



Papua New Guinea
National Information and Communications
Technology Authority

RECOMMENDATION REPORT

**A report to the Minister recommending
the introduction of a retail service
determination**

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1 EXECUTIVE SUMMARY

Part VII of the *National Information and Communications Technology Act 2009* (the Act) provides for the Minister, upon the recommendation of NICTA, to make a retail service determination in relation to a specific retail service supplied by an operator licensee.

NICTA has held a public inquiry into whether or not mobile originated retail national voice call services that are supplied by Digicel (PNG) Ltd ("Digicel") on a pre-paid basis should be subject to a retail service determination that restricts the level of price discrimination between on-net and off-net calls. NICTA has also considered such a proposal for a retail service determination against the retail regulation criteria specified in section 158 of the Act and is satisfied that all of those criteria would be met by the introduction of such a retail service determination.

Accordingly NICTA recommends that the Minister subject mobile originated retail national voice call services that are supplied by Digicel on a pre-paid basis to a retail service determination that contains a pricing principle that prevents discrimination of more than 40% between on-net and off-net prices unless, upon application by Digicel, a greater difference in on-net/off-net prices is objectively justifiable by NICTA based on differences in the costs of supplying the service. In addition, NICTA recommends that the pricing principle include scope for Digicel to apply to NICTA for conditional approval to engage in on-net/off-net price discrimination that is greater than either the 40% tolerance or the approved cost-justified difference, as the case may be, as part of a specific promotion.

NICTA recommends that this retail service determination apply for a period of five years, the maximum period permitted under the Act, with a review of its effectiveness and continuing need undertaken after it has been in operation for two years.

A draft retail service determination that reflects this recommendation (and which NICTA has considered against, and is satisfied meets all of, the retail regulation criteria) is provided at Annex A.

This report identifies the particular terms of the recommended retail service determination and the extent to which the retail regulation criteria would be met by the recommended determination. This report fulfils the requirement set out in subsection 159(1) of the Act.

NICTA has consulted with the Independent Consumer and Competition Commission (ICCC) throughout the inquiry process and in the preparation of this report.

2 BACKGROUND

2.1 RETAIL SERVICE DETERMINATIONS

Part VII of the *National Information and Communications Technology Act 2009* (the Act) sets out special arrangements relating to consumer protection and the regulation of retail pricing. Under section 157 of the Act, NICTA is able to hold a public inquiry under section 230 of the Act to determine whether or not it should recommend to the Minister that one or more particular retail services supplied by one or more specified operator licensees should be subject to a retail service determination.

A retail service determination is a regulation that is made by the Minister based on the recommendation of NICTA. NICTA's recommendation must be based on the application of the retail regulation criteria that are set out in Section 158 of the Act, which are as follows:

- (a) that making a retail service determination for the retail service in respect of an operator licensee for a particular period will further the achievement of the objective set out in section 124 but disregarding section 124(2);¹ and
- (b) specifically, in relation to the competition objective, that –
 - (i) that operator licensee has a substantial degree of power in the market within which the retail service is supplied; and
 - (ii) in the absence of the retail service determination for that period, that substantial degree of power is likely to –
 - (A) persist in the market over that period; and
 - (B) expose retail customers to a material risk of higher prices and/or reduced service where they acquire the retail service from that operator licensee during that period; and
- (c) specifically, in relation to the efficiency objective, that the operator licensee will not be prevented from achieving a return on assets during that period sufficient to sustain investment necessary to supply the retail service; and
- (d) the aggregate likely benefits of making that retail service determination outweigh any aggregate likely detriments.²

¹Section 124(1) of the Act states 'The objective of this Part [Part VI] and Part VII of this Act is to –
(a) promote effective competition in markets for ICT services in Papua New Guinea, to be known as the "**competition objective**", subject to –
(b) promoting the economically efficient use of, and the economically efficient investment in, the facilities by which ICT services may be supplied, to be known as the "efficiency objective".
Section 124(2) of the Act, which is to be disregarded in any consideration of the retail regulation criteria, states 'In determining the extent to which a particular thing is likely to further the achievement of the efficiency objective, regard shall be had (without limitation) to all of the following matters –
(a) whether it is technically feasible for the relevant ICT services to be supplied, having regard to –
(i) the technology available or likely to become available; and
(ii) the reasonableness of the costs involved; and
(iii) the effect of supplying the ICT services on the integrity, operation or performance of other ICT services or facilities; and
(b) the legitimate commercial interests of the access provider in supplying the ICT services, including the ability of the access provider to exploit economies of scale and scope; and
(c) the incentives for investment in the facilities by which the ICT services may be supplied, including the risks involved in making the investment.'

² Section 158 of the Act

The specific matters that a retail service determination may specify are set out in section 161 of the Act. In summary, section 161:

- requires that a retail service determination must specify the operator licensee to which it refers (and may apply to more than one operator licensee);³
- provides that a retail service determination may
 - regulate prices for the supply of the retail service;⁴
 - specify service standards that the operator licensee supplying the retail service must meet;⁵
 - specify any pricing policies and/or principles that must be complied with by the operator licensee in pricing the retail service;⁶
 - specify conditions relating to the price of the retail service, including that any calculation is to be performed, or a matter is to be determined, by NICTA;⁷ or
 - require the operator licensee to provide specified information to NICTA, retail customers, or any other persons;⁸
 - require the operator licensee to supply the retail service in particular areas or to particular classes of retail customer;⁹ and/or
 - require the operator licensee to comply with any terms and conditions advised by NICTA that NICTA considers are necessary or desirable to give effect to any of the matters listed [in the section];¹⁰
- provides that in relation to retail service price regulation, that the retail service determination may do many things including fixing a price, determining price increases and decreases, determining indices, regulating revenue outcomes, and requiring approvals on a periodic basis.¹¹

The Act therefore gives very wide scope to the matters that the Minister, on NICTA's recommendation, may include in a retail price determination. A determination may not have retrospective effect.¹²

2.2 NICTA'S PUBLIC INQUIRY

Under section 157 of the Act, NICTA may hold a public inquiry into whether or not a recommendation should be made to the Minister that a retail service should be subject to a retail service determination in respect of a particular operator licensee. Such an inquiry may be initiated by NICTA on its own initiative or in response to a written request for any person asking NICTA to hold such an inquiry.

In 2011, bemobile Limited ("bemobile") requested NICTA to hold a public inquiry to examine bemobile's claims that Digicel (PNG) Limited ("Digicel") was pricing calls to bemobile customers in an anti-competitive manner. bemobile sought the establishment of a retail service determination and the imposition of retail price controls on Digicel.

NICTA undertook a preliminary examination of the substance of bemobile's complaint and concluded that there were matters that warranted being tested and considered further through a public inquiry process. In November

³Sub-section 161(1) of the Act

⁴Paragraph 161(2)(a) of the Act

⁵ Paragraph 161(2)(b) of the Act

⁶ Paragraph 161(2)(c) of the Act

⁷ Paragraph 161(2)(d) of the Act

⁸ Paragraph 161(2)(e) of the Act

⁹ Paragraph 161(2)(f) of the Act

¹⁰ Paragraph 161(2)(g) of the Act

¹¹ Paragraph 161(2)(a) of the Act

¹² Sub-section 161(3) of the Act

2011, NICTA issued the first of two public discussion papers that set out NICTA staff's preliminary examination of what they considered to be the key relevant issues. The purpose of the first discussion paper was to determine whether or not there were grounds that warranted NICTA considering a specific proposal for a retail service determination.

NICTA considered all of the issues raised in the submissions and comments received from respondents to the public consultation document and concluded that some of the issues raised in the first discussion paper were not directly relevant to the matter under inquiry but that the substance of be-mobile's original complaint warranted further detailed examination. To that end, NICTA issued a data request to be-mobile, Digicel and Telikom and undertook further research into some of the issues raised by the submissions. The findings and proposed conclusions from that analysis were set out in a second discussion paper.

NICTA has published a separate report on the public inquiry process for the purposes of section 235 of the Act.

After detailed analysis and consideration of all of the evidence and arguments submitted to NICTA through the two public consultation exercises, NICTA considered whether the retail regulation criteria would be met by the Minister's introduction of the recommended retail service determination. NICTA is satisfied that all of the criteria would be met.

3 THE RECOMMENDED TERMS FOR THE PROPOSED RETAIL SERVICE DETERMINATION

The recommended terms of the proposed retail service determination are identified below. A draft determination reflecting these terms is provided at Annex A.

3.1 PROPOSED LICENSEE

A retail service determination must specify the operator licensee to which it applies (s.161). Although a retail service determination may apply to more than one licensee, it may only apply to licensees that have a substantial degree of power in the market (SMP) in which the retail service is supplied (s.158).

As NICTA found that Digicel alone has SMP in the retail mobile services market, NICTA recommends that the proposed retail service determination apply only to Digicel.

3.2 PROPOSED RETAIL SERVICE

A retail service determination must specify the particular retail service to which it applies (s.159, s.161). It does not need to apply to all of the services in the market in which the particular retail service is supplied.

As NICTA found that Digicel's on-net/off-net price discrimination is greatest and most problematic in relation to its supply of national voice telephony, and is unlikely to be as problematic in relation to its supply of SMS or MMS services, NICTA recommends that the retail service determination apply only to Digicel's supply of mobile originated national retail voice call services. That is, NICTA recommends that the retail service determination not also apply to SMS and MMS services or any other types of retail mobile services that might be introduced during the period the determination is in effect.

Further, as pre-paid services represent the overwhelming majority of the retail mobile services market (99% in subscriber terms and 97% in revenue terms, with postpaid services making up only 1% and 3% respectively) NICTA recommends that the retail service determination apply only to Digicel's supply of mobile originated national retail voice call services on a pre-paid basis.

NICTA recommends that the proposed retail service determination apply only to mobile-to-mobile call services and not also to mobile-to-fixed call services, which always terminate off-net. Similarly, NICTA recommends that the retail service determination apply only to national calls (i.e. calls made within PNG) as international calls always terminate off-net.

NICTA believes that the negative effects of on-net/off-net price discrimination can be sufficiently addressed by limiting the scope of the retail service determination to the particular service that represents the overwhelming majority of the market. By excluding the application of both SMS/MMS and post-paid services NICTA's recommendation also limits the application of the proposed retail service determination to the minimum necessary to address the identified problems and is thus proportional to the problem. NICTA intends to monitor this situation closely during the period that the recommended determination is in effect and if the proposed mid-term review of the determination identifies that the prices of SMS/MMS or post-paid services are being

manipulated in a way that undermines the effectiveness or intent of the retail service determination, then NICTA may recommend to the Minister that the scope of the determination be expanded to address those effects.

3.3 PROPOSED PERIOD

A retail service determination must specify an expiry date that is not longer than five years from the commencement of the determination (s.159). A determination may not apply retrospectively (ss.161(3)).

NICTA recommends that the proposed retail service determination remain in effect for a period of five years unless revoked earlier on the basis that Digicel is found to no longer have SMP in the retail mobile services market or circumstances have changed such that the determination is no longer required.

NICTA intends to review the effects of the determination after it has been in operation for two years. That review may identify a need for a public inquiry to consider an amendment to or revocation of the determination. If circumstances change later in the life of the determination—after the planned review—then a further review and/or inquiry can be instituted.

3.4 PROPOSED TERMS

A retail service determination may specify a pricing policy and/or principle that must be complied with by a licensee in its pricing of a retail service (s.161(2)(c)). A determination may also specify conditions relating to the pricing of a retail service that are to be determined by NICTA (s.161(2)(d)) and require a licensee to supply specified information to NICTA on specified terms (s.161(2)(e)).

NICTA recommends that the proposed retail service determination establish a pricing principle that there must be no discrimination based on the terminating mobile network beyond a level of 40% in the pricing of pre-paid mobile originated national voice call services unless such discrimination can be objectively justifiable based on differences in the associated costs or is part of a limited duration promotion. For the first exception to apply, Digicel would need to demonstrate to NICTA's satisfaction that its costs are different for its supply of mobile originated national voice call services to different terminating mobile networks—including on-net termination on its own network—and that, as a consequence, a specific difference in the retail prices is warranted. For the second exception to apply, Digicel would need to demonstrate to NICTA that the proposed promotional pricing would be consistent with certain specified conditions to ensure that promotional pricing is not used to undermine the intent and effectiveness of the pricing principle in the proposed determination.

For the purposes of NICTA's monitoring of the effects of the determination, NICTA also recommends that the proposed retail service determination require Digicel to submit to NICTA every quarter information that shows:

(i) the number of pre-paid national call minutes that originated on Digicel's network during each calendar month; and

(ii) the proportion of those minutes that terminated on-net, off-net on Digicel's mobile network, off-net on Telikom's mobile network, and off-net on the fixed network.

4 OVERVIEW OF THE REASONS FOR NICTA'S RECOMMENDATION

NICTA believes that Digicel is exercising a substantial degree of power in the retail mobile services market to strategically manipulate its off-net call prices, in particular the relative differences between its on-net and off-net prices, in a way that increases the barriers to entry and expansion and risks foreclosing the market to competition. Further, NICTA believes that Digicel will retain and exercise that ability for the foreseeable future to the long term detriment of competition in the retail mobile services market.

As customers will tend to prefer to subscribe to the larger network, mobile operators often compete aggressively through heavy on-net/off-net price discrimination in an effort to gain market share. In such circumstances on-net/off-net price discrimination may help foster increased mobile penetration and lead to gains in consumer welfare. This is a legitimate use of on-net/off-net price discrimination and explains why on-net/off-net price discrimination is commonly found (and tolerated by regulators) in mobile markets in other countries that are effectively competitive.

However, on-net/off-net price discrimination can also have very damaging consequences for competition. These stem from the strategic incentive created by the existence of a call externality (that is, the benefit that is enjoyed by the receiver of a call that is made by another mobile subscriber) and the ability of a mobile network operator with a substantial degree of market power (SMP) to act upon that incentive. A mobile network operator in such a position can strategically manipulate its off-net prices, and in particular the relative difference between its on-net and off-net prices, in order to reduce the number of calls made to subscribers on a rival network and, thus, the attractiveness of that rival network to existing and potential subscribers.

NICTA regards this as an inappropriate and anti-competitive application of on-net/off-net price discrimination as it has serious anti-competitive consequences in the form of increased barriers to entry and/or expansion and customer lock-in which, in turn, can lead to the foreclosure of the market to competition. Such pricing behaviour can also reduce the rival network's profits and cash flows and, thus, its ability to reinvest in the factors of competition.

These negative consequences are magnified when there is a large difference between the off-net retail price and the on-net retail price and further magnified if the off-net retail price is inflated by an above-cost mobile termination rate (MTR). If the actual costs of termination are significantly lower than the prevailing MTR, then the larger network operator can price on-net calls close to, or even below, the MTR. The smaller network's off-net prices will need to be competitive with the larger network's on-net prices. However, the MTR effectively imposes a price floor under the off-net prices that cannot be economically offered by the smaller network. As a greater proportion of the smaller network's traffic is likely to be off-net (because there are more people to call on the larger network), the smaller network will have to pay the mobile termination charge for a larger proportion of traffic than the larger network. This creates potential for a margin squeeze on the smaller network. NICTA doubts that the current MTRs are set at a level that reflects cost, but has formed no final conclusion on the matter.

Digicel has been found to have SMP in the retail mobile services market (unlike either bemobile or Telikom). Further, NICTA believes that the structure of Digicel's on-net/off-net prices, and the scale of its discrimination between on-net and off-net prices, reflects a strategic manipulation of the relationship between its on-net and off-

net prices in an effort to make off-net calls unduly expensive and unattractive to its subscribers and deter the making of such calls entirely. This in turn has a significant and unfair impact on the ability of Digicel's rivals to compete against it. These circumstances are exacerbated by the relatively small size of retail mobile services market and the highly asymmetrical positions of Digicel compared to its competitors. The extremely high proportion of total mobile traffic in PNG that remains on-net also suggests that on-net/off-net price discrimination is severely distorting the distribution of traffic.

Given Digicel's SMP in the retail mobile services market, NICTA does not believe that Digicel is likely to refrain from acting on the opportunity or incentive to engage in anti-competitive price discrimination or refrain from its current on-net/off-net price discrimination practices. Indeed, a rational competitor would respond to the incentive and take the opportunities of this kind that are available to improve its commercial position.

NICTA's recommendation is that the retail service determination should seek a balance between other alternative outcomes, namely an absolute prohibition on on-net/off-net price discrimination and the absence of any limitations at all (i.e. the present situation). In its submission in response to the second consultation document Digicel and its third party experts made the point that under certain conditions some price discrimination of this kind can have consumer welfare enhancing effects. The final form of the determination now being recommended seeks to gain these benefits but, at the same time, prevent the excessive levels of price discrimination that lead to anti-competitive outcomes. NICTA has examined the practices of many other countries to determine where a reasonable "tipping point" might lie, and has concluded that that point is best reflected in a price discrimination limit of 40%. That is, leaving aside cost justifications, Digicel should be permitted to charge up to 40% more for off-net calls than on-net calls. NICTA considers that this limit captures the benefits that Digicel and its experts claim without causing the consequences for competition that were the basis for the public inquiry in the first place. NICTA is in effect seeking a balanced outcome that is optimal in all the circumstances.

NICTA believes that a 40% tolerance is reasonable and sufficient to cover:

- a) any likely differences in the costs between the supply of on-net and off-net calls that may exist; and
- b) a reasonable degree of price discrimination for commercial purposes, whether in the form of standard pricing or promotional pricing.

The potential for an allowance greater than 40% to be approved on purely cost grounds has been included in the recommended determination in case that 40% tolerance is shown to be insufficient. However, based on all of the information that NICTA has seen and considered over the course of the inquiry, NICTA does not consider it likely that it will be necessary for Digicel to submit an application seeking a greater allowance on cost grounds as a sufficient allowance has already been made. Similarly, the recommended determination also includes scope for an allowance greater than 40% to be approved by NICTA as part of a limited duration promotion in the event that NICTA is satisfied that any such promotion would not undermine the intent or effectiveness of the recommended determination. By accommodating these two potential exceptional circumstances (i.e. unforeseen cost differences and innovative promotions) NICTA believes that the recommended determination incorporates sufficient flexibility to meet any changes in circumstances that may arise over the five year duration of the pricing principles. In addition, NICTA intends to review the effectiveness of the determination after it has been operating for two years.

5 THE EXTENT TO WHICH THE RETAIL REGULATION CRITERIA ARE MET BY THE RECOMMENDED DETERMINATION

NICTA has considered whether the retail regulation criteria in section 158 of the Act would be met by the making of the proposed retail service determination at Annex A and is satisfied that they would be.

The extent to which each criterion would be met by the proposed retail service determination is identified below.

5.1 CRITERION 1: THE COMPETITION AND EFFICIENCY OBJECTIVES

The first retail regulation criterion is that the making of a retail service determination for the retail service in respect of an operator licensee for a particular period will further the achievement of the objective set out in section 124 of the Act (but disregarding subsection 124(2)).

In relation to the competition objective, NICTA is satisfied that based on the evidence and having regard to the academic literature and practices in other relevant jurisdictions that the proposed retail service determination will promote effective competition in the retail mobile services market by:

- (a) reducing the anti-competitive effects of Digicel's excessive on-net/off-net price discrimination (i.e. prohibiting undesirable anti-competitive uses of on-net/off price discrimination); while also
- (b) providing opportunity for Digicel to continue to use a reasonable level of on-net/off-net price discrimination (defined as being up to 40%) to stimulate competition (i.e. retaining scope for a degree of on-net/off-net price discrimination that is potentially welfare enhancing).

Further, NICTA believes that if the proposed retail service determination is not made, then the risk of further harm from the anti-competitive effects of Digicel's much more pronounced on-net/off-net price discrimination will not be addressed and will damage the long term prospects for effective competition in the retail mobile services market.

In relation to the efficiency objective, if Digicel's past or future investments are based on the current low level of competition that at least in part is a consequence of the scale of its on-net/off price discrimination, then that investment will tend towards being inefficient. That is, because of the depressed competition, investments by the dominant operator will lack the discipline and shaping that occurs when investments into effectively competitive markets are being considered. This does not mean that only investments in effectively competitive markets can be efficient; rather it simply means that in the absence of effective competition, investment signals and rationales will be distorted, which can lead to inefficient investment much more than investments made under the discipline and influence of effective competition.

There is also the matter of efficient investment by competing mobile operators – bemobile and Telikom. In making their investments these operators are entitled to assume that the market will be reasonably and sustainably competitive or, at the least, that anti-competitive behaviour, such as Digicel's current on-net/off-net price discrimination, will be addressed through appropriate regulatory intervention. If anti-competitive behaviour is permitted to persist it can undermine the investment incentives of those operators and/or reduce their investment below the levels that they would otherwise be inclined to make.

5.2 CRITERION 2: SUBSTANTIAL MARKET POWER

The second retail regulation criterion has three aspects that all relate specifically to the competition objective:

- (a) that the operator licensee has a substantial degree of power in the market within which the retail service is supplied;
- (b) in the absence of the retail service determination for that period, that substantial degree of power is likely to persist in the market over that period; and
- (c) in the absence of the retail service determination for that period, that substantial degree of power is likely to expose retail customers to a material risk of higher prices and/or reduced service where they acquire the retail service from that operator licensee during that period.

Mobile originated national retail voice call services are supplied in the retail mobile services market. NICTA has found that Digicel has a substantial degree of power in that market and that the evidence of that market dominance is clear and overwhelming. The factors that—considered in aggregate—NICTA found most compelling in reaching this conclusion are:

- Digicel's high and prevailing market shares (Digicel's has 74% of all mobile subscribers in PNG, earns 88% of the total market revenues, and generates 91% for the total voice traffic in the market);
- Digicel's network reach and being first in with a high coverage of both territory and population;
- Digicel's price leadership and its ability to sustain on average higher prices than its competitors; and
- Digicel's use of strong network effects (specifically tariff mediated network externalities derived from the scale of its discrimination between on-net and off-net prices) to reinforce its market share and overall market position.

In the absence of the proposed retail service determination—which NICTA has concluded is the only practicable ex ante regulatory option in the circumstances—NICTA believes that there is every indication that Digicel's SMP will persist. Indeed, NICTA believes that if Digicel is able to maintain the current scale of its on-net/off-net price discrimination then the likely consequence will be the irreversible reinforcement of Digicel's dominance in the retail mobile services market. It is also clear that if the retail service determination is not made, that Digicel's customers will continue to be subject to unnecessarily high prices for mobile-to-mobile off-net calls.

5.3 CRITERION 3: ACHIEVEMENT OF A RETURN ON ASSETS

The third criterion relates specifically to the efficiency objective and requires that the operator licensee will not be prevented from achieving a return on assets during the period the determination is in effect that is sufficient to sustain the investment necessary to supply the retail service.

NICTA believes that this criterion requires a suitable, adequate or commercial return (taking account of the adjustments necessary for the associated risks) on the assets that the licensee employs to supply the retail service. This criterion does not require a current return to be maintained or a return considered desirable by the licensee to be maintained or achieved (otherwise no retail service determination that involved regulation of a retail price would be likely to satisfy this criterion).

NICTA is satisfied that the proposed retail service determination would meet this criterion. The proposed determination would not increase the cost burden on Digicel. If there are genuine differences in the costs associated with terminating calls off-net and on-net, the proposed determination provides a means for such costs to be covered through price discrimination if Digicel so desires.

The proposed determination also enables Digicel to retain considerable pricing flexibility to structure and set its (pre-paid) prices for on-net and off-net calls in a way that maximises its possible returns. The impact of the proposed determination on Digicel's revenues is thus largely within Digicel's own control and will depend on the particular pricing strategy or strategies that it chooses to adopt to comply with the determination once it is made. Additional flexibility exists in the ability of Digicel to apply to NICTA for conditional approval to engage in price discrimination greater than the 40% tolerance as part of a specific and limited duration promotion.

NICTA have tested various combinations of on-net increases and off-net decreases which Digicel might conceivably adopt to comply with the recommended Determination. The two extremes would be represented, firstly, by increasing on-net prices to a compliant level and, secondly, by decreasing off-net to a compliant level.

In the first case price elasticity would limit the increase in revenue, as would the potential competitive advantage such a price rise would hand to Digicel's rivals. Nevertheless in that extreme case Digicel's revenue would increase from moderately to significantly, depending on competitor and user responses. In the second case the maximum revenue decline would be relatively modest and insufficient to impact on Digicel's overall ability to achieve appropriate returns on its investments. NICTA considers that it is reasonable to expect Digicel to adopt a compliance (with the Determination) strategy that is much better balanced and commercially sensible than either of these extremes, with consequential minimal impact on revenues and investments.

5.4 CRITERION 4: THE LIKELY BENEFITS OUTWEIGH THE LIKELY DETRIMENTS

The fourth criterion is that the aggregate likely benefits of making the retail service determination outweigh any aggregate likely detriments.

After weighing the aggregate likely benefits and aggregate likely detriments of the proposed determination, and also weighing those benefits and detriments against the aggregate benefits and aggregate detriments of maintaining the status quo (i.e. not making the proposed determination), NICTA is satisfied that the proposed determination would meet this criterion.

NICTA found that the key benefits of making the proposed determination included that:

- it would retain potential for Digicel to use a reasonable degree of on-net/off-net price discrimination to stimulate competition and foster increased mobile penetration while also preventing the anti-competitive effects of excessive levels of price discrimination;
- competition in the retail mobile services market would become based on merits and costs with consequential market growth and a shift towards an effectively competitive market;
- network effects would be available, to the extent permitted by the 40% tolerance, at the market level instead of solely at the operator level, enabling the benefits to be better enjoyed by all mobile phone users;
- competition in the retail mobile services market would be on a more level playing field, with licensees attracting subscribers based on the innovativeness, quality and value of their services instead of disproportionate weight being given to the relative size of their subscriber base;
- the distortion of mobile originated traffic flows due to price-discrimination would be minimised;
- it would encourage continued or increased investment in the retail mobile services market by the non-dominant operators;
- it may lead to a review of pricing structures and levels by Digicel and, in response, the other mobile network operators which would stimulate competition in the retail mobile services market and/or lead to increased value being offered to all mobile phone users.

NICTA found that the key detriments of making the proposed determination were that:

- it may lead to Digicel's average on-net prices increasing for the purposes of compliance in the short to medium term; and
- it may delay or reduce investment by Digicel in the retail mobile services market in the short to medium term.

Both of the detriments are considered by NICTA to be less likely than likely to occur, and therefore, on one interpretation of the words used in the fourth criterion, may not need to be taken into account at all (i.e. as they are not considered to be 'likely detriments'). Nevertheless NICTA considered that there was some chance of these responses and considered them. In both cases the actions are entirely in Digicel's hands and will be determined by Digicel's view on how best to pursue its commercial interests.

The reason why Digicel is unlikely to increase on-net calls in order to comply with the recommended determination is because such calls account for over 96% of calls. Partially offsetting the loss of revenue from reducing prices for off-net calls is price elasticity of demand that might be taken as around -0.6.¹³

In addition, NICTA has concluded that the aggregate benefits of the determination outweigh the benefits of doing nothing for the reasons already stated. NICTA has further concluded that the risks and consequences of *not* intervening through an ex ante measure in the form of the determination are worse than the risks and consequences of any potential intervention on an ex post basis in response to a specific abuse of dominance by Digicel. The latter form of intervention is costly and may be protracted as a case is prepared. During that period there is a material risk that irreversible damage may be inflicted on competition and on consumer welfare.

¹³ A price elasticity of around -0.6 is suggested in two studies: Ahn, Hyungtaik and Park, Minsoo, 'An Econometric Analysis of the Demand for Fixed-Mobile Telephone Services' (March 31, 2010), *International Telecommunications Policy Review*, Vol. 17, No. 1, 2010. available at SSRN: <http://ssrn.com/abstract=1847585> and Growitsch, Christian, Marcus, J. Scott and Wernick, Christian, 'The Effects of Lower Mobile Termination Rates (MTRs) on Retail Price and Demand' (November 18, 2010). *Communications and Strategies*, No. 80, Fourth Quarter, pp. 119-140, 2010. Available at SSRN: <http://ssrn.com/abstract=1813687>

6 CONCLUSION

NICTA considers that regulatory intervention is necessary to address the potential anti-competitive effects of Digicel's strategic manipulation of the relationship between its on-net and off-net prices and that a retail service determination is the only practicable ex ante regulatory option in the circumstances. NICTA is satisfied that all of the retail regulation criteria would be met by the Minister's making of the proposed retail service determination provided at Annex A.

ANNEX A: RECOMMENDED DRAFT OF THE PROPOSED RETAIL SERVICE DETERMINATION

Retail Service Determination No. 1 of 2012

1. Name of Determination

- (1) This Determination is Retail Service Determination No. 1 of 2012.

2. Preliminary

- (1) This Determination is made by the Minister pursuant to his powers and responsibilities under Section 160 of the *National Information and Communications Technology Act 2009* and after his consideration of:
 - a. the retail regulation criteria specified in section 158 of the Act;
 - b. NICTA's recommendation under section 159 of the Act and the accompanying Recommendation Report;
 - c. the related Inquiry Report published by NICTA on 5th September 2012 for the purposes of section 235 of the Act; and
 - d. the related Discussion Paper published by NICTA on the 4th May 2012 and the associated Response to Comments Report published by NICTA on 5th September 2012.

3. Commencement and Termination

- (1) This Determination commences 30 calendar days after the date on which it is notified in the National Gazette.
- (2) The date this Determination commences shall be the Commencement Date.
- (3) This Determination shall terminate on the day before the fifth anniversary of the Commencement Date unless terminated before that date in accordance with the revocation processes described in Section 160 of the Act.

4. Interpretation

- (1) In this Determination, unless the contrary intention appears:
 - “Act” means the *National Information and Communications Technology Act, 2009* and includes any regulations made under that Act;
 - “Digicel” means Digicel (PNG) Limited;
 - “On-net” means in relation to calls those calls that originate and terminate on Digicel's network;
 - “Off-net” means in relation to calls those calls that originate on Digicel's network but terminate on the network of another Licensee; and
 - “Pre-paid” means payment of an amount before a service is used.
- (2) Each of the following terms used in this Determination has the meaning given to it by the Act:
 - fixed network

- mobile network
- network
- NICTA
- price
- retail service

5. Application

- (1) This Determination applies to the supply by Digicel of mobile originated retail national voice call services that are supplied on a pre-paid basis.
- (2) For the avoidance of doubt, the service described in 5(1) is a retail service.

6. Pricing principle

- (1) In pricing the services to which this Determination relates, Digicel shall not price discriminate on the basis of the mobile network (including its own) that will terminate the call except that Digicel may price discriminate between on-net and off-net calls:
 - a. up to a limit of 40% for each separate minute, or part thereof, of a national call, calculated by dividing the difference between the price of an on-net call and the price of an off-net call by the on-net call price (where all prices relate to calls made at the same time of the day); or
 - b. to the extent that any such differences in the price of an on-net call and the price of an off-net call are objectively justifiable based on differences in the costs of supplying the service; or
 - c. in addition to either (a) or (b) as the case may be, to the extent that any such differences in the price of an on-net call and the price of an off-net call are the subject of a limited period promotional offer the terms of which have been approved by NICTA on a case by case basis following an application from Digicel that complies with the requirements set out in clause 6(5) of this Determination, such approval being subject to the conditions set out in clause 6(6) of this Determination.
- (2) For the purposes of clause 6(1)b, only differences in cost that have been subject to assessment and approval by NICTA shall be accepted as 'objectively justified'.
- (3) NICTA shall endeavor to process applications received under clauses 6(1)b and 6(1)c as expeditiously as possible bearing in mind the complexity of the evidence and of the issues raised by the application.
- (4) For the avoidance of doubt-
 - a. Digicel may not begin charging prices that discriminate on the basis described in clause 6(1)b unless and until NICTA has assessed and approved the costs differences for the purposes of this Determination as described in clause 6(2); and
 - b. In approving cost differences claimed by Digicel pursuant to clause 6(1)b NICTA shall adjust the amount claimed by deducting an amount equal to the 40% price differential allowance in clause 6(1)a, and approving the remainder, if there is a remainder, under clause 6(1)b.
- (5) Applications from Digicel for approval of prices for promotional offers pursuant to clause 6(1)c of this Determination shall contain the following information –
 - a. The purpose of the promotion, and, if there are multiple purposes, all of them;
 - b. The category or categories of persons, including existing subscribers if applicable, to whom the promotional offer is directed or targeted;
 - c. The dates on which the promotion shall commence and finish;
 - d. The terms of the promotion and the prices that will be charged to those customers that accept, or are otherwise subject to, the promotional offer;
 - e. The areas in which the promotion will be conducted (nationally or on some other basis);
 - f. A statement of how the approval sought will achieve the purposes of the promotion;

- g. Such other information as Digicel considers will provide NICTA with a basis on which to understand the promotion and to determine the application expeditiously; and
 - h. Such other information as NICTA might subsequently request from Digicel to clarify the nature of the specific approval being sought and of the specific promotion in contemplation.
- (6) NICTA will not approve an application pursuant to clause 6(1)c of this Determination if:
- a. the promotion is not a bona fide promotion and is an attempt to avoid the requirements of this Determination;
 - b. the terms of the promotion are inconsistent with its objectives;
 - c. the duration of the promotion is intended to be more than one calendar month;
 - d. the application seeks to extend an already existing approval pursuant to clause 6(1)c on the same or similar terms; and
 - e. Digicel has received an aggregate number of approvals pursuant to clause 6(1)c covering the same area which, in NICTA's considered opinion, are inconsistent with the pricing principle contained in this paragraph of the Determination.
- (7) For the avoidance of doubt -
- a. NICTA may take into consideration in deciding whether to approve an application from Digicel pursuant to clause 6(1)c of this Determination such other considerations as NICTA considers to be relevant to deciding on the application, and NICTA shall not be constrained to consider only those matters set out in clause 6(6);
 - b. Where the objective of a promotion for which approval is sought is to gain new subscribers NICTA will not approve a promotional offer other than to such new subscribers;
 - c. Where a promotional offer involves price reductions for calls that exceed the 40% differential allowed in clause 6(1)a of this Determination, the application of such price reductions must not continue for more than one calendar month or extend beyond a date which is one calendar month after the final date of the offer, whichever is the later.
 - d. Digicel may not offer, promise or charge prices that require NICTA's approval pursuant to clause 6(1)c unless and until NICTA has assessed and approved the promotional scheme proposed by Digicel, subject to such conditions as may be imposed by NICTA.

7. Provision of information to NICTA

- (1) Within two weeks of the end of each quarter, Digicel shall submit to NICTA information that shows:
- a. the total number of national pre-paid call minutes, SMS messages and MMS messages that originated on Digicel's mobile network during each calendar month of the quarter; and
 - b. the total number of national post-paid call minutes, SMS messages and MMS messages that originated on Digicel's mobile network during each calendar month of the quarter; and
 - c. the proportions of the call minutes and messages reported under 7(1)(a–b) that terminated on:
 - (i) the mobile network operated by Digicel;
 - (ii) the mobile network operated by bemobile (PNG) limited;
 - (iii) the mobile network operated by Telekom PNG Limited; and
 - (iv) the fixed network operated by Telekom PNG Limited.
- (2) NICTA may specify the format or manner in which Digicel shall supply this information.