMU includes countries without substantial nominal rigidity such

as France, Belgium and Germany. Moreover, should the ECB allow inflation rates to fall much lower, countries with substantial nominal rigidity could begin to experience significant increases in the equilibrium unemployment rate.

Laurence Meyer (Meyer's Monetary Policy Insights) discussed the question of what responsibility a central bank should take for the emergence of an unsustainable current account imbalance and what role a central bank has in facilitating the adjustment of such an imbalance. He expressed the view that a central bank should take an "indirect" approach to monetary policy. According to this approach a central bank should respond only to deviations from its mandated objectives and respond to all other shocks and developments only in so far as they affect the path and/or forecasts for its objective variables. Laurence Meyer also provided an analysis of potential causes for differences in the conduct of monetary policy between the Fed and the ECB. He argued that they might be the result of differences in the structure of the economies in which they operate, and/or differences in strategy. Laurence Meyer pointed out that differences in the economic structure between the U.S. and the Eurozone such as lower confidence in the relationship between aggregate

demand and the policy rate in the Eurozone relative to the U.S. can cause stabilization policy to be more effective in the U.S. than in the Eurozone. He stressed that these differences could provide an explanation for the differences in monetary strategies between the Fed, which has a mandate to focus both on inflation and output gaps, and the ECB, which has a mandate to primarily focus on inflation only. In this context Laurence Meyer called the FED's mandate a "dual" mandate and the ECB's mandate a "hierarchical" one. Laurence Meyer also discussed the question of how the price stability objective should be defined, how explicit it should be, and how success should be monitored. He expressed the opinion that the Fed should adopt an explicit numerical objective for inflation. However, he made it clear that his preferred approach is different from an inflation targeting approach. He argued that he associated the latter approach with the combination of a hierarchical objective as well as an explicit numerical objective. On the contrary, the Fed would very likely adopt the numerical objective in the context of its prevailing dual mandate, should it move in this direction. He argued that the ECB's initial definition of price stability was problematic for two reasons. Defining price stability as given when the overall inflation rate is below 2% can cause monetary policy to react asymmetrically to positive and negative demand shocks. Moreover, the



Laurence Meyer, Thomas Mayer

experience of the 1990s has shown that policymakers should be at least as focused on returning inflation to its target

from below as from above. Referring to the recent refinement of the ECB's inflation target, Laurence Meyer argued that it represented a clear improvement over the earlier practice, but that he still preferred a narrow range like 1% – 2%, or, as a second choice, a simple point objective. Laurence Meyer also discussed the question of how the central bank should monitor its success relative to the objective. He argued that if one is setting current policy in terms of recent inflation performance relative to the inflation objective, it would be advantageous to focus on core rather than overall inflation. The reason is that core inflation may provide a more reliable reading of overall inflation over the policy horizon than overall inflation which may be dominated by spikes in inflation associated with price level shocks. He suggested that an approach that focused more on overall inflation might respond more aggressively to supply shocks, unless the focus of the policy was on an intermediate term inflation rate that would not necessarily have been affected by the supply shock.

Thomas Mayer (Deutsche Bank) stated that the ECB was caught between a rock, i.e. economic weakness, and a hard place, i.e. strong liquidity growth. In his opinion the ECB had paid more attention to short-term economic weakness so

far. However, to keep the euro "hard", long-term threats from strong liquidity growth ought to be given more weight. As inflation was mainly a monetary phenomenon the recent liquidity development represented a major danger to price stability in the Eurozone.

Ulrich Kater (Deka Bank) noted that, from a market perspective, neither the heavily discussed inflation differentials nor the development of monetary aggregates were a major concern. He said that the recent claims of the German



government, which make the monetary policy of the ECB responsible for the dismal economic performance in Germany, represented a new dimension in criticism of the ECB. As the euro was first and foremost a political project, certain negative economic consequences should be borne by the member states without immediately giving rise to potentially dangerous political lamentations.



In his reply **Otmar Issing** said that the conduct of monetary policy in a heterogeneous economic environment was nothing unusual. Like in the Eurozone large differences in inflation and economic growth rates exist across U.S. states. However, he admitted that the persistence of inflation rates in the Eurozone was larger. Nevertheless, he expressed the view that the U.S. experience showed that monetary policy can work well for heterogeneous geographical units. Issing rejected the notion that the ECB's monetary policy had been too expansionary or too restrictive. Contrary to Thomas Mayer, he expressed the view that the ECB had fully met market expectations.

Concerning the issue of credibility Otmar Issing admitted that the ECB had had difficulties convincing market participants that it was able to fight inflation when the euro was introduced. To build up credibility the ECB had announced a strategy that everyone understood and it had committed to the announced tar-



get. He expressed the view that 6 years of successful monetary policy should be enough to convince critics of the ECB's ability to fight inflation. An important ingredient for the successful conduct of monetary policy was the successful extraction of real-time signals. It was particularly important to successfully disentangle real from monetary shocks. Looking back at the past 6 years Otmar Issing argued that the ECB had been successful in achieving this task.

Referring to the most recent rejections of the draft for the European constitution in France and the Netherlands Issing expressed the opinion that it was very important to win the vote of EU citizens. He said that this task was an important communication challenge.

Monetary and Fiscal Policy - The Political Economy of the Stability and Growth Pact

The second panel, chaired by **Manfred J. M. Neumann** (University of Bonn), focused on the interaction between monetary and fiscal policy. A special emphasis was given to the design and potential reform of the Stability and Growth Pact. **Klaus Regling** (European Commission) started his presentation by giving a short summary of major changes that were implemented in the 2005 reform of the Stability and Growth Pact. He argued that the reform achieved a proper balance between more room for judgement, increased flexibility and preserving the rules-based character of the system. Moreover, it provided a good basis for increased national ownership. He summed



up his presentation by claiming that the existing fiscal rules were good, but what ultimately mattered was their effective implementation.



Caio Koch-Weser (German Federal Ministry of Finance) called the 2005 reform of the Stability and Growth Pact a big step forward towards more strategic fiscal coordination in the Eurozone and in the European Union. He stressed that it struck a good balance between stability and economic growth and that the reformed Pact was more intelligent in terms of economic rationale. The key test, however, would be its implementation. Caio Koch-Weser claimed that the new Pact made it possible to better assess fiscal policy in member states and to address problems early on. Moreover, it allowed the full economic picture to be taken into account and would not, unlike its predecessor, focus on only a few figures such as the deficit rate. Referring to cases in the recent past Caio Koch-Weser also pointed out that work on timely and higher-quality statistics was needed and that therefore the role of Eurostat as an independent statistical office had to be improved.

Lucas Papademos (Vice-President of the European Central Bank) argued that rigorous and consistent implementation of the reformed Stability and Growth Pact was crucial for sound public finances in the Eurozone. He noted that the credibility of the reformed Pact would be tested in the coming months as the budgetary provisions of countries with excessive deficits were assessed by the European Commission and the European Council. He expressed his hope that this test would be passed successfully because it was of decisive importance for the credibility of the fiscal framework of the EMU countries. Moreover, only a sound fiscal policy would ensure the compatibility of fiscal policies with the stability-oriented monetary policy of



the ECB, the anchoring of expectations of fiscal discipline and the establishment of macroeconomic conditions conducive to sustainable growth.

Michael Deppler (IMF) shared Klaus Regling's view that the success of the reformed Stability and Growth Pact mostly depended on its proper and consequent implementation. He pointed out that in-



creased flexibility certainly could be advantageous but also bore the risk that the rules-based framework would be washed out. He emphasized that ultimately individual governments could not blame Brussels for bad economic outcomes in their respective countries but that they were the ones who were responsible for good or bad policy.

Monetary Policy and Central Bank Communication



The third panel was chaired by **Lucrezia Reichlin** (ECB) and focused on the interaction between central bank communication and monetary policy.

Marcel Fratzscher (ECB) pointed out that there were stark differences in the communication strategies of the Fed, the ECB and the BoE. Whereas the approach of the Fed could be described as an individualistic one, the ECB and the BoE followed a collegiate approach. However, the results of an empirical study that he had conducted together with Michael Ehrmann (ECB) showed that transparent and effective policy could be achieved with very different communication strategies and therefore there was no single best communication strategy.

In his presentation **Richard Clarida** (Clinton Group and Columbia University) discussed several dimensions of central bank communication. First, a central bank could simply report decisions that had already been made. By referring to the FED's communication policy in the 70s Richard Clarida made clear that this had not always been the case. Secondly, it could communicate decisions that had not been made. In this context Richard Clarida pointed out that a decision to leave policy unchanged was a policy decision. Thirdly, a central bank could explain why a certain decision was made by, e.g., providing its information about the current state of the economy and ma-

king its own forecasts public. Fourthly, it could communicate the expected path of policy. This, however, could be redundant if forecasts were published. Finally, a central bank could communicate information on relative prices versus price levels versus inflation. Referring to Lucas' famous paper on this topic Richard Clarida pointed out that regular systematic communication of a central bank on the contribution of each to a rise in observed prices would have potential value over and above the forecast.



Vincent Reinhart (Federal Reserve Board) expressed the view that central banks had a tendency to overestimate their ability to influence macro outcomes. He argued that central banks certainly were influential but that the resilience of a market economy in absorbing shocks was more important. He stated that the ECB might have missed some opportunities to influence economic activity, in part by not having a





broad enough array of communications devices. However, he also made clear that structural economic reforms that were outside the pursuits of a central bank probably had the greatest chance of generating longer-term benefits in macro stabilization.

Lars Svensson (Princeton University) stated that not only the level of interest rates was important but also its historical path. He argued that long-term interest rates were the ones that economists were interested in and that these rates were influenced by expectations about future economic developments. In this context, the task of monetary policy was to manage expectations. The most effective way of doing this was to publish and discuss the central bank's forecasts about key



macro variables such as the inflation rate and the output gap. As a benchmark model Lars Svensson referred to the Bank of Norway.

David Walton (Goldman Sachs) argued that there was a number of areas in which the ECB could consider refining its communication. However, these refinements should be seen in the context of the ECB's success in meeting its inflation objective, stabilizing inflation expectations and reducing variability of output. In his opinion, the disappointing performance of Euroland's economy owed more to demographic and structural factors than the ECB's conduct and communication of monetary policy.

In his concluding remarks, **Otmar Issing** noted that the ECB was early on confronted with substantial criticism. A major reason for this criticism was the role of the monetary pillar that had been seen as superfluous and even confusing by critics. Contrary to this view Otmar Issing stated that the ECB's successful policy over the last 7 years had been founded on the two-pillar strategy in which a thorough analysis of monetary developments had played a key role. As a major challenge for monetary analysis Otmar Issing identified the real-time extraction of signals of medium-term inflationary or deflationary pressures from monetary developments. In his opinion, the ECB had been successful in disentangling, in real time, money demand shocks and noise

in monetary developments from the underlying trends. He pointed out that the ECB had consistently communicated the role of the monetary pillar and any uncertainty related to monetary developments to market participants. Otmar Issing interpreted the high predictability of its decisions as an indicator of the lar-



ge degree of transparency that the ECB has achieved. He also made clear that the Governing Council of the ECB had not disregarded the ample liquidity situation. He pointed out that the Council had been constantly aware of the risks of monetary developments to price stability. However, as economic indicators had increasingly pointed to a deteriorating economic situation in the Eurozone towards the end of 2004, the Council came to the conclusion that the risks to price stability might not materialize, but continued to warrant vigilance.

Günter Beck
(University of Frankfurt and CFS)

CFSseminars

Value Based Management Supported by Ratios: The Current Position and New Developments

Value Based Management supported by ratios was the subject of a CFSworkshop on September 13, 2005. Louis Velthuis of the University of Frankfurt und Peter Wesner of KPMG began by explaining those traditional and value based profitability ratios currently being applied in practice along with conventional value contribution ratios. Following that they presented ERIC (Earnings less Riskfree Interest Charge), a value contribution ratio devised by KPMG and Louis Velthuis. In contrast to conventional value contribution ratios, it links the methodological advantages of the adequate inclusion of value contributions, in particular with regard to management pay and measuring performance.

Value based management implies the gearing of all management measures towards increasing a firm's shareholder value. Its main areas of application are valuating, management pay and measuring performance. Ideally a manager is paid in accordance with the increase in value he has generated, in order to act in accordance with the shareholders' interests. Traditional profitability ratios, e.g. RoI (Return on Investment) and RoE (Return on Equity), and value based ratios, e.g. RoIC (Return on Invested Capital) or CFRoI (Cash Flow Return on Investment) have one main disadvantage, namely that the attainment of value is only measured as a (relative) return (success period/capital invested). Absolute ratios are essential for adequate value based management. Not only for this reason were value contribution ratios increasingly able to push out profitability ratios from their top spot as shareholder value ratios for DAX 100 firms between 2000 and 2003. Examples of conventional value contribution ratios are, amongst others, Economic Value Added (EVA), Cash Value Added (CVA) and the new ratio ERIC. They are calculated on the basis of residual profit, i.e. interest on all the initial capital invested is subtracted from the amount of profit. ERIC's main distinguishing characteristic in comparison with other value contribution ratios is the way in which capital costs are calculated on the basis of risk-free instead of risk-adjusted interest. In this way erroneous assessments in the ex post measuring of performance and erroneous incentives in management pay should be avoided.

ERIC does not mix risk and temporal structure in one rate of interest. On the contrary, risk is taken into consideration where it occurs - at the source i.e. among the cashflows to be estimated. In contrast to conventional procedures, depreciations and capital costs are also discounted at the rate of riskfree interest, as secure

amounts are being dealt with. Within the planning framework, the methodological error conventional value contribution ratios make of using risk-adjusted capital costs by discounting risk-free components with the risk-adjusted interest is just about compensated for. In the case of management pay conventional ratios tend to lead to under-investment, as profits achieved are compared with risk-adjusted instead of risk-free capital costs. Value increasing projects are often not carried out because the lowest bar is set too high. ERIC's measuring of performance attempts to avoid erroneous assessments by allowing the actual ex post value developments achieved to be compared with a benchmark achieved ex post (e.g. average industry revenue achieved), which could have been achieved with comparable risk. Thus it is hoped that environmental influences which could affect the performance and distort the "true" management performance can be blocked out to a large extent.

Velthuis and Wesner stress the advantage of ERIC in allowing the separate consideration of risk and temporal structure, which makes risk as a discount for cashflow more transparent and in raising the risk consciousness of decision-makers in firms. Furthermore erroneous incentives in management pay and erroneous assessments within the framework of measuring performance should be avoided. Even if ERIC still has to prove itself in practice, the workshop participants were at least given food for thought about the ratios used in the practice of value based management.

Matthias Gassert (University of Freiburg)

More information on all CFSseminars can be found under www.ifk-cfs.de or contact Birgit Pässler, Tel: +49 (0)69 798-30052, Email: paessler@ifk-cfs.de.



Eugene F. Fama – an Extraordinary Academic

One of the highest cash prizes for outstanding achievements in the field of banking and capital market research saw its premiere in Frankfurt on October 6, 2005. The Center for Financial Studies and Frankfurt University presented the inaugural Deutsche Bank Prize in Financial Economics. The first prizewinner of the award of 50,000 euros is Eugene F. Fama, who was honored for his development of and research into the concept of market efficiency.



J. Ackermann, E. Fama, J. P. Krahnert at the award ceremony on October 6, 2005.

Just as extraordinary as Fama's outstanding research work was the path that took him to the world of economics. "I did not take a direct route into financial economics," says the Robert R. McCormick Distinguished Service Professor of Finance, the holder of many honors already, about himself. Fama did not commence his studies with economic sciences. The man now regarded by leading financial market publications as a "legend in capital market research", was initially much more interested in French philology.

Eugene F. Fama was born in Boston. His grandparents had im-

migrated to the USA from Sicily and his father was a trucker. Eugene F. Fama was the first member of his family to attend university. Shortly before completing his undergraduate degree at Tufts University, Medford, Massachusetts, Eugene F. Fama discovered his passion for economics. Fama was working for one of the professors at Tufts University. The professor had a "Beat the Market" service and tried to figure out trading rules to beat the market. The trading rules always worked when they were back-tested on the historic data. But once applied to a real trading program they stopped working. That, Fama says today, was the point in time when he became an efficient markets person.

After successfully completing his undergraduate degree, Fama moved to the Graduate School of Business at Chicago University, where he completed his master's degree and, in 1964, his Ph.D. in economics-finance. Fama's dissertation had the title "The Behavior of Stock Market Prices". Eugene F. Fama has always remained true to the University of Chicago – after his studies as Assistant Professor of Finance, then as Professor of Finance, and ultimately as the Robert R. McCormick Distinguished Service Professor of Finance. Fama holds several honorary doctorates, and is also a member of the American Academy of Arts and Science, and of the American Finance Association.

Fama's market efficiency hypothesis thematizes the speed in which new information is reflected in stock prices. Once all the available information is included in the pricing at any one time, investors can no longer systematically attain a higher return. Prices then rise with the same probability that they will fall. In Fama's opinion not even the best stock analyst can outperform an efficient market in the long term without insider information.

Fama goes one step further, however. In line with his "random walk theory", price developments do not follow any pattern or trend. Previous price movements cannot be used to predict future prices therefore. In numerous empirical studies Fama has been able to substantiate his – often controversial – theses.

Eugene F. Fama is not only one of the most productive and most-cited financial market experts, but is also considered an outstanding windsurfer. At the age of 66 Fama still gets on his surfboard even in extreme wind conditions. "You have to have something worth dying for," he replies when asked about his hobby. His wife and he regularly spend the winters in their house near Malibu, close to the Californian beach. Practically enough, two of his children live in Chicago, two in California. Fama does not intend to retire in the foreseeable future as his work is still a source of "much too much pleasure".

*Felizitas Thom
(CFS staff)*

CFSsymposium on "Market Efficiency Today"

In honor of the prizewinner there was a CFSsymposium on the topic "Market Efficiency Today" prior to the presentation of the award on October 6, 2005. Renowned financial economists discussed the significance of Fama's theses against the current background.

Nouriel Roubini from New York University analyzed the role of economic policy for market efficiency. He referred to the increasing number of financial crises in recent decades, both in industrialized nations and in less developed economies. Often, a whole range of economic sectors, particularly in the



emerging markets, is affected by a combination of monetary, banking, corporate and sovereign debt crises. Roubini emphasized that the so-called asset price bubbles, observed in all country groups, are distinct indications of market inefficiency: They arise from self-fulfilling expectations; when they burst, they often have considerable negative impact on financial markets and the real economy.

On the whole, Roubini identified three policy fields that are important for increasing market efficiency and alleviating financial crises: monetary policy, which should react also to rising asset bubbles, financial supervision, to improve the risk management of debtors and creditors, and international financial institutions, as a lender of last resort in the event of a crisis.

In his comments, **Marcel Fratzscher** of the European Central Bank addressed the complex relationship between finan-



cial markets and economic policy. He stressed their mutual significance, yet also pointed out the limited effectiveness of political control on internationally integrated financial markets. In particular, policy itself causes market inefficiencies all too often. Therefore, he concluded that the main focus should be on transparency, information provision, and a stable political environment.

Eric Ghysels from the University of North Carolina looked in his speech at market efficiency from the stance of empirical financial market research. In accordance with the fundamental valu-

ation equation, the value of stock and shares corresponds to the expected value of the cash flows, weighted with a factor which includes investor preferences. This valuation equation may not be reconciled with the so-called “equity premium puzzle”, however: On the markets it is possible to observe average annual returns of around 7 percent for the stock market and 1 percent for the bond market. While it is accepted wisdom in financial market research that greater risk is rewarded with higher returns, for the valuation difference to be consistent with the fundamental valuation equation, the financial market players would have to be extremely reluctant to take risks – much more reluctant than observed in experiments conducted separately.

Ghysels argued that numerous works have been published in recent years with the goal of solving the equity premium puzzle in which academics have shifted away from the assumption that homogeneous expectations dominate on the



market or that there is such a thing as a representative investor with rational expectations. On the basis of empirical tests Eric Ghysels demonstrated that the existence of heterogeneous agents, as well as model insecurity, is relevant for the valuation of stocks. The degree of model insecurity can in part better explain the returns attained on the capital market than the risks traditionally considered relevant to a valuation.

Hashem Pesaran from the University of Cambridge discussed the Effi-



E. Ghysels, L. E. Harris and H. Pesaran

cient Market Hypothesis (EMH) from the market perspective. Recent studies have arrived at the conclusion that the EMH is unsustainable: Stock returns are predictable to some degree by means of a variety of macroeconomic variables. Eugene F. Fama therefore formulated a weaker version of the EMH: Prices reflect information up to the point where marginal benefits in acting on information and marginal costs are identical. But this makes the task of testing the EMH even more complicated as it requires models that allow for heterogeneous information and transaction costs. Additionally, beating the market as a test of market efficiency also raises new challenges because it could be argued that such tests are carried out with the benefit of hindsight.

The basic premises of the EMH are rationality of investors, absence of arbitrage and collective rationality. According to Pesaran, the hypothesis of rational expectations is unlikely to hold at all times: On the one hand, there may be major departures in periods of turmoil; on the other hand, herding behavior can lead to violations of rational behavior.

As it is furthermore difficult in praxis to separate market inefficiencies from

risk-adequate compensation, it might not be helpful to focus on the development of new tests in the future. Instead, future research should concentrate on the limits of individual and collective rationality, and in doing so it should include findings from other areas of research as already done in behavioral finance.

For **Lawrence E. Harris** of the University of Southern California the Efficient Market Hypothesis is a regularity enforced by well-informed speculators. Market efficiency determines price levels. A similar regularity governs the provision of liquidity. Liquidity plays the decisive role in the price adjustment processes. Permanent price impact is



due to changes in value. Therefore the price impact resulting from the reconciliation of supply and demand is only permanent if the change in price has been caused by informed trading.

Transitory price impact is due to transaction costs, bluffing, and uninformed trading. The greater the price impact due to surplus supply or demand, the greater are the liquidity costs. The liquidity costs have to be paid by uninformed and impatient market participants.

“Bluffing strategies” try to profit from unstable market liquidity. If the price impacts per unit traded differ for buy and sell orders, bluffers can profit. Therefore they try to fool traders into offering liquidity unwisely.

A typical approach is: First acquire a large position quietly while having little impact on price. Subsequently push prices loudly up, perhaps following positive news whose significance foolish traders could misinterpret. Finally sell the position at a profit when others follow.

Dealers and other traders who supply liquidity must carefully regulate their trading to avoid losses to bluffing strategies. Discipline from bluffers ultimately enforces liquidity efficiency.

Automated trading algorithms and momentum traders are most vulnerable to bluffers because bluffing strategies func-

tion if market players believe transitory price effects to be a permanent price effect. This is the dark side of the Efficiency Market Hypothesis. According to Harris many large traders claim that they are “pure traders.” They test “market resolve” and so to speak identify “weakness in confidence.” This is essentially a bluffing strategy.

Strategies which try to profit from inefficiencies, however, discipline the market participants and provide efficiency. The market efficiency determines the price level; the liquidity efficiency determines the price adjustment processes.

Eugene F. Fama defended his Efficient Market Hypothesis. He sees the biggest support for his model in an observation of the profits of professional investment managers. Their profits are not particularly good.

Responding to the presentations he agreed that there was no equity premium puzzle. “Who do you know that would hold equities at a premium of 1 or 1 1/2 percent? I do not know anybody”, he said. Fama hea-



vily disagreed to Roubini’s presentation: “Statistically I do not see any evidence of bubbles or any evidence of overshooting.” Talks about the internet bubble would drive him crazy. “I do not think anybody can identify bubbles.” In line with Marcel Fratzscher he stressed the limited effectiveness of political control on internationally integrated financial markets. He concluded that policy people should not intervene in the markets.

*Susanne Bröck, Thorsten Freihube,
Christian Offermanns, Christian Wilde
(all University of Frankfurt)*



Statements



Jan Pieter Krahen, CFS Director and chairman of the jury for the Deutsche Bank Prize in Financial Economics 2005

"The ideas put forward by Eugene F. Fama have made a decisive contribution to our understanding of information processing and price movements on the capital markets. His insights have had and continue to exert the most remarkable impact on financial management. Thus Fama's work also defines the very high standards that shall be associated with the Deutsche Bank Prize in Financial Economics. The objective is to develop the prize into one of the most renowned awards in financial economics."



Hermann Remsperger, Member of the Board of Deutsche Bundesbank and member of the jury for the Deutsche Bank Prize in Financial Economics 2005

"Deutsche Bundesbank is obliged to ensure monetary stability and the stability of the financial system. It makes this key contribution to economic policy on the basis of well-founded academic findings. Against this background I was not lacking in motivation to be a member of a jury with the honor of selecting an academic who has made a pioneering contribution in the field of financial economics. In Professor Eugene F. Fama we are honoring an economist who has fundamentally shaped our stance towards financial markets, and thus at the same time contributed greatly to a practical policy of stability."



Josef Ackermann, Chairman of the Board of Deutsche Bank AG

"Professor Fama has opened up new dimensions in international financial sciences. He must take the credit for elevating our understanding of the financial markets into new spheres. Professor Fama can look back on nearly 40 years of successful research work. In this period he has – thanks to his insatiable curiosity and his active examination of real market phenomena – consistently challenged existing findings and their possible explanations. The speed and force with which his theoretical and empirical research has been included in practical work is quite remarkable. This is precisely the kind of knowledge transfer that financial institutes need, and which we at Deutsche Bank intend to assist and encourage."

"The Deutsche Bank Prize in Financial Economics is an important contribution to strengthening Frankfurt as a financial and business location, and is an indication of the new quality in the global partnership between practice and research."



Rudolf Steinberg, President of the University of Frankfurt

"The governing board of Johann Wolfgang Goethe University Frankfurt am Main is proud to award – together with the Center for Financial Studies – the 'inaugural' Deutsche Bank Prize in Financial Economics, one of the world's most significant prizes for financial economics. The presentation of the award at Frankfurt University shows that we are the leading financial university in Germany."

NEW STAFF PORTRAITS



Günseli Tümer-Alkan joined the Center for Financial Studies in September 2005. She is also enrolled as a Ph.D.

candidate in Finance at Tilburg University. She holds a BA degree in Economics from Istanbul University, an MBA de-

gree from Yeditepe University in Istanbul and an M.Phil. degree in Finance from CentER at Tilburg University. Previously she worked for several years as an equity analyst in Turkey.

Günseli's research interests are in the area of empirical banking. She has worked on the impact of government's borrowing needs on banks' lending behavior changes. At CFS, she is working on Ger-

man financial institutions, including bank relationships, concentration of borrowing and role of state ownership under the supervision of Jan Pieter Krahen and Steven Ongena.

CFScolloquium series 2005**Basel II und die Konsequenzen für das Risikomanagement / Basel II and its Impact on Risk Management**TBC **Dr. Helmut Perlet**, Mitglied des Vorstands**CFSresearch conferences**

Nov. 18/19 2005 *Third RICAFE Conference - "Entrepreneurship, Risk Capital and the Financing of Innovative Firms" in Turin*

Organization: Marco Da Rin (Turin University), Marina Di Giacomo (Turin University), Giovanna Nicodano (Turin University), Alessandro Sembenelli (Turin University)

Dec. 2/3 2005 *DSGE Modelling at Policymaking Institutions: Progress and Prospects*

Organization: Matthew Canzoneri (BMW Center for German and European Studies at Georgetown University), Dale Henderson (Federal Reserve Board), Gian Maria Milesi-Ferretti (IMF), Lucrezia Reichlin (ECB), Volker Wieland (University of Frankfurt and CFS)

Mar. 15 2006 *Behavioral Finance and Investment Management (TBC)*

Organization: BSI GAMMA Foundation, CFS

Nov. 17/18 2006 *Public versus Private Ownership of Financial Institutions*

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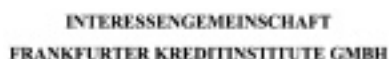
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