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Assessing Telkom's 2003 Price Increase Proposal: Price Cap Regulation as a Test of Progress in South African Telecom Reform, and E-economy Development

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Executive Summary

Telkom has filed for an overall price increase of 9,5%, including an increase of 12,5% for basic service charges (installation, monthly rental, local and domestic long distance calls) for 2003. The telecom regulator ICASA must assess the justification for this proposal. The primary standard ICASA will use to judge the reasonableness of the proposal is the Price Cap Model, a standard used by telecom regulators in many countries. The proposal must also be assessed in light of the government's policies for ICT sector development, and preparation for South Africa's e-economy and information society.

According to the Price Cap Model, Telkom's prices may be increased to cover the expected effects of inflation upon Telkom's costs of providing its fixed network services, but must be decreased to cover expected improvements in Telkom's productivity. Telkom has used the CPI annual inflation rate for September - 12,5% - and an annual productivity improvement factor of 1,5%. This would permit an overall price increase of (12.5 – 1.5 =11%), higher than the 9,5% overall price increase requested. Within the overall price cap, Telkom claims that price increases for specific services may be up to 5% higher than the permissible overall average price increase, thereby justifying the 12,5% increase in basic service charges.

Telkom's proposed price increase would come into effect in 2003 and would apply until further changes are made. The 12,5% September monthly CPI inflation figure does not represent a valid estimate of the inflationary impact on Telkom's costs in 2003 and 2004. The dramatic increase in the inflation rate in recent months from the 5-6% level of the last several years has been caused primarily by price increases in food and other basic consumer items, which seriously affect Telkom's consumers and employees, but are not major purchase items of Telkom. It is experiencing declining costs in its major purchases of the latest technology equipment in international markets. When combined with the appreciation of the Rand, Telkom is experiencing a deflation of its purchase costs. The announced inflationary target of the government's financial policy for 2003 is 3 - 6%. It is highly likely that Telkom's inflation experience in 2003 will be less than the government's target.

The productivity number used by Telkom, 1,5%, was adopted in 1977 and is remarkably low when compared to numbers used for incumbent telecom operators in other countries. At a similar stage in their telecom reform process, productivity factors typically range between 5% and 10%. Productivity is measured by a combination of capital investment and labour productivity. New technologies are providing Telkom with continuous major improvements in productivity on the order of 10% per annum or higher. The standard used by Telkom and other operators around the world for judging labour productivity is the number of main lines subscriber per employee. Due to major reductions in its workforce in recent years, Telkom's main lines per employee productivity has improved dramatically, including 11% in fiscal 2002 for its fixed network and 29% for its mobile investment in Vodacom. Telkom plans a further major reduction in its work force in 2003 promising even

greater gains in labour productivity. The evidence suggests that an achievable overall productivity improvement figure on the order of 11 - 13% for Telkom in the Price Cap calculation would leave ample opportunities for additional productivity gains for Telkom to realise as increased profit. Under any realistic application of the Price Cap Model, one would expect a price reduction by Telkom for 2003, on the order of 5 – 10%, not a price increase.

It has been suggested that Telkom must raise its prices and profits significantly to ensure a successful public sale of government-held shares in Telkom in an IPO expected in 2003. Telkom's financial results for fiscal 2002 and its expectations for calendar 2003 are excellent. Its 2002 Annual Report documents the successful transformation of its network, its organisation and its finances, the end of its license obligations for network expansion, the completion of its rate rebalancing programme, future opportunities for increasing profitability, and plans to reduce its rate of investment and significantly reduce its debt ratio. Further price increases in 2003 would create artificially high monopoly prices that might help bring the government more revenue on the public sale of Telkom shares, but it would be at the expense of: (1) South African first-time **investors** who were misled into believing this situation could be maintained over the longer term, which it cannot in the more competitive market of the future, when share prices would fall to reflect Telkom's promising, but more reasonable long term prospects; (2) South African **consumers** who would have to pay higher prices so the government, SBC and Malaysia Telkom could have their Telkom shares valued higher in the short run. Consumers would likely have to pay several times more to Telkom over the next several years in higher prices than the government receives in extra revenue from its sale of shares; (3) South African **telecom infrastructure development** to support its future economic development. The new e-economy would be slower to develop and connect fewer people, accentuating the digital divide. South Africa is unique in the world in having a shrinking, rather than expanding coverage of fixed network subscribers, caused in part by Telkom's continuous price increases – 26% per annum for a local 3 minute call at peak times between 1997 – 2002. The penetration rate of 11 main lines per 100 population covering 31% of households will be decreased further by Telkom's proposed price increase. Disconnections, reduced usage, collection costs, bad debts, fraud and negative publicity will reduce the benefit to Telkom, making these price increases a very unproductive way to raise profit.

Telkom's proposal is a challenge to ICASA and the government. Can the regulator and the government resist the political pressure from Telkom? Can the government place its long-term ICT sector and e-economy development policy ahead of its short-term interest in maximising revenue from the IPO? Can the government resist interfering in the independent analysis and decision of ICASA, its own expert agency? Can ICASA undertake an informed, independent analysis and present a justified decision that will withstand the political lobbying and legal appeal of Telkom? There is an opportunity to mark a turning point from an era of price increases and decline in fixed network subscribers to one of price decreases and expansion of participation as a foundation for a more inclusive South African e-economy

and information society. The international telecom community will be watching to see if the telecom reform process in South Africa has begun to reach maturity.

1. Introduction

Telkom's recent filing for an overall price increase for 2003 of 9,5%, including a 12,5 % increase for basic services (the primary rental rate and basic call charges) has prompted a wave of critical responses from the public and the press. Telkom's justification for the price increase must now be assessed by the telecom regulator, ICASA. This paper provides a framework for examining the Telkom proposal on its merits, and attempts to provide a better understanding of the issues and their implications. It reviews the important role of the telecom sector, and Telkom in particular, in preparing the foundations for South Africa's future economy based on electronic communication, its e-economy and information society. The paper outlines the crucial role of independent regulation for effective policy implementation and explains the Price Cap method of regulation used by ICASA to judge the reasonableness of Telkom's proposal. It then applies the Price Cap method to the proposal, and provides a preliminary assessment of available evidence.

It is apparent that Telkom's proposal raises a number of politically sensitive issues for the government, with conflicting and contradictory implications. It is important that these issues are identified, and their implications assessed. They include the following,

(1) Whilst other countries are expanding their telecom fixed network subscriber coverage to prepare the network foundation for their 21st century e-economies, Telkom's coverage has been declining significantly for several years, due in part to continuously increasing prices. The proposed price increase would aggravate this problem, making it even more difficult to achieve the government's e-economy goals, its information society objectives and its NEPAD opportunities. It would make the "digital divide" wider in South Africa, not narrower.

(2) The basic telecom service is subscribed to by poorer members of society who are suffering exploding inflation in the price of food and a decline in their real incomes. The price increase of 12,5% for the basic service could force even more poor people to give up their service, denying them a lifeline public necessity and participation rights in the e-economy. Paradoxically it would deny Telkom some of the revenue it anticipates from its proposed price increase and increase its costs of payment collection and bad debts.

(3) Telkom must set prices to cover all its costs and earn a reasonable profit on a very large capital investment. Otherwise it will not be able to attract capital for future investment in the expansion and upgrading of its network. As the cornerstone of the ICT sector, Telkom must have a profitable future if the South African e-economy is to be realised. In addition, Telkom has needed to rebalance its tariffs so the prices for different services reflect their respective costs.

(4) The public offering of government-held Telkom shares in the planned Initial Public Offering (IPO) for March 2003 might bring a higher share price, and more revenue to the government treasury, if Telkom's price increase proposal is approved and potential purchasers of the public shares anticipate a big jump in Telkom's profits in the first quarter of 2003.

(5) The proposed price increase of 9,5% is significantly higher than the government's inflation target of 3 - 6% for 2003. If accepted, it would reflect government approval of an inflationary price increase substantially above its target in an industry with declining costs, thereby inviting inflationary price increases in other sectors and making its inflation target impossible to achieve.

(6) One of the most important elements of telecom reform is the establishment of a telecom regulator that is independent of short-term political pressures from government and the incumbent telecom operator (in South Africa, Telkom), a regulator that can make informed, objective, unbiased decisions, based on facts, evidence and analysis. ICASA is charged with implementing the government's long-term telecom policy objectives of promoting the development of a national telecom network that provides a full range of services, universal access at reasonable prices, and a foundation for the South African e-economy and information society. But South Africa has had a troubled history in attempting to establish independent regulation, as continuous political interference and Telkom pressure have prevented the regulator from doing its job.

Telkom will be lobbying the government and ICASA very hard on its price increase application. The government will be greatly tempted to interfere and dictate a short-term politically expedient decision that could delay and impair the effective implementation of its own long-term sector development policies. The Telkom price proposal will test the maturity of the government as to whether it can restrain itself and honour the independence of the regulator; and test the mettle of ICASA as to whether it can stand up to the lobbying power of Telkom and issue a credible, justified and defensible decision.

The paper assumes that ICASA will be able to assess the Telkom price increase proposal on its merits in light of the government's long-term policy objectives for the sector and the accepted standard of the Price Cap method. It is intended as a contribution to that assessment. The paper begins with a brief summary of the significance of the reform of the telecom sector in all countries as a foundation for e-economies and information societies. This sets the framework for the establishment of independent regulation. It then explains why ICASA's independence is fundamentally important, to the credibility of the telecom reform process; to the stimulation of investment in the expansion of the converging telecom and information technology sectors; to the promotion of fair and effective competition in the sector; and to the achievement of the government's policy objectives. The paper then explains the standard by which the Telkom price increase proposal will be assessed, the Price Cap model, and how the terms are interpreted and applied. Telkom's selection of data for the model is compared with other publicly available data ICASA will need to consider, and the implications examined. Finally the politically sensitive issues noted above are examined with respect to their implications for ICASA's application of the Price Cap method to the Telkom proposal.

2. Telecom and the New E-Economy

Telkom's price increase proposal is not only important to consumers struggling with limited budgets, it is also important for the growth of South Africa's e-

economy and the development of its information (or knowledge) society. The future economy must be built on an efficient telecom network that is accessible to everyone. The successful development of e-commerce and e-government requires that business and government have efficient telecom links with consumers and citizens. If the majority of the population is either not connected, or cannot afford to use the services, e-commerce and e-government initiatives will falter, economic growth will be restricted, and South Africa's Information Society will be confined to an elite minority. If people are not connected they cannot participate. A massive "digital divide" will be created making it more difficult to raise the incomes of the relatively poor majority. The telecom network will provide the information infrastructure for South Africa's e-economy and information society. This sets the framework for assessing Telkom's price increase proposal and its implications for expanding the accessibility of the network and access to services by South African users.

Telecom and information technology (IT) are converging as a result of the introduction of new technologies. Telecom networks are being converted into giant computers, capable of transmitting all forms of communication – voice, data, images, music, video. In the last five years Telkom has transformed its network to digital standards and upgraded its capability to provide the convergence services needed for an e-economy. Indeed, continuously expanding applications of information and communication technologies (ICT) are transforming local, national, regional and international economies throughout the world into e - economies. Just as electricity, the telephone, railroad and automobile each provided a major stimulus to economic growth and a significant restructuring of most economies and societies during the 20th century, so the ICT revolution is in the process of creating another "paradigm shift" for 21st century network based e-economies.[1]

This has been recognised in recent years at the highest levels of national, regional and international government in a variety of "Information Society" policy statements and reports, culminating in the adoption of the Charter on Global Information Society at the Year 2000 G8 Summit in Kyushu – Okinawa.[2] Like many other countries, South Africa has appointed a Presidential Commission on the Information Society. Essential elements in the NEPAD program include radical improvement in telecom reform, information infrastructure development, e-commerce and e-government services applications as a stimulus to rapid economic and social development[3].

Although the information society perspectives that are outlined in the many national government policy statements and reports vary considerably, they are all based upon a common premise – that the extensive use of advanced telecom networks for the communication of vast amounts of information will enable significant improvements in economic productivity, and provide a wave of opportunities for economic, social and individual growth. These advanced telecom networks will become the information infrastructures for a cornucopia of new services - sometimes called next generation Internet services – that will transform economic and social relations and activities. The foundation of

e–economies and information societies will be their information infrastructures, the transformed and upgraded telecom networks.[4]

The point of entry to participation in the e-economy and information society is the telecom network that provides both access to services and information, and opportunities for participation. The productivity improvements and benefits that are actually realised by people, organisations and countries will depend upon how effectively these networks can be used. It is the network characteristics supporting economic activity that will be changing quite dramatically, and it is the capability for exploiting the potential benefits of these new networks that will drive economic growth and productivity improvements. The potential benefits of the future e-economy, or e-world are illustrated in Figure 1. This is by now a widely used figure in reports examining the potential new opportunities. But those opportunities rest entirely on the telecom network foundation of the e-economy – the coverage, access, quality, services and prices of the telecom network.

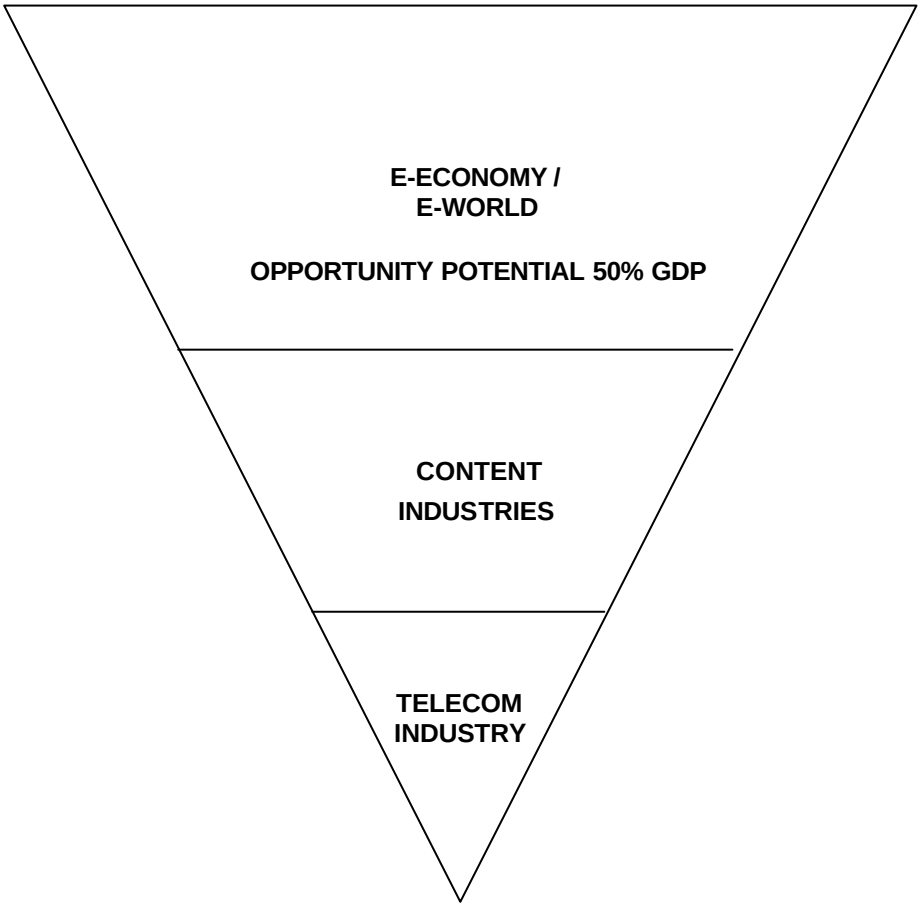

Figure 1: E-world triangle

South Africa's telecom network includes other players besides Telkom, and will include more in the future. It will require the contributions of many players to develop a complete national network capable of meeting the many diverse needs for an increasing variety of telecom services. However, in South Africa, as in most other countries, the incumbent fixed line operator, and the basic fixed network services it provides are the overwhelmingly dominant components of the network. It is extremely important that Telkom be a strong operator capable

of raising large amounts of funds for investment in network expansion and upgrading, and providing a wide variety of efficient services. At this point in its telecom reform process, South Africa's development of its information infrastructure for its e-economy depends overwhelmingly on Telkom's capability to keep improving and extending its network. The current penetration rate of Telkom's fixed network is 11 main lines per 100 population covering about 31% of households. Without significant and rapid network extension, South Africa's e-economy will be restricted to less than one-third of its population.

In a recent international study of the E- Readiness of different countries for the e-economy undertaken by the Harvard Institute for International Development (HIID) for the World Economy Forum, South Africa was ranked 40th with respect to network readiness. The report noted, "Nonetheless, strong political will has led to several major national initiatives working to transform South Africa into a knowledge-based economy that are expected to result in an integrated national ICT policy during 2002". But it also stated, "Leading observers note that the key elements needed to further Networked Readiness will continue to be telecommunications reform, affordable prices, and promotion of computer literacy." [5]

South Africa has had unexpected difficulties with its telecom reform process, to the point where its progress in expanding its fixed network subscriber coverage has stalled and its international and African rankings have suffered noticeably. In its 2001 Report on African Telecommunication Indicators, the ITU summary on South Africa stated,

> "South Africa was once the envy of the African telecom sector. In 1991, it had the highest fixed-line teledensity on the continent (behind Réunion and Seychelles). It was also among the first to introduce competition in the mobile segment (in 1994) and to partially privatise its incumbent telecom operator Telkom (in 1997). The results were impressive, with the GSM network becoming one of the largest among developing countries. Fixed-line rollout was also impressive with the particular privatised operator meeting network targets. Recently though things have not been going so well. Some half million fixed lines were disconnected in 2000 for fraud and non-payment, causing a decline in the fixed density (to only fifth highest in Africa). The decline in the fixed-line user base casts a shadow over the future expansion of the Internet where again South Africa once had a lead among developing countries. South Africa has also taken over two years to license a third mobile operator, a process that has been mired in controversy. Hopefully the launch of the third mobile operator in December 2001 and the eventual introduction of competition in the fixed market, will restore some of South Africa's lustre."[6]

Finally, the NEPAD Documents note that throughout Africa: "poor ICT infrastructure, combined with weak policy and regulatory frameworks and limited human resources, have resulted in inadequate access to affordable telephones, broadcasting, computers and the internet".[7] Clearly the enormous potential of telecom reform and information infrastructure development is not

being realised in South Africa, and its opportunities for e-economy and information society development are being restricted accordingly.

3. Independent Regulation: The Key to Effective Policy Implementation

There is now widespread recognition that telecom is no longer simply a convenient public service, but an enormously valuable economic resource, and an increasingly important infrastructure for economic growth and development. An expanded role of the market can facilitate not only improved efficiency but also the achievement of public policy objectives as well. However, markets can be highly imperfect and unstable. The challenge is to structure the new institutional environment so as to make maximum use of market forces in programs to achieve both efficiency and public policy objectives.

The effectiveness of telecom markets depends upon the establishment of an independent, competent and effective regulatory system. There are three distinct, but related sets of activities that are fundamental to telecom reform – policymaking, supplying services and regulation.[8] The essential conditions required for the establishment of an institutional structure that clearly defines separate and distinct roles for policymaking, regulation and operator management are the following:

- *Policy Development* is directed toward fundamental issues of long-term societal objectives and directions, not issues of day-to-day implementation and problem solving. It ensures attention to long run implications of developments in the sector and issues arising from them. To ensure policymakers are informed and capable of addressing the need for policy change when it is required, it is important to have access to a specialised professional policy analysis unit, generally located in a Ministry or Department. On matters of compelling policy significance new policy directives can be developed through the normal channels of policymaking.

- *Operations Management* must be clearly separated from the government so neither politicians nor government bureaucrats can interfere in day-to-day operational decisions of the incumbent operator (Telkom). The management must be accountable to a Board of Directors that is insulated from day-to-day government interference. The Board may have political appointees, but for terms of significant duration and with mandates to act independently in achieving specified economic (e.g. efficiency) and social (e.g. universal service) objectives.

- *Regulation (ICASA*) must be independent both from the incumbent operator (Telkom) and from day-to-day government influence. The regulator's task is to implement government policy. It ensures performance accountability by Telkom and other industry players to economic and social policy objectives, resolves disputes between competitors and between consumers and operators, monitors changing industry conditions, and advises government on developments bearing on policy. The regulatory agency acts as a buffer between telecom operators and government, helping to ensure the separation of functions. Whereas the incumbent and other operators may

focus too narrowly on financial objectives, the regulatory agency can insure recognition of social and other policy objectives as well.

The effectiveness by which this fundamental separation of basic functions is achieved will have a significant impact upon investment and growth in the sector. The more effective the separation, the better will be the climate to attract financing and undertake investment. It is by now a well-worn cliché that major investors and investment bankers in telecom infrastructure need answers to only two questions to determine whether a country has a favourable environment for investment. Is the regulator independent from the government? Is the regulator independent from the incumbent operator? Until now, the answer to these questions in South Africa has been "no". As a result, there was only one bidder for the Telkom licence in 1997 and two bidders for the second national operator licence (2002) and these bids are being questioned.

If each function - policy development, operations management and regulation can be performed well, each will provide clarity and stability in an institutional framework conducive to rapid growth and effective achievement of economic and social objectives. This requires both that independence of the different activities be established, and that it be sufficiently transparent to be understood by all the directly affected parties and the public.

Regulatory agencies in most countries have gone through a process of development by trial and error, generally gaining more responsibilities, power, resources and independence as experience with the new arrangements has been gained. Given its history, South Africa will need to demonstrate greater regulatory independence to convince investors, competitors and consumers that ICASA is at arm's length from political interference and from Telkom monopoly power on the specific issues of sector regulation. But the trend is in the right direction. ICASA's assessment of the Telkom price increase proposal will provide a test of the maturity of telecom reform in South Africa.

4. Telkom's Performance and its Need for a Major Price Increase

Telkom has enormous monopoly power over the fixed network and the services provided over it. Holding a monopoly over essential public and consumer services, it can force consumers to pay unreasonably high prices. A task of ICASA is to ensure Telkom does not exploit its monopoly power, and its prices are reasonable.

If Telkom is to be able to invest in network expansion, upgrading and new service development, it must be able to charge prices that are high enough to generate a reasonable level of profit. That level must be high enough to attract the capital Telkom needs for investment in expanding the network and providing a reasonable profit for investors. Therefore, the first step in assessing Telkom's price increase proposal is to examine Telkom's financial performance as an indicator of its need to earn greater profit in order to attract capital for future investment. Telkom's 2002 Annual Report (for the fiscal year ending March 2002) provides a good summary of Telkom's recent performance, financial condition and future prospects, prior to the development of its price increase

proposal. It documents the changes in 2002 compared to 2001 by a variety of benchmarks, including the following key indicators:

- Operating Revenue + 8%
- Profit from Operations + 8%
- Earnings per Share + 17%
- Cash flow from Operations + 16%

These results are described by CEO Sizwe Nxasana in his review as “robust results”. Chairman Eric Molobi states in his overview,

> “the business has never been stronger due to strategic and operational changes that were driven throughout the [Telkom] Group over the past 5 years. The Group’s financial results for the year indicate that Telkom is well positioned to both operate in a liberalised market and be judged against its international peers as it prepares for an Initial Public Offering”. (16-17)

With respect to the wireline segment, which provides the fixed network services, revenues increased by 5%, but operating profit declined by 9%. Despite an average tariff increase between 5% and 6%, fixed line traffic revenues grew only 3% as a result of a decline in net access lines and in voice volumes. These declines were associated with an increase in the effective price per minute for a local call in standard time of 23.9%, an increase in monthly telephone rental charges of 8%, and in installation charges of 15% in 2002. This suggests that for many people, Telkom priced them out of the market, and therefore it didn’t get the revenues and profits anticipated from the price increases. The Annual Report describes the wireline segment as ”stable” with “the ability to deliver strong cash flows”.

During 2002 investment in the wireline segment was reduced. Capital expenditures in the segment declined by 15%. This new policy was explained as follows,

> “As we reach the end of our licence obligations, we have changed our capital spending decision process to ensure that adequate returns on investment are achieved. We are focused on reducing capital expenditure in our wireline segment without impacting service levels. This year we started the process by reducing our capital spend to R6, 9 billion, 25% of revenues, from R8, 1 billion in 2001, 31% of revenues.” [9]

According to the Annual Report the combination of significant reductions in investment and in the number of employees in the wireline segment, together with expanding data and other value-added network services can be expected to increase wireline segment profit in the future. Telkom’s priority for the future is to promote advanced network services to those already connected to the network, not an expansion of the number of subscribers.

Telkom's financial results for 2002 are impressive and reflect a steady improvement over five years. The company is extremely well positioned to reap increased profit in future years from its past network investments. This evidence provides reason to question whether a major price increase for wireline services is needed by Telkom to bringing its financial returns up to an acceptable level. It also questions whether the price increase would deliver the expected increase in revenue and profit, because once again a significant portion of consumers will be forced to give up their service or substantially curtail their use.

5. Applying the Price Cap Method to Telkom's Proposal

The proposed price increases are based on Telkom's application of a pricing formula that is widely used by national telecom regulators around the world for assessing pricing proposals of incumbent telecom operators - the Price Cap model. According to this model, for a specified future period, the telecom operator may adjust prices on the basis of estimates of probable inflation in the operator's costs (often measured by the consumer price index, CPI) and achievable improvements in its productivity, generally labelled "X". Inflation increases costs. Productivity improvements decrease costs. Thus the formula CPI –X. The purposes of applying this formula are,

1. to allow Telkom to recover increases in the costs of the items it purchases over which it has no control (i.e. inflation);
2. to ensure consumers get a share of the benefits of productivity improvements from new technologies and improved efficiencies, as they would in a competitive market (i.e., X); and
3. to provide an incentive for Telkom to improve its productivity, similar to that provided to firms in competitive markets. If Telkom exceeds the agreed level of achievable productivity improvement, it will be allowed to keep the extra profit actually realised.

Telkom has applied this formula by including an inflation rate of 12,5%, and a productivity improvement factor of 1,5%, to achieve, in its view, a permissible overall price increase of 11%, greater than the 9,5% increase it has proposed. The increase of 12,5% for the primary rental rate and domestic call charges is justified, in Telkom's view, by a prior agreement with ICASA that specific price adjustments within the overall package of price changes can be increased up to 5% more than the allowable overall price increase.

From Telkom's perspective, there is really nothing to debate. They have simply applied a formula that was previously agreed. However, the applications of all formulae require a great many judgements. It is important to independently assess the interpretation of the factors in the formula, the selection of data that is used, and the "end result" consequences of the proposed price increases. One should not be surprised if the judgements reached from the perspective of Telkom, with a top priority to increase profit and shareholder value, differ from that of ICASA, with a top priority to stimulate network development, access to the network and reasonable prices. "The methodology is flexible and may be adjusted to take into account a variety of objectives related to telecommunications tariffs".[10]

The Price Cap method was initially adopted in South Africa by a Ministerial Determination of Fees and Charges for Telecommunication Services (7 May 1997) and valid for 3 years, following section 45 of the Telecommunications Act. As there was no direct experience and no Telkom productivity data to guide the determination of the productivity improvement factor (X), it had to be negotiated with only very limited information and understanding. A productivity factor of 1.5% was selected. As part of this rate regulation regime, a rate structure rebalancing factor of 20% was permitted. Prices for specific service components could increase by 20% higher than the overall average price increase. This was intended to enable Telkom to rebalance its prices – essentially to raise its basic service prices so as to cover their costs. In retrospect, this price regulation regime was extremely generous to Telkom, although it should be noted that a common pattern across countries applying the Price Cap method is to begin with a generous determination of the productivity factor and then increase it, sometimes significantly, in succeeding applications of the method as experience and actual productivity data for the incumbent operator are obtained.

The former telecom regulator, SATRA, began a process to establish a new application of the Price Cap method in 2000, but failed to complete its work before the third anniversary of the initial Ministerial determination, so the initial Price Cap regime was continued. Last year (2001) the new regulator, ICASA, published draft Price Cap regulations, received public comment and sent its decision to the Minister of Communication for approval. ICASA proposed that Telkom's productivity factor be raised from 1.5% to 3%, and the rebalancing factor be reduced from 20% to 5%. At the ICASA hearings on the issue, Telkom argued for a zero percent productivity factor.

Telkom lobbied the Minister; the approval of ICASA's new price regulations was delayed; ICASA was forced to reduce the productivity factor back to 1.5%. Before the new regulations were implemented, Telkom filed for new price increases for 2002 based on the old regime, including a 23.9% increase in local calls. ICASA rejected Telkom's filing and the matter ended up in the courts. Finally a negotiated settlement was reached whereby Telkom's increased prices were approved subject to the introduction of a new lifeline service to try to keep customers on the network. This and other amendments to the regulations were belatedly approved by the Minister. These are the new regulations of 24 October 2002 available on the ICASA web site.

In addition to documenting a classic case of failure to establishing and implement independent regulation, this scenario clearly demonstrates the need for a current independent assessment and application of the Price Cap method to Telkom's price increase proposal. The recent run up in the CPI because of increasing food prices creates a special circumstance where its use as a proxy for estimating future inflation in the costs of Telkom purchases is seriously called into question. The productivity factor of 1.5% was determined more than 5 years ago, and has no foundation in experience or factual evidence. The Price Cap approach is a method for determining reasonable prices for a future period of several years. Whenever price changes are proposed, whether by the regulated company or the regulator, a current independent assessment of the inflation and productivity factors is required, based on the best available evidence. This is necessary to be fair and responsible to both Telkom and

consumers, and to prepare the ground for the day when the Minister will stop interfering in ICASA decisions and Telkom's backdoor lobbying will no longer succeed.

A. Initial Conditions and the Period of Application

An application of the Price Cap method begins with an assessment of the initial conditions, i.e., the financial, operational and general condition of Telkom at the beginning of the period. If Telkom's condition is poor, ICASA would have to consider a generous application of the method to ensure Telkom is strengthened to a healthy financial and operational condition. If Telkom is in a very healthy condition, well positioned to exploit future technological and market opportunities, then a more rigorous application of the Price Cap method is called for, with greater attention to consumer interests and long-term government policy objectives.

In addition to the strong financial indicators noted in its 2002 Annual Report, Telkom's finances will be strengthened for 2003 by significantly increased revenues from renegotiated interconnection agreements with the mobile operators, and a policy of investing only in profitable opportunities. CEO Nxasana summarised the future prospects for Telkom in his 2002 Annual Report Review as follows,

> "We now offer a full range of products and services across voice and data, fixed and mobile, and have completed a substantial capital investment programme in our networks, incorporating the world's best technologies. Our customer service is consistently improving both in terms of service levels and product delivery. We have invested in the right skills and have developed a performance driven culture across our leadership team and into our workforce with new measures to drive higher productivity. We now have all the fundamentals in place to operate successfully in a liberalised market." (23).

A rigorous application of the Price Cap method to this price increase proposal by ICASA would seem to be appropriate.

The future period to which the Price Cap analysis applies begins at 1/1/2003. Information from Telkom suggests the duration of application of these prices may be as short as one year as price changes are assessed annually, although ICASA information suggests a period of at least 18 months or until such time as a new rate regime is approved. For this analysis, the Price Cap period will be considered to be between one and two years, the calendar years 2003 and 2004.

B. Impact of Inflation Upon Telkom's Costs

The inflation factor is an estimate of the inflationary impact on the costs to Telkom of producing a specified basket of telecom services – essentially the monopoly residential and business wireline fixed network services. Telkom does not maintain an index of wireline network services costs, so a proxy indicator is

used as reference point. One common proxy indicator is the consumer price index (CPI). When inflation is low, CPI can be a satisfactory indicator. It is clearly defined and continuously measured in a consistent manner by an independent source. The calculation of a Telkom wireless network inflation index would be a more precise method, but would involve both considerable debate at the outset about what cost elements to include and how to weight them, and an extra cost to establish and maintain the index. The CPI is a crude indicator for measuring the effects of inflation on Telkom's purchases, but where there is evidence that it provides a poor estimate of the inflation in Telkom's costs, appropriate adjustments can be made.

The 12,5% annualised monthly CPI inflation rate for September 2002 is a very poor estimate of the likely inflation in Telkom's wireline network costs in 2003 and 2004. It is considerably higher than the CPI inflation rates of 5 – 6% for the past few years, and reflects a recent run up in the price of food, which is about 30% of the CPI and increased 19.1% during September. Thus, almost half the CPI increase for September is explained by the increase in food prices. Other major contributions to the recent CPI increase have been housing, transport and health services. If these elements are removed from the CPI, the remaining inflation is very low. While Telkom is not totally exempt from the effects of these price increases, it is hard to imagine a sector of the economy where the inflationary impact on the costs of providing its service would be less. It is Telkom's customers and employees who are hit with the full brunt of this inflation, not the costs associated with providing Telkom's wireline network services.

A special factor that must be considered in assessing the potential impact of inflation on Telkom is the fact that Telkom purchases most of its equipment overseas, mostly in US dollar or Euro currencies, and is therefore subject to price increases due to the devaluation of the Rand. This has been a problem in the past, but as the Rand has appreciated about 25% against the dollar during 2002, Telkom has experienced a major deflation in these equipment prices. Moreover, the dollar and Euro prices for wireline network equipment and services provided by the global equipment suppliers continued their downward trend in 2002, providing another force for deflation of Telkom costs.

Telkom also borrows funds in international markets, which are subject to currency risks. Here too Telkom interest payments in international currencies will have been reduced from the appreciation of the Rand in 2002. Also Telkom wisely manages its foreign exchange rate risk by hedging identifiable exposures via various financial instruments. This protects Telkom from the risk that the eventual net financial flows will be adversely affected by changes in exchange rates.

The evidence with respect to inflationary impact on the costs of Telkom purchases relating to its wireline network facilities and services suggests that Telkom may well have benefited from deflationary price reductions in 2002, rather than inflationary price increases. However, one cannot presume the favourable conditions of 2002 necessarily will be continued throughout 2003 and 2004. But it is reasonable to expect the inflationary impact on Telkom to be

well below the CPI. Telkom is in a declining cost industry and should be expected to contribute to keeping inflation down.

The government's CPI inflation target rate for 2003 is 3- 6 %. Although present evidence indicates that it is unlikely to be met, the causal factors (food, etc.) will not significantly affect Telkom's costs. Telkom purchases in 2003 can be expected to have an inflation impact on its costs of no more than the government's inflation target. Applying an estimated inflation rate of 3 - 6 % in the price cap formula for Telkom would appear to be appropriate. Three percent might be a rigorous application. Six percent would be generous.

C. Achievable Productivity Increases by Telkom

Productivity is the relation between inputs of capital investment and labour resources, and outputs of services and products. Increased productivity occurs when greater output is achieved with the same or fewer inputs of resources. Capital productivity is improved when investment in physical plant and equipment provide greater network capacity that supports greater volumes of service. In telecommunication this is generally associated with,

1. economies of scale as the network becomes larger;
2. economies of scope as the network can provide more volumes of service and more services over the same network facilities e.g., voice, data, video;
3. new technologies, which provide greater output capacity for the same, or less investment. Sometimes new technologies provide reduced costs, as well as additional economies of scale and scope.

Labour productivity is improved when the output per employee increases. This is generally associated with,

1. employees working with new technologies that allow them to be more productive;
2. increased employee skills;
3. changes in business processes or organisational structure that enable more efficient work activity; and
4. elimination of redundant, unproductive and unnecessary jobs.

The productivity number used by Telkom in the Price Cap formula, 1.5%, is remarkably low when compared to the numbers used for incumbent telecom operators in other countries, especially at a similar stage in their telecom reform process, where there are major opportunities to improve productivity. International benchmarks would suggest a number between 5% and 10%.[11]

Telkom has dramatically improved the technology of its network in recent years. The network is now fully digitalised. An extensive Voice over Internet Protocol (VoIP) network has been deployed. Convergence voice, data and video services can be provided.

> "Telkom is adopting an evolutionary approach towards a Next Generation Network, using the Packet Mode Architecture-model to maximise existing infrastructure while adding new functionality. By utilising Packet Mode architecture (PMA), Internet Protocol (IP), Asynchronous Transfer Mode (ATM) and the wider bandwidth made possible by Asymmetric Digital subscriber Line (ADSL) technology, Telkom is able to offer customers a fully converged Next Generation network." [12]

Although there are no numerical calculations available of Telkom's capital productivity, the available evidence clearly demonstrates that it is high, and will continue to be high for the foreseeable future. This suggests that for the immediate future (2003-04) Telkom's capital productivity must be at the upper bound of the international benchmark range for total company productivity, 10%, or even higher.

Telkom uses the internationally accepted indicator for measuring labour productivity on wireline networks for incumbent operators – fixed lines per employee. Fixed lines connect customers with services. The greater the number of lines per employee, the greater the labour productivity. Between 1997 and 2002, Telkom increased its lines per employee from 75 to 125, a 67% increase in 5 years. In 2002, the increase was from 113 to 125, an 11% increase. This is a major accomplishment, especially when the number of fixed lines is declining.

However Telkom's plans are even more ambitious. It is now in the process of another major staff reduction before the IPO of Telkom shares by the government. Telkom's target is to improve its labour productivity to the international standard of 200 fixed lines per employee as fast as possible. That is another 60% labour productivity improvement within the next year or two. This evidence suggests a labour productivity number for the Price Cap formula on the order of 25% or more per annum for the next two years. Despite Telkom's plans, it seems unrealistic for Telkom to be able to achieve a labour productivity improvement of more than 25% per year. A more realistic figure might be a slight improvement on the level achieved over the past 5 years, 12 – 15%. If Telkom actually achieves its plans, the productivity improvement in excess of 12 –15% would provide Telkom with extra profit.

The combination of capital productivity of 10% or more and labour productivity of 12 – 15% or more yields a total productivity estimate for Telkom of 11-13% or more. This estimate is more appropriate to the impressive productivity improvements and ambitious plans of Telkom. It's use of a 1.5% productivity figure over 2003-04 as its estimate of achievable annual productivity is a disservice to itself and an international embarrassment. Knowledgeable investors would not be impressed by an incumbent national telecom operator that claims its achievable productivity improvement for the future is only 1.5% per annum. If they were to believe this, the forthcoming IPO would surely fail. Fortunately they will rely on the data in Telkom's Annual Report.

D. Price Cap Model Results and Implications for Telkom

The results of applying the Price Cap Model to Telkom for 2003-04 based on available evidence indicates that

1. the effects of inflation on Telkom's costs are likely to fall between 3 – 6%, with a possibility of being less; and
2. Telkom's achievable productivity improvement is likely to fall between 11 – 13% per annum, with a reasonable probability of being higher.

The Price Cap model results do not support a price increase of 12.5%, but rather a price decrease between 5% (6% - 11%) and 10% (3% - 13%). Determination of the actual price reduction requires a more detailed analysis of the evidence by ICASA.

Before rejecting Telkom's price increase proposal and ordering a price decrease based on an independent application of the Price Cap method, ICASA will need to assess the likely effects of such a change on Telkom's activities. Is it likely to result in any impairment of Telkom's service provision capability, or reduction in its financial standing? Telkom has stated, that

1. with the completion of its licence conditions for geographic network expansion, it plans only to invest in profitable activities;
2. the reduction in wireline network investment (15% in 2002) will continue. Network investment will be reduced further in future years;
3. the network is fully modernised and fully capable of providing a full set of converged services for the future;
4. priority activity for network services will focus primarily on data and other value-added network services, not on the basic network services;
5. its continuing loss of basic service customers will be addressed by more rigorous enforcement with respect to payments, bad debts and fraud, and expanding the option of prepaid fixed service.
6. the rebalancing of its pricing structure was completed in 2002.

None of Telkom's plans or activities will be affected by whether Telkom increases or decreases prices for its basic fixed network services by 10% in 2003. The financial effects of the price increase for basic services during 2002 were that the price increase of 5 – 6% yielded only a 3% increase in revenue, some customers gave up the service, calling volume was less than expected, and bad debt and collection costs problems were aggravated. This calls into question the financial viability of such price increases, especially when the increased marketing and public relations costs that are necessary to counter the negative perceptions of Telkom created by the price increase, are considered.

This would suggest that going ahead with another 9.5% price increase in 2003 is seriously questionable in terms of any significant long-term financial benefit to Telkom. The financial gain will be far less than it appears, and it will not affect Telkom's planned activities in any event. It will top up the profits a bit and increase earnings per share a few cents – the result of monopoly power, not

competitive market efficiency. The more important activity by far will be Telkom's implementation of capital and labour productivity improvements and the rollout of its convergence services to support e-commerce, e-government and other e-economy services. These activities will be the drivers determining the profitability of Telkom in 2003.

If Telkom prices for basic services are reduced, the effects will be in the opposite direction. The retention of customers, the stimulation of call volumes, the reduction in bad debt and collection costs, the reduction made possible in public relations costs, the good press and general customer goodwill will minimise (if not counter entirely) any negative financial effect on Telkom. The percentage decline in basic service revenue is likely to be no more than half the percentage decline in prices. There have been occasions in other countries where price decreases stimulated volume to the point where revenue and profit actually increased. The costs of retaining customers and handling an increase in call volumes will be less than the costs of losing them, and the customer goodwill will be substantial. The negative effect on profit and earnings per share is likely to be inconsequential in terms of Telkom's overall financial performance and its future prospects as noted above. In light of the forthcoming competition in the sector, a price decrease in the basic services will almost certainly be in Telkom's long-term best interest.

6. Implications for Customers and Government ICT Sector Policies

Table A summarises the experience of consumers between 1997 and 2002 with continuous price increases for the different components of the basic telecom service. These prices influence whether or not residential households can afford to subscribe to participate in network services. It is apparent that price increases have been growing at a rate far greater than the growth in average wage rates or incomes. This makes it difficult to attract new subscribers and forces low income subscribers to be continuously assessing whether they must give up the service rather than give up or reduce their purchases of other necessities. Telkom prices for the basic services are now relatively high by international benchmarks. When considered with reference to the income levels of the lower 75% of the population they are extremely high. The majority of the population is priced out of the market.

Table A: Telephone Tariffs (in Rand)

Tariff Category	1997	1998	1999	2000	2001	2002*	CAGR '97-'02	2003* Proposed	% Increase '02-'03	CAGR '97-'03
Cost of a local 3 minute call (peak rate)	0.31	0.39	0.46	0.63	N.A.	0.99	26.0%	1.11	12.5%	23.7%
Residential monthly telephone subscription	49.59	55.54	55.58	62.70	N.A.	67.72	6.4%	76.20	12.5%	7.4%
Residential telephone connection charge	171.00	192.38	207.77	207.77	N.A.	239.00	6.9%	268.98	12.5%	7.8%

Source: ITU World Telecommunications Indicators Database (2002)
* - 2002-2003 figures are calculations made from figures contained in Telkom News Article "Telkom announces its tariff adjustments for 2003" (12/11/2002) available at http://www.telkom.co.za/servlet/ClickManager?currentFile=/index.jsp&nextFile=/news/article_510.jsp&click.

Table B shows the fixed network population coverage, or penetration rate, from 1997 – 2002. What is alarming is that despite the significant geographical expansion of the network arising from Telkom's license obligations between 1997 and March 2002, subscriber penetration did not increase discernibly. Between 2000 and 2002 it actually declined. In the Telkom Annual Report 2002, CEO Nxasana explains:

> "While we connected 2.8 million fixed lines over the past 5 years to meet our licence rollout obligations, our net line growth over the licence period was 665, 819. This resulted in a total of 4.9 million fixed lines including payphones and ISDN, at 31 March 2002. Our net fixed-line growth over the five-year period was disappointing. While we succeeded in connecting millions of customers, we were adversely impacted by a high rate of disconnections.
>
> Disconnections can be attributed to the poor domestic economic climate coupled with the phenomenal growth in mobile subscribers over the five-year period. Fixed-line teledensity currently stands at 11% and fixed-line household penetration at an estimated 31%".[10]

Table B: Telephone Tariffs (in Rand)

Indicator	1997	1998	1999	2000	2001	2002	CAGR 1997-2002	CAGR 2000-2002
Main telephone lines per 100 inhabitants	10.1	10.8	11.8	12.8	11.5	11.4	2.5%	-5.6%
Cellular mobile telephone subscribers per 100 inhabitants	2.3	4.0	7.1	12.1	19.3	24.9	61.0%	43.5%

Source: 2002 Telkom Annual Report.

This indicates that more than 2 million lines, more than 75% of the license obligation for network expansion are not connected to subscribers. Moreover, even these figures mask the full effect on the penetration rate for residential subscriber service. ISDN lines are really substitute lines to provide additional capacity for advanced services for existing subscribers. In 2002 ISDN lines increased 25% to 467,518 lines. Increases in payphones (10% to 195,399 in 2002) and prepaid fixed lines (47% to 707,881) are commendable, but they help disguise the fact that subscriber fixed lines declined by 10% to 3.6 million in 2002. It may well be that the number of residential subscriber fixed line customers is less in 2002 than it was in 1997.

As a result, South Africa is one of the very few countries, where progress in network development has been declining. Its international ranking with respect to network penetration and consumer prices continues to decline with each year's annual price increase. The explosion in mobile service, the steady increase in payphone coverage and the establishment of many telecentres throughout the country have helped many people get some kind of access to the national voice communication network. Telkom's proposed price increase

would force more people to shift to these options, if they are available and people can afford them. However, a reasonable access to fixed network services is essential for participation in e-economy and internet services.

After its unsuccessful attempt to expand the network significantly as a result of its license obligations, Telkom appears to have defined the bounds of its fixed line market as the approximately 28% of households that are likely to remain as subscribers after the 2003 price increase. Its only programme that might increase penetration is the prepaid fixed line option, but these users have to pay even higher prices than fixed line subscribers.

These developments create difficulties for the further development of the South African fixed telecom network. The planned second national operator, under-serviced area operators, and potentially other service providers will all help in the longer term, but not in 2003. After the licensing processes are completed, it will take some time for them to roll out significant network services. The effective implementation of the government's policies for telecom network expansion, information infrastructure development, e-commerce and e-government services all depend on Telkom playing the major role. The proposed price increase conflicts directly with these development policy objectives. A price decrease would support them, and begin the process of expanding rather than shrinking participation in fixed network services.

Finally, Telkom's proposal to raise its prices because of a short-term run-up in the CPI attributable to price increases in food and other consumer necessities, when the costs it incurs in providing network services have declined, is a direct challenge to national policy to control inflation. It would be a cause of inflation, made possible because of Telkom's monopoly power, not a justified response to an increase in Telkom's costs. A price reduction based on Telkom's continuously improving productivity and declining costs would support national inflation policy and help bring down the CPI, as basic service telecom costs are a component of the CPI.

7. Implications for the Government's IPO of Telkom Shares

It has been suggested that Telkom must raise its prices and profits to ensure a successful public sale of government-held shares in Telkom in an IPO expected in 2003. Knowledgeable investors will be basing their decisions on the prospects for Telkom over the next several years and for the longer-term, not on any single decision relating to its fixed network service prices. Telkom's financial results for fiscal 2002, and its expectations for calendar 2003, are excellent. Its Annual Report documents the successful transformation of its network, its organisation and its finances, the end of its license obligations for network expansion, future opportunities for increasing profitability, and plans to reduce its rate of investment and reduce its debt ratio. These are the factors that are far more important for investment decisions.

There is no question that Telkom has "the fundamentals", as financial analysts would characterise it, for a successful IPO. The overall investment climate will determine the best window of opportunity for offering the IPO. The offering price for the shares selected by the financial experts will determine whether the IPO

is immediately oversubscribed or needs some marketing to sell out. The price increase proposal by Telkom will have no influence whatsoever on whether or not the IPO will succeed. It will succeed unless the financial experts advising on the timing and share offering price misjudge the financial markets, which is unlikely.

A price increase in 2003 by Telkom would create artificially high monopoly prices, and anticipation of extra profits in the immediate short run that might bring the government more revenue on the public sale. However, it would be at the expense of:

1) South African first –time **investors** who were misled into believing this situation could be maintained over the longer term, which it cannot in the more competitive market of the future, when share prices would fall to reflect Telkom's promising, but more reasonable long term prospects;
2) South African **consumers** who would have to pay higher prices so the Government, SBC and Malaysia Telkom could have their Telkom shares valued higher in the short run. Consumers would have to pay substantially more to Telkom over the next several years in higher prices than the government receives in extra revenue from its sale of shares;
3) South African **telecom infrastructure development** to support South Africa's e- economy which will be impaired and delayed.

Governments are often tempted to place immediate financial gain for the treasury ahead of their own long-term sector and economy development policies. However, this policy of short-sighted monopoly mercantilism has been demonstrated many times to be inefficient, harmful to economic growth, and often foolish. This was dramatically demonstrated recently in the government licensing of the third generation mobile (3G) spectrum licenses in England, Germany, France and the Netherlands. The governments succeeded in extracting the highest possible payments from the incumbent operators and other bidders. As a result the incumbent operators were pushed to the verge of bankruptcy and the introduction of 3G mobile services has been delayed several years. Europe has lost its world leadership in the mobile sector to Asia and is losing ground to the US. Government losses in tax and other forms of revenue from the reduced growth in the sector are already far greater than the revenue realised from the sale of the licenses at monopoly prices.

The South African government will want investors in Telkom shares to do so at a reasonable price reflecting the long-term prospects of Telkom, which are very good. It does not need Telkom's proposed price increase in basic telecom services to do that. One would not expect the government to be willing to compromise its long-term development policies for the ICT sector, South Africa's e-economy and information society, for the sake of an artificially topped up Telkom share price at the time of the IPO. The fact that the IPO is planned for March 2003 should weigh against a price increase by Telkom, not in favour of it.

8. Summary and Conclusion

The Telkom price increase proposal has important implications for information infrastructure development, the effective implementation of the government's ICT sector policies, the development of the South African e-economy and information society, and the credibility of ICASA as an independent regulator. The proposal from Telkom is the first to come after completion of both its fixed network rollout obligations under its license agreement and its programme to rebalance its prices. Telkom's fixed line penetration rate has declined over the last three years to 11 lines per 100 population covering only 31% of households. South Africa has slipped in international benchmark comparisons from the best in Africa to fifth. Throughout the period, Telkom has raised basic service prices continuously at a far higher rate than the increase in average wages or incomes. Although these price increases have reflected changes to rebalance Telkom's pricing structures, the rebalancing has reflected the costs of an inefficient operator, not the efficient operator Telkom will become when it completes its programme of productivity improvements.

The cost of a local 3-minute call at peak times has increased 26% per year between 1997 – 2002. The proposed price increase would raise it another 12.5%. By now Telkom has relatively high prices by international benchmark comparisons. It is apparent that South Africa's and Telkom's programme to expand fixed network coverage has not succeeded and the continuing price increases are an important reason why it hasn't. Moreover Telkom's increased revenue from the 5 –6% price increase in 2002 was only 3% because the much higher price increases in basic services stimulated significant disconnections and non-payment.

By other measures, Telkom's transformation since 1997 has been impressive. The network has been upgraded with modern technologies to world-class standards and is capable of providing advanced converged services. Its capital and labour productivity has been very high, and will be continuing. The financial performance has improved steadily to the point where Telkom's credit worthiness is ranked high by international ratings agencies. Profits and earnings per share continue to rise. In fact, Telkom is in such a strong position that it has begun to reduce investment in the network as part of policies of investing only in profitable projects and reducing its debt ratio. Telkom is well positioned for the future, and its prospects are excellent. This ensures the success of the forthcoming IPO of government held Telkom shares.

The evidence suggests that Telkom's proposed price increase would have several consequences,

1. A significant number of people would give up the service, reducing the penetration rate and household coverage further.
2. The revenue increase to Telkom would be only about half the price increase. Significant additional costs of disconnection, payment collection, bad debts, fraud, and public relations to counter the bad publicity, will lower the profit benefit further. This would seem to be a very inefficient and relatively unproductive way to raise profits in the current environment.

3. It would slow down, if not seriously impair, implementation of the governments ICT policies intended to foster information infrastructure development, the e-economy and South Africa's information society. The price increase would reduce the number of connected participants, magnify the digital divide in South Africa by increasing the gap between the connected and the disconnected, and reduce potential South African participation in the e-economy to less than 30% of households.
4. It would unnecessarily contribute to South Africa's inflation problem, and could have a multiplier effect by encouraging other sectors to raise prices.
5. It might make it possible for the government to sell its Telkom shares for a higher price at the forthcoming IPO. However the price increase is not necessary for a successful IPO and will not significantly affect the decisions of informed long-term investors, although it may mislead first time South African investors.

Telkom has not suffered the inflationary increases that have caused the CPI to rise sharply in recent months. The costs of its purchases associated with the provision of fixed line telecom services are more likely to have declined as a result of the declining prices of telecom equipment in international markets and a 25% appreciation of the Rand against the US dollar in 2002. It is reasonable to estimate the impact of inflation on Telkom's purchases in 2003 – 04 to be less than the government's inflation target of 3 - 6%.

Telkom's selection of a productivity improvement factor of 1.5% is unrealistically low by international benchmarks and by Telkom's experience and plans. Capital productivity improvements have been at least 10% per annum based on continuing improvements in technology. Labour productivity has been in 11 – 12% per annum range based upon an increase in the number of lines per employee, associated with major reductions in the work force. Telkom plans an even more rapid increase in labour productivity during 2003 – 04. Overall, the use of a productivity improvement factor for Telkom of 11 – 13 % would allow considerable opportunity for Telkom to exceed it and earn extra profit.

Substituting a more realistic inflation factor of 3 – 6%, and a productivity improvement factor of 11 – 13 %, in the Price Cap formula yields the result of a price decrease of 5 – 10%, instead of a price increase of 9.5%. The more detailed assessment necessary to determine the precise price reduction percentage will need to be undertaken by ICASA.

To date, South Africa has had difficulty implementing its new Telkom reform structure, and has gone through a painful eight year learning cycle. The Telkom price increase proposal provides an opportunity for the South African government and ICASA to demonstrate that independent, objective, expert regulation will now be respected. There is an opportunity to mark a turning point from an era of price increases and decline in fixed network subscribers to one of price decreases and expansion of participation as a foundation for an inclusive South African e-economy and information society.

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