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P A P E R S

## Administered Prices

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# Administered Prices

A report for National Treasury

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## Preface

*This report was prepared for National Treasury to support its assessment of administered prices in South Africa. The objective of the study was to assess the processes involved in setting prices in regulated industries. By evaluating the efficiency, effectiveness and analytical rigour of the regulatory processes involved in setting prices for the services involved, an assessment can be made of the likelihood that the resultant tariffs approach efficient levels. Volume I of the report sets out the main findings and recommendations with supporting information relating to the individual sectors included within the scope of the study provided in a summarised form. Volume II contains more detailed sectoral reports, covering individual review of the water, electricity, telecommunications, transport, health and education sectors.*

*The report does not offer a detailed quantitative assessment of the performance of the regulatory regime, and is largely based on in-depth interviews and documentary analysis. The authors would like to thank the interviewees for their cooperation and valuable insights. Although much care was taken to provide a correct reflection of the opinions expressed, the authors remain entirely responsible for any inaccuracies.*

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# ADMINISTERED PRICES

## *Executive Report*

### 1. INTRODUCTION

#### 1.1 Objectives

This report covers the findings and conclusions of a study carried out for National Treasury focusing on the price determination processes in several regulated sectors. The findings relate to a set of exercises commissioned by National Treasury, covering price determination in the telecommunications, water, electricity, health and education sectors.

The objective of the study was to assess the processes involved in setting prices South Africa. By evaluating the efficiency, effectiveness and analytical rigour of the regulatory processes involved in setting prices for the services involved, an assessment can be made of the likelihood that the resultant tariffs approach efficient levels.

In economic theory, efficient prices are defined as prices that approach marginal cost, which is the level achieved under – perfectly – competitive conditions. Economic regulation is generally introduced when market failures prevent effective competition and is aimed at mimicking the competitive conditions to steer prices towards efficient levels. Network industries such telecommunications, electricity, water and transport have a strong natural monopoly component, namely the grid or network, which generally cannot viably be duplicated, thereby constituting a market failure that justifies economic regulation. This said, the particular characteristics that result in market failure – strong economies of scale and consequent natural monopoly tendencies in key components of their overall activity chains – mean that ‘second best’ pricing structures will often be necessary. Thus the ‘best’ achievable ‘efficient’ cost-reflective prices in these sectors will necessarily represent a compromise given the need to mark up marginal cost prices in order to recover total costs.

The overall aim of the study was to evaluate the efficacy of the price determining processes that are in place for these important sectors and the issues that arise for the future regulation of these sectors in South Africa. Hence, this study does not attempt to assess the efficiency of the absolute price levels, but rather aims to assess whether the current regulatory processes are likely to result in efficient pricing.

If well-implemented, economic regulation should lead to efficient prices – in terms of both the overall level at which prices are set and of the relative structure of prices for different services or volumes of usage. Efficient pricing is not necessarily synonymous with price reduction – although well designed price control approaches will provide incentives for productive efficiency that *other things being equal* should result in lower costs and lower prices. But poor price administration procedures may also lead to prices that are inefficient because they are set, unsustainably, *below* a level that would

adequately reflect efficient costs. A key finding of this review is that administered price setting in SA can not, by and large, be expected to lead to efficient prices. A key, conclusion, however, is that the appropriate solution is not to substitute the existing systems with the blunt instrument of an across the board inflation cap, which would make matters worse, but to work to improve them so that they can function more effectively. The report includes conclusions and some preliminary recommendations for improvements to the current price determination processes.

The report focuses on the processes involved in determining prices, not the actual price levels themselves. An analysis of the institutional and procedural framework was complemented by an assessment of the practical forces impacting on price levels in an industry, which may or may not be captured in the official decision making framework. For example, public opinion may be an important effective ‘cap’ on prices of infrastructure services, although this force may not feature prominently in the regulatory framework. Likewise ministerial approval of tariffs could in practice entail anything from heavy-handed ministerial interference to a procedural ‘rubber-stamping’ mechanism.

It is important to note that the need for and effectiveness of price regulation depends to a large extent on factors exogenous to the price setting process, such as (i) sector structure and market design, including the degree of vertical or horizontal integration and the extent to which competition is encouraged where this is economically feasible; (ii) the ability of government to adequately control the behaviour of state-owned enterprises without regulation; and (iii) government policy objectives regarding the transport sectors, including social imperatives.

## 1.2 Scope

The study was prompted by several public statements regarding ‘administered prices’ by the Minister of Public Enterprises, the Minister of Finance, the Reserve Bank Governor and ANC MPs<sup>1</sup> between March and May 2002. In this public debate the term ‘administered prices’ related to all prices for services provided by state-owned enterprises or those regulated by organs of the state. The Minister of Public Enterprises, prompted by concerns expressed by the Reserve Bank Governor regarding the effect of rising administered prices, such as of electricity prices, on South Africa’s ability to meet its inflation targets, made several statements regarding price increases proposed by parastatals. Furthermore, in response to price hikes implemented by Eskom, Telkom and Spoornet, the Minister of Public Enterprises emphasised the need for a uniform approach to tariffs by parastatals to avoid placing government’s inflation targets in jeopardy. One of the options under consideration was including inflation targets or restraints on tariff increases in the shareholder compacts of state-owned enterprises. In addition to financial criteria, the shareholder compacts should stipulate development aspects, including investment plans and affirmative procurement.<sup>2</sup>

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<sup>1</sup> Ensor, Linda (2003), *State Considers Inflation target Limits on Tariff Increase*, Business Day 20 March 2003.

<sup>2</sup> Ensor, Linda (2003), *State Considers Inflation target Limits on Tariff Increase*, Business Day 20 March 2003.

The debate was extended to include public sector wages and suggestions of a universal cap on administered prices were raised. The Minister of Finance responded to this debate by placing on record that Government would not put a cap on administered prices or public sector wages as there were legitimate factors that had to be balanced against inflation targeting.<sup>3</sup> This study includes some consideration of such legitimate factors.

As the impact of other publicly provided services, such as health and education services which typically suffer from market failures, also have a large impact on disposable income and potentially on inflation, the spectrum of industries that were assessed in this study was widened to include these two sectors in addition to the electricity, water, telecommunications and transport sectors.<sup>4</sup> Although conventionally not considered a network industry, the question of control over prices in these sectors is an important one that falls within the ambit of the debate around administered prices.

### 1.3 Methodology

The report uses official documents and policy statements, complemented by extensive interviews with government officials, service providers and stakeholders. By its very nature, this report is a qualitative and unavoidably judgemental assessment of the price setting mechanisms in the transport sectors under review. The assessments contained in this document are based on the views expressed by sources holding divergent opinions but great care has been taken to produce a balanced view. All views expressed – as well as any inaccuracies - in this report remain entirely the responsibility of the authors.

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<sup>3</sup> Ensor, Linda (2003), *Inflation Goals not to Hamper Wage Rises*, Business Day 23 May 2003.

<sup>4</sup> The sectors under review differ from the composition of the ‘administered price index’ by Statistics South Africa, which includes a large petrol cost component in the transport weighting and which includes only public hospitals under health costs, not medical aid or medicines costs. In order to assess the sectors in a coherent manner, the regulatory approach for the *network* part of the industries was focussed on in this study. Thus, the transport section includes ports and aviation charges in addition to train tariffs.

## **2. OVERVIEW OF SECTORAL PRICE DETERMINATION**

### **2.1 Introduction**

As the price determining processes in each sector under review are more or less unique, this section will provide a short overview of the process in each sector, according to a set of common criteria. Firstly, the arrangements and procedures involved in the price-setting process are discussed, followed by a summary of the actual price control mechanisms in the sector. The arrangements and procedures include *inter alia* the market structure, regulatory framework and ministerial discretion, which together give an impression of the way in which prices are determined, e.g. whether by an independent regulator for a partially privatised public owned utility or by the state-owned entity subject to ministerial oversight. The price control mechanisms include a discussion of the methods used in determining tariffs, including the regulatory methodology, the use of benchmarking or performance monitoring and efficiency incentives. These mechanisms will give an indication of the analytical rigour which is employed in determining prices. Finally, the actual forces on prices in each sector are discussed and analysed.

### **2.2 Electricity**

#### **2.2.1 Background**

The regulatory framework for electricity prices is well-established, including an independent regulator with appropriate powers. However, the implementation of effective price regulation remains riddled with pitfalls, ranging from information asymmetries to institutional challenges. Although plans to introduce competition in electricity generation exist, the current monopolistic market structure places a heavy regulatory burden on the regulator.

The electricity supply industry (ESI) in South Africa remains organised along the lines of the traditional public monopoly model. Eskom (recently converted to a wholly state owned, limited company), produces 96% of power generated in South Africa, while large municipalities generate 1.3%, and a small number of private power producers generate 3.1%. Eskom also owns and operates the national high voltage transmission grid, which conveys electricity from Eskom power stations to the main load centres across the country. Currently Eskom holds 55% of the distribution and retail market in terms of energy supplied, while the remaining 45% of its energy is sold to Municipalities who retail it to other end-users.

The desirable organisation model for the overall electricity supply industry has been subject to much debate in the last decade. At present the Government policy position is to introduce competition into the sector by firstly separating Eskom Generation and Transmission and by selling off 30% of Eskom generation capacity, while the remainder of its power stations should be organised into competing clusters (albeit under one holding company) participating individually in the open power market. The distribution



industry will be restructured into a limited number of REDs. Large consumers and the REDS will purchase their wholesale power requirements in the market, or directly from the clusters. Studies are currently underway to identify the appropriate clustering and the appropriate market mechanisms.

## **2.2.2 Regulatory framework**

The ESI is regulated by the National Electricity Regulator, which licenses and thereby regulates all significant electricity generation, transmission, distribution, and retail activities in South Africa. The NER has a part-time Board appointed by the Minister of Minerals and Energy. The Board consists of a Chairperson, the Chief Executive Officer (full-time), and seven other members.

The key functions of the NER are inter alia: issue licences for generation, transmission, distribution and retail of electricity; determine electricity prices; settle disputes; and advise the Minister of Minerals and Energy on matters pertaining to the electricity supply industry. The NER and the Competition Commission have concurrent jurisdiction and the two parties have entered into a memorandum of agreement that governs behaviour in relevant cases.

## **2.2.3 Electricity prices in a historical context**

Eskom's investment history has been the dominant driver behind the changes in its price levels. In the 1980s Eskom embarked on a large power station construction programme, which turned out to be hugely excessive compared to demand growth. Eskom effectively had surplus generating capacity from the middle 1980s onwards and its reserve margin increased significantly during the 1980s and early 1990s as its construction programme expanded.

After the price increases during the late 1970s of up 30% and 45% in nominal terms per annum, nominal average increases during the 1980s of between 15% and 23% were commonplace. By increasing its price levels in the late 1970s and then maintaining these levels for the following ten years Eskom was able to contain its rapidly increasing debt levels before allowing prices to decline gradually as real debt levels were brought down to manageable levels. Although Eskom allowed real prices to reduce during the 1990s, it did not do so at the cost of its financial position.

This apparently contradictory result of both improving its financial position while reducing prices was made possible by it making the best of the 'bad situation' of: its huge over investments in the 1980s; its monopoly position, which enabled it to raise and maintain price levels when it was stranded with surplus capacity (the opposite would have happened in a competitive situation); and its dividend free and tax exempt status. Eskom was also assisted in this process by the fact that it did not pay the full economic opportunity cost of the debt finance employed to finance its investments. Government guarantees, open-ended Reserve Bank forward cover, and its monopoly position effectively shifted most of its business and financing risk on to consumers and the state. This meant that its borrowing costs did not reflect the economic opportunity costs (including the cost of the risk and uncertainty) of constructing new power stations.

## 2.2.4 Price reviews

Eskom's high price levels of the late 1970s and 1980s, were turned into a public relations triumph in the early 1990s, by announcing a pricing compact which would allow average prices to gradually reduce in real terms as Eskom's debt continued to decline in real terms.

After the NER's establishment in 1995, Eskom average price levels were thus declining in real terms, in accordance with its self-adopted pricing compact. This situation left the NER with essentially little to do with regard to Eskom price levels. Given that the NER was recently established and had limited resources, and that Eskom's prices were declining, Eskom's annual price adjustment application to the NER entailed a relatively minor decision-making process and was always accepted without major queries.

Currently the approach used by the NER to assess Eskom's average price increase application is focussed on considering the impact on Eskom's historic cost rate-of-return on nominal price levels relative to inflation. Due to severe skilled human resource constraints the NER is not able to produce these indicators independently. To date the NER has also not conducted an independent review of Eskom's cost items or of the asset valuations used to determine these indicators. This severely limits its ability to conduct an independent review of Eskom's application. Essentially the price review is determined by a process of structured negotiations between the NER and Eskom, most of which does not take place in the public view.

The NER has recognised the need for an established methodology for the regulation of Eskom's price levels and has developed a conventional rate of return methodology (ROR) which it proposes to use in the evaluation of Eskom and RED tariff increase applications. This method sets prices at a level that allows Eskom to recover all the expenditure that has been prudently incurred with the production and supply of electricity, plus a fair rate of return on its productive electricity supply assets. Although the principles of the methodology have influenced the NER's approach to regulating Eskom, it has not been implemented. The NER is currently undertaking further investigations, to adjust its regulatory approach and methodology.

It is important to realise the NER does not just approve average price levels (which are essential for cost recovery), but also approves tariff structures for the respective customer groups. This is a critical aspect of electricity pricing because it determines the balance between the cost reflectivity of prices (efficiency signals), the affordability of prices to the poor and rural consumers (including commercial farming), and the transfers from higher consuming households, commerce and industry to subsidies these. Cross-subsidisation in electricity tariffs exists at various levels, including inter-tariff cross-subsidisation (e.g. subsidisation of rural, electrification and domestic customers); intra-tariff cross-subsidisation and geographic cross-subsidies. The issue of cross subsidies and pricing efficiency is critical for the effective functioning of the system. While cross-subsidies are important for equity reasons they have to be weighed up against the extra costs imposed on the system as a result of the inefficiencies resulting from incorrect price signals.

### **2.2.5 Municipal tariffs**

At the time of the creation of the NER, it faced with the prospect of regulating more than 400 councils distributing electricity, this number has been reduced to 177 distributing electricity municipalities. Given the magnitude of the task and the NER's limited resources, its approach to regulating municipal distributors has been to attempt to rationalise tariff structures and reduce the disparities in price levels. The NER does not apply the rate of return methodology to local authority distributors, and neither has it been able to investigate their costs. The finances of local authority distributors are not ring-fenced from other municipal costs and significant revenue shifting is thought to occur.

Two objectives currently inform the NER's regulation of local authority price levels. The first is to harmonise price levels for distributors that are within the same size class. The second is to converge the price levels of distributors that will fall within the same proposed regional electricity distributor (RED). Essentially thus, the local authority distributors are subject to 'regulation by comparison'. Currently, 60% of the 177 municipalities supplying electricity have 'illegal' tariffs (tariffs that are not formally approved by the NER), highlighting the backlog in addressing municipal tariffs that the NER faces. Municipalities generally make substantial surpluses from their electricity distribution and retail activities, and even where formal surpluses are low, other municipal services typically benefit from shifting costs onto the electricity undertaking.

### **2.2.6 Pricing influences**

In practice, many factors have a direct or indirect bearing on Eskom's price levels. Some factors are a historical nature such as Eskom's investment and pricing history and its financial policies. The institutional and political pricing influences include not only the NER, which as independent regulator has final power of approval over Eskom's price levels and structures, but also the Ministers of Public Enterprises and of Finance.

The Minister of Public Enterprises is the representative of the State's shareholding in Eskom, appoints its board; and has an important direct influence on Eskom's pricing decisions. On several occasions in the recent past the Minister has also made public pronouncements concerning Eskom price levels, including a statement that Eskom would not be allowed to increase their price levels above inflation in 2004. Such direct political interference in the domain of the regulator creates significant political uncertainty about the government's respect for the role of independent regulatory processes. A more appropriate role for state as shareholder, in terms of financial matters, would be set Eskom's dividend policy. Although no formal relationship exists between Eskom's price setting process and the National Treasury, concerns regarding inflation and media statements by the Minister of Finance to that regard are of direct concern to Eskom and the NER.

The social objectives pursued by Eskom are also of importance as they affect prices to the extent that such services have to be subsidised from internal cash flows. The extent to which Eskom pursues social objectives is determined by its perspectives of what is politically required. Officially this is determined by guidance from the Department of Minerals and Energy through policy documents such as the White Paper on energy etc.

Lastly, a number of consumer groups directly reflect the interest of consumers with respect to Eskom price increases. The two primary groups are organised local government (AMEU/SALGA) and large industrial users, which are able to lobby or exert political pressure on Eskom, the NER and government in general regarding electricity prices.

## **2.2.7 Conclusions**

To date, NER has not yet implemented a robust approach to regulating Eskom prices. Until recently this has not been a significant problem as Eskom prices were falling in real terms, however, the NER is currently grappling with the challenge of avoiding allowing Eskom excessive free cash flows, while ensuring adequate incentives (including prices) for the investment in new capacity. While grappling with these challenges the NER aims to develop its regulatory approach and methodologies to improve its effectiveness for dealing with Eskom price increases. Its treatment of the increases for 2004 and 2005 over the next 18 months will demonstrate whether it has come to terms with this task. At present it is unlikely that the regulatory framework is consistently and forcefully driving electricity prices towards efficient levels.

It is clear from the discrepancy between the formal regulatory framework and the practical pricing influences that Government has not found a definite solution to its multiple roles as shareholder, and industrial and social policy maker; and reconcile this with the state's decisions to allocate economic regulatory functions to an independent regulator. Current role confusion potentially limits the effectiveness of this governance system.

The ESI is rapidly approaching the time when investment in new capacity will be required. Current Government vacillation on implementing the competitive market framework within which this was supposed to happen is creating significant uncertainty. It is also become an issue for the NER to consider in its approach to assessing Eskom's annual price increase application.

The best, and only sustainable way, of limiting inflationary pressures from the ESI is to accelerate institutional reforms aimed at increasing cost efficiency and service delivery levels. Given the capital intensity of these industries it is especially important that this framework creates appropriate incentives which, in the face of risk and uncertainty, encourages investment which is appropriately timed and technologically configured to provide the appropriate levels of service delivery at lowest possible cost.

These reforms have to be managed in such a way so that most cost savings are passed on to the economy in the form of lower prices. This is best achieved by aggressively promoting competition in the market for new capacity and in the market for wholesale power.

Eskom and municipal tariff structures should continually be moved closer to cost, including real-time costs, so as to impact on customer behaviour and delay further generation investment and encourage more efficient demand side adjustments and investments. While costs would be higher at peak times this strategy would limit the increases in average costs over the long-term.

## 2.3 Telecommunications

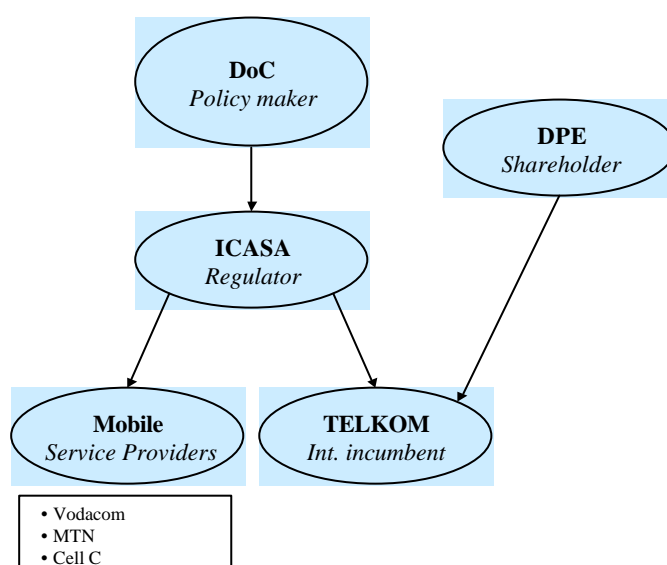
### 2.3.1 Institutional framework

Figure 1 summarises the main features of the telecommunications sector institutional framework pertinent to setting administered pricing.

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**Figure 1: Institutional framework for telecommunications price setting**

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### 2.3.2 Common issues

#### Regulatory Accounts

Regulatory accounts (Chart of Accounts and Cost Allocation Manual [COA/CAM]) should provide detailed cost information that is required by the regulator in setting both retail and wholesale price controls and in broader monitoring of price-setting behaviour.

While Telkom's is required to prepare regulatory accounts, the licence conditions provide extensive scope for Telkom to circumvent this requirement in practice. Under licence condition 8.4, Telkom is not required to prepare Regulatory Accounts "until it has put in place the necessary accounting and management information systems which will enable it to do so". While Telkom is required to put these in place by the fifth year of the licence (7 May 2002), it may escape this requirement if meeting it would impose an undue burden. The legislation therefore establishes a number of loopholes that Telkom has utilised to avoid the production of information that is crucial for retail price regulation, as well as interconnection and facilities leasing price regulation. Information asymmetry

will always tend to benefit incumbents in their dealings with regulators – the legal framework within which telecommunication regulation is conducted in South Africa significantly increases this imbalance.

Furthermore, there are strong incentives for Telkom to delay the development of the requisite systems as long as possible, because the next retail tariff review is only scheduled to take place once regulatory accounts are complete: ICASA recognises that reasonable price regulation for Telkom is not technically feasible without adequate information.

### **2.3.3 Market-specific issues**

#### **Regulation of retail PSTN tariffs (Telkom fixed line services)**

As part of the sector reform process, the 1996 Telecommunications Act empowered the Minister of Communications to determine the first rate regime– valid until May 2000. Subsequent to this, the sector regulator (SATRA, subsequently, ICASA) would propose new rate regimes subject, however, to final approval by the minister.

This arrangement provides scope for political intervention in what should in principle be a technical matter and lack of clear regulatory independence has encouraged some players to focus attention on lobbying the Minister to obtain favourable changes in the rate regime. This is particularly problematic given both the size and resources of the companies involved and the large state shareholding in these companies. The minister exercised [her] power to overturn ICASA's initial recommendation in the first, and to date only, rate review. Although following the government's sale of its stake in Telkom, this threat to regulatory independence may be somewhat reduced, is likely that the minister will remain the subject of intense lobbying from Telkom and other industry participants.

#### *Price administration to date*

##### *Initial Rate Regime*

The initial rate regime was a classic price cap mechanism, with the productivity factor (X) set at 1.5% for Telkom coupled with a maximum movement of 20% in real terms for any individual price. The cap excluded wholesale services (interconnection) and services where Telkom faced competition (customer premises equipment, value-added network services).

The choice of a price cap approach is in line with accepted best practice and was also considered more appropriate in view of the lack of either the detailed information or regulator expertise judged necessary to carry out effective cost of service (rate of return) regulation<sup>5</sup>. Given the lack of hard information on which to base a judgement about the appropriate productivity factor to include within the price cap formulation, it appears that it was established primarily through a process of negotiation between the Ministry and the

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<sup>5</sup> In fact it is arguable whether the informational demands of price cap regulation are any less than those of cost of service regulation. Based on this view, the real advantage of the price cap approach is the clearer and stronger incentive effects that result from its application.

operators. While the initial price cap seems relatively conservative by international standards, it should be seen in the context of:

- the considerable debt held by Telkom at the time and the need to place it on better financial footing;
- the need to attract a strategic equity partner; and
- the rollout targets and network upgrade obligations imposed on Telkom.

#### *The 2001 Telkom Rate Review*

ICASA began a review of the rate regime in December 2000 and published its findings in April 2001. The review process, which included significant scope for public consultation, was useful and succeeded in getting significant public feedback on the rate regime. A key conclusion from the public consultation was that the overall price cap approach should be maintained and concern was focused on the following areas:

- the vulnerability of residential customers to rate rebalancing;
- the appropriate productivity factor (the initial factor being considered too low).

Some additional protection for residential customers was put in place by introducing a residential sub-cap and continuing to limit the maximum real price increase for any single service. With regard to the productivity factor to be incorporated within the price cap, Telkom argued in favour of 0% because "it had already achieved virtually all efficiency improvements possible" and that its profitability as been reduced by the costs of the rollout targets in its licence. It further argued that rebalancing limits should reflect the ratio of local to long-distance prices in South Africa as compared with the equivalent ratio in liberalised markets.

ICASA eventually recommended a productivity factor of 5% p.a., based only on the equivalent factors at the time in place in the UK and Canadian regulatory regimes (5% and 5.5% respectively). The clear drawback with this approach is that it did not take into account specific Telkom data or national circumstances. It has been argued that, even without detailed regulatory accounting data, a productivity factor could have been derived from other available data sources – it seems likely that such an approach would have culminated in a significantly more stringent price cap proposal.

Following consultation, ICASA moderated the proposed productivity factor to 3%. In the event, the minister was not prepared to accept even this modified proposal and suggested the rate should be 1.5%. The delay in determining a price cap that resulted from this disagreement allowed Telkom to file new tariffs in the absence of any regulatory control. The increase achieved amounted to 1.1% in real terms. Despite eventual Ministerial approval of a price cap incorporating a 1.5% p.a. productivity factor (28 November 2001) Telkom persisted with its new tariffs, contending that the new regulations were invalid. In the subsequent out of court settlement in June 2002 Telkom was required to 'repay' consumers R320m over the following two years, an outcome that appears to be relatively favourable to the operator and to overall disbenefit of customers.

## **Mobile Cellular Retail Prices**

### *The Rate Regime*

The initial rate regime for the mobile operators was stipulated in their licences and as with PSTN involves a price cap formulation – in this case initially set at CPI-0%. The technical details of the tariff basket specification mean that it is extremely easy for mobile operators to evade even this relatively mild control, however. Community Service Phones operated by the mobile networks are regulated separately and all tariff increases must be approved by the regulator (even if the increase is below CPI). As with the PSTN, any review is to be conducted by ICASA but the Minister has final approval of recommended changes.

There has never been a formal rate review for the mobile cellular sector in the nine years that it has been operating. ICASA has argued that:

- the existence of competition in the sector limits the potential for operators to raise prices and that actual prices have fallen significantly in real terms over this period;
- tightening controls on mobile cellular prices would potentially harm the business prospects for the latest entrant, Cell C – applying differential controls to Vodacom and MTN, the two larger operators, would not necessarily be helpful since Cell C would in any case have to compete with them on price;
- the need to prioritise the use of scarce resources in ICASA.

Given that a fourth competitor might well be introduced in 2005, it is likely that ICASA may continue to leave mobile cellular prices to the market.

Analysis of experience in other markets internationally suggests that where there is a relatively small number of significant mobile operators, collusion may result in competition being ineffective as a constraint on pricing. Cell C remains a minor player in the South African market and currently continues to share facilities with Vodacom, limiting its effective independence from it. While real unit rates have decreased in SA, this has been significantly less than has been the case in some other markets internationally.

## **Wholesale Prices**

### *The Rate Regime*

The Minister initially established the interconnection guidelines for Telkom – to be in force until May 2000. Thereafter, ICASA was to determine interconnection fees and charges. The original Ministerial determination stated that "Telkom's interconnection charges shall be as soon as practicable be based on its long run incremental costs (LRIC)" but did not prescribe what Telkom should do in the meantime, preventing ICASA setting and enforcing interconnection price regulation until LRIC was feasible (these weaknesses were addressed in . Whilst interconnection agreements had to be lodged with ICASA and the regulator was to resolve any disputes, it lacked either data or any guiding framework within which to do this.



ICASA drafted interconnection guidelines in 1999 approved and gazetted by the Minister in March 2000. The guidelines set out the following principles for interconnection pricing:

- non-discriminatory treatment - interconnection rates and treatment must be the same for each interconnection seeker;
- charging structure to match cost structure - interconnection provider must separately price fixed once-off charges, periodic rental charges and variable charges for services;
- maximum charges - charges must not exceed retail charges for the provision of equivalent services;
- major operators of essential services - these operators must provide interconnection at LRIC to public operators (i.e. mobile operators and SNO and USAL in future), at no more than the best retail price less avoidable costs and no less than LRIC for service providers, and at no more than the retail charge for the provision of an equivalent service for private operators.

The guidelines however offered no alternative to LRIC pricing in the interval before issuance of the COA/CAM manuals.

While Telkom is defined as a major operators and therefore subject (in principle) to more stringent regulation, neither Vodacom nor MTN is so defined despite their predominance within the mobile telecommunications market. This means that there is very weak regulation of the wholesale rates at which other operators may terminate services on their networks.

Supplementary interconnection guidelines were issued in December 2002. These:

- stipulate an alternative approach to cost-based charges for major operators of essential facilities to apply in the transition to LRIC;
- require major operators to provide ICASA with a cost study and supporting documentation to allow the regulator to determine whether the rates applied do not exceed cost with ICASA able to set alternative interconnection rates if it is not satisfied with the case presented.

### *Facilities Leasing*

Facilities leasing regulations and their history mirror those of interconnection. The regulations determined by ICASA when they took over responsibility in 2000 are very closely modelled on those developed for interconnection.

To date there has not been a single regulatory review of interconnection prices. Prior to August 2002, ICASA was empowered to review these rates only in the event of a dispute – and there were no disputes. Since then no interconnection agreements have been filed with ICASA and it has consequently been unable to carry out the cost-based review that it is empowered to under the revised guidelines.

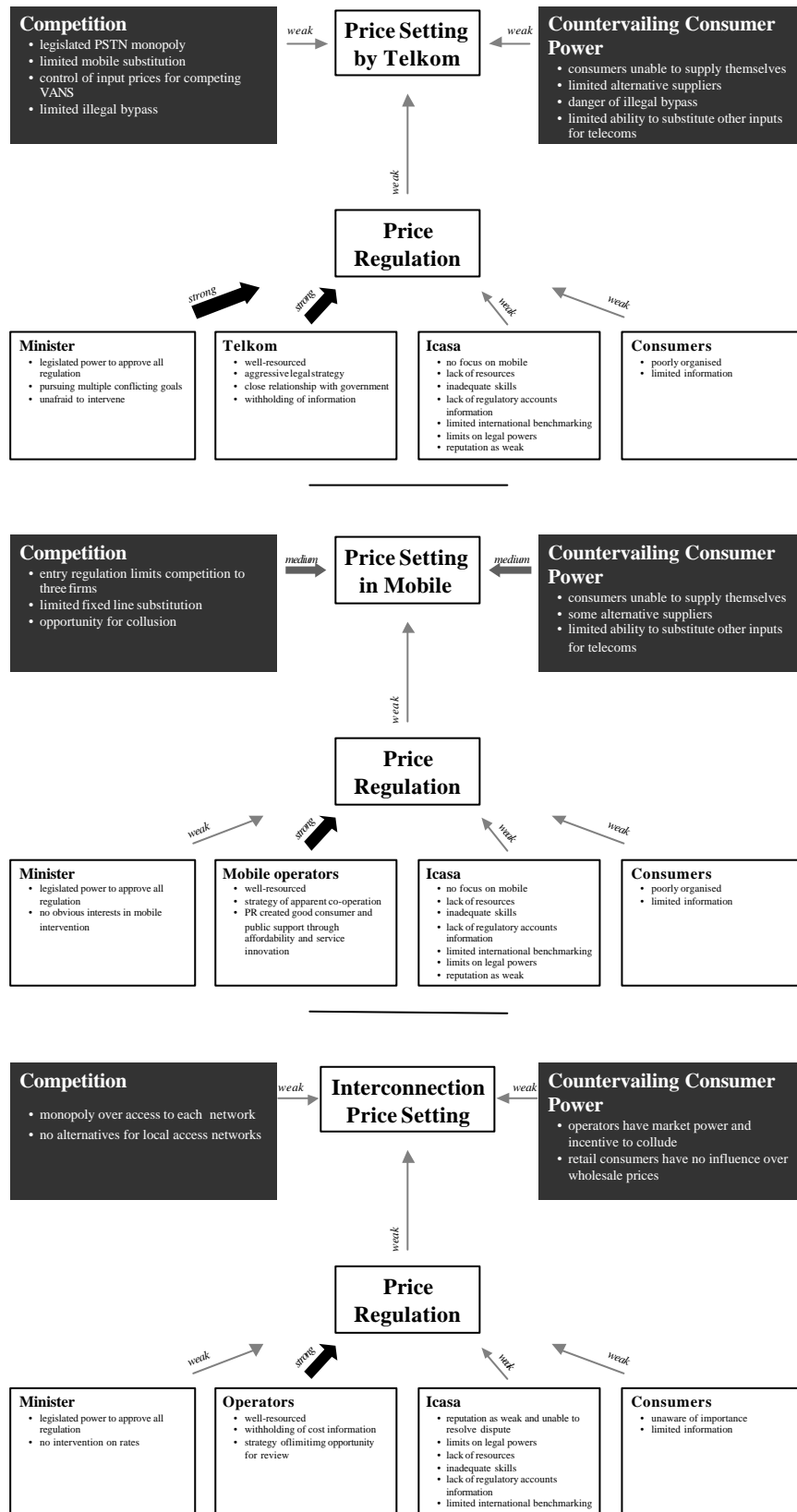
Telecommunications operators have strong incentives to collude in setting (higher) interconnection charges. They are able to increase the profits they earn from terminating

calls originating on other operators' networks while passing through additional interconnection costs to their own retail customers.

### **Influences on telecommunications pricing**

The mix of influences acting on the price setting process in respectively PSTN services, mobile cellular services and interconnection is summarised in Figure 2 below. It is notable that the influence of the operators tends to be strong in all cases while the impact of competition or countervailing consumer power is generally rather weak. Lack of powers, insufficient independence and lack of capacity currently limit the regulator's ability to act effectively to redress these imbalances.

**Figure 2: Influences on price setting in telecommunications**



### 2.3.4 Conclusions

It is clearly very unlikely that efficient prices will emerge from the current processes for setting administered prices in the telecommunications sector.

James Hodge's full telecommunications sector in Volume I of this report suggests a of potential measures to improve the efficiency of administered prices in telecommunications, that is to say the extent to which they are reflective of efficient costs and give appropriate signals to both consumers and producers of telecommunications services. These include:

#### *Retail*

- adopting strategies to strengthen the influence of ICASA and of consumers, while reducing the influence of the Ministry;
  - accelerating the delivery of reliable regulatory accounting data from Telkom to reduce its strong informational advantage over ICASA;
  - increasing the resources available to the regulator;
  - implementing technical assistance programmes to build ICASA's capacity and to assist it in learning from the experience of other regulators;
  - ICASA needs to improve its access to reliable benchmarking data as a guide to establishing appropriate price controls.
- consideration should be given to implementing a significant once-off reduction in Telkom's allowed retail tariffs ('P nought') as part of the next tariff review *before* application of the annual productivity improvement factor;
- consideration to be given to introducing an earnings-sharing formulation for the price control to reflect:
  - the strong demands for distributional fairness in South Africa and to allow consumers to recover at least some of the excess profits from a flawed process
- a commitment by the Ministry not to intervene in the price-control process;
- strengthening the mechanisms for customer consultation/representation in the price control setting process and for representation of other relevant interests such as National Treasury and DTI.

#### *Mobile*

An assessment exercise focused on whether competition in the mobile cellular market is likely to provide an adequate means of ensuring efficient pricing in this market sub-sector (ICASA's current view) and of whether direct retail price controls might also have a role to play in this market.

#### *Wholesale*

ICASA at present has no power to investigate the cost-reflectiveness of interconnection charges set under intercompany agreements. Its powers would be improved if MTN and Vodacom were given major operator status so that new agreements amongst themselves,

Cell C and Telkom would have to be lodged with ICASA and be subject to regulator scrutiny.

Since the current arrangements have given operators the incentive to inflate interconnection charges while providing little scope for regulatory intervention, it is likely that interconnection has become overpriced. ICASA needs to be empowered to review existing established interconnection agreements, possibly requiring legislative changes.

Measures should be taken to ensure that ICASA has the technical capability and resources to carry out the complex analyses required to critically evaluate operators' estimates of LRIC (or cost-based) prices. This is likely to require both capacity building within ICASA and temporary expert technical assistance.

## **2.4 Transport**

Regulatory frameworks in the transport sector differ markedly from those prevalent in other network industries. There is a strong emphasis on safety and standard regulation and a remarkable lack of economic regulation. The sector is further characterised by state-ownership, limited private sector participation and the absence of independent regulators. As a result, the influence on prices by government is limited and prices are likely to contain monopolistic rents.

The most advanced form of economic regulation is found in the aviation sector where a dedicated, albeit part-time, regulatory body exists. A regulatory entity may also be established in the port sector, where a precarious disentanglement of the ports authority from its current owner Transnet is part of the State-Owned Enterprise restructuring process.

The 1990s witnessed the establishment of numerous commercial transport agencies such as the SARCC, ACSA, ATNS, and the NRA. In addition, the corporatisation and restructuring of Transnet led to the formation of business units within Transnet responsible for port operation, rail services etc. However, this commercialisation drive was not accompanied by the establishment of independent regulators or formalized reporting procedures to ensure policy implementation by these agencies.

The National Department of Transport has a surprisingly small mandate in terms of economic regulation, and, although responsible for policy, has limited direct control over policy implementation as Transnet is monitored by the Department of Public Enterprises, and as the transport agencies are commercial entities, not part of the NDOT's line management structure.

### **2.4.1 Implications for efficient prices**

The transport sector in South Africa, thus remains largely unregulated in the economic sense. Policy approaches remain fragmented with mode-specific strategies and a proliferation of single-modal implementation agencies, each with their own unique mandate and institutional relationship to a government department. No overarching structure currently exists to coordinate the various agencies involved in transport infrastructure, leading to lack of alignment in terms of provincial spending on transport

infrastructure; institutional gaps; and a lack of coordination across transport modes. Moreover, there is no coherent framework for price determination, and monitoring of efficiency in the delivery of transport services is virtually non-existent.

The regulatory framework for each transport mode includes a complex web of overlapping and at times conflicting institutional roles without independent regulators or, even, formalised monitoring. Presumably retaining government ownership was expected to suffice to ensure desirable conduct by these agencies. However, establishing commercial entities that control vital transport infrastructure without ensuring proper economic regulation of these entities and without the introduction of competition, may have led to a situation less desirable than the initial state of affairs, namely publicly-owned, yet unregulated monopolies, acting as private monopolies. When no or limited scope for competition exists, commercialisation of vital enabling infrastructure such as transport networks, should be accompanied by strict application of tariff controls, both in terms of level and structure, investment targets, and planning coordination, to ensure compliance with government objectives.

The lack of regulatory frameworks or independent regulators for port, passenger rail or rail freight services, combined with the continued existence of cross-subsidies and lack of separation between ownership and regulation, indicates that no formal or effective controls over the behaviour of the state-owned enterprises in terms of its pricing strategies have been established.

## **2.4.2 Cross-subsidisation**

Intermodal cross-subsidisation continues to exist, most evidently between ports and rail, and in the present transport framework there is little analysis of the direct and indirect impacts of cross-subsidisation or of the combination of social and commercial objectives without adequate targets or controls. It is often implicitly assumed that the pursuance of social objectives by a state-owned enterprise is somehow ‘free of charge’, as it obviates the need for fiscal transfers. Without adequate controls and efficiency incentives however, these opaque cross-subsidies and dual mandates could be more costly to the economy as a whole than transparent transfers and open tenders for infrastructure upgrading and services provision. Cross-subsidies are not per se taboo, but the current opaque method of cross-subsidisation, determined by a commercial entity is highly undesirable. If such cross-subsidisation were deemed necessary, more efficient outcomes would be rendered by transparent solutions. Once the subsidies are made explicit, greater attention can be paid to the effectiveness and appropriateness of these subsidies and to targeting.

The influences on prices in the aviation, ports and rail sectors are briefly summarised below.

## **2.4.3 Aviation**

The economic regulation of infrastructure services pricing is the responsibility of the Regulating Committee. ACSA and ATNS both have exclusive control over the national aviation infrastructure, and their charges are thus regulated to prevent abuse of dominance.

Although the regulatory framework for aviation infrastructure services is the most advanced and sophisticated of all modes of transport regulation, the scientific basis of the methodology is undermined by its less scientific implementation. The Regulating Committee lacks the skills and resources required for a rigorous price cap regime and continuous monitoring of efficiency improvements. The effectiveness of the regulatory methodology employed hinges on critical assumptions made regarding the rate of return, the rate base and risk assessments, which appear based on international practices, but do not take into account that the entities in question are public-owned entities for which private sector risk premiums may be inappropriate. Neither the lack of regulatory independence nor the shareholding role of the Minister of Transport add to the Regulating Committee's regulatory credibility.

The strongest suggestion of inefficient prices is given by the fact that the operating profit for ACSA proves to be the highest of all airports companies in a large international survey. Other suggestions of inefficient prices are provided by the persistent user complaints; combined with little resistance from the regulated entities and the high margins and profits realised by the companies.

The main lesson of this experience is that a state-of-the-art framework does not guarantee success. In particular, a regulator needs to have a clear and unambiguous mandate in order to pursue efficient prices. The regulator also needs to be provided with the tools to fulfil its mandate, in particular, it requires accurate data, sufficient resources and appropriate skills. Moreover, its mandate should specify that efficient prices are of imperative importance as monopoly rent-seeking will occur.

#### **2.4.4 Ports**

The current institutional arrangements and frameworks in the port sector are unsatisfactory from a regulation point of view. As Transnet controls both the infrastructure (NPA) and operations (SAPO), this entity, and through its shareholding structure the state, is both player and referee. As there is some competition in operations (freight handling/terminal operation), the state competes with the private sector in service provision.

Despite its shareholding though, the control of government over the price-setting, investment decisions and other pertinent aspects is limited and performed via the Department of Public Enterprises, which is tasked with the restructuring of Transnet to *inter alia* enhance its profitability. The cross-subsidisation of other business units that is largely funded by port revenues creates distortions and places an undue burden on importers and exporters.

Formal regulatory controls are non-existent in the port context. The Department of Public Enterprises is tasked with monitoring Transnet's performance, constrained both in terms of corporate governance options and by a lack of human capacity to effectively monitor Transnet. Thus it appears that the SA economy is burdened with an public-owned, yet unregulated monopoly, whose incentive structure and behaviour is no different from a private monopoly. As a result, the discrepancy between efficient price levels and actual price levels is likely to be high and approaching full-scale monopolistic rents.

## **2.4.5 Rail**

Similarly for the railways, the lack of regulatory control over consumer prices is a cause for concern. Despite the establishment of the SARCC as a monitoring agency, the price setting processes for commuter rail services are unlikely to result in efficient prices as both the SARCC and the DPE have limited influence on commuter rail fares and no coherent system of benchmarking or efficiency incentives exists. As a result, the influence of Transnet on Metrorail's tariffs is rather disproportionate, which is not adequately balanced by the SARCC, the NDOT, the DPE or the Competition Commission.

As an unregulated monopoly provider of commuter transport services, Metrorail should be subject to rigorous economic regulation. The current price-setting framework performs none of these functions and tends to be strongly input oriented, with fares determined based on inadequate cost allocations systems devoid of efficiency incentives.

Similarly in tariff determination for long-distance rail passengers, Spoornet is the main influence on Shosholozza Meyl's tariffs. Efficiency incentives are low and no systematic system for benchmarking or monitoring exists. The cross-subsidies from GFB and the other units of Spoornet, such as Orex and Coallink, denote that manufacturing industries in South Africa are essentially paying a concealed tax to finance long-distance rail passengers.

In the determination of rail freight tariffs, the DPE can only exert indirect and limited influence. Rail users have some negotiating capital, but ultimately have no choice of substitutes and cannot take any tariff decision by Spoornet on review other than lodging a complaint with Transnet. The lack of regulatory control over rail freight prices is a cause for concern. Not only are the resultant tariffs unlikely to be efficient, certain issues, such as the under-investment in rail infrastructure will lead to significant negative externalities throughout the economy, and require urgent policy attention.

In order to address the lack of efficiency in rail tariff determination, some form of regulatory oversight is required. As a minimum requirement, clear cost accounting mechanisms for Spoornet and Metrorail should be developed. This would help in eradicating opaque and discretionary cross subsidies as well as provide the means for rigorous efficiency monitoring.

## **2.4.6 Preliminary recommendations**

As the current policy developments and restructuring processes in various transport modes are carried forward, the need for greater economic regulation will mount. Such regulation will be required in the ports, where a commercialised entity controls the infrastructure, and in railways, where, depending on the status of the envisaged commuter rail entity, a commercial entity will control both the infrastructure and provide or concession services.

### **Institutional changes**

The restructuring of Transnet raises several fundamental issues regarding the utility or enabling function of transport infrastructure; inter-modal cross-subsidies; and effective



control of public-owned enterprises. Institutional changes to be considered include severing the links between the NPA, Spoornet/Metrorail and Transnet, or at least discontinuing the inter-modal cross-subsidy links that exist within Transnet. A policy decision needs to be taken regarding the nature of Transnet, essentially deciding the balance between its profitability and utility aspects.

### **Improved economic regulation**

Given the questions raised around the determination of the price cap in aviation and the general lack of economic regulation in the other transport modes under review, the need for improved regulatory approaches becomes resoundingly clear. The development of common principles in the approach to regulation in the transport sector should be at the foundation of this move towards greater regulatory coherence, taking sector specific needs and lessons from international experience into account.

### **Regulatory jurisdiction**

In the context of an alarming proliferation of regulatory bodies, budgetary constraints and lack of human capital, the option of a cross-modal transport regulator deserves further investigation. Furthermore, it is of critical importance that the concurrency of jurisdiction between the competition authorities and the transport regulator(s) is solved satisfactorily, either through the conclusion of memoranda of understanding, but preferably by clarification of the legal status of appeals on decisions by regulatory bodies. In addition, enhancing the ability of the competition authorities to handle anti-competitive practices in the regulated industries is advisable.

### **Reform and competition**

This brings to the fore a fundamental point in restructuring of SOEs and regulation of network industries. Generally speaking, the introduction of competition has been given limited attention in the transport sector reform processes. Limited scope for competition actually increases the regulatory burden and exacerbates capacity problems rather than circumventing them. The current debate regarding port restructuring is promising in this regard, and serves to underline the urgent need for efficient regulatory structures to be put in place in the transport sector.

## **2.5 Water**

### **2.5.1 Institutional framework**

There are many different players in the provision of water and sanitation services in SA. The water sector does not have a distinct or independent regulator.

- |  |  |
|--|--|
| <b>Department of Water Affairs and Forestry (DWAF)</b> | <ul style="list-style-type: none"><li>• custodian of water resources and overall policy maker and regulator (there is no independent regulator)</li><li>• oversees the activities of all water sector institutions</li><li>• responsible for national/international resource planning and allocation</li></ul> |
|--|--|

	<ul style="list-style-type: none"> <li>• licenses water use and discharges and collects abstraction and discharge fees</li> <li>• manages water resources infrastructure (for example, dams) and also some water services infrastructure</li> </ul>
<b>Catchment Management Agencies (CMAs)</b>	<ul style="list-style-type: none"> <li>• water resource planning and management at the catchment level (where CMAs are not established, DWAF fulfils these functions)</li> </ul>
<b>Water Services Authorities (WSAs)</b>	<ul style="list-style-type: none"> <li>• provision of water services within their appointed areas. Includes metropolitan municipalities, many district municipalities and authorised local municipalities. May contract out service provision to external water services providers.</li> </ul>
<b>Water Services Providers (WSPs)</b>	<ul style="list-style-type: none"> <li>• operational water provision and/or sanitation services (as a bulk or retail service)</li> </ul>
<b>Water Boards (WBs)</b>	<ul style="list-style-type: none"> <li>• regional or bulk water services providers (sell water to, or accept wastewater from, other water services providers). As WSPs, the Boards are accountable to WSAs; as organs of state, the Boards are owned, controlled and regulated by DWAF and National Treasury (NT) under the terms of the Water Services Act, 1998 and the Public Finance Management Act, 1999.</li> </ul>

In this setting, ministerial discretion is high, although actual involvement is low as DWAF, which reports directly to the Minister, is both the sector policy maker and regulator.

A key characteristic of the sector is the diversity of WSPs in terms of both *scale* and *type*: a water services provider could serve one small rural community, one or more towns, a large metropolitan area or a whole region; it might be a community-based organisation, a local municipality, a district municipality, a public utility (owned by local and/or national government), or a private organisation.<sup>6</sup> The sector is further characterised by public ownership and control (at the national and municipal level) and limited participation by private companies. Where there is private participation, for example, the Dolphin Coast and Nelspruit concessions, the ownership of the water services assets has remained in public hands.

## 2.5.2 Regulatory framework

There is a marked absence of any formal economic regulation of water tariffs throughout the water cost chain and no formal economic regulatory function exists in any part of the water sector. Self-regulation is evident in a number of instances: that is, the same institution both *sets* the tariff level and *regulates* the tariff level.

The final charges paid by water service end-users incorporate a number of different elements that are themselves regulated in different ways and by different entities. As a consequence, it is extremely unlikely that the end charges bear any systematic relationship either to costs or to the achievement of wider social objectives that are of key importance in setting water charges. The following is a brief overview of the prices involved in the water activity chain:

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<sup>6</sup> This is not an exhaustive list of possible arrangements.

<b>Water resource prices</b>	<ul style="list-style-type: none"> <li>• apply to water supplied by government water schemes (GWSs) and other water management institutions which include CMAs and water user associations (WUAs)</li> <li>• separated into two basic components: <ul style="list-style-type: none"> <li>– the <i>water resources management charge</i> (intended to cover the costs of catchment management activities) <p style="margin-left: 40px;">Set by CMAs (or DWAF where there is no CMA). Tariff should be cost-reflective but there is no formal regulation of costs or the charge.</p> </li> <li>– the <i>water resources development charge</i> (reflecting DWAF’s broader water resource pricing strategy) <p style="margin-left: 40px;">Set by DWAF. Tariff policy requires a 4% real return on the depreciated <i>current</i> value of assets (to be implemented progressively from a low base). This policy is considered by some to imply extraction of monopoly rent by DWAF at the expense of the WSAs and to be an abuse of its self-regulatory status. The evidence suggests that the charge is still at below full cost recovery level, however.</p> </li> </ul> </li> </ul> <p>DWAF’s overall water resource pricing strategy is aimed at moving towards tariffs which recover the full economic costs of providing raw water from the resource, whilst maintaining subsidies for poorer consumers and emerging farmers. DWAF is both price setter and regulator (for its own schemes) and has an incentive to increase prices, although in practice actual prices are in many cases set below the rate allowed by the policy. There are no incentives to cut costs or improve efficiency.</p>
<b>Bulk water tariffs</b>	<ul style="list-style-type: none"> <li>• Prices for bulk water provided by water boards are set by water boards themselves, subject to ministerial approval. <ul style="list-style-type: none"> <li>– bulk tariffs set inconsistently by WBs and with a lack transparency</li> <li>– no explicit policies exist although a draft guideline has been developed by DWAF. Charges generally cost-plus but there is no formal economic regulation of prices, and no guidelines for allowed costs, rate of return etc exist. There are no incentives to cut costs or improve efficiency.</li> <li>– Main constraint in practice is DWAF’s insistence that charges changes should, if at all possible, be consistent with government inflation targets. WBs required to justify larger increases in terms of promotion of contribution to key objectives (social equity, financial sustainability, water demand management, direct costs of augmentation) as well as the impact of changes in demand projections.</li> </ul> </li> <li>• Prices for bulk water provided by other agencies, such as WSAa, also not formally regulated. Where WSAs manage their own bulk supplies, costs (and price) are subsumed in their retail tariffs. Where WSAs provide bulk water to other WSPs, price and other terms are negotiated between the parties.</li> </ul>
<b>Water services tariffs (retail prices)</b>	<ul style="list-style-type: none"> <li>• High level principles for tariff setting are included in Municipal Systems Act and the Water Services Act <ul style="list-style-type: none"> <li>– tariffs to be cost based and take into account equity and sustainability considerations, and principles of proportionality;</li> <li>– all forms of subsidy should be fully disclosed</li> </ul> </li> <li>• little guidance provided on the practical application of these principles</li> <li>• significant risk that pressure from municipalities to constrain charges increases below inflation has resulted in final charges being progressively squeezed to below full cost recovery level (i.e. below the level necessary to enable full maintenance of infrastructure). Incentives to improve efficiency tend to result in sub-optimal investment.</li> </ul>

Table 1 summarises the responsibilities for tariff setting in the water activity chain.

**Table 1: Responsibilities for tariff setting**

Tariff / charge	Responsibility for setting tariff and source of authority	Responsibility for regulating the tariff and comments
Water resource management charge. (Recovers the costs of water resource management <sup>7</sup> .)	Catchment management agency in terms of National Water Act. DWAF (where there is no catchment management agency)	DWAF. DWAF. (Self-regulation.)
Water resource development charge (also called raw water infrastructure tariffs).	DWAF in terms of the national water resource pricing strategy (but only for DWAF owned schemes).	DWAF. (Note: raw water tariffs are also implicitly set by WSAs and water boards where these manage raw water systems.)
Bulk water and wastewater tariffs. (Recovers the cost of conveying and treating bulk water and wastewater.)	Negotiation between water board and water services authority in case of a water board. Water services authority where bulk function undertaken itself, or by an entity owned by the water services authority. Negotiation between water services authority and external provider of service.	DWAF. (Direct regulation of water boards). Water services authority. No regulation.
Retail water tariff and sanitation charges. (Includes the bulk water and wastewater tariff and recovers the retail costs.)	Water services authority in terms of the Water Services Act and Municipal Systems Act.	Water services authority (self-regulation).
Waste discharge charge. (A water resource charge based on the “polluter pays” principle.)	Catchment management agency in terms of National Water Act.	DWAF. Where there is no catchment management agency, DWAF both sets and regulates tariff (self-regulation).

### 2.5.3 Conclusions

1. Individual water charges vary widely across South Africa. Due to the large number of links in the water supply chain that are regulated in different ways and by different entities, final charges are unlikely to be cost reflective.
2. Regulatory incentives for cost reductions and for efficient prices are weak at all levels of the activity chain. The absence of an independent regulator is problematic with highly opaque regulatory relationships currently in place.
3. Strong municipal and broader political pressure to limit retail water tariffs leading to a cost squeeze, which generally translates into insufficient investment and under maintenance. In this case *low* prices are not an efficient outcome and above-inflation increases would be economically efficient and promote better and more reliable service in the long-run.

<sup>7</sup> Includes evaluating and issuing licences, monitoring water resource quality against the water resource objectives, detecting and prosecuting unlawful use, promoting water conservation and demand management and removing and managing alien vegetation.

4. efficient regulation and any reliable assessment of pricing efficiency likely to depend above all on ring-fencing of water operations at local authority level from other local authority activities so that better information can be made available
5. consideration should be give to the establishment of an independent regulator in the short term. Alternatively, regulatory capacity could be development within DWAF and moved to an independent regulator later. The advantages and disadvantages of each approach need to be more fully considered prior to making a decision.

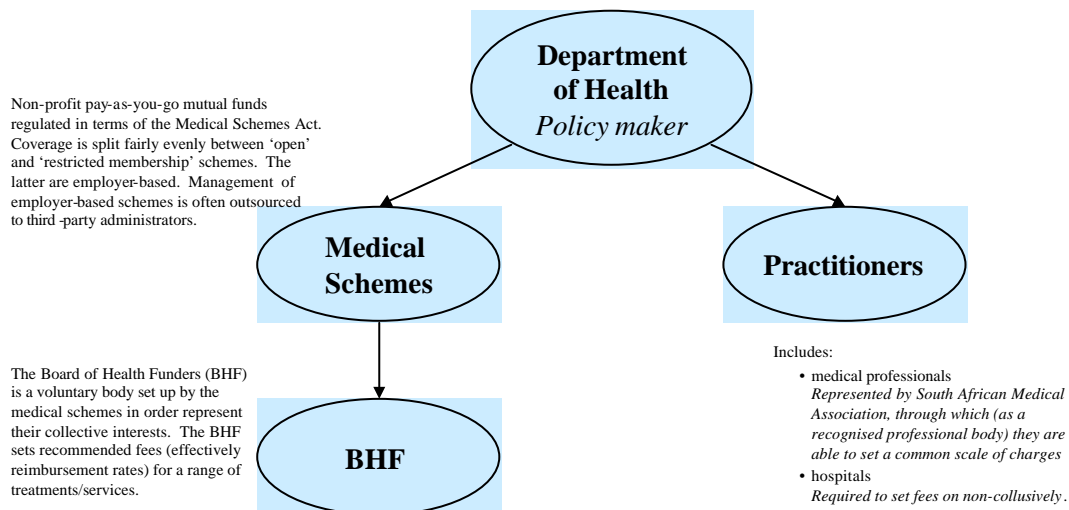
## 2.6 Health

The study examined the basis on which prices are administered in the private health care sector in South Africa. The South African private healthcare market shares many attributes with other private health care markets internationally – particularly relating to the perverse incentives that typically apply in these markets in which insurers act as intermediaries between service users and service provider. The South African private health care market is here considered in the context of these broader generic market characteristics.

### 2.6.1 Institutional framework

The institutional framework within which private health care services are provided in South Africa is summarised in Figure 3.

**Figure 3: Private health sector institutional overview**



## 2.6.2 Market failure and government intervention in private health care markets

Internationally, governments intervene heavily in the financing and provision of health care. The reasons for this are well established. Because of asymmetric information between buyers (patients) and sellers (doctors, hospitals, etc.), buyers are vulnerable to over-servicing, 'quackery' and over-charging. Monopoly power on the part of service providers results in higher prices, lower output, lower product quality. Information is costly to consumers when services are purchased infrequently, due to the technical nature of much of medical care, and because of the emotional state of patients and the urgency required at point of service.

It is a well-recognised phenomenon that private markets for health care suffer from inherent destabilising factors, which result in:

- systematic cost increases;
- adverse selection (in the case of health insurance);
- provider induced moral hazard (where providers and suppliers of service have a profit motive to supply more services than are actually needed by the patient); and
- consumer related moral hazard (where insured patients face zero cost at point of service they have an incentive to consume services in excess of their actual needs).

Where the incidence of illness and the cost of treatment are uncertain, health insurance is demanded (except insofar as acceptable services are publicly provided<sup>8</sup>). Insured people, costs exceed any deductible, face zero costs for further health care purchases. Consequently, insured people will buy more care than would be the case if they were paying directly out-of-pocket.

In addition, doctors acting as agents for their patients, recommend and provide more care when reimbursed on a fee-for-service basis. They are given significant incentives to provide more services than necessary due to the financial reward involved. The net result is increased demand for existing services and new technology without any effective discretion provided by consumers. This results in systemic cost increases over time.

Incentives throughout the market are consequently so skewed that the normal rules of competition do not work. Prices remain high even when volumes traded are high. Technology remains expensive even when widely used. Hospitals and doctors remain in business even when they charge excessive prices for equal quality or fail to provide high-quality services. Incentives exist only for innovations that raise costs or increase quality regardless of cost.

A particular undesirable consequence of market failure in private healthcare markets is the spill-over effect on public health care provision. Overprovision in private markets bids up the costs of key resources to the public health sector and shifts key resources (doctors, nurses, etc.) from the public to the private sector.

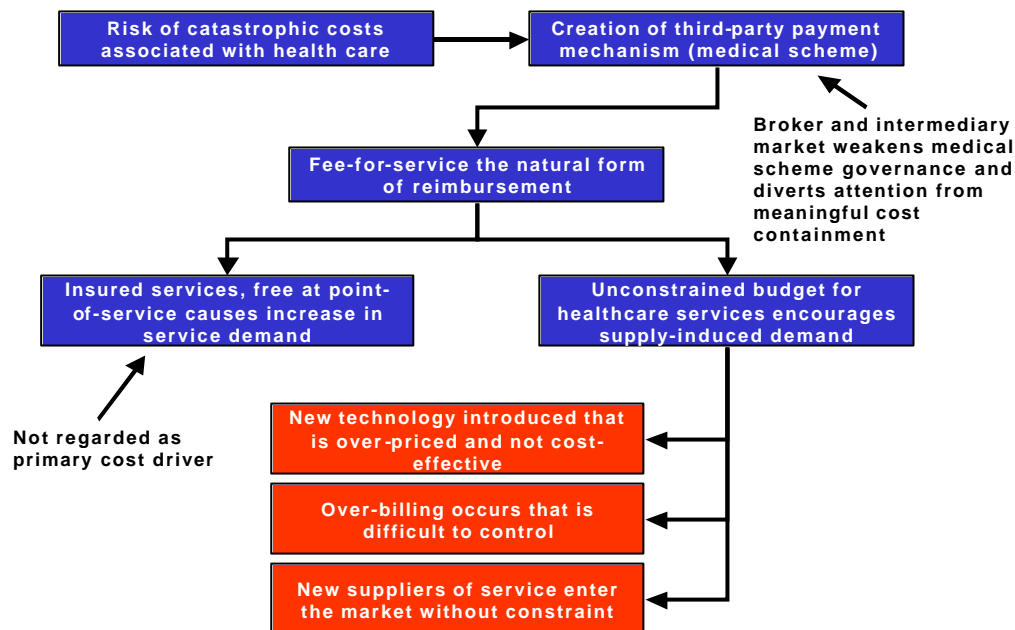
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<sup>8</sup> Publicly provided/financed health care services themselves involve risk pooling across a wide section of the population.

A perverse feature of market failure in the private health sector is that rather than demand leading supply as would be expected in normally functioning competitive markets, the functioning of the market is to all intents and purposes inverted so that supply tend to lead demand. For this reason many governments focus on restricting health care supply in addition to demand-side measures. Controls are typically placed on the creation and deployment of new services and equipment. Any attempt to deal with cost increases within private health markets, however, requires a combination of measures, operating on both the supply and demand side.

The key factors that drive per capita claims costs higher for private medical schemes internationally are summarised in Figure 4 below.

**Figure 4: Overview of issues leading to increasing costs in the private health system**



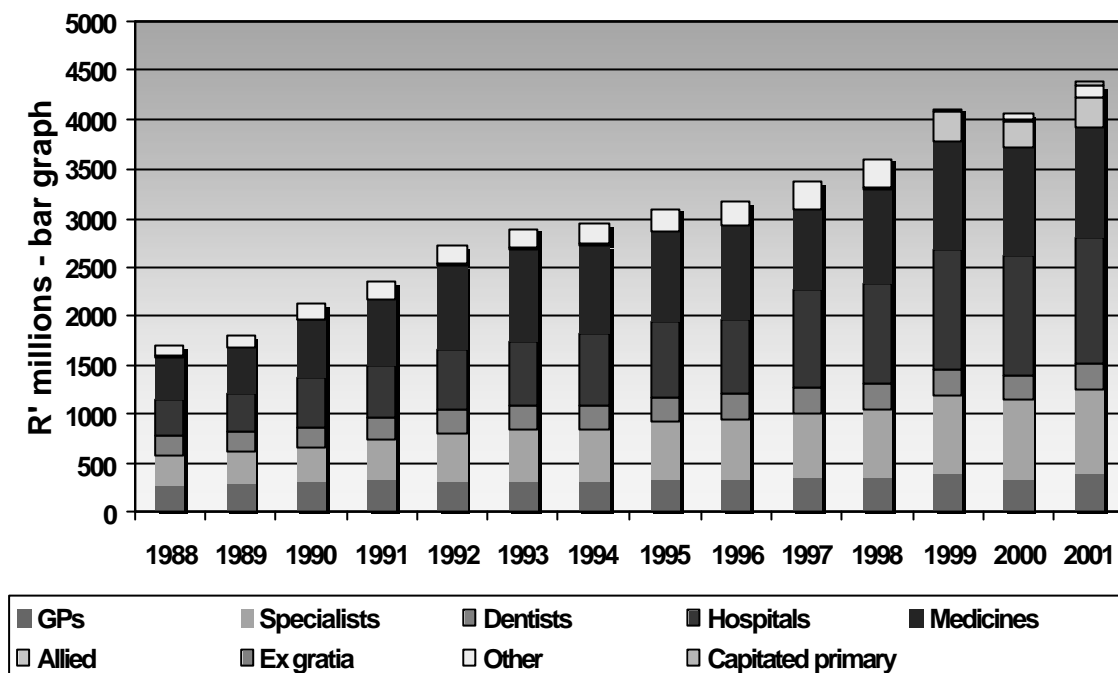
### 2.6.3 Cost increases experienced in the South African private health sector

The private health care market in South Africa has experienced systemic cost increases over the entire recorded history of the market. Certain services have however increased in cost more than others. These are hospitals, medicines and specialists. However, in recent years medical schemes have faced dramatically increased intermediary and non-health costs – in excess of the increases in medical costs. Figure 5 presents the per capita expenditure for medical schemes on health benefits (medical claims) from 1988 to 2001 in 2001 prices (using the Consumer Price Index (CPI)). In 1988 the average beneficiary on a medical scheme spent annually just over R1,703 on all medical benefits in 2001 prices. By 2001 this has increased to around R4,396 per annum which amounts to a 158 percent real increase in costs. Over this period the coverage of benefits has also been consistently declining.

Real cost increases within South Africa’s private health market have been both persistent and dramatic over the past twenty years. An acceleration in cost occurred during a period of deregulation from 1989 to 1999 – resulting from the increased membership of open medical schemes which had fewer incentives to control medical costs, and have substantially higher non-medical costs. The most important areas for cost-containment in the future are: hospitals, medicines, specialists, and non-medical expenses.



**Figure 5: Real per capita claims cost changes in medical schemes from 1988 to 2001 (constant 2001 prices)**



Source: Council for Medical Schemes Annual Financial Statements of medical scheme

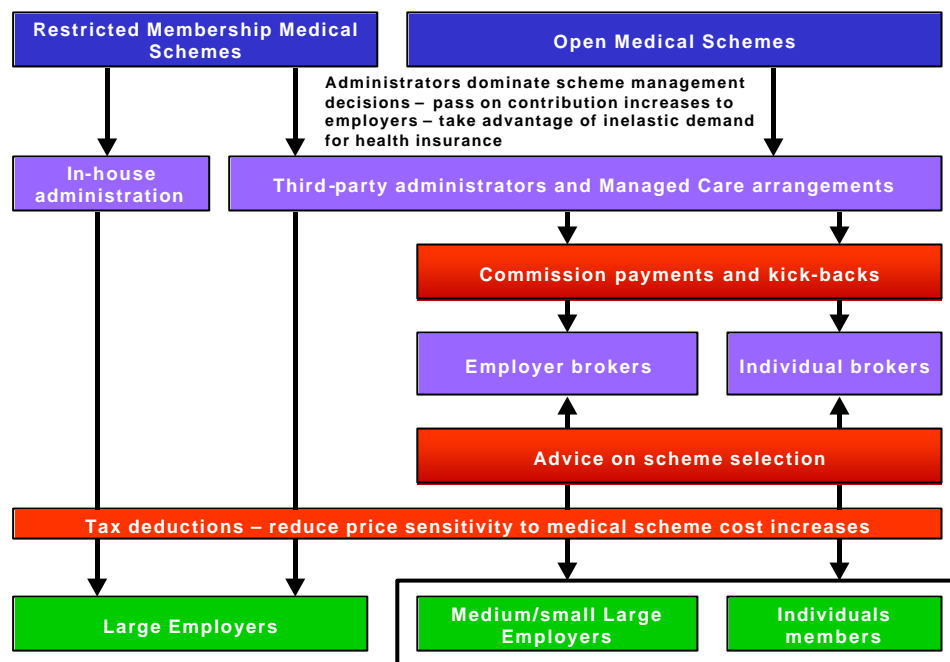
### Demand side cost drivers

Key areas that affect price determination on the demand side of the health market are:

- Employers are price takers when approaching open medical schemes. This reduces the incentive for medical schemes to price compete.
- Members paying contributions are price insensitive to medical scheme contribution increases. This results from high employer subsidies encouraged by a generous government tax deduction for employer contributions to medical schemes on behalf of their employees.
- Administrators have to compete for members in open schemes by bargaining up broker commissions. This increases the cost of schemes.
- Brokers are remunerated by administrators paying the highest price for members. Consequently they do not provide accurate information to members in choosing a scheme. This weakens price and benefit competition between schemes – reducing any pressure they may feel to keep medical costs down.

Managed care services are often sold into schemes via third-party administrators. In many instances these services merely serve as an additional layer of administration fee, with questionable benefits for the scheme.

**Figure 6: Key relationships on the demand side of the private health sector in South Africa**



### Supply side cost drivers

The pricing of goods and services on the supply-side of the private health market is heavily influenced by incentives provided to the key agents in the market, doctors. Once doctors have been influenced via financial rewards of one form or another, prices are pushed up, and volumes sold increased.

Government has intervened at this stage through the introduction of Act 90. This will impact on certain peripheral aspects of the perverse market for drugs. It is however not clear that a regulatory structure up to the task of achieving compliance and further development of the regulatory environment will be put in place. The regulation without the regulator will achieve little, and will potentially be circumvented with ease.

As things stand no process has been put in place to filter the importation and use of new technology that is not cost effective. Regulatory intervention is typically required in such instances, where review committees assess the need for new equipment against established criteria. This serves to limit the introduction of new technology at excessive prices, the costs of which are passed on to the third-party payer (the medical scheme).

Measures to deal with perverse behaviour amongst medical professionals is always a difficult matter. The most appropriate measures involve a combination of strong conduct oriented legislation, coupled with rapid and firm enforcement. Given the individual nature of medical treatment, direct interference with doctor discretion may not always work well. Overall cost containment is best achieved however through market-related interventions that permit the group purchasing of health care services.

## 2.6.4 Conclusions

	Comment	Optimal response
<b><u>Medical scheme</u></b>		
<b><u>restricted schemes</u></b>	Schemes have strong governance, but lack the buying power to influence medical service providers. They are unable to access selective contracting arrangements except through intermediaries.	Provide mechanisms for employer schemes to group together to purchase healthcare. This combines strong governance with improved buying power.
<b><u>open schemes</u></b>	Schemes have weak governance, but in a number of cases have the buying power to monopsony price..	The governance framework operating in open schemes needs to be strengthened to remove the influence of administrators and related parties.
<b><u>Central bargaining of tariffs</u></b>	The existing process for centrally determining medical scheme tariffs is flawed, inflationary, and open to special interest manipulation. It exists within a regulatory vacuum.	Government needs to consider the creation of a regulated central bargaining process,
<b><u>Third-party administrators</u></b>		
<b><u>restricted schemes</u></b>	Administrators are currently quite closely monitored, with the possibility that they could lose their contract in cases of poor service.	
<b><u>open schemes</u></b>	Administrators are able to exert influence on the schemes to such an extent that the interests of members are given a low priority.	Problems with administrator influence can best be addressed through a continued strengthening of the governance framework of medical schemes.
<b><u>Group members</u></b>	Employers tend to abdicate their influence on medical schemes and consequently become price takers in the market. They are excessively influenced by brokers who operate in the interests of third-party administrators.	Incentives need to be provided in the market for medical scheme cover to ensure direct employer participation in medical scheme governance.
<b><u>Individual members</u></b>	Individual purchasers of medical scheme cover have no market power, and are excessively influenced by brokers.	See recommendations on brokers.
<b><u>Group brokers</u></b>	Brokers targeting employer groups rely on large payments from administrators for their remuneration. As the employers do not directly pay for broker services, brokers serve the administrator interests.	The linkage between administrators and brokers needs to be severed. To ensure the most effective market, remuneration needs to derive entirely from contracts with employers. Kickbacks to brokers should be outlawed.

Comment		Optimal response
<b>Individual brokers</b>	Brokers targeting individual members are remunerated by administrators and not the members they are placing. As a consequence their advice is not independent, and administrators are forced to bargain up commissions to attract membership.	Members need to have the ability to access a medical scheme without using a broker. Members not using a broker should receive a discount on contributions for the commissions not paid. A contract should exist between the member and the broker.
<b>Hospitals</b>	An effective cartel exists which colludes to prevent shifts away from fee-for-service billing to selective contracting. Pharmaceutical costs passing through hospitals are a major cost-driver which has little to do with the ex-manufacturer price. Hospitals obtain substantial discounts from manufacturers, which are not passed on to patients.	The cartel needs to be broken through the application of competition legislation and direct government support for competing low-cost hospitals. Restrictions on the expansion of private hospital beds should remain in operation. A certificate of need process should be introduced for applications for new hospitals.
<b>General practitioners</b>	General practitioners have been shifted into the out-of-pocket market. Government legislation has also limited their ability to dispense. Primary care is beginning to respond more rapidly to the emerging low-cost market. For all these reasons, primary care services are not likely to remain a major driver of cost into the future.	
<b>Specialists</b>	Specialists collude with hospitals to protect the fee-for-service market. They remain a significant driver of healthcare decisions within hospitals and are key to the direction costs take in the future.	The conduct of specialists needs to be placed under greater scrutiny. Horizontal collusion amongst specialists, and vertical collusion with hospitals should be outlawed.
<b>Pharmaceuticals</b>	The pharmaceutical market is rife with kickbacks directed at the key agents making healthcare decisions, the doctor and specialist. Although new legislation has been introduced to weaken this link, given the pervasive nature of the practice, it may continue nevertheless.	Interventions in the pharmaceutical market are complex. Act 90 provides some possibility for intervention, but lacks the regulations for a compulsory licence. Implement approaches aimed at permitting medical schemes to benefit from the government's ability to monopsony price as the largest single purchaser of drugs in the country.
<b>Equipment</b>	New technology enters the market without any review for cost-effectiveness. Given the nature of the market, with demand almost guaranteed, new technology enters the market at a high price	A technology review process for both the public and private sector is required. This should scrutinize all proposed imports or purchases of equipment. If the equipment is found to be over priced, or not cost-effective, it should not receive a licence to operate in South Africa.

## 2.7 Education

Very little is known about the costs of education in South Africa. Although there is good budgetary data on education, such data are often inadequate for a detailed study of costs since they cover expenditures rather than real resource or opportunity costs. Moreover, they often present planned or provisional budget estimates rather than actual expenditure. In addition, there is very little data on private expenditure.

The South African education system is characterised by the absence of adequate knowledge about schooling outcomes. Undue emphasis has been placed historically on the matriculation pass rate and very little on cost-effective analyses to determine outcomes of education in non-financial terms (such as literacy and numeracy levels).

This study makes use of the extremely limited data sets to analyse education prices, both in terms of public and private costs. The data only allow for a piece-meal analysis of education costs and not an integrated, time-series analysis – which suggests that much more research and analysis are required to understand the various dimensions of and the factors influencing education costs in South Africa.

Four sets of cost items are key to obtaining an understanding of public costs in the schooling system: personnel expenditure, textbooks, pupil transport, and infrastructure and capital equipment.

In contrast to many developing countries, South Africa appears to be containing increases in educator salaries, the major component in educator costs, at least for the past three years. This is in contrast to the early years of democracy when the education salary bill rose dramatically as a result of the imperative to ensure gender and racial parity. However, there are some ‘hidden costs’ not measured in most instances, relating to teacher performance. For instance, the South African education system is characterised by a high rate of teacher absenteeism.

Containing personnel costs has seen a strong recovery in non-personnel expenditure – largely due to growth in capital expenditure, which mainly comprises the building of schools, the provision of extra classrooms in over-crowded schools and replacing dilapidated buildings.

Textbooks constitute a significant factor in education costs. Some views suggest that the textbook industry may not be sufficiently competitive, and that it is characterised by too many sole-supplier situations, which prevent the emergence of competitive prices. Higher prices could allow producers to make abnormally high profits, or might simply sustain inefficient production processes. However, more research is required on this subject to inform government policy responses by to improve the industry’s competitiveness.

The cost of textbooks could be an important contributory factor to the rising costs of education, primarily because of inadequate competition in the production of textbooks, inappropriately high quality standards, costs relating to inefficient distribution, and poor retrieval rates in schools.

Suggestions to improve efficiency and costs in relation to textbooks include making books last longer, encouraging business with other African countries and exchanging material with these countries, and eliminating value-added tax (VAT) on textbooks – which could boost efforts to promote literacy and reduce education costs.

The fragmented procurement of goods and services is another area that should receive attention. There is a need at provincial level to look at the possible integration of individual school orders into bulk orders, and the negotiation of system-wide contracts, which would lower the price of inputs. It has been suggested that education departments negotiate with individual suppliers of goods and services to secure better prices for especially section 21 schools.

The key categories of private (household) costs are textbooks and stationery, uniforms, infrastructure, transport, and fees.

There is no doubt that school fees have been the single biggest contributor to rising education costs for many households, particularly those from high-income categories who have the ‘ability to pay’.

Although the poorest fifth of all households pay low fees in absolute terms, this constitutes a high proportion of household income. The very poorest spend on average 2% of income on school fees, whilst the figure for middle- and high-income groups is around 1%.

There is some evidence that the increasing cost of uniforms constitutes a financial burden, especially for poor households. While research on this issue has not been adequate, crude estimates indicate that school uniforms are twice as costly as they would be if the market worked well, and if schools did not specify unnecessarily elaborate uniforms.

In some instances, private costs of education have been exacerbated by families having to provide or fund infrastructure. Some evidence from the Department of Education’s media survey suggests substantial parental contributions to infrastructure provision in the absence of government provision.

Survey data suggest that hidden fees amount to about 25% of the official fees, across quintiles. There has been much media attention around such ‘hidden fees’ for learners. One report claimed, for instance, that a R100 official fee concealed a hidden fee of some R6,700 when items such as food, transport and uniforms are included.

The government’s commitment to equity in the public funding of education has led to a dramatic redistribution of public funds away from previously advantaged to formerly disadvantaged schools. For the former group, it has seen a substantial increase in tuition fees – determined largely by the ‘ability and willingness to pay’ criteria – especially in some of the self-managing section 21 schools to make up for the deficit in public funding.

For formerly disadvantaged schools, the substantial increase in public funding post-1994 has still not been able to address all the costs of education provision, largely because of the enormous, apartheid-inherited backlogs. This has meant that even for the poorer segments of the society, there continues to be substantial private costs relating particularly to uniforms, transport and books.

This analysis has shown that the Department of Education's influence on costs other than personnel costs has been insignificant or in many cases totally absent.

On the infrastructure side, government can contribute by undertaking analyses of the costs of provision, including cost-benefit measures. Moreover, the Department of Education should explore together with the Departments of Public Works and Trade and Industry the potential for the SMME sector to become involved in education infrastructure provision.

On transport, in the rural areas, the government is committed to providing transport to pupils but little has been done so far – this should be prioritised as part of the government's strategy to improve quality of schooling.

School fees have risen sharply in some section 21 school fees, and there is potential for this to spiral out of control, especially if more schools start to equate quality of outcomes with higher cost. The Department is understandably reluctant to adopt an interventionist stance and impose limits on fee increases. However, a much more strategic approach would be to emphasise the efficiency arguments rather than the budgetary considerations. In this respect, much greater emphasis has to be placed on cost-effective analyses of education, particularly with respect to measuring quality of outcomes.

## **3. CROSS-CUTTING THEMES**

### **3.1 Introduction**

The sectors under review have individually distinct economic and operating characteristics, with a particularly strong contrast arising between the infrastructure sectors (transport, communications and the utilities) on the one hand and the education and health public service sectors on the other. The overall institutional framework and the processes adopted for determining (or controlling) prices also vary widely between the sectors. Despite this diversity, this section considers the main themes and cross-cutting issues relating to prices setting/control that are evident across the different sectors.

It may be noted that the sectors under consideration share two common features:

- they are all activities which have a key bearing on the achievement of key government policy objectives in terms of South Africa's economic and social development;
- they are all activities where, for one reason or another, market failure is likely to lead to price and service outcomes that will not fully support the promotion of these key policy objectives unless there is government intervention.

Collectively, these services also represent a significant proportion of typical household expenditure, while individually the prices charged for most of these services also have high visibility and are matters of public concern. The government therefore has a number of important reasons for seeking to intervene in the pricing process in all of the sectors under consideration

Diversity of approach to price setting/control in fact emerges as one of the strongest features – no two of the sectors under review demonstrate the same essential approach. Immediately apparent in the cross-sectoral overview is the divergence in approach to regulatory frameworks, as illustrated by the different policy choices regarding market structure, price determining methodology, social objectives and regulatory design. Combined with a paucity of strong economic analysis, information asymmetries and a dearth of skilled regulation professionals, the resultant price determination processes are strongly input focussed or cost-driven, with little efficiency or outcomes monitoring. On the whole, there are few reassurances regarding the efficiency of the resultant administered prices.

### **3.2 Regulatory frameworks**

It is common to find economic regulation in some form or other in markets of key economic and/or social importance that are subject to market failure (or where the free market outcome would not adequately satisfy vital social, environmental or other wider objectives). The approach to economic regulation in the sectors under review varies considerably. In some a separate regulatory body has been established (electricity, telecommunications and aviation), whilst in others regulation is performed – generally in



a relatively informal and perfunctory way – by the relevant line department or, in the case of some parastatals, by the department that holds the State’s ownership interest in the enterprise (ports, rail freight). No formal regulator, or unambiguously assigned departmental, regulatory function exists in the water, health and education sectors. Moreover, even where independent regulators have been established, these vary in institutional design, mandate and powers.

The regulators that have been separately established tend to lack true independence from ministerial intrusion (telecoms and aviation) or have a limited mandate (electricity). By endowing the regulators with limited powers, the ability of a crucial player to exert effective control over prices and to promote productive efficiency is significantly limited. If private sector participation is envisaged in the sector involved, it is important to note that a weak regulator, and particularly one that lacks independence, will push up the cost of capital for private participants and inhibit the development of competition by deterring market entry.

An inherent characteristic of most of the sectors under review is the difficulty of developing reliable and useful cost information. A generally evident feature in these sectors is the limited power of the regulator to extract core cost data information, either because the obligation to collect and provide data to the regulator is not adequately enshrined in legislation (electricity, rail, ports) or because the regulated entities have been successful in frustrating data collection (telecoms, aviation) – or by a combination of both these factors. The scale of the resulting information asymmetries makes it impossible for a regulator (whether separately established or a government department) to steer prices towards efficient levels. With such poor information the regulators are effectively flying blind without instrumentation: they have very limited means of knowing whether they are intervening appropriately or effectively.

The lack of appropriate ring-fencing of accounts at the municipal level further aggravates the lack of accurate cost data (water and electricity).

### **3.3 Pricing methodologies**

There is no reason in principle why the price determination methodologies that are employed by the various regulators/government departments in the different sectors should be identical. Where, however, fundamentally different approaches have been adopted, it is not clear that this reflects any systematic evaluation of the underlying nature of the sector and/or relevant policy priorities.

There could be sound reasons for choosing a price cap over rate of return regulation and vice versa, depending on data availability, regulatory objectives etc. However, it appears that in some sectors the choice of regulatory methodology has been made without any systematic consideration of such factors, or is simply a formalisation of the status quo. In electricity the choice of rate of return regulation appears to be largely based on the lack of regulatory accounts and on the perceived simplicity of this methodology. In the water sector, the use of ‘cost-plus’ pricing is implicitly accepted as the appropriate methodology in a significant portion of the activity chain – although not, by and large, in the determination of retail prices. The price caps that are employed in the aviation and telecoms sectors seem to have been based on international experience. However, little

debate appears to have taken place around the appropriateness of these methodologies in a data-constrained setting, whilst more recently devised regulatory methodologies, such as hybrid systems and earnings sharing plans, are seen as too advanced or complicated to implement in the South African setting.

Although it is difficult to generalise across the sectors, it seems evident that in most sectors there is no systematic tariff-setting framework. Often the term ‘cost-reflective’ is used when a vague link between costs and prices exists. In the water sector, for example, cost-plus pricing without efficiency incentives will lead to tariffs that are in a very limited sense ‘cost-based’, but:

- not necessarily cost-reflective for each type of service;
- do not take into account the scope for realisable cost efficiency improvement; while, at the same time, they
- fail to take into account the least cost investment and maintenance needs if services are to be sustainable.

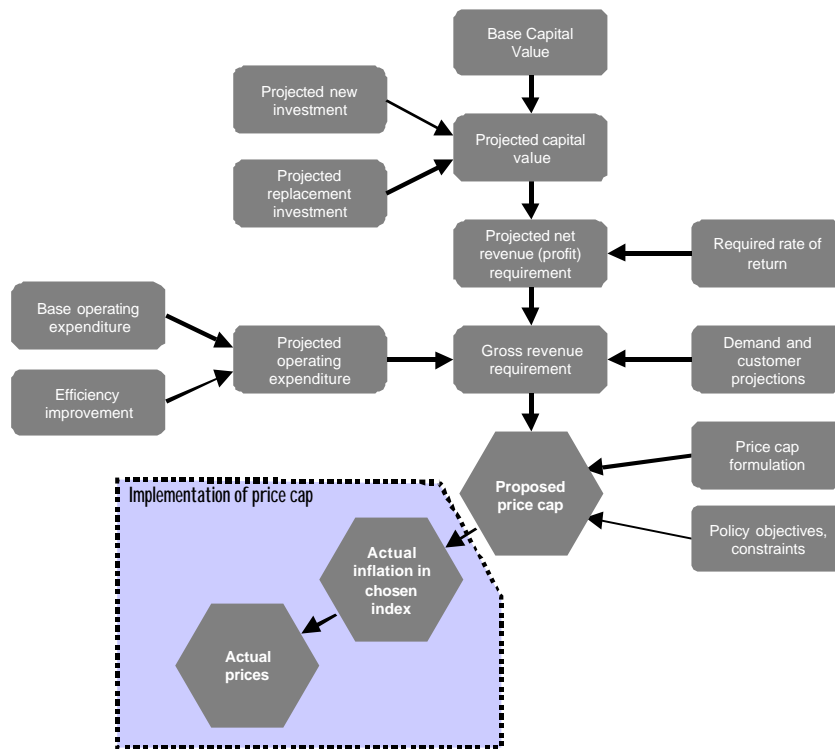
Similarly, in the transport sectors it appears that budgets, rather than service outcomes are the focus of the regulatory oversight.

In addition, lack of technical capacity (or, perhaps, confidence) and depth of resources – combined with inadequate powers to extract essential cost and performance data – has tended to result in implementation of price controls based on negotiated agreement rather than hard analysis and the calculation of the technically appropriate control. This may in part reflect the common misperception that price cap controls require both less data and less analytical effort to apply than do rate of return controls. International experience has, however, demonstrated that setting the ‘right’ level for a price cap control requires expert analysis of efficiently achievable future costs and future investment requirements. Although, where the private sector is involved at least, the profit motive will generally provide price-capped companies with a strong incentive to improve cost efficiency, this does not imply as much of a reduction in the regulatory workload as is often assumed. Companies may adopt gaming strategies to conceal the full extent of potential efficiency improvements from regulators with the aim of maximising long-term profits (thereby denying consumers the full benefits of potential productivity improvements). If the scope for efficiency gains are exploited in full, but regulators have failed to perceive the extent of achievable improvement<sup>9</sup>, publicly unacceptable levels of profitability may undermine the credibility and sustainability of the regulatory regime.

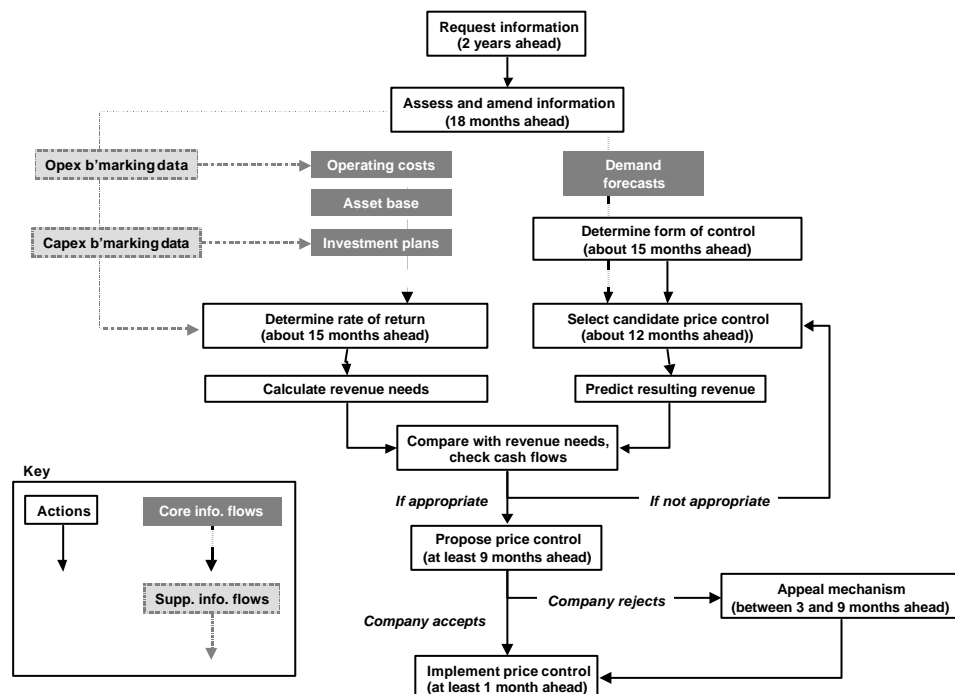
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<sup>9</sup> Experience in the UK water and electricity sectors has demonstrated the tendency of regulators to underestimate by a very wide margin the extent of productivity gains that private sector operators will be able to achieve and the difficulty of getting back on course without undermining the credibility of the regime for investors or for the general public.

**Figure 7: Price cap schematic - typical calculation process (international example)**



**Figure 8: Price cap schematic - typical procedures (international example)**



Adapted and developed from: Utility Regulation—A Critical Path for Revising Price Controls, World Bank Note. 133, Richard Green

In general, it transpires that even if a ‘scientific’ approach is chosen, the implementation suffers from a lack of skills and resources; a lack of systematically collected and monitored data; and limited consultation. This can be said for ICASA’s price cap, and to a lesser extent for the NER’s proposed rate of return regulation and of the Aviation Regulating Committee’s price cap. As a result, we find that the South African regulatory approach is one of negotiated prices cloaked under the veil of a scientific approach.

In those cases where no independent regulator exists, the lack of emphasis on efficiency is generally greater and the approaches adopt tend to be strongly input-driven. In passenger and freight rail services, but also in water, education and health, the focus tends to be on budgets rather than on outcomes. As a result, cost containment does not necessarily translate into greater efficiency, but tends to be achieved at the expense of infrastructure investment (rail and water) or service delivery (rail).

Lastly, monitoring of actual performance, or even of allowable revenues in the case of rate of return regulation, is surprisingly lax. In electricity and aviation price-control, close attention is given to determining the allowable rate of return, but no commensurate effort is devoted to the monitoring the performance of the regulation entities – so that price controls once set may be an ineffective constraint on actual pricing behaviour.

Generally speaking, little or no benchmarking is performed in the sectors under review or, where benchmarking is carried out, it tends to be on an inappropriate basis. Examples of benchmarking deficiencies across the different sectors include:

- Inappropriate international comparisons are found in telecoms and aviation
- In case of regional provision there is no benchmarking at national level, such as in the electricity, water, and education sectors
- There are no systematic comparisons between public and private sector where this is possible, most notably in the health and education sectors.

Clearly valuable opportunities for data analysis and comparison are lost by the absence of benchmarking.

## 4. CONCLUSIONS

The clear overall conclusion that can be drawn from this review is that administered pricing in SA is not working well. While our review has focused on processes and procedures for setting administered pricing and has not been concerned with the details of the calculations, it is evident that the serious flaws in terms of processes and procedures mean that there is very little likelihood that the prices in place in any of the sectors under review will reflect reasonably achievable efficient costs. Not only the general level of prices but also the structure of prices are likely to be deficient in this respect.

A number of factors can be seen to be contributing to the overall weakness of administered pricing. The most important identified in these reviews are discussed below.

### **Institutional weaknesses**

Not all the sectors under review are natural candidates for independent regulation. But in the utilities and communications sectors the introduction of properly independent regulation will increase transparency and consistency in price setting/control. In SA, however, although *separate* regulators are in place in a number of sectors, the organisational models that have been adopted reserved key powers to ministers and fail to meet generally accepted standards of independence. Lack of powers in the regulatory bodies is exacerbated by lack of capacity – in part, but not exclusively, attributable to insufficiency of resources.

### **Opacity of objectives**

A common feature of the sectors under review – and one of the principal reasons why government has a particularly close interest in pricing outcomes – is their particular importance to the realisation of wider economic and social objectives. It is important and proper that these objectives should be taken into account in price setting/control and (even if price regulation were not also desirable to counter market failure in monopoly activities) the desired outcome will be different from what would emerge from free markets.

It is difficult to codify and or quantify these broader objectives but unless this issue is tackled it is effectively impossible to take them into account in price-setting/control in any systematic or consistent way. As a consequence, while there are clearly cross-subsidies between different user groups in the prices that apply for the provision of key services<sup>10</sup>, it is impossible to ascertain whether these are consistent with generally hazy, imprecise and unprioritised articulation of the social objectives that they are intended to promote.

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<sup>10</sup> Although poor cost data means that is extremely difficult to quantify these.

### **Insufficient monitoring and evaluation**

Associated with the absence of clearly stated measurable social objectives, there is a further concern that outcomes, in terms of the extent to which these objectives are being promoted by decisions about administered pricing structures and levels are not being adequately monitored. A perhaps inevitable consequence of a lack of clarity concerning objectives is a similar lack of clarity regarding achievement or of the opportunity cost associated with this.

To the extent that cost-based pricing is a feature of administered pricing in SA, it is by and large based on simple cost-plus methodologies rather than on any assessment of achievable least cost. Both the efficiency with which services are produced and the effectiveness with which they meet the government's objectives go largely unmonitored.

Taken together with the general opacity of the objectives themselves, inadequate monitoring of outcomes means that there is a lack of transparency concerning the effectiveness of administered pricing in contributing to the realisation of national priorities.

### **Myth of cost-free price intervention**

It is easy for ministries to conclude that by intervening in the price-setting/control process they can promote the achievement of key social objectives without incurring any corresponding cost penalty and that this approach therefore offers a virtually cost-free route to pursuing these objectives. This is rarely, if ever, the case.

For example, cross-subsidies that change the relative profitability of serving different groups of customers will inevitably impact on the incentive to provide services to those groups for both private sector providers and public sector providers charge with meeting commercial objectives. Cross-subsidies between wealthier groups of service users and customers in poorer communities can play an important part in ensuring that all members of society have access to a basic set of essential services at prices that they are able to afford. If, however, the extent of cross-subsidy becomes too great, so that poorer communities come to be regarded as loss-making by service providers, a probable consequence is that standards of service to those communities will fall with resources being concentrated on wealthier communities whose profitability is exaggerated by the premium they are paying over cost-reflective tariffs.

Moreover, when the pursuance of social objectives by state-owned enterprises is performed in a monitoring vacuum, it is unlikely that for instance the roll-out of infrastructure is achieved at the lowest possible cost. Any inefficiencies in the process will simply be passed on to consumers in a non-transparent manner without a clear view on the opportunity costs, for instance the price for roll-out arrived at via a competitive tendering process.

More generally, prices have an important role to play as signals to both the demand and the supply side of the market. In the utilities and transportations sectors, in particular, where planning cycles are relatively long, misleading price signals can lead both customers and service providers to make erroneous investment decisions at high cost to both themselves and to the economy. It is generally agreed, for example, that due to past over-investment in capacity electricity prices lie below the level that would reflect the

long terms costs of maintaining supply. While the immediate consequence of this is that customers benefit from cheaper energy while the economy as a whole is likely to be boosted by low cost access to a key resource. The problem, however, is that low prices give conflicting messages to the demand and supply sides of the electricity market. Customers on the one hand are encouraged to invest in energy intensive appliances and equipment, while there is no corresponding incentive on the supply side to invest in increased capacity on the other. Security of supply will necessarily be put at risk if prices do not give broadly the right signals to both the demand and supply side of the market.

### **Myth of privatisation/liberalisation cure-all**

That the current approach to administered pricing is failing to deliver efficient cost-reflective prices – consistent with promoting the Government’s social objectives – is widely acknowledged. There is widespread belief that the solution lies in privatisation and liberalisation and that this on its own will be sufficient to tackle the evident problems.

While privatisation and liberalisation may have an important part to play, it is important to recognise that they are on their own unlikely to be sufficient in the sectors under review. This reflects a number of factors:

- incumbent dominance represents a formidable barrier to entry in the utilities, transport and communications sectors and firm, expert and clearly independent regulatory intervention will be essential to overcome this disincentive to competition. The importance of effective regulation will be especially great where there is a continuing government ownership interest in the sector in question;
- competition in network industries requires access to essential network facilities to be available on equal terms to all industry participants. Effective regulation of network access is essential if this is to be achieved. As experience in the SA telecommunications sector shows, this is a very difficult issue to address;
- the achievement of core social objectives such as the provision of universal service at an affordable price is likely to be put at risk unless there is appropriate regulatory intervention, which in turn need to reflect clearly articulated and published government policy.

This is in no sense a criticism of the underlying policies of appropriate privatisation and liberalisation. Indeed it is evident that in many respects commercially oriented public monopolies in SA themselves tend to behave like private monopolies but, veiled by the contention that as public enterprises they are act only in the public interest, with less transparency that would be the case if they were in private ownership. The key requirement is for effective regulatory institutions and powers to be established to ensure that privatisation and liberalisation can be made to work.

### **Administered pricing and inflation**

As emphasised in this report the objective of price administration – in concert with other regulatory instruments - should not simply be to ‘keep prices down’ but to try to establish prices at level that are consistent with, and encourage, efficient delivery of services while meeting as far as possible both public and individual objectives – including balancing

supply and demand over the longer term. Nevertheless, other things being equal, it remains the case that price control in these sectors should support anti-inflation policy.

While a case can be made that prices for some services in some sectors may have been held at too low a level, notably in relation to retail water tariff, the overall picture is one of weak incentives towards productivity improvement and administered price levels that will consequently tend on average to exceed efficient levels. To this extent, weak institutions and inadequate processes in relation to administered pricing can be argued to be inflationary.

It is sometimes suggested that a blunter control, in the form of a simple inflation target linked cap on prices in the sectors under review, would prove more effective than the current approach. Such an approach would, however, fail to address the key issue that administered pricing is currently unlikely to lead to price levels and structures that are reflective of efficient costs. It is likely that a blanket inflation target linked control would result in increasingly distorted pricing levels and structures and impose a significant cost burden in terms of inefficiency and wasted resources.

The ills of the current approach to administered pricing are identifiable as, in general, are the appropriate remedies. The solution is better regulatory institutions and methods tailored to individual sector priorities and conditions rather than any simplistic across-the-board solution.