2001 Annual Forum

at Misty Hills, Muldersdrift

The Design and Performance of Regulatory Agencies: What can South Africa Learn from the Brazilian Experience?

Andrea Goldstein

OECD Development Centre – Paris

and

José Claudio Linhares Pires

BNDES – Rio de Janeiro

THE DESIGN AND PERFORMANCE OF REGULATORY AGENCIES: WHAT CAN SOUTH AFRICA LEARN FROM THE BRAZILIAN EXPERIENCE?

Andrea Goldstein (OECD Development Centre – Paris) and
José Claudio Linhares Pires (BNDES – Rio de Janeiro)

To be presented at the TIPS Annual Forum, 10-12 September 2001. We thank Sally Van Siclen and Stephen Yeo for useful comments on earlier versions; the usual caveats apply.

I. Introduction

In recent years, dozens of OECD and non-OECD countries have followed the United States in establishing strong autonomous regulatory institutions empowered with regulatory instruments and financial independence. Flexibility and agility are required to implement ad hoc policies through regulations, resolutions, and decrees. Their special status also responds to the need to operate efficiently in an environment characterized by technical complexity leading to a rise in the number of interested stakeholders; arbitrage conflicts and potential clash of interests with other government bodies; and the risk of regulatory capture, since the agencies repeatedly interact with a reduced number of private firms. They enjoy a quasi-judicial status, but unlike the judiciary which applies the law to facts, they are required to balance the interests of different stakeholders, and promote the development of the sector. The existence of these institutions is deemed necessary to make the regulatory framework credible and transparent and thus allow the mobilization of private investment on the scale required. Where the functions of owner, operator, and regulator of public utilities were previously carried out by government in its different manifestations (including state-owned monopolies), the new market-friendly environment requires a number of institutional changes with a view to separating and more clearly defining responsibilities for policy and planning, regulation, and service provision.

Latin America has been at the forefront of this trends, and indeed the need to carefully analyze what happens on the other side of the Southern Atlantic had already been identified by Alexander and Estache at the 1999 TIPS Forum. In this paper we wish to go a step forward with respect to the useful, but still rather general, issues raised on that occasion by examining the performance of Brazilian regulatory agencies in selected infra-structure sectors – electricity (Aneel), natural gas and oil (Anp) and telecommunications (Anatel) – in view of making policy proposals to improve the design and functioning of similar regulatory bodies in South Africa.[1] Following Spiller (1993), "it is only through detailed analysis of the economic and political implications of the privatization experiences that we may obtain insights about the role different institutions have in determining the performance of the regulatory and ownership reforms" (p. 388).

In order to set a framework to anayze the performance of regulatory agencies, in the next Section we distinguish between regulatory governance and regulatory incentives (Levy and Spiller 1994). In Section III we sketch the main characteristics of the Brazilian regulatory experience and study the agencies' relationship with other government bodies and state-level regulatory bodies, and in Section IV analyze the agencies' most important decisions and draw some policy implications. The following Sections identify the main challenges open to South Africa in this domain and conclude.

[1] Despite cultural differences and the pervasively British character of its political, commercial, and legal institutions, in terms of income levels and distribution South Africa has more in common with the large industrialized countries of Latin America (especially Brazil) than it has with any other emerging region. In both countries the big business scene has been dominated by closely-controlled private groups and state-owned enterprises, although mining still accounts for a far larger share of GDP in South Africa. Similarities wear a bit thinner when it comes to monetary and fiscal policy and macroeconomic stability.

II. A General Framework to Assess Utilities' Regulation

Utilities differ from other (formerly) state-owned firms because they have natural monopoly components, so that the welfare benefits of transferring ownership to a private investor may not be big if this continues to act as a monopolist: "it is an essential truth that trading a public monopolist for its unregulated private equivalent is not guaranteed to enhance either the enterprise's efficiency or the government's chances of being kept in office by satisfied consumers" (Galal *et al.* 1994, p. 579). This is why it is argued that privatization must be accompanied by regulatory reform and that – because of the nature of the services supplied by the utilities (assets' specificity and non tradability) – this process hinges on the (prior or simultaneous) development of safeguarding institutions (Spiller 1993). These must improve *regulatory governance*, signaling policy-makers' commitment not to engage in opportunistic behavior and reassuring potential and actual investors against the risk of administrative expropriation of their assets. This reduces the regulatory risk and premia on financial markets. Specific norms on issues such as market structure, tariffs, and interconnection rules constitute the *regulatory incentives*. The combination of governance and incentives constitutes the *regulatory regime*.

Those with a significant interest in a decision incur costs when negotiating the amelioration of a market failure, so regulation is best viewed as a contracting problem. Political and social institutions not only affect the ability to restrain administrative action, but also have an independent impact on the type of regulation that can be implemented, and hence on the appropriate balance between commitment and flexibility. In particular, to complement regulatory procedures in a welfare-enhancing way, three mechanisms restraining arbitrary administrative action must be in place (Levy and Spiller 1994): a) substantive restraints on the discretion of the regulator; b) formal or informal constraints on changing the regulatory system; and c) institutions that enforce the above formal – substantive or procedural – constraints.

These principles are relatively general. All around the world, issues in the reform of regulatory governance include the designation of regulatory authorities, the definition of their powers, of guarantees against unmotivated removal, and of financial autonomy, the choice of the tariff-setting formula, the fora to arbitrate controversies, and the role of the existing antitrust authority in monitoring access to networks and competition in the liberalized markets. In developing countries, agencies may be more permeable to the temptation of kick-backs, as the state is weak and civil servants' salaries are often low in absolute terms and always lower than in regulated firms. The recipe is therefore rather simple: introduce meritocratic recruitment and pay competitive salaries. A final issue concerns the degree of discretion. While clear mandates which specify limits, either through licenses or through legislation, may reduce the risk of expropriation, rules such as price caps and incentive schemes demand some flexibility in order to adapt to ever-changing technology and demand circumstances.

There is then an important trade-off between constraining discretion and retaining the flexibility to pursue efficiency and other goals. Countries like Brazil and South Africa have weak judicial systems. Thus, unless the country's institutions allow for the separation of arbitrariness from useful regulatory discretion, systems that grant too much administrative discretion may underperform in terms of investment and welfare.[2] Smith (1997b) argues

[2] A somehow mirror problem may occur when the agencies take the "opportunity to engage in "shirking" – consciously failing to pursue the policy objectives that elected political leaders would desire" (Noll 1989, p. 1277).

that the allocation of responsibilities between agencies and ministries should be decided on the basis of four factors: a) whether political or technical criteria should be given priority; (b) whether significant conflicts of interest may raise by sharing responsibilities; (c) whether there are learning-by-doing effects and economies of scope that may favor concentration of responsibilities; and (d) whether political authorities have confidence in the agency (or more in general in agencies as a "general-purpose institutional technology").

The discussion so far has hinted at the importance of a "transaction costs political economy" which would give an active and central role to institutional design (Estache and Martimort 2000). The normative and positive agenda, however, should not be limited to the "depoliticization" of the economy by strengthening the rules on bureaucratic conduct and setting up independent agencies (Chang 2002).[3] In the public domain individuals have motivations other then pure self-seeking and regulatory processes are indeed highly idiosyncratic. As Smith (1997a) put it, "persons appointed to these positions must have personal qualities to resist improper pressures and inducements. And they must exercise their authority with skill to win the respect of key stakeholders, enhance the legitimacy of their role and decisions, and build a constituency for their independence". Equally important, the structure of rights and obligations that underlie markets are political constructs and result from political struggles. In other words, by design markets cannot be free from politics, and arguing otherwise in order to establish a-political institutions is not very useful.

III. A General Overview of the Brazilian Regulatory Experience[4]

III.a. Before Privatisation

The main corporate actors in both telecommunications and electricity were listed holding companies where the federal government owned the majority of voting stocks and monitored by regulatory departments within the relevant ministries. The pre-privatisation regulatory regime, by giving federal holdings planning and policy execution responsibilities, clearly blurred the relationship between the regulator and the regulated, allowing a high degree of discretion in the exercise of monopoly power. Moreover, competencies were split among several bodies and the practice of hiring the bureaucracy from SOEs also did little to foster the development of independent and autonomous capacities. Tariff decisions were often subordinated to macroeconomic or social policy objectives, such as inflation control or equity considerations. None of these objectives was achieved, but long-run inefficiencies have been inserted. Moreover, while Brazil has had a competition law since 1962, CADE's action remained subdued for many years and the modern era in competition policy in the country only began in 1994, when a new competition law was enacted, granting independence to CADE.

The Brazilian electricity system is characterized by very high dependence on hydro sources, the lack of a national transmission system, and the market power exercised by vertically integrated utilities in some states. The single nation-wide uniform tariff and the system of compensation (CRC) to equalize price and cost differentials, amounted in practice to a rate-of-return regulation, discouraging managers from seeking higher efficiency, since any benefits had to be passed on to other utilities. Short of retained

[3] "Economic ideas, even if Pareto optimal, are never 'innocent' objective schemes devoid of distributions of gain and pain affecting the sponsors" (Jacobsen 1995, p. 288).

[4] Sections III and IV and fully based on Goldstein and Pires (2001), to which the interested reader is directed for more detailed analyses and bibliographic references.

earnings or government-provided finance, investments failed to meet the new needs of the country and ensure maintenance of existing assets; the nuclear energy program failed to generate the expected benefits; and transmission losses passed from 13 per cent in 1990 to more than 16 per cent in 1996.

In the gas and oil sector, nationalism and the desire to reach self-sufficiency led to the creation of Petrobrás – a vertically-integrated state-owned corporation – in 1953. In the oil business, Petrobrás's investment efforts were often curtailed by fiscal deficits and inflation controls, at least until the Gulf War stimulated new investment in exploration and production. The gas market has remained very underdeveloped. Petrobrás controls every segment of the chain, except the downstream business where state utilities (sometimes in partnership with Petrobrás itself) have regional monopoly power.

In telecommunications, Brazil lagged behind the rest of Latin America in terms of access lines in service, digitalization, lines per employee, and quality of service. The system favored the middle class relative to both business users and the lower class: subscribers were heavily concentrated in urban areas, the backlog for obtaining a new line was so long that a black secondary market had developed, and sizable cross-subsidization continued despite some rate rebalancing since the early 1990s.

III.b. The New Regulatory Compact: Incentives and Governance

Regulatory incentives are clearly different in the three industries under examination. In telecommunications, long negotiations preceeded the final approval of the General Telecommunication Law (LGT, which does not cover cable TV nor radio broadcasting) in 1997. First, Telebrás system was completely reorganized by grouping the 27 operators in three separate holdings; by carving up mobile telephony in nine regional A-band operators competing with B-band private concession-holders; and by establishing the long-distance carrier Embratel as a separate holding. Second, successors companies are expected to attend the Universalization Plan, that calls for increasing wireline lines by 89 per cent (by 2001) and wireless lines by 148 per cent (by 2003). Third, the mechanism for differentiated sharing of long-distance revenue between Embratel and the operators of individual states was replaced by a tariff-based interconnection one for long-distance calls.[5] Fourth, an RPI-X formula was decided. For the tariffs of wireline companies, the X-factor is equal to zero for the 1998-2002 period, but equal to 10 for interconnection charges, in order to allow new competitors (the concessionaires of so-called mirror, or *espelho*, licenses) to challenge the incumbent. The Telebrás system was sold very successfully in July 1998. Two *espelho* local concessions were then granted on 14 January 1999 to compete with the former Telebrás holdings until 2002, when entry into the Brazilian telecoms market will be unrestricted.[6] July 1999 saw the launching of the multi-carrier system that allows consumers to choose their long-distance carrier.

The 1993 electricity reform eliminated the CRC, allowing individual companies to set their own prices conditional upon approval by the regulatory entity, and created a transmission system (SINTREL) to unify the national grid and provide open access to all suppliers.[7] In September 1997 a report commissioned by the government to an international consultancy

[5] ANATEL has established a rate per minute, plus an additional temporary surcharge (PAT) per minute, that will be abolished in 2002.

[6] In August 2000 Anatel awarded the first *espelhinho* concessions, to offer fixed telecom services in 413 municipalities not served by the *espelhos*.

[7] Sintrel has never worked in practice because state concessionaires opposed it and transmission tariffs were not defined.

recommended some standard measures for electricity privatisation, such as gradual unbundling of Eletrobrás's assets, creation of a wholesale power market, and operation of the transmission network by an independent operator (possibly to remain state-owned). Except for the Angra nuclear reactors and for Brazil's stake in Itaipú, the federal government sought to privatize all generation and distribution companies – an objective that it has largely fulfilled although with one important exception. Following the introduction of rules on unbundling and on access to the transmission network, industrial users with consumption in excess of 10 MWh (3 MWh since mid-2000) can buy on the recently-established wholesale market (*Mercado Atacadista de Energia Elétrica*, MAE) where short-term electricity transactions not covered by bilateral contract take place. New investment in hydroelectric and thermoelectric generation is governed at the federal level by the concession regime, while entry regulation in gas distribution, also through concession, is a state responsibility. For technological reasons, however, market competition in electricity finds its limit in the need to assure centralized coordination (planning and dispatch order). So, even in this more competitive setting, the MAE remains subject to the decisions of the National System Operator (*Operador Nacional do Sistema Elétrico*, ONS), a private non-profit body in charge of co-ordinating and controlling the operation of electricity generation and transmission facilities.

Finally, in the case of oil, where prices and quantities already responded to (international) market signals, the government strategy in the 1990s has been to cautiously open up new exploration opportunities to private participants, usually in partnership with Petrobrás, whose state-owned status remains unquestioned.[8] The situation is more complex in the case of gas. Transportadora Brasileira Gasoduto Brasil-Bolívia (TBG), the Petrobrás subsidiary that operates the pipeline, maintains long-term contracts (20 years) with separate clauses to determine dollar prices for gas and to index readjustments on the variation of oil prices on the world market. Gaspetro uses a mix prices between domestic gas and imported gas (80 and 20 per cent respectively) and defines a dollar price for gas distributors. Increases in the price of gas are passed through by distributors, who define a overhead before charging the final consumers.

As far as regulatory governance is concerned, three new independent bodies have been created (Annex Tables A1-A4).[9] A positive feature is the fact that the regulatory regime is embodied in laws, thus making it more difficult to change it without a debate in Congress. The law-making process itself, however, substantially watered down the government's initial propositions, regarding for instance the regulators' ability to access information, provide firms with efficiency-enhancing incentives, and institute safeguarding mechanisms to protect against expropriation. Moreover, as will be made explicit below, the decision to create two separate agencies for the energy sector has created serious inefficiencies, especially insofar as it has contradicted the goal of increasing the use of gas. Finally, only Aneel has signed a management contract detailing its operational targets.

[8] While the government must hold, by law, a controlling majority in the company, it reduced its stake from 81.7 per cent to 55 per cent in August 2000 in the first privatization specifically targeted at retail investors.

[9] Seven state-level multi-utility agencies have also been set up and the National Water Agency (ANA) was instituted in July 2000.

IV. An Early Appraisal

The previous sections have shown the large steps taken in the second half of the 1990s in reducing the role of the state in the Brazilian economy, the scrupulous adoption of the lessons from the international experience concerning the design of the regulatory agencies, and the institutional and political conditions that have surrounded the whole process. In Goldstein and Pires (2001), we have analyzed the regulators' behavior on the basis of their ten most important decisions (Table 1). Our paper differs from other approaches in that we do not compare the reality to some normative framework, but rather we derive policy-relevant implications from the analysis of actual behaviors.

While performing a beauty contest is not among the goals of this paper, it is fair to conclude that Brazil has not done worse than its peers. Simple indicators such as price, quantity, and quality of services, as well as financial results and productive efficiency, all show across-the-board improvements.[10] In general our analysis shows that the governance of the agencies has been conducive to welfare-enhancing decisions, despite some difficulties related to deficiencies in the incentive set-up.

Of course this does not mean that all is well in Brazil. There are three main problems:
a) insufficient coordination between different agencies;
b) unclear definition of their respective competencies;
c) lack of regulatory sovereignty.

First, political infighting and lack of coordination between energy authorities have inhibited private sector investment and, as we write this paper, the country faces its worst energy crisis in decades, with serious consequences on short-term economic prospects and possibly on the medium-term sustainability of reforms. The sixth event in Table 1 – the decision taken by Aneel on 20 April 2001 to take control of the MAE in order to "increase the flexibility of negotiations in the electricity market, preserve competition, support investments to expand supply, and defend the public interest" – does indeed deserve some more attention. Since its establishment, the operation of MAE has been marred by the conflicting interests of the state as regulator and producer and the vague definition of the enforcement regime for penalties. Regarding the first factor, as the federal government owns the main generators, in practice it has failed to signal to other industry participants that it was expecting such companies to respond to the same pressures. When Aneel fined Furnas US$ 240 million for its failure to respect an agreement with MAE to supply power generated at the Angra II nuclear plant, the company refused to comply. The second factor relates to flaws in MAE's governance structure, based shared management by agents that intervene on the pool market at different stages. In this regard Brazil seems to share many problems with California. According to Besant-Jones and Tenenbaum (2001: pp. 12-8):

> "the market and system operator must be genuinely independent in ownership and decision-making from market participants (generators, distributors, retail and wholesale suppliers and final customers). The governance system in California resembled a mini-legislature and […] suggests four lessons. First, the board cannot be too large or it will be ineffective as a decision making body. Second, the voting rules must ensure that one or two classes cannot control the board's decisions. Third, the regulator must be

[10] See data on http://www.bndes.gov.br/pndnew/palestra/priv2002.exe. An important qualification, however, is that competition in local fixed phone services is still minimal, because the "mirror firms" have found it difficult to challenge the incumbents.

able to step in and make a decision if the board is deadlocked. Fourth, consumer representatives or advocates should be viewed as market participants".

The intervention has brought about three key changes:

a) the MAE's Executive Committee (Coex), a collegiate body, has been suppressed and substituted by the *Conselho do Mercado Atacadista de Energia* (Comae), managed professionally;[11]
b) guarantees and penalties have been set for trading energy on the MAE, with an upper limit set at 10 per cent of a firm's total turnover; and
c) the Asmae, which was previously an independent and self-regulated institution, is now regulated and supervised by Aneel.

In May 2001, as the energy crisis worsened, the Comitê de Gestão da Crise de Energia (CGE), chaired by Pedro Parente, President Cardoso's Chief of Staff, was established.[12] As shown by the high number of resolutions approved (15 in the month to 15 June), the CGE has proven rather efficient in taking emergency measures to reduce consumption and increase supply – and has attracted positive comments from the business press.[13] By including a large number of ministries, departments, and government agencies, however, the CGE has effectively taken over most of Aneel's statutory responsibilities, such as setting the spot price on the MAE, marketing excess capacity produced by independent generators, and fixing objectives to curb consumption. Although the CGE is also responsible for decisions in the gas industry, Anp has been able to gain increasing power and credibility, at least indirectly at the expense of Aneel. So, while setting up the CGE has allowed to quickly issue some urgent measures, this still represents a imperfect form of intervention. Over the long term, enhancing policy coherence and credibility requires to return decision-making powers to the regulatory agencies, consolidate the sources of rule-making, and achieve higher coordination capabilities.

Second, it is necessary to better define each agency's competencies. There is an insufficient degree of institutional coordination between Aneel and Anp and the water agency, despite the fact that some important issues for the functioning of the electricity sector – such as the use of water rights or the structure of the gas industry – fall under the responsibility of such other bodies. The weakness of Aneel reflects its establishment when the restructuring process had already started, so that its legitimacy in dispute settlement and arbitration is contested. As most of Aneel's top management is formed by former DNAEE officials, the signal given to private investors is also that the crux of the regulatory game still concerns technical, legal, and operational issues, and not the creation of the economic incentives necessary to create a really competitive market. While more evident in the energy sector, the debate raging around the definition of the rules governing digital TV operations shows that as technologies and corporate strategies converge, Brazil needs a sort of focal point to negotiate with industrial and financial investors and set the rules over both media and telecommunications.

---

[11] Comae consists of six professional members, independent from market participants and subject to a quarantine obbligation upon expiration of their mandate. Consumers, producers, and Aneel appoint two members each. ONS and Asmae (Administradora de Serviços do MAE) each have one non-voting director.

[12] While the justifications of Aneels´s director general was the low level of rainfalls, the government instituted the Comissão de Gerenciamento da Racionalização da Oferta e do Consumo de Energia Elétrica (CGRE) on 18 April 2001, because the risks of muddling through increased. This was replaced by the CGE on 15 May 2001, at the same time as a special commission, chaired by the director-general of the National Water Agency (*Agência Nacional de Águas*, ANA), was set up to assign responsabilities for the crisis.

[13] "A inércia versus a eficiência da Câmara de Gestão", *Valor Econômico*, 12 June 2001.

Third, a constitutional amendment is required so that the decisions of the regulatory bodies can be made equal to the ruling of a first instance court. It is imperative to discipline the incentives that parties currently have to call the judiciary to step into the fray and delay business decisions.

Table 1. The main decisions taken by Brazilian regulatory agencies

Event	Type of contractual revision	Subjective evaluation of the decision	Adequacy of contractual design	Context in which the decision was taken	Visibility of the decision	Participation
ANATEL						
1. Share Sale	Intervention in the CRT´s board (20 June 2000 until 27 June 2001)	Right: Application of sector's law avoided market concentration	Adequate: applied LGT	Conflict of interest, judiciary appeals	Average	Industry, state and federal governments
2. Redefinition of mobile phone regulation	Anatel resolution Resolução nº 253 (21 December 2000)	Right: supported convergence	Adequate: applied the General Concession Plan	Conflict of interest between incumbent and challengers	High	Public hearings with industry participants
3. Interconnection rights	Anatel arbitrations (several between 1998 and 2001)	Right but insufficient: strong information asymmetry	Insufficient: the lack of reference tariffs made free negotation difficult	Conflict of interest between incumbent and challengers, judiciary appeals	Average	Anatel's Câmara de Arbitragem
ANEEL						
4. Escelsa's tariff revision	Aneel resolution nº 246 (3 August 2001)	Right: included productivity gains in pricing formula and started timid readjustement	Insufficient: the revision was not foreseen in the concession contract, thus risk of opportunism and *hold up*	Erosion of consumers' trust in the agency, black-outs in various parts of Brazil	High	Public hearings with industry participants and consumers
5. Pass-through of increases in distributors' non-controllable costs	Non-application of clause in the concession agreement (several between 1998 and 2001)	Wrong: created an hold-up problem that increased regulatory risk	Insufficient: the concession agreement does not clarify terms for pass-through	Erosion of investors' trust in the agency, inflationary pressures, intervention of Finance Ministry	High	Public hearings with industry participants and consumers, judiciary appeals

6. Intervention of the MAE	Aneel resolutions Nº 160, 161 and 162 (20 April 2001)	Right but overdue: overcome a deficiency in the model	Insufficient: MAE is a private concern	Energy crisis and erosion of investors' trust in the agency	High	Threat of judiciary appeals
ANP						
7. Exploration and production license tenders	Public tenders (June 1999, 2000, and 2001)	Right: boosted competition	Adequate, application of Oil Law	Conflict of interest between Petrobrás and challengers	High	Industry participants
8. Free access to the Bolivia-Brazil gas pipeline	Decision of the director-general based on decrees nº 8 (18 January 2001, 14 February 2001, and 16 April 2001)	Right but insufficient: unsustainable boost to competition	Insufficient: lacking a Gas Law, ruling does not remove entry barriers	Conflict of interest between Petrobrás and challengers	Average	Only interested parties (Enron, Gaspetro)
9. Withdrawal of licenses of fuel distributors	Anp resolution of 26 December 2000	Correct	Adequate	Conflict of interest between incumbents and challengers, protect consumers	Average	None
ANEEL/ANP						
10. Emergency measures to overcome the energy crisis	Resolutions of the Comitê de Gestão da Crise de Oferta de Eletricidade (21 between 16 May and 26 June 2001)	Necessary but far from perfect: trade-off between policy coordination and agencies' independence	Industry laws did not make it possible to ensure supply expansion and coordination	Various conflicts of interest	High	Government bodies, industry participants

Source: Goldstein and Pires (2001).

V. The Case of South Africa

The recent history of privatization and regulatory reform in South Africa cannot be gauged appropriately without referring to the country's peculiar history.[14] At the time of the democratic transition in 1994, the major parastatals were generally characterized by capital starvation, over-borrowing, bureaucratic inertia, and managerial stagnation (Ministry for Public Enterprises 1999). Penetration rates for basic utilities were (and still remain) low and racially-skewed. In 1997 there were just 4 telephones per 100 people in rural areas (Achterberg 2000) while in 1994/5 62 per cent of dwellings (almost 6 million homes) and 86 per cent of schools in South Africa were without electricity (Hansen 2000). Although electricity is currently among the world's cheapest, in Soweto about 20,000 electricity users a month are being disconnected, as Eskom tries to recover its unpaid bills and it is estimated that tariffs should increase between 22 per cent and 50 per cent to create a viable market.[15] Telecoms tariffs, on the other hand, are relatively high, in particular for new services like Internet lines whose lease is 15 times more expensive in Cape Town than in Los Angeles.[16]

The 1992 ANC's Policy Guidelines for a Democratic South Africa heralded the intention to introduce "anti-monopoly, anti-trust and merger policies in accordance with international norms and practices, to curb monopolies and continued domination of the economy by a minority within the white minority, and to promote greater efficiency in the private sector".[17] This mandate was made explicit by he new government's economic program – the RDP – which also mentions the systematic discouragement of the system of pyramidal companies where they lead to over-concentration of economic power and interlocking directorships. On the other hand, perhaps not surprisingly the RDP did not explicitly mention privatization, although it saw receipts from state divestiture as a way to fund its objectives and assigned some commitments to SOEs. The 1996 foreign exchange crisis compelled the government to adop a more orthodox economic plan – the GEAR – in which the scope for public sector restructuring program is much wider. In 1998 the government set up a National Empowerment Fund (Nef), where a portion of the shares of each privatized enterprise will go, in order to reduce political opposition to state divestiture. Nonetheless, there have only been two deals of some significance – the sale to strategic partners of equity stakes in Telkom (30 per cent) in 1997 and South African Airways (20 per cent) in 1999.[18] While there is a clear sense of continuity between the Mandela and the Mbeki

[14] Fox (2000) analyzes the challenges facing nations that use competition law for equality ends. She concludes that the South African competition law substantially fulfills the basic requirements of (1) clear legal rules and frameworks for analysis; (2) clear derogations from market-based rules; and (3) transparent decision-making and agency and limited court discretion.

[15] "Soweto power cuts to be challenged", *Mail and Guardian*, 6 April 2001 and "Crossed wires over policy and uplifment goals", *Financial Mail*, 22 June 2001.

[16] "Industry joins the Alec & Ivy show", *Financial Mail*, 15 June 2001.

[17] While competition policy was introduced in South Africa in 1955, it has been traditionally berated for its timidity to act decisively to combat market dominance by large firms. The issue of the concentration of economy-wide power in the hands of a few conglomerates, much more than the debate about competition policy *per se*, has taken center stage of the policy debate immediately after the end of apartheid.

[18] In November 2000 Metro Gas, the gas distribution company that serves 15,000 business and residential customers in the Johannesburg metropolitan area, was sold for R110 million. The new owners are expected to invest another R276 million in the facility over the next ten years. In addition to Metro Gas, Johannesburg has recently sold Rand Airport and the Johannesburg Sports Stadium. Much of the gas infrastructure is very old and urgently needs replacement or upgrading. The average age of pipes is 90 years, while most machinery is 50 years old (or more). A specific capital investment that will be required for Metro Gas is the conversion to gas of a higher calorific value (a measure of the heating capacity of gas). Another capital

governments, the latter in power since mid-1999, privatization seems to have recently attained a higher policy priority. The Public Finance Management Act, 1999 aims to secure transparency, accountability and sound management of public and semi-public institutions. The privatization of Telkom is planned for the fourth quarter of 2001.

The advance in the liberalization of the regulatory regime for public services has been timid – as shown in Table 2 – as government officials appear to be pulled by the equally anti-liberalization mermaids of default statist orientation and hope to maximize the fiscal revenue from selling Telkom. Regulatory responsibilities have only partially been located outside of the Ministries. The Minister of Posts and Telecommunications remains responsible for issuing the licences, although Satra has the right to take action against Telkom should it appear that it is giving undue preference to certain parties or causing undue discrimination. Further confusion was created in the discussion concerning the creation of Icasa. The executive proposed to retain the powers to appoint and remove commissioners and to allow regulatory decisions to stand even if improper interest is later established on the part of a councillor – although such ideas were both amended at a later stage.[19] The new telecoms policy announced in early 2001 by the Department of Communications favors limited competition for Telkom. The vague wording of the text has also raised concerns that government will run roughshod over the authority of the independent regulator. Government intends "granting" licences to state-owned companies like Sentech (which will receive a multimedia and international licence) and the second network operator "shall include" Esi-tel (the telecoms subsidiary of Eskom Enterprises) and Transtel (the telecoms division of Transnet). It has been criticized not only by the private sector but also by the Department of Trade and Industry, which argues that it is not supportive of the development of logistics and other knowledge-driven activities.[20]

The NER has also been beset by a number of problems, including allegations of financial mismanagement and human resources malpractice.[21] At the centre of the problems have been issues of governance, relating to the combination of the role of the chairman and the chief executive, the increasingly encroaching role of the board in management, and the fact that, when the regulator was set up in 1995, it was fully staffed by former employees of Eskom.

---

expenditure required almost immediately will be an environmental cleanup of the Metro Gas operation. In addition, normal maintenance had been deferred in recent years due to city budget constraints. A measure of the need for capital investment is the level of 'unaccounted-for-gas' – the difference between gas purchased and gas sold. Unaccounted-for-gas was nearly 30% of total gas at the time of sale.

[19] "New communications Bill amended", *Mail and Guardian*, 14 April 2000.

[20] "Now DTI stirs the Telkom pot", *Financial Mail*, 1 June 2001.

[21] "Time to regulate regulators", *Financial Mail*, 20 November 1998.

Table 2. Utilities Reform in South Africa

Components of reform	Electricity	Telecommunications
Unbundling	Establishment of six regional electricity distributors ("REDs"), controlled by Government and to which the electricity distribution assets of Eskom and the municipalities will be transferred, proposed in November 2000. Negotiation continues on the REDs' final form, which is closely linked to the implementation of the WET implementation. Eskom favors seven REDs.	The July 2001 policy directives require Telkom to allow the two new operators to use the existing infrastructure for two years.
Introducing competition	The 400+ local municipalities buy from the Eskom distribution network and are vertically integrated into the monopoly. Municipalities in many instances earn a margin on the supply of power and they are worried that transferring their assets to other entities could generate losses in excess of the annual R 2.4bn transfer from the Treasury. In December 2000, the NER (see below) approved the first licence for power generation by a private sector entity and a further two applications are currently pending. Some generation facilities are owned by municipalities.	Telkom received three 25-year licences, to provide public switched telecommunication services (PSTS) and value added network services, and to use the radio spectrum. The PSTS licence gives Telkom an exclusive privilege to supply local, national and international telephony for five years. If it meets 90 per cent of the roll-out and service quality targets it may win a sixth year of exclusivity. The other two licences permit competition to Telkom, although Telkom has exclusive rights in its allocated radio frequencies.
Ensuring equal access	Barriers to entry include access to transmission assets, targeted government subsidies, and delays in forming an integrated South African Power Pool (SAPP). The regulatory framework relating to distribution was due to be implemented on 1 April 2001. At this stage it seems unlikely that this target date will be met.	The Existing Numbering Plan was adopted in 1997. Interconnection guidelines providing fair pricing and service level agreements for new operators and service providers that need to hook into Telkom's network or lease its bandwidth were issued in June 1999 after many months of consultation with industry.
Regulatory agency	The National Electricity Regulator (NER) took over the functions of the Electricity Control Board. Directors are named by the Minister of Mineral & Energy Affairs, who also appoints the chief executive officer. The NER has to approve electricity price increases and it manages the Electrification Fund. In 2000 it rejected Eskom's application for a 7 per cent price increase, limiting it to 5.4 per cent.	The South African Telecommunications Regulatory Authority (Satra) was established in 1996, although key decisions are left to the discretion of the Minister. In July 2000, the Independent Broadcasting Authority (IBA) and Satra merged to form the Independent Communications Authority of South Africa (ICASA). Appointments are made by the President, on the advice of the parliamentary committee on communications which invites applications through a notice in the *Government Gazette*. Public hearings in respect of each candidate are held. The National Council of Provinces, which was involved in choosing the IBA and Satra councils, has now been excluded from the voting process.
Privatisation	The Eskom Amendment Bill, published for comment, proposes the conversion of Eskom from a statutory entity into a company under the Companies Act, 1973. There would be no privatisation of any part of Eskom until competition had been introduced to the market through the establishment of subsidiary generating companies. The latter could be sold at a later stage once the system was operating satisfactorily.	Strategic partners bought 30 per cent equity stakes in Telkom in 1997. Privatization is planned for the fourth quarter of 2001. Government could list between 14 per cent and 30 per cent on the Johannesburg Securities Exchange (and possibly in New York) and generate more than the targeted privatisation revenue for 2001. It will also broaden share ownership for black people in what will be the country's biggest retail share offering yet.

Government interference has also contributed to deprive the regulators of the time needed to gain credibility. The Minister revoked the telecoms interconnect and facilities-leasing guidelines, arguing that they were premature in view of Satra's merger with the IBA to form Icasa. This of course makes it easy for Telkom to deny bandwidth to value-added network firms it claimed were acting illegally.[22] In March 2001, the Pretoria High Court ruled that the Minister had no right to act in this way.[23] Satra also came under intense criticism for recommending for the third cellular license a bidder (Cell C) that had been ranked third by specialist reports.[24] Controversy surrounded the forced recusal of Satra's chair Nape Maepa on the basis of a remote and subsequently discredited connection with a shareholder in one of the bidder, a situation which left the supporters of Cell C in the majority.[25]

The point of course is not to second-guess the Satra's decision, rather to point to the lack of transparency that marred the agency's functioning and, more generally, hit the country's credibility *vis à vis* investors.[26] The new Independent Communications Authority of South Africa (Icasa) has introduced a code of conduct and ethics, which all staff will have to sign, which includes a register of gifts received and a requirement for disclosure of potential conflicts of interest. Yet many shortcomings remain in the governance set-up, as observed by Icasa's chairman in his presentation to the parliamentary portfolio committee on communications.[27] Government has yet to give the regulator the power, including financial autonomy, to do its job properly.[28] Icasa was not given enough time to comment "meaningfully" on the draft telecoms policy directives before they were gazetted.[29] And members of the executive have sometimes been unfortunate in their comments to the press.[30]

As observed in the discussion on the Brazilian case, a clear definition of the respective mandates of the regulatory agencies, on the one hand, and the antitrust commission, on the other, is a requirement for enhancing efficiency, transparency, and predictability. Although the 1998 Competition Act provides that it applies to all economic activity within or having an effect within South Africa, it makes a few specific exceptions, of which one is for "acts subject to or authorised by public regulation". The exception had originally been

---

[22] "Langa lays down the law for communications regulator", *Financial Mail*, 27 October 2000.

[23] "Court disconnects confusion regarding interconnection guidelines", *Business Report*, 23 March 2001.

[24] The Telecoms Act requires that the regulatory Authority is to adjudicate on the award of the licence, before making a final recommendation to the Minister of Communications. The consultants edexpress, among other reservations, a concern that Cell C will be dependent on huge sums of additional funding from its main shareholder, Saudi Oger, if it is to survive an initial period of insolvency. This section is based on various articles published by the *Mail and Guardian*, including "Cell C ownership controversy" (10 March 2000), "Cell C scored third with Satra" (24 March 2000), "Satra split over Cell C decision" (31 March 2000), and "Cell C not out of the woods yet (7 July 2000).

[25] Satra chairman Nape Maepa claims he was forced to recuse himself from the licensing process under pressure from the Minister and the Office of the President, and not because he had conceded any conflict of interest. The court subsequently ordered that Satra's recommendation be suspended, and the Minister interdicted from granting the licence to Cell C, until a full review of the adjudication process had occurred. In June 2001, Cell C announced a out-of-court settlement with Nextcom.

[26] The wife of a director of Nextcom, for exemple worked for Satra.

[27] "Langa and his not-so-merry band fear state shackles", *Financial Mail*, 20 April 2001.

[28] "Icasa's Resources Predicament Unresolved", *Business Day*, 16 May 2001.

[29] Government wants to invite applications for the second network operator (SNO) licence by July. But Icasa says it will be impossible to produce final regulations before 30 November if it is forced to publish draft regulations and then allow 90 days for public comment.

[30] "Icasa slams communications official over 'baseless claims'", *Business Report*, 18 May 2001.

created so as to avoid any possible disputes and conflicting rulings between public regulators who had jurisdiction in respect of the same matter, and the solution originally adopted in the Act was that the competition authorities should defer to the industry-specific regulator. Once created, however, the competition authorities decried their exclusion from matters involving competition policy in circumstances where they would, at most, be consulted. Consistency required an approach which recognised that, like the courts, industry-specific regulators would be ill-equipped to deal with issues of competition law and policy (Driver *et al.* 2000). Consequently the Competition Second Amendment Act of 2000 deleted the public regulation exception from the Act and provides for concurrent jurisdiction between the competition authorities and other regulatory authorities which have jurisdiction in respect of a prohibited practice or a merger.[31] The Act now requires that the manner in which concurrent jurisdiction is exercised must be managed, to the extent possible, in accordance with the provisions of co-operation agreements concluded between the relevant regulators. The Act also requires the various other industry-specific regulators to negotiate with the Competition Commission in order to conclude such agreements.

[31] The only exception to this concurrent jurisdiction rule exists in the case of mergers in the financial industry.

VI. Conclusions and Policy Implications

In this paper we have analyzed the performance of regulatory agencies in Brazil and South Africa from an institutional perspective. Discussing the conditions for establishing a "regulatory compact" requires a normative analysis – what is the content of norms and regulations in imperfectly competitive markets – as well as a institutional explication – under which conditions future public regulation can be made more effective than the direct state intervention of the past. Our perspective is informed by the idea that political institutions interact with regulatory processes and economic conditions in exacerbating or ameliorating the potential for administrative expropriation or manipulation, and hence determining the utilities' economic performance. In this concluding section we identify a number of messages that, while originally addressed to Brazilian policy-makers, are in all likelihood even more relevant in the context of a country, South Africa, that has a larger credibility gap to fill.

In Table 3 we synthesize the regulatory experiences of Brazil and three other countries. Three implications emerge from the international experience. First, that the success of the agencies in gaining autonomy and respect from the government, the regulated firms, and consumers strengthens the regulatory environment. Second, that this process takes time and that learning by doing effects are sizeable. Third, that, as suggested by Levy and Spiller (1994), commitment can be developed even in what are *prima facie* problematic environments – Brazil being of course an excellent demonstration in this sense – and that without such commitment long-term investment will not take place.

Change is precipitated by favourable political circumstances, but politics also explain the reform stalemate. In the case of Brazil, privatization only became a core component of the Real's reform package when the political benefits to the government outweighed the political costs, when those favoring reform controlled the levels of power (such as the legislature and the judiciary), and when investors, opponents and other groups who might otherwise derail the reform by refusing to go along deemed the reform credible. By and large, regulatory institutions were given the instruments to shore up their reputation, but we also identified the obstacles that still remain and that have to do with both regulatory governance – in particular the lack of coordination between different agencies and the limit on their jurisdiction resulting from the low legal status of the decisions – and regulatory incentives – in particular the lack of progress in the privatization of electricity generation.

South Africa has not faced the kind of macroeconomic crisis that Latin America has experienced – and maybe it is not casual that it has still to gain a modicum of regulatory credibility. On the other hand, different policy goals – keeping the macroeconomic situation under control, favoring FDI, improving services for black communities, and enhancing black empowerment – have clearly proved inconsistent, putting additional pressure on the regulatory game. As noted by Cassim (2001), South African regulators "face the difficult task of balancing return ratios to encourage new investment in upgrading technology and delivery with providing infrastructure to less profitable market segments and improving service delivery". For this reason the costs of suboptimal regulatory governance – to take just an example, the fact that Satra, the IBA, and the NER have all been besmirched by internal infighting and allegations of political interference – are huge in terms of policy credibility. Government must address these perceptions and design more hands-off policies. Regulators, in particular, should be adequately funded and councillors well paid, of exemplary standing, and experienced in the areas they work in.

Table 3. A summary view to assess regulatory agencies in selected countries

	Argentina	**Brazil**	**Italy**	**United Kingdom**
Institutional endowment and regulatory design	While politicians have largely relinquished control on macroeconomic policy by adopting the currency board, they have kept discretionary powers in utilities' regulation	Neutral effect, although the judiciary may impact negatively on the performance of the agencies	Strong resistence by Parliament and the judiciary to the institution of independent authorities, governments in favor but weak	Supportive, although the choice of individual, rather than collegiate, regulators has been criticized
Regulatory governance	High degree of specificity of the contractual arrangement has made regulation individualized and politicized	Agencies have generally abode by the spirit of the respective industry laws; uneven development of due process procedures; the debate on how to improve accountability is still in its infancy; lack of coordination between electricity and oil/gas regulators	The media regulator has dual responsibilities for telecoms and television and its cumbersome structure resuls in politicization of decisions; its procedures are rather murky, while those of the gas and electricity agency are very transparent	Excessive discretion has not encouraged consistency between regulators and the adherence to common principles in addressing core issues; the Monopolies and Mergers Commission has reinforced the regulators' discretion rather than constrained it
Regulatory incentives	The very generous conditions granted in some cases (telecoms and water in particular) are making it difficult to open up markets; the risk of renaging on signed contracts outweigh the possible benefits; the energy wholesale market is highly competitive	Competition has been introduced to the largest possible degree in telecoms, while the costs of the delayed sell-off of generators are proving sizeable	In electricity and gas the very limited dilution of state ownership in the integrated incumbents is delaying the introduction of competition; some asymmetrical competition in telecom, although the privatized incumbent still has more than 90 per cent of the market	Achieving the current large degree of competition has required continuous adaptations (e.g., duopoly review in telecoms, British gas demerger); the RPI-X approach has resulted in excessive costs of capital and has tended to benefit investors over consumers

Source: Goldstein and Pires (2001).

Bibliography

Abdala, Manuel (1999), (2000), "Institutional Roots of Post-Privatization Regulatory Outcomes", *Telecom Development*, Vol. 24, Nos. 8/9.

Achterberg, Rossana (2000), "Competition policy and regulation: a case study of telecommunications", *Development South Africa*, Vol. 17, No. 3.

Alexander, Ian and Antonio Estache (2000), "Industry restructuring and regulation: building a base for sustainable growth", *Development South Africa*, Vol. 17, No. 3.

Almeida, Maria Hermínia Tavares de (1999), "Negociando a Reforma: A Privatização de Empresas Públicas no Brasil", *Dados*, Vol. 42, No. 3.

Artana, Daniel, Fernando Navajas and Santiago Urbiztondo (1998), "Regulation and Contractual Adaptation in Public Utilities: The Case of Argentina", Inter-American Development Bank, IFM –115.

Besant-Jones, John E. and Bernard W. Tenenbaum (2001), "The California Experience with Power Sector Reform: Lessons for Developing Countries", The World Bank, Energy and Mining Sector Board, April.

Cassim, Rashad (2001), "The South African Economy, Growth and Regulation", Draft Note, TIPS.

Chang, Ha-Joon (2002), "Breaking the Mould: An Institutionalist Political Economy Alternative to the Neo-Liberal Theory of the Market and the State", *Cambridge Journal of Economics*, forthcoming.

Driver, Gareth, Pieter Steyn, Morne Van Der Merwe, Evert Van Eeden, and Jan Bouwman (2000), *Competition second amendment act no 39 of 2000*, Competition Werks.

Estache, Antonio and David Martimort (2000), "Transaction Costs, Politics, Regulatory Institutions, and Regulatory Outcomes", in *Regulatory Policy in Latin America: Post-Privatization Realities*, edited by Luigi Manzetti, Lynne Rienner.

Fox Eleanor M. (2000), "Equality, Discrimination, and Competition Law: Lessons from and for South Africa and Indonesia", *Harvard International Law Review*, Vol. 41, Number 2.

Galal, Ahmed ,Leroy Jones, Pankay Tandon and Ingo Vogelsang (1994), *Welfare Consequences of Selling Public Enterprises*, Oxford University Press.

Global Competition Review (2000), *Rating The Regulators*, available on-line at http://www.global-competition.com/rating/rtng_fs.htm.

Goldstein, Andrea and José Claudio Linhares Pires (2001), "Brazilian Regulatory Agencies: Early Appraisal and Looming Challenges", to be presented at the the Annual Conference of the International Society for New Institutional Economics, Berkeley, 13-15 September.

Hansen, Christopher (2000), "Regulatory change and competition in the South African electricity supply industry", *Development South Africa*, Vol. 17, No. 3.

Jacobsen, John (1995), "Much Ado about Ideas: The Cognitive Factor in Economic Policy", *World Politics*, Vol. 47, No. 2.

Levy, Brian and Pablo Spiller (1994), "The Institutional Foundations of Regulatory Commitment: a Comparative Analysis of Telecommunications Regulation", *Journal of Law, Economics and Organization*, Vol. 10, No. 2.

Majone, Giandomenico (1997), "From the Positive to the Regulatory State: Causes and Consequences of Changes in the Mode of Governance", *Journal of Public Policy*, Vol. 17, No. 2.

Noll, Roger (1989), "Economic Perspectives on the Politics of Regulation", in *Handbook of Industrial Organization*, Vol. II, edited by R. Schmalensee and R. Willing, Elsevier.

Smith, Warrick (1997a), "Utility Regulators: The Independence Debate", The World Bank, Public Policy for the Private Sector, *Viewpoint*, No. 127.

---- (1997b), "Utility Regulators: Roles and Responsibilities", The World Bank, Public Policy for the Private Sector, *Viewpoint*, No. 128.

---- (1997c), "Utility Regulators: Decisionmaking Structures, Resources, and Start-up Strategy", The World Bank, Public Policy for the Private Sector, *Viewpoint*, No. 129.

Spiller, Pablo (1993), "Institutions and Regulatory Commitment in Utilities' Privatization", *Industrial and Corporate Change*, Vol. 2, No. 3.

Table A1. Brazilian regulatory agencies: summary data

	ANATEL	ANEEL	ANP
Industry-wide regulation	Law 9472 (16 Jul 97)	Law 8987 (13 Feb 95)	Art. 177 of the Constitution
Founding legal act	Decree 2338 (7 Oct 97)	Law 9427 (26 Dec 96)	Law 9478 (6 Aug 97)
Estrutura Regimental	Decree 2455 (14 Jan 98)	Decree 2335 (6 Oct 97)	Decree 2455 (14 Jan 98)
Regimento Interno	Resolução 197 (16 Dec 99)	Portaria 349 (28 Dec 97)	Portaria 41 (15 Apr 98)
Management contract	No	2 Mar 98	No
Inauguration	5 Nov 97	2 Dec 97	16 Jan 98
Headquarter	Brasília	Brasília	Rio de Janeiro
Regional offices	In each state	No	Brasília, São Paulo, Salvador
Number of directors	Director-General + 4	Director-General + 4	Director-General + 4
Background of Director General	Renato Navarro Guerreiro: former Executive Secretary, Ministry of Telecommunications, and President of the Board of Directors, Telebrás.	José Mário Miranda Abdo: former Director-General, Departamento Nacional de Águas e Energia Elétrica.	David Zylbersztajn: Ph.D., Institut d'Economie et de Politique de l'Energie (Grenoble), former Energy Secretary, state of São Paulo
Number of employees *Of which graduates* *Of which temporary consultants* *Of which former civil servants*	No more than 1,496	No more than 325	No more than 657
Annual budget (R$ million) in 1999	278	106	
Source of funding	Telecom fiscalization tax (Fistel) + Budget Law	Electricity fiscalization tax + Budget Law	Concession fees + windfall gain tax + Budget Law

Source: Goldstein and Pires (2001).

Table A2. Statutory responsibilities of Brazilian regulatory agencies (regulatory incentives)

	ANATEL	ANEEL	ANP
Sector characteristics Type Extent of monopoly Extent of competition	Markets Fully competitive Favor new entrants through regulatory asymmetry	Markets Partiality competitive In transmission and distribution In generation and commercialization	State-owned enterprise and markets Vertically-integrated state monopoly Prospecting concessions, wholesale distribution
Granting of licences & concessions	No	Yes	Yes
Tariff setting (formula, frequency)	Price cap over a basket of services until 2001, although Anatel may grant permission to freely set tariffs.	Price cap in distribution, revenue cap in transmission. Annual adjustement + revision every 4 years.	Ministries of Finance and Mining/Energy (until 31 Dec 2001?). Gas tariffs are determined by state governments.
Contractual objectives Quality standards Investment targets Meeting demand needs	 Yes Yes Yes (universalization)	 Yes No Yes	 Yes Yes No
Contractual requirements Access to essential facility Universalization	 Free negotiation Yes	 Yes No	 Partiality No
Review of anticompetitive conduct	Control, prevent, and sanction anti-competitive behaviors, without infringing CADE's legal responsibilities.	Avoid the exercise of monopoly power through restrictions on market participation. No agent can a) control more than 20% of nationwide capacity or distribution (25-35% at the regional level) and b) have cross-ownership in generation and distribution in execss of 30%. Distribution companies can self-generate 30% of their own consumption.	Inform CADE and SDE about any indication of anti-competitive behaviors.

Source: Goldstein and Pires (2001).

Table A3. Formal safeguards of Brazilian regulatory agencies

	ANATEL	ANEEL	ANP
Legal mandate (freedom from ministerial control)	Yes	Yes	Yes
Criteria for appointment	No specific requirements, but rules to prevent conflict of interest	No specific requirements, but rules to prevent conflict of interest	No specific requirements, but rules to prevent conflict of interest
Appointment process	By the President of Brazil, following approval of his proposal by Senate	By the President of Brazil, following approval of his proposal by Senate	By the President of Brazil, following approval of his proposal by Senate
Staggering terms	No, except for the first Board	Yes	Yes
Length of mandate	5 years	4 years	4 years, renewable
Terms of removal	Upheld sentence or administratrive sanction	Unmotivated in the first four months only; motivated at any time (upheld sentence, administratrive sanction, unmotivated failure to comply with management contract)	Unmotivated
Quarantine	A former Director cannot make a complaint to the Agency on behalf of any actor for the 12 months following the end of the mandate	A former Director cannot work for any company in the electricity sector for the 12 months following the end of the mandate. During this period s/he remains an employee of the Agency.	A former Director cannot work for any company in the oil sector for the 12 months following the end of the mandate. During this period s/he remains an employee of the Agency.
Exemptions from civil service salary rules	Yes	Yes	Yes

Source: Goldstein and Pires (2001).

Table A4. Accountability of Brazilian regulatory agencies

	ANATEL	ANEEL	ANP
Transparency			
Open decision-making	Public hearings and sessions	Public hearings and sessions	Public hearings and sessions
Publication of proceedings	Yes	Yes (minutae)	Yes
Justification of decisions	No	No	No
Consultative/advisory boards	12-member Conselho Consultivo	No	No
Ouvidor	Yes	Yes	Yes
Appeal procedures	Agency, ordinary justice	Agency, ordinary justice	Agency, ordinary justice
Grounds of appeal (error of fact or of faw, incl failure to follow a required process)	Decisions have to pass through three levels of internal administrative justice	Decisions have to pass through three levels of internal administrative justice	Decisions have to pass through three levels of internal administrative justice
Scrutinity of the budget	No	No	No
Management contract	No	Yes	No
Scrutinity of conduct	Internal auditing, Congress (with General Accounting Office – Tribunal de Contas da União), ordinary citizens can appeal to justice	Internal auditing, Congress (with General Accounting Office – Tribunal de Contas da União), ordinary citizens can appeal to justice	Internal auditing, Congress (with General Accounting Office – Tribunal de Contas da União), ordinary citizens can appeal to justice

Source: Goldstein and Pires (2001).