Consumers do not choose their preferred central bank base rate in the way that they buy, say, telephone services from one of a number of competing companies: independent central banks (ICBs) and utility regulators have different tasks. However, those concerned with the emerging field of utility regulation can still learn much from research on ICBs, not least because, for historical reasons, there is much more of it. The authors of this article argue that the key to the success of both ICBs and utility regulators is proper governance arrangements. They reject the arguments for procedures that are totally rule-based with little or no discretion. Within clear rules, they say, both ICBs and regulators should be given discretion combined with high accountability.

The history of utility regulation is not yet long enough to provide data that conclusively prove that one type of regulation is better than another. We can already demonstrate, particularly in developing countries, that disaster usually results from regulatory arrangements with poor governance, including that bad outcomes arise from wide, non-accountable discretion. But the experience of utility regulation is not yet sufficient to prove the positive.

The research on central banks is more conclusive. The history of national monetary institutions, including independent central banks (ICBs), goes back several hundred years. Even today, some countries like New Zealand have ICBs but not independent telecom regulation. Those with independent telecom regulatory agencies usually also have ICBs operating monetary policy and the latter usually preceded the former – often, as in Germany, by many years. The UK is a rare exception: the telecom regulator OfTEL was established in 1984 but the Bank of England was given responsibility for operating monetary policy only in 1997.

Both the historical understanding and formal testing of the effects of the independence of central banks (and monetary policies) on macroeconomic outcomes are therefore much better established than for independent utility regulation. The results uniformly show that where ICBs operate monetary policy, inflation is lower and less variable. They also show that ICBs with better governance arrangements outperform those with less good governance arrangements. Whether the relationship is causal or related to underlying policy choices is still unclear. However, the results are encouraging for the
supporters of independent utility regulation, and for the types of governance arrangement that provide genuine independence and accountability.

Focusing on telecoms, this article draws out the lessons for utility regulation from the research on central banks. The conclusions are also relevant for the many developed and developing countries that are not only unbundling, liberalizing and privatizing their telecom industries but have also recently decided to assign the control of monetary policy instruments such as interest rates and/or monetary growth rates to an ICB rather than leave it with the government.

This article starts with a discussion of the features which central banking and telecom regulation have in common. It summarizes the key results from economic research on central banks and on telecoms in turn. It concludes with a discussion of what central bank research suggests are the critical features to achieve effective regulation in telecom services and, to varying degrees, in other utility services too.

**Common Ground**

The arguments for the independence of central banks and telecom regulators have two main things in common:

- The need for consistent long-term policies, and
- Institutional design characteristics.

The conventional economic argument for an independent central bank is that taking monetary policy out of the hands of politicians reduces (and is perceived to reduce) the average rate and variability of inflation. There may also be other benefits: a steadier and possibly higher rate of growth of output, and lower unemployment (at least on average). One of the main reasons for expecting faster growth is that lower and less variable rates of inflation are likely to reduce real interest rates and thereby increase the rate of investment.

This argument is very similar to the claim that independent regulation of telecoms is necessary to ease and promote commercialization, liberalization and privatization of telecom industries. For telecoms, like other regulated and privatized utilities, a key issue is to ensure that short-run policy considerations are not allowed to damage the investment climate for the industry. Investment considerations are particularly important in telecoms with its capital intensity and rapid rate of growth of technical progress.

In the monetary policy case, the issue is the establishment of effective institutions to ensure a credible macroeconomic and monetary policy framework, particularly for investment. In the telecoms case, it is the establishment of effective institutions to ensure a credible micro-economic framework to support private investment and competition.

Moreover, the issues of what institutional design characteristics lead to effective operation are very similar in both cases, with independence from short-term political pressures as a common concern. In both cases, the question of introducing an institution separate and independent of government is intimately related to the questions of the role of (a) rules relative to discretion and (b) the degree and nature of the accountability of the institutions.

These are still contentious issues both for central banks and for the development of utility service regulation. In both cases, the establishment of an independent agency is typically accompanied by a move to a more rule-based and less discretionary mode of operation. Some commentators argue for a totally rule-based and non-discretionary mode of operation, but others argue for agencies with limited discretion but high accountability. The latter is the model most often found in practice. In the UK, the introduction of monetary policy control by the Monetary Policy Committee of the Bank of England has been accompanied by a move to a much more rule-based framework for macroeconomic policy but a high degree of accountability (Brown 2001).

There has been extensive theoretical and empirical study over the last 10-20 years of whether, why and how ICBs achieve the objectives outlined above. In recent years, there have similarly been studies of whether, how and why independent telecom regulatory agencies achieve their regulatory objectives. A critical issue is what “independence” actually means and what are its key attributes. In neither case is independence absolute, either in law or in practice, and, in both cases, questions of independence are intimately bound up with issues of accountability.
The Time-Inconsistency Problem

The clearest non-technical case for an independent central bank is that made by Gordon Brown, the UK Minister of Finance (see box). Behind the non-technical case is a substantial theoretical literature on macroeconomic credibility. The “time-inconsistency” problem arises from the fact that Governments that face elections every few years find it difficult credibly to commit to a sustained low inflation policy:

- Governments always have an incentive for a short-term monetary expansion to boost economic growth and reduce unemployment just before an election leaving the next Government to deal with the resulting inflation; and
- market participants know that Governments have such an incentive and are very likely to discount their statements on the need for a stable anti-inflationary policy, however strongly made.

This problem was set out in the classic Kydland and Prescott paper in 1977.

Originally, monetary growth rules were seen as the most promising way of handling the macroeconomic time-inconsistency problem. However, such rules are difficult to apply strictly and their performance has been increasingly disappointing for many reasons, not least the increasing liberalization of financial markets. The UK moved away from monetary growth (M3) targets in the 1980s and the ECB appears to give them little weight. Increasingly, the preferred solution to the macroeconomic time-inconsistency problem has been for governments to delegate the operation of monetary

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**Gordon Brown’s Case for an Independent Central Bank**

UK Finance Minister Gordon Brown has most clearly made his case for an independent central bank in an article based on his July 2000 lecture to the Royal Economic Society. He identifies four basic reasons:

- Effective monetary policy as well as demand management is necessary to deliver low inflation and high and stable rates of employment.

- Effective monetary policy can be delivered only within the discipline of an institutional framework that provides limited and accountable discretion to meet defined targets. Neither unfettered discretion nor fixed monetary targets deliver low inflation and high and stable rates of employment.

- The institutional framework must command public trust and market credibility. In the UK, this is achieved by having an independent Bank of England and a Monetary Policy Committee, including outsiders, which operates monetary policy to meet an inflation target laid down by the Government. (In the UK, the inflation target is symmetric – ie inflation rates below the target are considered as undesirable as those above the target).

- The credibility of the framework depends on “maximum openness and transparency” with “clear objectives and well understood procedures” – and openness underpinned by accountability and responsibility.

Gordon Brown summarizes his case as follows:

“...Public trust and indeed stability require not mechanistic responses, but judgements made within a disciplined framework. Stability should be built on a foundation of credible objectives rather than fixed relationships and on well-understood procedures within which judgements can be made and openly explained rather than relying on decisions made behind closed doors” (Brown 2001, pC35).

This statement could be taken as an excellent summary of effective utility services regulation. In particular, the strong emphasis on (a) well-understood procedures and (b) openness meshes directly with the utility experience. Sound and well-understood procedures are increasingly being recognized as the true safeguard of effective and genuinely independent utility regulation. Indeed, UK regulatory practice is often criticized for deficiencies in its procedural requirements relative to eg the US or Australia. This has a pleasant irony given the way that UK commentators criticize the European Central Bank (ECB) for its lack of openness and unclear procedures compared to those of the Bank of England. 

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policy – particularly interest-rate setting – to an independent central bank, operating under a forward-looking inflation target. The theoretical case for such a policy has been set out by Rogoff (1985) among others.

The same “time-inconsistency” argument exists almost identically in utility regulation. In the short term – particularly in the period approaching elections – there is always an incentive for governments which regulate utility prices to hold back on necessary price rises (or to cut prices back beyond what is justifiable on economic cost grounds). In addition, as with monetary policy, private investors in (and managers of) utility service companies know that governments have such an incentive. Hence they will discount government statements that they will price such services at full economic cost and that they will always allow prices to include the expectation of a reasonable, risk-adjusted rate of return.

In consequence, the cost of direct government regulation of utility service prices is that it is likely to reduce investment and raise the cost of capital in the future – unless the utility is operated as a state-owned vertically-integrated company (ie as a “nationalized industry”), which has many other disadvantages (eg inefficiency). This is a major practical as well as a theoretical problem in many countries, most obviously (but not only) in middle- and low-income developing countries.

The parallels between the time-inconsistency problem as it affects (a) monetary policy and (b) utility services investment and pricing have been explored in a number of theoretical articles (eg Currie et al 1999) and the recommended solution is the same – government assigns the role of economic regulation of utility services to an independent regulatory agency.

Impact on Macroeconomic Performance

The general consensus is that countries that assign monetary policy to an ICB have lower and less variable rates of inflation.

There is less evidence that countries with ICBs have higher average growth rates or employment levels or less variance – ie that they have less-severe economic cycles, as claimed by Gordon Brown. They may do better on output and employment (see Levine et al 2000) and there is no evidence that they do worse. If they have lower and less variable inflation, their real interest rates should be lower and this should encourage investment and increase the rate of growth for a long period if not in perpetuity. However, critics of ICBs often point to the need to combine monetary and fiscal policy in the same institution to avoid damaging conflicts. In the US in the early 1980s, monetary policy had to be tightened to compensate for large fiscal deficits.

The real difficulty with assessing the impact of ICBs is that choosing to have an ICB is related to countries’ macroeconomic policies. For instance, in 1948, Germany established a very independent central bank, which was given extensive control of monetary policy and a strong anti-inflation objective. But, as a result of its history, post-1945 Germany was a very inflation-averse country and the political choice for independence was in response to this inflation aversion. Similarly, the UK made the Bank of England independent and established the Monetary Policy Committee (MPC) to set interest rates only after a decade or more of low inflation and when all the major political parties had become convinced that a low-inflation environment was essential for good economic performance. Moreover, countries with healthy economies, not surprisingly, find it easier to establish ICBs – and much easier to sustain them. In consequence, the statistical association between assigning the implementation of monetary policy to an ICB and low inflation may or may not be causal.

Key Features of Independent Central Bank Governance

There are two dimensions to central bank independence: the goals of monetary policy (what these are and who sets them) and politics.

Goal independence

Most ICBs have price stability or an inflation target as one – sometimes the only – goal. This is the case both for the Bank of England and the ECB but not for the US Federal Reserve. The Fed also has output, employment and other “real” economic variables included in the objectives for monetary policy.

However, the UK does not have “goal independence”. The Bank of England’s inflation target is set by Ministers – neither the Bank nor the MPC chooses it. For Gordon Brown it is a virtue that the inflation target (which he is largely responsible for setting) is symmetrical around the 2.5% target.
The ECB, by contrast, is, formally, completely independent of European Ministers of Finance and the EU Commission in terms of its objectives as well as in its operations. It was established by the Treaty of Maastricht which states that its primary objective is the maintenance of price stability. It is the responsibility of the Governing Council of the ECB to make this operational – ie the ECB has an unusually high degree of “goal independence”. In December 1998, the ECB announced that its definition of price stability would be an annual inflation rate for the Euro area of under 2%. This is a non-symmetric inflation objective, unlike that chosen by the UK Government, and has been criticized by some observers (including some major political figures) for imparting an unnecessarily deflationary bias to ECB monetary decision-making.

In the US, the Fed has a relatively high degree of goal independence but, unlike the ECB, it is formally accountable to the US federal legislature – as well as informally to politicians, business, the media, etc.

Some observers see government specification of the monetary policy goals as reducing goal independence; others see it as strengthening the position of the central bank by showing the commitment of government to the framework and the policy. Gordon Brown’s comments quoted above show that he strongly believes that goal-setting by government strengthens the position of the Bank of England.

In the utility regulation debate, it is usually taken for granted that policy should be separated from regulation and that ministers should specify the policy framework within which regulatory agencies like Oftel should operate. This is consistent with the view that governments should specify monetary policy objectives and that this increases the effective independence of regulatory agencies. Comparison between the experience of the MPC in the UK and the ECB in the EU supports this view. The ECB clearly has more formal independence but has had a much harder time establishing its reputation and fending off pressures from national Ministers of Finance and others.

**Political independence**

Many of the indicators used to assess the degree of independence of central banks in controlling monetary policy are the same as those used to assess the degree of independence of telecom and other utility regulatory agencies. This is particularly true for measures of political independence. In both cases, important issues include:

- procedures for appointment and, more importantly, for dismissal of central bank governors;
- the existence of fixed terms of office;
- government rights to give instructions to the central bank;
- government rights to veto, suspend or defer central bank decisions; and
- government rights to appoint and dismiss central bank board members.

These indicators are typically taken as measures of political independence and are usually measured from provisions in the relevant law. They are thus examples of formal, legal aspects of governance.

**Actual independence** can be measured by, for example, the turnover rate of central bank governors or the proportion of governors replaced within six months of a change of regime or a change of Government (see eg Cukierman and Webb 1995). This can suggest a very different degree of independence from what is written in the relevant laws. Formally independent

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**ICB Independence: Measuring the Effects of its Different Components**

The key problem in testing for the effect of individual governance components on inflation and other macroeconomic outcomes is that they are highly related – countries which give fixed terms for bank governors are also likely not to require government approval of monetary policy decisions.

The solution adopted by researchers is therefore to combine governance elements either (a) into eg a number of types of central bank with similar characteristics or (b) into a continuous index. Both methods suggest higher central bank independence is associated with lower inflation, but the research has not yet identified which variables are most important. Indices are probably the better solution but they do have problems – eg rankings for Japan and some countries can be very different between similar indices.
governors in middle-income and developing countries often leave/lose their jobs after a change of Government or regime. Argentina is a case in point.

The Time-Inconsistency Problem in Telecoms

The classic time inconsistency problem for utility services is that they require large volumes of investment which, once installed, become “sunk assets” in the sense that most or all of them cannot be removed and used elsewhere or sold on second-hand markets. In consequence:

- private investors are at risk of opportunistic behaviour by governments, particularly over prices, once the investments have been installed; and
- awareness by private investors of this regulatory risk drives up the required rate of return and the cost of capital.

The government has a commitment problem, particularly given the legal and/or practical inability of one government to bind its successors.

In theory, this problem could be handled by devising appropriate contractual terms. In practice, the difficulties of contract monitoring and enforcement (e.g., involving binding international arbitration) mean that this route is both difficult and uncertain.

Because of the problems of a contractual arrangement, the standard solution is to install an independent regulator.

Telecoms Regulation: History

The Federal Communications Commission (FCC) was established as long ago as 1934. It is no coincidence that explicit regulation by designated and independent regulatory agencies developed first in the US: telephone and other utility service providers there were more likely to be owned and managed privately than in other countries.

US regulation originally developed to protect the rights of consumers facing vertically- and horizontally-integrated monopolies like the Bell System. However, it was also realised that protecting consumers in the medium to long run meant that utilities – particularly privately-owned companies – had to be able to charge prices that allow them to earn a reasonable rate of return on their investments. In particular, the companies had to have the regulatory guarantees to be able to finance the large network and other investments required to roll out the system and create an efficient, nationwide telephone system. These considerations led to the concept of “just and reasonable rates” being placed at the heart of the US regulatory system.

In many other countries, including the UK, mid-twentieth century telephone companies were state-owned monopolies, often linked in with postal services. The relevant government ministry regulated investment and prices as well as setting policy and exercising ownership functions. Only in 1981 was British Telecommunications established as a (wholly state-owned) commercial entity fully separate from the Post Office. Separation from posts and from detailed ministry oversight came later in most other European countries and has only recently been achieved in Greece and in many CEE countries.

The technological revolution that computerisation has brought to telecom services since 1970 has led to an explosion in the supply of (and demand for) new services. This has led to the rapid decline of the old nationalised industry monopoly supplier model for three reasons: massive investment needs that governments were unable or unwilling to fund; the need for good-quality commercial and management skills to keep abreast of rapidly developing markets and technologies; and the growth of competition within the market, first in mobile and rapidly spreading to other services.

The result was privatization and rapid growth of competition. BT and their other European counterparts were privatized. Bell Telecom was broken up. Competition developed initially in markets for equipment (including handsets, PABX exchanges, etc), followed by mobile, value-added services and then core fixed-line data and voice services.

The establishment of an independent regulator has been a major element in the privatisation process.
A regulator with clearly defined powers and duties is (rightly) seen around the world as providing protection for the new shareholders in a way that no Government can guarantee. Oftel, the first UK regulator, was established in 1984, following the Littlechild Report in 1983 as part of the privatization package. Other independent regulatory offices were set up in the UK for gas, electricity, water and railways as they were privatized.

Oftel was installed to protect consumers in the face of a privately-owned dominant supplier (BT) faced by very limited competition. It also, however, had the function of protecting the company and investors in it, many of whom were first-time shareholders. As telecom competition developed, Oftel increasingly had a role in protecting the interests of shareholders in new entrants.

However, it can be argued that the introduction of competition — particularly competition over networks owned by the dominant incumbent — has been the major factor behind the introduction of strongly independent, decision-making regulators. The growth of telecom regulation throughout the EU and the EU Directives which require member states to have national telecom regulators is intimately associated with finding solutions to network access problems (particularly access prices) for trunk networks and now, increasingly, at the local loop.

It is possible credibly to introduce regulation of a privately-owned (or privately-financed) monopoly utility by a ministry or with an advisory or consultative regulator. It is much harder to avoid the need for a strongly-independent decision-making regulator once there is significant competition at the retail service level. This is because network access terms and prices become crucial to the successful working of the market and, in practice, these cannot be voluntarily negotiated between all the relevant parties — hence the virtually universal need for a regulator to determine at least the principles of interconnect prices if not the actual prices charged. Initially, this was largely a problem of regulating the incumbent and its conditions and prices for network access. But it is now increasingly becoming a problem affecting other networks, eg mobile termination prices.

The single most important reason why independent regulators are needed when competition is introduced into network industries is that new entrants — particularly potential new entrants — do not have a seat at the table in the negotiations over network access arrangements and prices. For this reason, independent regulatory agencies are increasingly being introduced into utility service industries where state ownership of the incumbent supplier remains but where competition is being encouraged. Examples are Postcomm for UK postal services and electricity regulation in Norway.

Not surprisingly, therefore, both have evolved the answer of creating an institution which can establish and maintain a credible reputation for making and keeping commitments in a way that governments find extremely difficult to do. Hence, again not surprisingly, many of the governance issues for telecom regulators are identical to those for central banks.

**Telecoms: Governance**

Over the last decade, much research has been published on regulatory governance for telecom and other utility service industries. Often, it hinges on issues like fixed terms for regulators, appointment and dismissal criteria, enforcement powers and — increasingly — on regulatory procedures.
This exactly mirrors research on ICBs. It is particularly interesting to note Gordon Brown’s emphasis on “well-understood procedures within which judgements can be made and openly explained rather than relying on decisions made behind closed doors”. Increasingly, clear and open regulatory procedures are seen as the essential foundation of fair and effective regulation by utility regulators.

The case for clear and open procedures often leads to the suggestion that regulatory agencies should operate by simple rules and have no (or minimal) discretion. This view is particularly associated with Spiller (see e.g. Spiller and Guasch 1999) and is developed in a framework which emphasizes the need for regulatory stability to make privatization work. Critics of UK processes regularly maintain that regulators have too much discretion.

In the context of Latin America and in many developing countries, Spiller rightly argues that the essential is to create effective governance arrangements. These must be tailored to the institutional capacity of the country and are more important than the content of regulation. Hence, it is argued that countries with limited institutional capacity should regulate by simple, minimum discretion procedures or, if possible, by regulatory agencies relying on contract enforcement. However, this solution is inflexible and seems to create problems beyond the short-run – as in the post-privatization conflicts in Chile and other Latin American countries.

The alternative view is that proper regulatory governance arrangements are crucial precisely because telecom and other utility regulation cannot avoid discretion. Indeed, regulatory systems work better where independent regulatory agencies are given (limited) discretionary powers but which they must exercise in a fully accountable and open way. Accountability is the key to achieving regulatory stability through political legitimacy and market credibility. This is our view (see Stern and Holder 1999).

It is also Gordon Brown’s view – at least for central banks. He rejects monetary growth and similar rules and instead argues for “judgements made within a disciplined framework”. However, as yet, neither he nor any other member of the current UK Government has advocated the equivalent formality or openness of regulatory procedures for OfT and other regulators that is required of the Bank of England and the MPC. It would be very interesting indeed to have the right to read the minutes of the relevant meetings of OfT within two months of their publication, but this does not seem very likely to happen. The UK also has far fewer regulatory public hearings than Australia, let alone the US.

There are costs as well as benefits in having a fully open regulatory system. But the degree of accountability (eg in terms of justification requirements both for regulatory interventions and for decisions) is rather less in the UK than in Australia or the US – and also less than in some other EU member states and in public statements by regulated companies. In absolute terms, UK deficiencies over regulatory procedures and accountability have also been attracting more UK critics (eg the recent report by the Better Regulation Unit). Recent moves involving the Office for Fair Trading (OFT) and the Competition Commission are changing this. But the contrast with the MPC procedures remains.

For central banks, we saw earlier that there was a question of how far actual independence corresponded to formal, legal independence, particularly in developing countries. This has also been a major issue for utility regulation. Some authors (eg Noll 2000) argue that it is unreasonable to expect smaller and poorer developing countries to establish effective independent regulatory agencies. This view is one factor behind the push for relying solely on regulation by contract or seeking for regulation by multinational agencies. The problem is that it is just as difficult to find credible (and time-consistent) regulatory alternatives to an independent regulatory agency with some discretion as it is to find time-consistent alternatives to monetary policy control by an ICB. The problem is similar in both cases and the solution is just as elusive.

**ICBs, Telecoms and Other Utilities: The Differences**

We have seen that separating policy goals from regulation is almost always seen as increasing the effective independence of regulatory agencies whereas this is disputed for central banks.

One of the most important of the other differences between ICBs and utility regulators concerns
**Telecom Regulation and ICBs: the Constraints of Public Experience**

A crucial issue is that the history of utility regulators is very limited, particularly outside the US. In contrast, many countries still have very clear memories of hyperinflation and the damage it causes while in others (including the UK), there is widespread acceptance that monetary stability, low inflation and economic growth are related.

Historical experience (e.g., the difficulties over re-establishing the gold standard in the 1918-39 period) has shown that democratic pressures can make it very difficult to sustain the value of key assets when this value depends on controversial political decisions.

Particularly in young democracies, achieving the necessary understanding can be crucial even to get support for – and sustain – low-inflation policies and ICBs. This has become increasingly clear in many Latin American and Asian economies. The experience of the damage caused to utility services by opportunistic regulation is much more limited and the issues are much less widely understood.

Although central banks and national money-issuing regimes have existed since the seventeenth century, many countries still find it hard to manage the monetary process. Some opt for currency boards or dollarization. Monetary arrangements of this kind imply not just a completely rule-based regime but total non-discretion. If adopted as other than a short-term emergency measure, they imply the renunciation of an independent national monetary autonomy in the medium- and long-term.

For utilities, the much more limited history – both in time and across countries – means that there is much less institutional and legal experience on which to draw. There are far fewer experiments and fewer variants from which to explore what works, in what circumstances and why – and what does not work, in what circumstances and why not. Learning by doing is much more limited for utility regulation so it is more difficult to come up with convincing variants where conventional independent regulatory agencies are either infeasible or unsustainable.

supervision of companies. Telecom regulation is inherently about monitoring the behaviour of regulated companies and enforcing licence conditions or equivalent obligations. Monetary policy is not primarily concerned with the regulation of banks. Indeed, the Bank of England does not have any banking supervision functions outside those relating to systemic risk. In general, central banks with banking supervision obligations are usually considered to have less independence whereas telecom regulatory agencies with sole responsibility for issuing, monitoring and enforcing licences are usually taken as having more independence.

The other major difference concerns competition. ICBs are not monitoring and enforcing competition. There may be competition between the central banks of different countries over reputation and credibility (e.g., in attracting foreign direct investment) and, to a lesser extent, this is also true of different countries’ telecom regulatory agencies. The key difference is that telecom and other utility service regulatory agencies, unlike central banks, are directly monitoring and regulating the behaviour of commercial companies which are competing with one another over networks owned by some of the industry participants.

The network problem is most acute when there is a single network that all participants must use. This remains the case for most utility services other than telecoms. In telecoms, it was the case so long as the network was a monopoly or totally dominated by one provider in the shape of BT, Bell Services, Deutsche Telekom, and so on. But, over the last two decades, radio, cable and competition in fixed networks grew strongly.

There is still considerable scope for anti-competitive behaviour by network owners, e.g., on access and pricing of bottleneck facilities.

- Network operators need to be sure that they can expect to earn a reasonable rate of return on their network investments.
- New entrants need to be sure they will not be economically disadvantaged in network access and pricing (or in product service pricing) relative to the
incumbent offering both network and product services.

- Incentives for new network investment need to be adequate.

Although these problems are best addressed by an outside agency, it is not clear that this agency needs to be independent and specialized. For electricity, where there is one and only one transmission or distribution system in any space, an independent regulatory agency seems to be the most obvious solution. This also seems appropriate for telecoms in countries, especially developing countries, where the market is unable to support several competing networks – at least for network issues and possibly for small customers. The same argument probably also applies in countries where the market is heavily dominated by a recently-privatized incumbent company with a strong brand and reputation (eg BT for the decade after privatization).

It is, though, a much harder case to argue where there is genuine competition within and between the various network segments: fixed line, cable and wireless. This is particularly true if the incumbent has totally unbundled its network from its product service elements – as BT is reported to have been discussing. True, the number of actors and the degree of competition still remain relatively limited in most segments of the telecom market, particularly in network services. But it is possible to argue that, for telecoms, both the product service and network services issues discussed above are best addressed through conventional ex post competition policy rather than by ex ante regulation. In fact, Oftel’s work is increasingly of a general competition policy nature with regulation confined to specific bottleneck facilities (including the local loop). Oftel was given competition powers comparable to those in Articles 81 and 82 of the Treaty of Rome under the 1994 Telecommunications Act and these were extended under the 1998 Competition Act. If, as is planned, price regulation of telecom services to small customers is abolished by 2003, Oftel would become almost entirely a specialist competition agency – but with some ex ante as well as ex post powers of intervention.

The argument for abolishing telecom regulation primarily depends on there being sufficient competition between networks. In such circumstances, there is no longer a classic infrastructure regulation problem. But there is still the problem of whether network issues, particularly access pricing issues, are so important that anti-competitive behaviour by network operators would put new entrants out of business before any competition investigation could be carried out or even mounted. In addition, the more regulators act to keep network prices low, the less the incentive for new entrants to enter the facilities market and augment competition.

More fundamentally, it is questionable how far investment in new, competing networks is efficient in economic terms. This is an issue that has surfaced in Germany and elsewhere over the obligations of 3G licence holders to build new networks and whether or how far they can share networks.

The anti-regulation case is increasingly being argued for the US and the UK. However, no telecom regulators have yet been abolished – and New Zealand is just introducing one having previously decided that it did not need one.

In a country like the UK, the case for a telecom regulatory agency may be increasingly derived from the complexity of the competition issues (eg from the convergence of telecoms and broadcasting and the need for rapid review) rather than from classic network infrastructure regulatory concerns of the kind that still dominate electricity, railways and water and sewage services. In consequence, in the UK, telecom regulation is being integrated with broadcasting regulation in one Office of Communications (OFCOM). So, it’s “Goodbye Oftel – Hello OFCOM”.

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**The Banking Network Problem**

Retail banking depends heavily on payment networks eg for cheque clearing, credit card and cash machines. These networks raise issues of ownership, new entrant access, pricing of cash machine facilities to customers of other banks, etc similar to those of telecom networks. In the UK, a Government-commissioned review of retail banking services by Don Cruikshank, ex-Director of Oftel, recommended a new regulatory agency (Paycom) to regulate payments networks under a licensing system. However, in August 2001, the Government rejected his proposals in favour of assigning the regulatory task to the Office of Fair Trading.
Telecoms: Testing the Effects of Governance Factors

Some work has been done on the impact of having an independent regulatory agency, for example on investment, privatization revenues, beta values of regulated firms and prices. However, the variables used to measure the impact of regulatory arrangements in these studies has been unsatisfactory and much cruder than in the studies of the impact of ICBs on inflation and other macroeconomic outcomes.

It is not easy to construct good tests of an independent regulatory agency analogous to the simple inflation rate (or inflation and growth) test for an independent central bank. More investment in the industry is the most obvious – but an effective regulatory system may increase the efficiency and/or length of life of capital and reduce investment requirements. Falls in retail prices may be a good indicator in comparing US states. But, for Indian or Russian states, increases in what consumers pay may be a better indicator of regulatory success.

In general, studies to-date tend to demonstrate beneficial effects of both independent regulation and competition for investment, for network growth and for consumers. But much more needs to be done both on what is being explained and in defining what characterizes good regulatory governance.

The question of what to do in countries that find it difficult to sustain an independent regulator remains open. In telecoms it is less of a problem than one might expect – and much less than for electricity, natural gas, railways or water and sewage. This is because of (a) the rapid growth in demand for telecom services, (b) a reasonable willingness to pay economic prices for service, and (c) the awareness of the essential nature of telecoms for a modern economy. The telecom distinctiveness is very important. It significantly reduces the problem of attracting and sustaining private investment in telecoms – unlike the other utility service industries – in developing and transition economies. Even these countries may not absolutely need an independent regulatory agency to generate some private investment – though it is still likely that having such an agency would reduce the cost of capital to the countries involved (by how much, and depending on what governance characteristics, remains to be established). In OECD countries, the distinctiveness allows a variety of different telecom regulatory institutions, of different degrees of effectiveness, to continue to operate (and more widely) and hence to provide (at limited cost) more examples of both good and bad regulatory practice.

Conclusions

There are significant differences between the tasks faced by independent central banks and independent utility regulators. Monetary policy is not primarily concerned with the regulation of competing banks. Utility regulation is inherently about monitoring the behaviour of commercial (and competing) companies and enforcing licence conditions or equivalent obligations. Telecoms are also increasingly different from other industries traditionally bracketed with them as “utilities”. Although telecom regulation must operate within a general competition framework, it may in time be replaced – at least in some countries – by general ex post competition policy. In electricity and some other utility service industries, ex ante regulation (with its accompanying regulatory agencies) is likely to persist for the foreseeable future.

However, despite these differences, ICBs have much in common with the regulation of telecoms and other utility services. Most notably, the primary goal in both cases is to ensure that policy gets implemented without regard to the short-term electoral needs of any particular Government. In the case of monetary policy, the main aim is reduce the level and variability of inflation; in the case of utility regulation, a fundamental aim is to ensure the continuous and large-scale capital investment that is necessary to provide consumers with services at the best-possible price.

Some argue that goal-related independence is necessary for ICBs to be successful. Like Gordon Brown, we believe that ICBs are more effective in their inflation-related aims if the decisions on the aims of monetary policy are taken by governments. Goal-related independence has never been considered relevant to successful utility regulation.

The key factor in successful regulation and implementation of monetary policy is political independence. The effectiveness and sustainability of the regulatory compact require willingness to abide by the spirit of the framework – ie acceptance by all actors, (including ministers and other politicians) of the need to sustain the institutions. How to achieve this in modern
democracies, particularly but not only in parliamentary democracies, is a critical challenge for political economy.

For both ICBs and regulatory agencies, institutional form and sustainability depend on constitutional, political and legal issues as well as on economic factors. These non-economic factors vary, often considerably, between countries. Other commentators have pointed out the roles of the judiciary, of legal contracts, of the strength and impartiality of the civil service and of informal behavioural norms. Our focus is on the need for open, transparent and well-understood procedures and the associated accountability of ICBs and regulators. We argue that this is crucial for the sustained effectiveness of both sets of institution.

For both, a proper legal governance framework is the necessary starting point. Gordon Brown argues, in the macroeconomic context, that “public trust and indeed stability require not mechanistic responses, but judgements made within a disciplined framework” (Brown 2001, pC33, our emphasis). To achieve credibility, it is essential that the governance arrangements of the institutions – central banks and regulatory agencies – provide the necessary reassurance that future governments will not be tempted to renege on the commitment to operational independence. In consequence, for both sets of institutions, powers and duties must be established in a primary law that lays down the length of terms of office, appointment and dismissal criteria of institution directors, funding arrangements, and so on.

Similarly, for both sets of institution, great care is needed to ensure proper procedures. Proper governance arrangements require effective accountability and this, in turn, requires transparent procedures. Gordon Brown argues (rightly) that “stability should be built on a foundation of credible objectives rather than fixed relationships and on well-understood procedures within which judgements can be made and openly explained rather than relying on decisions made behind closed doors” (Brown 2001, pC35, our emphasis). What is required is institutions that provide limited and accountable discretion within a clear policy framework. We reject the argument that ICBs or agencies are more successful if their operations are totally rule-based and have little or minimal discretion.

Both theoretical and empirical research on central banks suggest strong potential benefits from well-founded regulatory arrangements with proper and transparent procedures that will support limited and accountable discretion. Even in the US, utility regulation is much more recent than central banking and in other countries it is a phenomenon only of the last two decades. The next task is to define and estimate the benefits of successful independent regulation, in practice, in the field of utility services.

**References**


