

CENTRAL BANKING IN AN EVOLVING ENVIRONMENT

*Speech of Mr Guy Quaden, Governor of the National Bank of Belgium,
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Ladies and gentlemen,

I am particularly pleased to speak before this eminent forum and to have the opportunity of addressing the topic "Technology and Finance" from a central banker's point of view.

Technology and the challenges it raises for financial markets is a most appropriate theme for this Colloquium. On the one hand, technology is closely intertwined with the evolution of many other factors affecting financial markets and, so, allows coverage of a wide range of issues. On the other hand, it has farreaching consequences for all market participants, and this certainly includes central banks. In a first part I propose to briefly recall how technology has impacted on our macroeconomic and regulatory environment. In the next two parts I would like to sketch the main consequences of these developments on what my colleagues at the Bank of England have described as the two wings of central banking, i.e. monetary and financial stability.

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*Technology is a powerful factor of change in our **macroeconomic environment**. So, a few years ago, our colleagues of the Federal Reserve had to recognize that something new was happening in the US economy: a persistent higher growth and lower unemployment without the emergence of inflationary strains. This was related, at least partly, to the revolution in the Information and Communication Technologies, which increased productivity growth and fostered efficiency in the labour market too. A third feature of the so-called New Economy, the reduction in the variability of output growth, obviously proved to be short-lived! But a wave of over-pessimism should not submerge the previous wave of over-optimism. The question whether the American economy is still on a higher trend productivity growth path remains open, as well as what the prospects for the European economy are in this respect. Europe will benefit from a specific driving force, the completion of the single market with the new single currency, which should trigger further structural reforms and hence foster innovative energies.*

*Technology also radically transformed the **financial sector**, which by the way greatly contributed to the new technological wave by financing it. New techniques in the treatment, the storage and the transfer of information exerted profound effects on a sector which is largely an information-based industry.*

¹ Société Universitaire Européenne de Recherches Financières.

In a first stage, Information Technologies made it possible to develop more sophisticated products, to build up a better market infrastructure, to implement more accurate and reliable techniques for the control of risks, to reach more distant and diversified markets, and to multiply the value and the volume of operations. In short, new technology has radically transformed all three major functions performed by banks, i.e. access to liquidity, transformation of assets and monitoring of risks.

A new phase is presently at work with the emergence of e-money, e-banking and e-finance. These new developments will clearly represent the great challenge of the coming years. The speed of adoption of these new products remains difficult to forecast. Contrary to the preceding phase, this new wave is not limited to professional operators but involves all customers, including the retail market. Many of the scenarios suggested by IT firms or consulting groups have proved to be overly optimistic. At the same time, it would be wrong to become complacent. Most new technology is spreading following an S-shaped curve. The base section of the S can be quite long and practically horizontal; however, it will sooner or later be succeeded by a steep section. The example of Nordic countries, and more specifically Finland, shows how quickly e-finance can develop, once circumstances are ripe.

*It is important to emphasize that the integration of new technology into the financial sector did not take place in isolation. Rather, it is the **interaction of technology with** another major development, **deregulation**, that contributed to reshaping the financial landscape. True, the pressure of the market to fully exploit the new technologies was strong, probably even irresistible. However a receptive environment had also been created by a lifting of the rather strict financial and banking regulations which were still prevalent at the end of the seventies.*

The increased awareness of the wide-ranging possibilities offered by new technologies illustrated that a lot could be gained through the removal of distortions in competition, directly linked to excessive regulation or intrusion from the Government.

In combination, these two evolutions contributed to the emergence of a more open, competitive and globalised financial market, which obviously improves efficiency in the world economy. The transition, however, has not been a smooth one. It was not easy for the authorities who had to cope with the more frequent arbitrages operated by market participants between the various currencies and financial instruments or even between different legal, regulatory or tax regimes. Neither was it easy for financial intermediaries that had to work in a much more competitive environment where traditional protection and barriers to entry were progressively lifted. In short, the shift toward a more liberalised system together with the quick expansion of new products and markets has greatly increased uncertainties and risks for financial sectors.

This was not immediately recognised by many market participants who had previously been sheltered by the existing regulation. As a result, individual bank failures and banking crises, quasi non-existent between the end of the forties and the early seventies, became all too frequent during the past two decades. In this context, the absence of significant problems within the Belgian banking sector during the recent period must be considered more an exception than a rule.

*Despite deregulation there is still a major role to be played by **public authorities**, among others in the field of competition rules, consumer protection, fight against money laundering... and, of course, central banking. Central banks indeed have to provide stability, which certainly does not*

mean “no change” but, on the contrary, building the best foundations for a sustainable dynamism. In doing so, central banks will cope with the evolving environment shaped by technical progress, by deregulation and globalisation and, last but not least in Europe, by the single currency.

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As regards the first wing of central banking, **monetary stability**, central banks have to provide a durable anchor in order for the price system to appropriately guide economic decisions. A stable value of money is all the more necessary for preserving the information value of relative prices in a changing world, where decisions have to be taken rapidly. Maintaining price stability is the primary objective of monetary policy, not only for the Eurosystem – according to the Treaty of Maastricht – but also for every central bank.

Nowadays the only regulations central banks rely on in designing the **operational framework** of monetary policy are the monopoly of banknote issuance and reserve requirements. The Eurosystem fully respects the principle of an open market economy with free competition, as enshrined in the Treaty. Its main instrument is the weekly allotment of credit by euro area-wide tenders. Minimum reserves, which are remunerated, have a stabilisation function, thanks to an averaging provision, and are enlarging the structural liquidity shortage of the money market.

As the development of e-money is liable to weaken the leverage of the Eurosystem and in order to provide for a level playing field, e-money issuers should not escape reserve requirements. A European directive of last year rightly broadens the definition of credit institutions in order to include e-money institutions.

Technological change and financial market developments do not only affect monetary policy instruments but also the whole transmission process and consequently the **strategy** of monetary policy. In this complex and changing world the Eurosystem was right in rejecting any simple rule and adopting an all-encompassing two-pillar strategy. Central bankers have to continuously reassess the information content of many economic indicators. Let me pick out some of them – output, money, stock prices and bond market indicators – not because other variables, like wage developments and the fiscal policy stance, are less important, but because the former are most affected by technological and financial market changes.

Central bankers, even in the Governing Council of the ECB, are not insensitive to **growth** and employment prospects, as some critics argue. But they are well aware of two limitations: firstly, growth should not be stimulated to the detriment of price stability, because such a stimulus would be short-lived and would imply longer-term costs; secondly, as “à la plus belle fille du monde on ne peut demander que ce qu'elle a”, monetary policy may exert some influence on the demand side of the economy but cannot solve structural problems, like persistent unemployment. Central banks may nevertheless contribute to output stabilisation, as far as the risks to price stability are linked to the business cycle.

A central concept in this respect is the output gap, but its measurement, especially in real time, is surrounded with a large degree of uncertainty. Potential output growth, which is an ingredient of both pillars of the Eurosystem's strategy, is not known with precision. Should the New Economy materialise, higher rates of growth could become sustainable. In the absence of any firm evidence of

a New Economy in the euro area – although some driving forces are to some extent in place – and since the emergence of a New Economy is not driven by monetary policy, the Eurosystem did not take the risk of pre-emptively accommodating it. Nevertheless it monitors a wide range of indicators in order to periodically reassess the “speed limit” of the euro area economy.

Needless to say, in the present circumstances growth is unfortunately even below the Old Economy speed limit, and the associated decrease in inflationary pressures has already prompted a 100 basis points interest rate cut in three steps since the spring.

*The first pillar of the strategy of the ECB gives a prominent role to **money**. It is based on the conviction that inflation is a monetary phenomenon in the long run and underlines the medium-term orientation of monetary policy and the inheritance in this respect from the Deutsche Bundesbank. Recognising that the demand for money can be subject to short-term fluctuations which are harmless for price stability, the ECB has not announced an “intermediate objective” but rather a “reference value” for the growth of a broad monetary aggregate. The recent rise in M3 growth is up to now interpreted as being such a short-term fluctuation, caused by the relatively flat yield curve and the weakness in stock markets.*

Technology and financial market changes obviously affect the first pillar. They might increase the volatility of the income velocity of monetary aggregates and, as they are blurring the frontiers of “moneyness”, they complicate the definition of key aggregates. To paraphrase a former Governor of the Bank of Canada speaking about M1 twenty years ago, I would say that while the ECB is not planning to abandon M3, I cannot rule out that, some day, M3 could abandon us, but you already noticed that the first pillar is much more than the reference value. It encompasses a broad monetary analysis which will duly take into account such developments.

The first pillar also rests on the fact that credit institutions remain major players in the transmission process of monetary policy. The development of euro area capital markets could however increase the weight of financial market indicators in the second pillar.

*The **stock market** is still a much less important channel of transmission in the euro area than in the US, but the holding of shares is spreading, for example through mutual funds. I would not attempt to summarise the vast debate about the appropriate monetary policy reaction to asset price movements. I am inclined to say that central banks have not to put on these variables more emphasis than warranted by their effects on demand and should avoid asymmetric reactions – benign neglect in the case of irrational exuberance, intervention in the case of sharp downward correction – which could pose a moral hazard problem.*

*The **bond market** provides indicators which are probably more important within the second pillar of the Eurosystem’s monetary policy. Technical progress and European integration lead to more sophisticated and liquid markets which supply useful information about market expectations. Incidentally I notice that, while many central banks looked disapprovingly on indexed bonds prior to monetary union, the Eurosystem now welcomes the opportunity to extract information on inflation expectations from the comparison of yields on indexed and nominal bonds. Despite the upsurge in inflation in the euro area resulting from oil price and food price shocks, inflation expectations appear to remain very moderate, showing that the Eurosystem benefits from a high degree of credibility. Such a capital of credibility has to be preserved.*

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*About the second wing of central banking, the safeguarding of **financial stability**, I would like to adopt a chronological approach. First, how are central banks currently adapting to the new environment by reconsidering the role they are playing in the financial market? Second, how could new technology affect the relations in the coming years between market participants, central banks and other supervisory and regulatory authorities?*

*Financial market developments and the heightened risks associated with these rapid changes led central banks to **reconsider the role they had to play** to preserve financial stability. For those central banks that were in charge of the surveillance of individual credit institutions, the implications were straightforward. They had to adapt the modalities of their micro-prudential activities. However, the need to proceed to **macro-prudential monitoring** was also strongly felt by central banks, like the NBB, which were not vested with the micro supervision.*

*First, at an **analytical level**, central banks were induced to enlarge the scope of their research. The use of new technologies has caused a spectacular expansion in the volume of financial operations, certainly in comparison to the growth of real activities. This has required reconsidering the direction of the links between these two fields. Central banks had traditionally focused on the consequences that changes in financial conditions could have on the real economy. If such analyses remain essential, central banks are also increasingly concerned by the vulnerability of the financial system to fluctuations in real activities. So, the causalities also have to be reversed and due attention must be given to the impact that evolution of the real economy could have on the stability of the financial system. It is no coincidence that an increasing number of central banks now complement their traditional annual reports centred on monetary policy and macro-economic developments by another report focused on the theme of financial stability. This is a development that the NBB will also actively embrace through the publication, possibly starting in 2002, of a new yearly Financial Stability Report.*

*At a more **operational level**, central banks contribute directly to strengthening the stability of the financial system by the development of secure and efficient payment and settlement systems. Here also new technology is playing a crucial role. Real time gross settlement systems, delivery versus payment mechanisms, cross-border connections between various clearing or settlement institutions, instant world transmission of information would be in practice unmanageable without the possibilities offered by information technologies. These multiple layers of networks are too often considered as mere plumbing. However, this so-called plumbing is in many respects as spectacular and sophisticated as the more glamorous Internet or mobile phone networks.*

The oversight of these modern payment and settlement systems has become a key function in modern central banking and this certainly applies to the NBB, as Belgium is hosting two major international institutions, SWIFT and Euroclear.

*The second step in our chronological approach is also the most uncertain as it implies speculating about the impact of new technology on the **future organisation** of financial markets.*

*It must be recalled from the outset that the introduction of new technology in the banking sector is not a one shot phenomenon. On the contrary, it is proceeding by **waves**. As already said, the development of e-money, e-banking and e-finance will represent a great challenge.*

Whatever its speed, this new wave will strongly modify the nature of relations between market participants. Distant access to financial products is substituting for close individual contacts. Brand loyalty, while still a key asset in a business built on trust, is increasingly associated with cherry picking. Banks themselves tend to shift from an approach based on long term and stable relations to a strategy where each deal is individually appreciated on its own merits.

The various financial institutions are also redefining what should be their core business. The technological wave of the eighties and early nineties allowed the unbundling of most financial products into their various components. To the unbundling of products is now associated, thanks to the second wave of innovation, an outsourcing of the production but also of the distribution process. Back office functions, distribution networks and IT infrastructures can now easily be subcontracted, creating a new web of connections between various categories of market participants.

*There are also important changes in the **relations between monetary and prudential authorities**, on the one hand, **and financial institutions** on the other. First the authorities will have to rely, much more than in the past, on the markets themselves for the surveillance of financial stability. One may legitimately feel concerned by such an evolution, which sounds like asking the fox to watch over the hens. However we must realise that financial markets are not only a major factor of change, they are also potentially a powerful factor of discipline. They are forcing credit institutions to be more transparent and to communicate more reliable information. The development of new, more sophisticated, risk management techniques, under the form of internal models, has been, at its roots, a private initiative from market participants. In order to integrate this modeling approach in the monitoring of banks solvency, the Basle Committee on Banking Supervision is not designing a new system from scratch. On the contrary, it is referring to the best practices of the market itself as a benchmark against which to calibrate its own proposals.*

Now, the authorities should not delude themselves. Best practices are what they are, easier to respect by strong institutions and in favourable circumstances, but much harder to maintain when the situation deteriorates. Far from being lightened, the burden of prudential authorities is becoming heavier. The necessarily limited human and financial resources of these authorities will be called upon all the more by the new Basle proposals which will require a more individualised and detailed surveillance of these new internal risk management systems.

*The resource constraint will finally also strongly determine the **relations** that the **various monetary and supervisory authorities** will have to maintain **among themselves**. A more globalised financial market calls for a more globalised approach to supervision.*

At the international level, several co-operative bodies and mechanisms have been established, either in the form of multilateral forums bringing together the competent authorities in the fields of prudential control and financial stability, or by means of bilateral protocols concluded between the supervisory bodies of different countries or sectors.

At each national level, the authorities also have to carry out an in-depth examination of their supervisory structure and procedures. I will not dwell here on the subject of the devolution of prudential tasks. Different models exist across the world bearing witness to the trade-offs which have to be made to adapt to market trends while also taking account of the specific national context.

Finally, this existing national and international framework needs to be periodically reviewed and adjusted. Whatever its form, the prevailing structure will have to fulfil two major conditions. On one hand, it must be efficient in preventing either loopholes or redundancy in supervision. On the other hand, it must be all encompassing by combining the microprudential control of individual institutions with macroprudential monitoring of the systemic risks faced by the global financial market.

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*To conclude, let me stress that central banks are fully aware of the close connection and the large convergence existing between the two goals of **financial stability** and **monetary stability**. Keeping inflation under control, which is the ultimate goal of every central bank, has proved to be the best way to reduce uncertainties on the market, to alleviate distortions and, so, to eliminate one of the fundamental sources of financial instability.*

Conversely, central banks need sound and efficient banking systems for ensuring rapid transmission, to the whole economy, of the impulses of their monetary policy. This is all the more important given that the assets at the disposal of central banks – the monetary base in our jargon – is becoming increasingly tiny compared to the total assets managed by credit institutions and, beyond that, by financial market operators.

In this context, the monitoring of financial stability may certainly not be considered as a by-product or a mere extension of the traditional monetary stability objective of central banks. The two functions are closely related but distinct. In other words, the monetary stability and financial stability wings belong to the same bird.

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