STRUCTURAL SEPARATION

REPRESENTATIONS FROM JERSEY TELECOM

22ND DECEMBER 2006

CONTENTS

Executive Summary

This paper outlines some of the key considerations that should be taken into account when considering the optimal structure of Jersey Telecom if the current and prospective demands for telecommunications services in Jersey are to be provided for – this being the primary duty of the Minister for Economic Development and the Jersey Competition Regulatory Authority ("JCRA") under the terms of the Telecommunications (Jersey) Law 2002.

Proponents of structural separation claim that it is necessary to avoid an alleged conflict of interest when a company is both a competitor and a supplier to the same organisations. Such proponents have also claimed that structural separation might reduce the cost of regulation in the long term by focusing regulatory scrutiny on the parts of the business most in need of it.

A decision to implement structural reform will have far-reaching and irreversible consequences and as such, any decision to engage in such reform should not be taken lightly but only after a careful analysis of the relative costs and benefits of the structural options under consideration.

A major disadvantage when evaluating some of the more radical structural options is the lack of empirical evidence of its effect. There are no known examples where network and retail elements of a telecommunications operator have been completely separated. Whilst there is some limited experience of a fixed incumbent operating without a mobile division, it has failed to provide any evidence that doing so is beneficial to competition.

Below, we outline Jersey Telecom's recommendations for the costs and benefits that must be taken into account when evaluating options for structural reform. In particular, we consider the following:

- The theory behind structural separation and claimed public benefits (Section 2.1);
- The criteria that should be used for evaluating the structural options (Section 2.2);
- The structural options that should be evaluated (Section 2.3); and
- Section 3 undertakes a qualitative evaluation of the benefits and costs of the structural options in terms of their effect on competition, the cost of regulation, the cost and time of implementation, efficiency, investment, effect on options for the future and the ability to attract scarce talent.

Overall, the benefits of structural separation are unknown given the lack of evidence, whilst the costs are both high and known with much greater clarity.

Consequently, we conclude that structural separation represents significant risk for no benefit whatsoever and that the most appropriate course of action would be to utilise regulatory tools such as accounting separation to manage conflicts, perceived or otherwise. It should be accepted that Jersey Telecom's current structure as a vertically integrated supplier is the most appropriate for Jersey and we note that competitors entering this market do so in the full knowledge of this structure. These new entrants are experienced, global players, and none have, to our knowledge, suggested that such a course of action would be appropriate or required. Whilst this would be true in any market, we argue that such risks would be particularly high in Jersey, given its small size.

1 Introduction

1.1 Background

A licence to operate a telecommunications network in Jersey was granted to Jersey Telecom Limited ("Jersey Telecom") on 1st January 2003 by the JCRA. Prior to this date the States of Jersey held the role of operator, regulator and owner of Jersey Telecom, the monopoly telecommunications provider. However, the States of Jersey endorsed a new approach to telecommunications in Jersey when it passed the Telecommunications (Jersey) Law 2002 ("the Law"). The effect of this Law was that the three roles of the States of Jersey were divided. The States of Jersey, through the Minister for Treasury and Resources, remained the shareholder; the regulatory role was divested to the newly formed JCRA and the operational activities were incorporated into JT Group Limited, under the direction of an independent Board.

The operation of the JCRA and the Minister for Economic Development in the telecommunications industry is governed by the primary duty set out in Article 7(1) of the Law which requires each to "*perform its functions under this Law in such manner as it considers is best calculated to ensure that (so far as reasonably practicable) such telecommunication services are provided, both within Jersey and between Jersey and the rest of the world, as satisfy all current and prospective demands for them, wherever arising".*

In addition Article 7(2) states that they must also, in so far as is consistent with their primary duties:

(a) "perform their functions under this Law in such manner as it considers is best calculated to protect and further the short-term and long-term interests of users within Jersey of telecommunication services and apparatus, and perform them, wherever it considers it appropriate, by promoting competition among persons engaged in commercial activities connected with telecommunications in Jersey";

(b) perform its functions under this Law in such manner as it considers is best calculated to promote efficiency, economy, and effectiveness in commercial activities connected with telecommunications in Jersey;

(c) perform its functions under this Law in such manner as it considers is best calculated to further the economic interests of Jersey;

(d) perform its functions under this Law in such manner as it considers is beats calculated to impose a minimum of restriction on persons engaged in commercial activities connected with telecommunications in Jersey;

(e) in performing its functions under this Law, have regard to the need to ensure that persons engaged in commercial activities connected with telecommunications in Jersey have sufficient financial and other resources to conduct those activities; and

(f) in performing its functions under this Law, have regard to any special needs of persons who are disabled or have limited financial resources to conduct those activities."

It is important, for a moment, to reflect further on Article 7(2)(a), where both the offices of the JCRA and the Minister for Economic Development are to perform its duties "*wherever it considers it appropriate"* by promoting competition in the telecommunications industry.

This specific form of wording was approved by the States of Jersey in recognition of the fact that competition, in all its forms, was not necessarily the best way of ensuring that all current and prospective demands were provided for in a jurisdiction the size of Jersey. That is not to say that competition does not have a role to play; clearly it does. However, it is the form and degree of competition that is appropriate to Jersey's circumstances that must be balanced by the JCRA and the Minister for Economic Development in their deliberations on matters related to telecommunications.

The current discussion on the possible sale of Jersey Telecom has potentially major implications for Jersey's telecommunications market and it is on this basis that the Minister for Economic Development, Senator Philip Ozouf, wrote to the JCRA on 2nd October 2006, requesting advice regarding the costs and benefits of the different options the States of Jersey has for either maintaining or selling its stake in Jersey Telecom.

Of particular consideration and concern is the impact of structurally separating different parts of Jersey Telecom, either as part of a sales process, or as a means of maximising the benefits to the economy whilst Jersey Telecom remains in state ownership.

The Minister has requested advice on a number of structural options, namely;

- selling Jersey Telecom in its current form, i.e. a transfer of ownership in Jersey Telecom as a whole;
- retaining Jersey Telecom under State ownership but structurally separating the network wholesale) business from the fixed retail and mobile businesses;
- retaining Jersey Telecom's network (wholesale) business and selling its fixed retail and mobile businesses (separately or together);
- selling Jersey Telecom's network (wholesale) business to one purchaser, and its fixed retail and mobile businesses to a second purchaser; and
- selling Jersey Telecom's network (wholesale) business to one purchaser, its fixed retail business to a second purchaser, and its mobile business to a third purchaser.

Jersey Telecom is an important stakeholder in this process and has valuable insights into the pros and cons of various structural options. In view of this, it is surprising not one single question or request for information has been submitted by the JCRA, notwithstanding that its deliberations must by now be close to completion. In the absence of any involved discussion on the matter, which this subject clearly requires, this paper sets out our views as to the analysis that we believe is required in order to understand the costs and benefits of each of the above options, as well as our opinion as to which of these options is most desirable from an economic development and competition perspective.

1.2 Objectives: what are we trying to achieve?

As with all significant regulatory decisions, the first question to be asked must be "What is the problem that we are trying to address?[1]". In this specific instance

[1] This was also asked in the paper "Recommendations of the Council Concerning structural separation in regulated industries" 6 June 2003

structural separation has been mentioned by the Minister for Economic Development in the context of the sale of the Company and the JCRA has been asked to prepare a response to them considering the implications to the business and the economy of implementing such. What is not clear, however, is what problem they think structural separation is the answer to.

The question of structurally separating an integrated company is not one to be decided lightly. The structure of the Company has been considered by the Board previously. Specifically, it was considered in depth when the wholesale product portfolio was being developed, as was reflected in Jersey Telecom's comments contained within its Impact Statement.

In the Impact Statement we stated,[2] "*Jersey Telecom considers that the most effective means of liberalising the telecommunications market in Jersey is through encouraging competition in the service market. Through adopting this approach, Jersey Telecom believes that the JCRA can achieve its core aims of providing the consumer with a choice of service provider, maintain the high level of quality that the consumer currently enjoys, stimulate new product and application development and continue to drive down the overall price of telecommunications*". However, subsequent to that submission, the JCRA stated that they believed infrastructure based competition would be most appropriate for the Island.

On this basis, the JCRA has supported infrastructure roll-out by the new entrants as it believes that such a roll-out offers the greatest benefits by each operator controlling its own portfolio and service quality, thereby allowing them to compete on a completely equal basis.

The question of whether structurally separating the dominant operator, is well recognised throughout the industry and it is generally agreed that such action should only be considered as a last resort option; there are many regulatory remedies that can be utilised in lieu of such an extreme measure, such as accounting separation and forms of operational separation that are already in place within Jersey Telecom[3]. If there is a problem, and it should be noted that no-one has yet identified one, then the first step would be to consider dealing with it utilising light touch approaches.

The JCRA first raised the question of whether structural separation would lead to inefficiencies, in its paper "*Consultation paper on Accounting Separation and Costing Methodologies*"[4]. In this paper it considered what structural separation was and how it would impact a small market such as Jersey. They stated that:

"In a small market such as Jersey, the imposition of structural separation could result in significant inefficiencies with central functions having to be duplicated, and extra resources having to be used to manage intra-operator billing".

This view is consistent with analysis carried out by other bodies that considered whether it was a cost effective regulatory strategy. In the paper "Preparing the next steps in regulation of electronic communications" by Analysys, they consider that structural separation is:

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[2] Jersey Telecom's Impact Statement Section 4 para 6.23

[3] It is interesting to note, however, that despite Jersey Telecom preparing and sending two full sets of 32 separated accounts each to the JCRA, not one question has been raised by them regarding the content of such. On this basis, any finding by the JCRA that this form of regulatory intervention has failed, or is not sufficient, would be materially flawed.

[4] June 2004

"…*a drastic regulatory intervention that does not sit comfortably within the Regulatory Framework's provisions and principles"* and they go on to state that it could be considered by a member state only in *"exceptional circumstances"* as it is a *"disruptive measure that can reduce the efficiencies of integration*".

1.3 Types of Separation

There has been a lot of recent debate regarding different types of separation for incumbent telecoms operators and what degree of separation, if any, is optimal in ensuring that there is an appropriate level of competition in the sector, recognising that unnecessary separation can damage economic development and consumer surplus as a result of creating unnecessary costs and barriers to innovation and product development.

Jersey Telecom is implacably opposed to structural separation being enforced upon the business, as there has been no failure in the manner in which the business is regulated or operates in the market. We are however, happy to discuss what the various structural options mean for the States of Jersey. We believe that an open debate is essential to ensure that any final decision is appropriately informed and has considered the views of all relevant stakeholders. Such open debate will ensure that the key objective of this process is met, namely, that the future structure of Jersey Telecom is the one that is optimal for the States of Jersey.

In forming our views, we have had regard to, among other papers, the 2003 Organisation for Economic Co-operation and Development ("OECD") paper titled, "The benefits and costs of structural separation of the local loop[5]". The focus of this paper is mainly on a particular structural model, namely, the separation of the local loop from the rest of the business. As such, not all of its conclusions are directly relevant in the current context. Because of this, we focus more on the analytical framework presented in the paper, which is relevant regardless of the structural model being considered.

The OECD paper notes that the outcome of market opening has been unambiguously positive with improvements in quality, falling prices and a wealth of new services. However, the paper goes on to say that problems faced by new entrants in obtaining access to incumbent network facilities have led to calls for structural remedies on incumbents (in particular, the separation of the local loop from other services). Such problems include "price squeeze", "foot dragging" and raising rivals' costs, among other things.

The theory behind structural separation as the OECD, the European Commission and others have noted, is to resolve a perceived inherent conflict of interest involved when the incumbent acts both as a supplier and as a competitor. It is argued that structural separation can, *inter alia*, align the incentives of the main wholesale operator with those of a non-integrated carrier by forcing it to deal with any retail operator on exactly the same terms. Jersey Telecom, however, already has a variety of options available to Other Licensed Operators ("OLO's") enabling them to compete on the same terms as itself. A range of wholesale products is available encompassing leased lines, xDSL and International Simple Voice Reseller options. In addition, a Reference Interconnect Offer ("RIO") has been made to OLO's which enables them to take products and compete on equal terms. This RIO was issued following extensive consultation by the JCRA regarding the framework and product offerings. To date there have been no requests supported by the JCRA for additional products, or changes to existing products to be made, by any of the OLO's, to either

[5] Working Party on Telecommunication and Information Services Policies, 3 November 2003

the RIO or wholesale offerings, that are not already being met, which is indicative, broadly, of satisfaction with the offerings.

1.4 Framework for evaluation – Cost Benefit Analysis

The most valuable contribution of the OECD paper in the current context was its strong advocacy of careful cost benefit analysis to inform decision making on structural options and the range of costs and benefits that might be considered.

In its analysis, the OECD appeared to be most concerned about the possibility that structural separation might:

- Delay or impede network upgrades, including the extension of fibre closer to the customer;
- Introduce significant problems in coordinating investment between wholesale and retail; and
- Threaten the various efficiencies enjoyed by an integrated firm, including economies of scale and scope.

Meanwhile, the OECD concludes that there is inadequate evidence to generate confidence that separation would enhance competition to the degree necessary to justify the cost. Consequently, the OECD concluded that against such an assessment, the more sensible option would appear to be to persevere with making improvements to the current regulatory approach, backed by sanctions to deal with anti-competitive behaviour.

Jersey Telecom agrees broadly with the above and notes once again that the current legislation gives the JCRA more than sufficient powers to address any activities that it deems are anti-competitive. Together with the extensive powers conferred upon the JCRA under the Law, the Competition (Jersey) Law 2005 is also available to assist where necessary. The development of legislation in this area has been consistent with liberalisation of the market and the mechanism to challenge any actions deemed anti-competitive is already in place.

1.5 Structure of this submission

The remainder of this paper deals with the specific factors that should be taken into account when considering if there is any need for any form of separation

2 How should the structural options be evaluated?

As stated in section 1.2 above, it is imperative that from the outset all parties must be clear regarding what problem they are seeking to remedy. It is not sufficient to regard structural separation as the answer to an undefined problem, simply because "it seems to be a good idea". In this particular case, there does not appear to be any failing of the regulatory regime currently being adopted and as such whilst it is compelling to discuss the issues surrounding the implication of physical separation of a business, it should be done so in the context of addressing an issue.

In this section we outline our recommendations for:

- Our understanding of the basis for considering structural separation in theory;
- The criteria that we recommend the JCRA should take into account when evaluating the options for separation; and
- The structural options that we recommend the JCRA evaluates (our suggestions are broadly consistent with those set out in the Minister's letter but we propose one additional option as well as a minor simplification to the list).

One ***spurious*** reason sometimes offered for structural separation is that "they are separate businesses and can be run separately". The fact that businesses ***could*** be run separately is not sufficient justification for why they ***should***. The benefits of running the businesses separately should be clearly seen to outweigh the one-off and ongoing costs of separation.

An example is a fixed-mobile business. Evidently, fixed and mobile businesses can be – and are – provided separately or together. But this fact alone is insufficient evidence for saying that they ***should*** be provided separately.

By contrast, a ***valid*** argument for structural separation might be that separation would increase competition or lower the costs of regulation (and that such benefits can be demonstrated to outweigh the costs). Unfortunately whilst this argument is consistently posed there is no evidence to suggest that this is in fact the case. It is more likely that the costs involved with structural separation would raise the regulatory costs and consequently prices to the consumer in the long term. One of the key benefits of the business being fully integrated is that savings can be made due to core infrastructure being apportioned over both fixed and mobile products. Should the business be forced to separate structurally, the cost of duplication of key activities/parts of the business would be significant.

In addition, the buying power of each business part would be reduced even further than it is now, which would have a significant impact to the competitiveness of the business and would directly affect the roll-out of key services due to the practice of vendors giving preferential treatment to those with high capital and spend. As has already been mentioned, the buying power of Jersey Telecom is significantly lower than that of the new entrants in the market. Should structural separation occur, then the business could be left in a position whereby for a period of time it holds market share, but lacks buying power to operate and compete effectively. In this case, the overall costs to the business would rise and ultimately the cost to the consumer would have to be raised to cover it.

2.1 Theory behind structural separation and claimed public benefits

The conjecture that structural separation would increase competition is based on an inherent conflict of interest that is seen to arise when a telecoms' operator is both a competitor with and a supplier to other operators. Such conflicts of interest have allegedly involved discrimination, price squeeze, "quality squeeze", "foot dragging" and so on.

There are a number of claimed benefits of structurally separating an incumbent vertically integrated operator, although it is worth noting that there is very little agreement, even among proponents of structural separation, as to whether all of these benefits will be realised, or the extent to which they will be realised. The claimed benefits include:

- Potentially aligning the incentives of the incumbent with those of a non-integrated carrier, thereby guaranteeing non-discriminatory access and enhancing competition;
- Potentially, allowing regulators to focus on the parts of the business most in need of regulation, wholesale pricing and access, reducing the need for regulation in potentially competitive areas;
- Potentially promoting innovation in terms of service delivery;
- Potentially eliminating conflicts between retail and wholesale arms[6];
- Potentially allowing greater effectiveness than behavioural remedies that run counter to an incumbent's incentives; and
- Potentially improving information and eliminating cross-subsidisation.

2.2 Criteria for Evaluation

Having briefly set out the theoretical benefits of separation, we consider here the criteria that we recommend the JCRA take into account when evaluating the structural options for Jersey Telecom. There are seven criteria that we recommend the JCRA use for evaluation. These are as follows.

[6] This point is considered by Lehr and Hubbard (The Economic Case for Voluntary Structural Separation, 2003) as a reason for firms volunteering to separate

Table 1

Criterion	**Notes**
1. Impact on competition.	Will the proposed structural option improve competition or worsen it? How much?
2. Cost of regulation (state and regulated entity).	What will be the effect of the proposed structural option on the cost of regulation for the state and for the regulated entities? What is the magnitude of the effect (if any)?
3. Cost/time of implementation.	What will the proposed option cost and how long would it take?
4. Efficiency (scale and scope).	What is the effect of the proposed option on economies of scale and scope? What is the magnitude of the effect (if any)?
5. Impact on investment and innovation.	Will the proposed option affect incentives to invest and innovate? If so, how much?
6. Loss of option.	Will the proposed option restrict options for further behavioural and/or structural options in the future? If so, how important is this?
7. Impact on ability to attract scarce talent.	Will the proposed option affect the ability of the entities' ability to attract scarce talent? If so, how much?

2.3 Which structural options should be evaluated?

The Minister's letter set out five options for considerations, as follows:

1. selling Jersey Telecom in its current form, i.e. a transfer of ownership in Jersey Telecom as a whole;
2. retaining Jersey Telecom under State ownership but structurally separating the network wholesale) business from the fixed retail and mobile businesses;
3. retaining Jersey Telecom's network (wholesale) business and selling its fixed retail and mobile businesses (separately or together);
4. selling Jersey Telecom's network (wholesale) business to one purchaser, and its fixed retail and mobile businesses to a second purchaser;
5. selling Jersey Telecom's network (wholesale) business to one purchaser, its fixed retail business to a second purchaser, and its mobile business to a third purchaser.

We have two comments on these options. First, we would recommend that the list should include the separation of core and access network functions as this model has been the subject of much discussion in a number of countries (for example, the UK, Australia, New Zealand and Italy). Second, we believe that the JCRA can simplify its analysis by considering the effects of each of the structural options in isolation rather than attempting to analyse all the possible permutations.

For these reasons, we recommend that the JCRA analyses the following options:

1. Retaining Jersey Telecom in its current form;
2. Separation of retail and network;
3. Separation of fixed and mobile; and
4. Separation of core and access.

3 Evaluating Benefits and Costs of Structural separation

The structural options should then be evaluated against the criteria. This is not an easy task as the costs and benefits must as far as possible be quantified. It is beyond the scope of this submission to attempt to quantify the costs and benefits. Instead, in this section, we consider some of the qualitative costs and benefits that we suggest the JCRA takes into account when evaluating the separation options against the criteria discussed above.

3.1 Effect on competition

To determine whether structural separation would improve competition, it is necessary to proceed through two steps as follows:

- First, it is necessary to diagnose the problem correctly; and
- Second, the correct solution must be found.

With regard to the first, those favouring structural separation have argued that the disappointing progress of competition in some markets (particularly local loop unbundling) is the result of anti-competitive conduct by a powerful vertically integrated incumbent. Of course, the current discussion is broader than Local Loop Unbundling (“LLU”) but it is useful to consider how the arguments have been applied and evaluated in relation to LLU, because this is the context in which most discussion has taken place.

There is no doubt that in many countries, LLU has been disappointing. However, such disappointment is not universal. In France for example, LLU is well recognised to have been a success story. Furthermore, the disappointment with the progress of LLU cannot be used as evidence for the allegedly harmful effects of vertical integration as there are many other areas – voice, for example – in which competition has been established successfully despite the presence of a vertically integrated incumbent. In most liberalised markets, competition in fixed voice services depends on a mixture of new infrastructure build, carrier pre-selection and wholesale line rental. The latter two are supplied by the vertically integrated operators to their competitors and have in most cases been very successful in introducing competition. Of course, the fact that it has been successful in some countries and not in others demonstrates conclusively that it is not the vertical structure of the market that determines the success of competition but other factors (for example, the quality of regulation and market specific factors).

We should also remember that LLU is only one of many possible technical solutions to establishing competition in broadband. In some countries, a regulated “bitstream access” product has been successfully deployed as an alternative to LLU as a platform for broadband competition in a vertically integrated market. In the UK, for example, while LLU has been slow to take off, broadband competition is considered to be remarkably successful with the incumbent enjoying one of the lowest retail market shares in the world (this being a measurement of success in the UK market). In Jersey, penetration levels for broadband access currently sit at 51.5%[7]. It is interesting to note that since June 2006 Jersey Telecom’s broadband competitor has matched, if not exceeded subscriber take-up in this area.

[7] Overall residential services per household, wholesale and retail, for period ending November 2006

The important point is that in markets with vertically integrated incumbents, competition has both succeeded **and** failed. As stated above, this demonstrates that the success or failure of competition is not the result of the vertical structure of the incumbent but of other factors. The OECD concurs with this view, stating that ineffective regulation, the difficulty of obtaining the scale to justify the capital expenditure necessary to compete in the local loop and limiting the funding for new entrant competitors all provide equally plausible explanations of the slow progress of competition. Summarising, it states, “the extent to which the source of the problem is anti-competitive conduct is not clear”.

The question of funding is a key point particularly when considering the initial funding of the new entrants. In Jersey we have already seen significant capital being invested in order to provide infrastructure to the new entrants thereby enabling them to compete independently of the Jersey Telecom network. C&W reported a market share of 7% of mobile market share within 6 weeks of launching, providing powerful evidence that in the Jersey market the bottleneck described as being the reason for structural separation will not necessarily be experienced. Indeed, even though the new entrants are focusing predominantly on mobile, with the advent of wireless broadband solutions these new entrants require only minimal access to the network and this is provided through current interconnection arrangements.

Furthermore, with new services being provided over varying platforms, such as VoIP, competition takes place at a different level in the network and is not as dependant on the traditional platforms and physical infrastructure as it was previously.

Even if it had been conclusively demonstrated that anti-competitive conduct was the primary cause of the difficulty in developing competition, it would remain to establish that structural separation is the correct remedy. In this regard, it is worth noting that the theoretical benefits of structural separation are at best are unproven. There is very little (if any) evidence on which to base a view on the benefits of structural separation.

In Table 2 below, we provide a brief summary and evaluation of the likely performance of the four structural options on competition.

Table 2.

Evaluation of the four options effect on competition

Selling Jersey Telecom in its current form	Separation of retail and network	Separation of fixed and mobile	Separation of core and access
Positive. Greater confidence in Jersey Telecom being independent of government and regulation may increase the propensity of new entrants to invest.	Inconclusive. No evidence that separating retail and network functions will improve competition.	Neutral/inconclusive. Limited vertical relationships between fixed and mobile and therefore limited scope for vertical leverage. Vertical relationships may increase as fixed/mobile convergence (FMC) gathers pace but lack of fixed network facilities have not prevented European mobile operators from developing FMC products.	Inconclusive. No evidence that separating core and access functions will improve competition.

3.2 Impact on cost of regulation (state and regulated entity)

A benefit often attributed to structural separation is its ability to reduce the costs of regulation to the state and the regulated entity. The basis for this argument is that the progress of service competition would allow the regulator to withdraw from regulation in downstream markets (such as residential voice). This is not necessarily the case. As has been experienced in other markets, new entrants will always complain to a regulator about alleged anti-competitive behaviour as it assists their campaign to slow down and tie up the incumbent in investigations and regulatory responses, all of which have an associated cost. In Jersey there have been several instances where investigations have been carried out on the basis of an unsubstantiated complaint by a new entrant. One such example is the ongoing xDSL investigation regarding margin squeeze that was commenced in October 2003. This investigation was commenced as a result of a complaint by a new entrant, however not only has the scope of the investigation changed three times, but it has cost Jersey Telecom a significant amount of time, resource and money and yet still remains unconcluded, It is imperative that the JCRA utilises its powers provided under the Law to ascertain within a reasonable period of time whether an alleged abuse is prevalent or not.

This power provided under the Law is contained within Article 9(2) the Law provides that *"the Authority shall consider any representation made to it (other than one that is, in the opinion of the Authority, frivolous or trivial, or more appropriately dealt with by another person)…."* .

Using the terms of this Article appropriately, as opposed to giving great weight to each and every complaint from new entrants to the telecommunications market about the alleged abuse of Jersey Telecom's dominance, would likely to have a far greater impact on reducing costs of regulation than the consideration of structural separation as an answer to all regulatory issues.

A difficulty with the argument that structural separation reduces the cost of regulation is that it requires another premise – that structural separation would improve competition – to hold true. However, as should be clear from Section 4.1 above, it is far from clear that it would.

A further issue is that – even as the most ardent advocates of structural separation admit – structural separation does not remove the problem that the regulation of network facilities (which account for most of the costs of regulation) is designed to address.

Moreover, as we have already mentioned, structural separation may even increase the costs of regulation. As the OECD notes, "there are concerns over whether there will be adequate investment in network infrastructure when providers are denied the revenues and consequent incentives that flow from vertical integration. This problem is acute in the telecommunications industry, where technological change is rapid and where investment demands are pressing." To address these problems, regulators would need to design an incentive framework to ensure the network operator receives due reward from making welfare enhancing investments. The result is likely to be complex, opaque, unwieldy and costly.

Table 3.

Evaluation of the four options on the cost of regulation (on Jersey Telecom and the States of Jersey)

Selling Jersey Telecom in its current form	Separation of retail and network	Separation of fixed and mobile	Separation of core and access
Neutral. There is no evidence that ownership of the regulated entity affects the cost of regulation.	Inconclusive, possibly adverse. There is no evidence that separation of retail and network will change the cost of regulation. Partly depends on whether the desired effect on competition (see above) is realised. Cost of regulation may increase to provide the right incentives to invest in network upgrades.	Neutral/inconclusive. Limited vertical relationships between fixed and mobile and therefore limited scope for changing the cost of regulation. Vertical relationships may increase as fixed/mobile convergence (FMC) gathers pace but lack of fixed network facilities have not prevented European mobile operators from developing FMC products.	Inconclusive. Possibly adverse. There is no evidence that separation of access and core will change the cost of regulation. Partly depends on whether the desired effect on competition (see above) is realised. Cost of regulation may increase to provide the right incentives to invest in network upgrades.

3.3 Cost of Implementation

As with any regulatory remedy of this significance, rather than pre-determining that a particular course of action is necessary or required, a cost benefit analysis and Regulatory Impact Assessment should be carried out in order to determine the likely cost and impact of any action.

In the JCRA's case a cost benefit analysis would also be required in order to ensure compliance with their duties under Article 7 of the Telecommunications Law. This Article specifies that the JCRA's primary duty is to "*perform its functions under this Law in such manner as it considers is best calculated to ensure that (so far as reasonably practicable) such telecommunication services are provided, both within Jersey and between Jersey and the rest of the world, as satisfy all current and prospective demands for them, wherever arising".*

They would need to consider this Article in the context of whether Structural Separation was the best way in which to provide such telecommunications services. In addition, the Article goes on to discuss the secondary duties that they have, including, among other things, "…protecting the long term and short term interests of users…" and being mindful of the need to "…promote efficiency, economy and effectiveness in commercial activities…". In doing so it would be insufficient to simply state that they believe it would help competition if the business were separated, for example without providing any evidence of where this has successfully been the case.

There must be clear benefits seen with such a regulatory act and this is why a full and detailed cost benefit analysis has to be completed. It should be noted that there is little hard evidence to show that structural separation has been a success anywhere. The imposition of a highly burdensome and significant obligation such as structural separation cannot be regarded as reasonable, proportionate or consistent with the JCRA's duties under Article 7, in the absence of proper analysis by the JCRA of the expected benefits against the expected costs. Comparisons in other jurisdictions suggest that this would not be beneficial move.

In this section, we consider, in qualitative terms, the likely costs of implementing structural reform. A cost impact is likely to be seen both in terms of one-off costs of implementation and ongoing costs of operation.

With regard to the ongoing costs of operation, Pociask[8] identified a range of costs, which he categorised into "Increased Transactions" and "Duplicate Staff", as follows:

Increased Transactions	**Duplicate Staff**
More vendors	Human resources
More contracts	Labour relations
More purchasing agents	Legal
More purchase orders	Regulatory
More spot purchases	Vehicle maintenance
More invoices	Building maintenance
More supplier payments	Administrative services
More billing	Material transport/storage
More regulations	Finance and corporate
More customer calls	Security, information systems

[8] Stephen B. Pociask, "Structural Separation of BellSouth Telecommunications and its Effects on Florida Consumers", TeleNomic Research, 31 July 2001.

In total, Pociask estimated that a separated wholesale operator in Florida would need to raise its wholesale prices by over 45% to make a modest rate of return and if costs were passed through to consumers, end user prices would increase by at least 11%.

We expect that all of these cost impacts would be experienced in the Jersey market following any structural reform of Jersey Telecom. Furthermore, the relative impact of such cost increases in Jersey would almost certainly amount to much more than in Florida owing to the scale of Jersey Telecom and the consequently greater effects of duplicating such functions.

The OECD considered a range of possible costs and other disadvantages of structural separation including impact on broadband deployment, loss of scope, high implementation costs and loss of bundling advantages. Its overall assessment was that:

"The benefits and costs identified above cannot be quantified and evaluated to provide a clear conclusion as to whether benefits exceed costs. This inconclusiveness raises serious doubts as to whether there is sufficient evidence for the structural separation of incumbent carriers to be confidently supported. The costs of structural separation in divestment costs, .lost innovation and inefficiency might make this approach far less desirable than non-structural regulatory safeguards. Even though behavioural regulatory constraints would place some restrictions on incumbents' activities, they would largely avoid imposing regulatory limitations on the design and implementation of new services."

The costs identified by Pociask above, principally concern recurring costs on a separated entity. These are considered in greater detail in Section 3.4 on efficiency below. Structural reform would also have very substantial one-off costs. Because of the limited experience of structural remedies imposed by regulators in the communications industry, very little data exist that allow an informed judgement of the likely cost in Jersey. A study in Australia,[9] however indicated that the one-off implementation costs might cost "hundreds of millions of [Australian] dollars", whilst it indicates the quantum's involved, it is difficult to know exactly how robust this estimate is for Telstra but it is difficult to find any other data that would allow us to make a more informed estimate.

How might such an estimate translate to Jersey Telecom? The critical question here is how the implementation costs would scale between a larger operator (Telstra) and a smaller one (Jersey Telecom). To what extent should we expect such costs to scale with size? It is instructive to consider what activities would be necessary to implement structural separation. A (non-exhaustive) list of the areas in which structural reform would create one-off costs might be as follows:

Costs directly affecting Jersey Telecom:

- Find a(nother) buyer for the separate entities, if the States decides to dispose if its interest;
- Separate operational support systems (OSS) and other IT systems;
- Conduct financial, legal and commercial due diligence;
- Implement separate billing systems;
- Novate employment contracts;
- Novate customer contracts;

[9] For example, see "Telstra split costs millions", The Courier-Mail 25 September 2002

- Relocate staff and IT systems to separate buildings;
- Establish ownership of assets where there is no unambiguous dividing line between them (an example of such would be shared infrastructure or network facilities); and
- Once that is all completed the whole manner of how the business operates would need to be considered.

Cost Directly affecting third parties:

- Technical, legal, financial and commercial due diligence;
- Advisors and brokers' fees in preparing for the sale (these costs would apply even if Jersey Telecom were sold as a whole, but would be multiplied if it were sold in two or more parts); and
- Advisors' fees into the choice of the correct demarcation between the businesses to be separated.

Some of these cost categories, particularly the first three will be largely invariant with respect to size. Other costs, such as legal costs in relation to contract novation will also be invariant with respect to size (although it is reasonable to expect the implementation of new contracts to scale with numbers of employees and customers).

Proportionately, it is therefore reasonable to expect that the cost of implementing structural separation would be much greater for Jersey Telecom than for Telstra.

Table 4.

Evaluation of the four options on regarding cost of implementation

Selling Jersey Telecom in its current form	**Separation of retail and network**	**Separation of fixed and mobile**	**Separation of core and access**
High. Significant restructures this would have a high cost.	Very high.	Very high.	Very high.

3.4 Efficiency

As outlined above, structural reform would have substantial one-off and ongoing costs. In evaluating the impact of structural options on efficiency, it may be helpful to divide the costs into their various categories, which might include (but are not necessarily limited to):

- Effect on economies of scale; and
- Effect on economies of scope.

An organisation is said to have "economies of scale" if its average cost (cost per unit of output) diminish with the organisation's size. Costs that are fixed, or approximately fixed, are one of the strongest sources of economies of scale. Buildings, central compliance functions (such as legal, regulatory and financial) and IT systems are all examples of functions that comprise a significant element of fixed costs. Jointly, they comprise a high proportion of total cost. The cost-benefit analysis would need to quantify the impact of structural reform on such costs.

An organisation is said to have "economies of scope" if it can produce two or more products at a lower cost than would be possible by comparable organisations producing the products separately. In telecoms, operators enjoy substantial economies of scope particularly in network operations, IT systems and research and development. The cost-benefit analysis would need to quantify the impact of structural reform on such costs.

3.4.1 Ongoing efficiency (scale)

Separating Jersey Telecom would by definition, create two or more organisations of a smaller scale. To analyse the impact on cost, it is important to consider whether structural separation would result the loss of economies of scale.

As a small operator in a global market, Jersey Telecom already enjoys fewer economies of scale than most incumbent operators. Another way of putting this that there are some cost categories for which the cost per unit of output is much higher for Jersey Telecom than for larger operators. Examples of such costs are:

- Human resources;
- Regulatory compliance;
- Buildings;
- OSS;
- Operating separate boards;
- Audit;
- Legal;
- IT systems; and
- Billing

All of these functions are subject to strong economies of scale. This means that for a small operator, such as Jersey Telecom, such costs would comprise a relatively higher proportion of revenues than for a large operator (BT for example). Regardless of the size of the organisation, there will always be a minimum amount of cost necessary to perform each of the functions above. For example, a certain minimum number of staff is necessary to provide a suitable human resource or a regulatory compliance function. Also, the cost of buildings typically increases less than proportionately with the square metres of space. Furthermore, IT and billing systems have development costs associated with them, which are both high and fixed.

For a number of the cost categories above, a two-way split of Jersey Telecom would double costs, whilst a three way split would treble them.

This would lead to substantial cost increases, which ultimately would have to be borne by the consumer.

3.4.2 Ongoing Efficiency (scope)

Structural separation should be analysed in terms of its impact on economies of scope. Areas in which economies of scope could be affected are as follows:

- R&D synergies for new product development;
- Network synergies (e.g. duct and trench sharing between transmission and access networks, transmission network sharing between fixed and mobile); and

- OSS and other systems.

Developing new products (especially the new wave of converged fixed, mobile, voice and Internet services) requires significant coordination between retail functions (to understand customer requirements and demand) and network functions, which are responsible for the developing and implementing the technology necessary to support new services. Loss of coordination between the functions could result in an increase in costs of developing new services (or prevent them being developed at all).

Traditionally, new companies do not spend a significant amount of resource on research and development and therefore the quantity of new products on offer would undoubtedly be restricted with focus being placed in far fewer areas. The quality and quantity of products on offer by Jersey Telecom is currently high with extensive portfolios for each area of the business, it is likely that this would be lost.

Another area in which a separation between fixed and mobile or core and access could erode scope economies is in the area of network economics. Today, a substantial proportion of networks are shared. Core, access and mobile networks share common facilities such as duct and trench with substantial cost savings. In reality, these scope economies would not be lost immediately following separation. After establishing ownership of shared network facilities (itself no easy task), different functions would lease facilities between each other. Although the transactions costs in doing so would themselves involve a loss of scope economies, leasing infrastructure would help mitigate the loss of economies of scope in the short term. A potentially greater concern would be the longer term risk that as networks grow and evolve, they would not do so in a cost minimising manner.

Table 5.

Evaluation of the four options on efficiency

Selling Jersey Telecom in its current form	**Separation of retail and network**	**Separation of fixed and mobile**	**Separation of core and access**
Positive. Stronger focus on profit might create greater incentives to improve efficiency.	Negative. Separation of network and retail would result in a dilution of economies of scale and scope.	Negative. Separation of fixed and mobile would result in a dilution of economies of scale and scope.	Negative. Core and access would result in a dilution of economies of scale and scope.

3.5 Impact on innovation/ incentives to invest

The cost benefit analysis should consider how structural separation would affect incentives and ability to invest and innovate. Commentators frequently refer to the possibility of a "coordination problem", referring to the coordination between vertically related but structurally separate business units. As the OECD puts it:

> *"The problems of co-ordinating investment between the wholesale and retail parties could be considerable. The effect might be, in the worst case, to delay or even impede network upgrading, including the extension of fibre closer to the customer."*

A coordination problem can occur in the communications industry when, for example, a retail function wishes to supply a new product, such as higher bandwidth, more functionality, superior reliability etc. Even where it does not involve new infrastructure build, product development in the communications industry is a highly technology intensive process and the necessary technical capability resides with the network functions rather than retail functions.

It is important to note that network **and** retail functions are necessary to develop new products. Network functions cannot, on their own, have sufficient information to determine customer demand for new types of products and how much they are willing to pay.

A separation between (for example), network and retail would necessarily prevent or network and retail functions operating as one unit, which would restrict the flow of information necessary to ensure that the network function is fully responsive to the needs of the retail function. This is sometimes (in the UK) referred to as the "Railtrack problem", referring to the problems experienced in the UK following the structurally separated rail and train operating functions.

Unlike current generation voice and data networks which are built around long-established global standards, next generation network technology is rapidly evolving and has few standardised technologies. Furthermore, demand-side preferences for new types of services are still unknown. For these reasons, there is now a greater need than ever to coordinate network and retail functions to ensure that the inevitably risky investment decisions are the right ones from the point of view of the end-user.

Investment coordination problems would not only be seen with a separation of network and retail. Similar problems are likely to seen in a separation between core and access and between fixed and mobile.

With regard to a separation between core and access, it is well understood that substantial investment is required to deliver the higher bandwidth required to support converged and multimedia services increasingly demanded by customers. An access network operator may be more risk averse than an integrated operator if it lacks direct access to information on customer demand or indeed the expertise to deploy new products.

For similar reasons, a separation between fixed and mobile would threaten the development of converged fixed-mobile products. It is worth nothing that BT sold its mobile assets to address its cripplingly high debt but has ever since been desperate to get back into the mobile market in order to maximise the opportunities for FMC.

Table 6.

Evaluation of the four options on the innovation/incentives to invest

Selling Jersey Telecom in its current form	Separation of retail and network	Separation of fixed and mobile	Separation of core and access
Positive. Stronger focus on profit and access to capital markets may create greater incentives to invest and innovate.	Negative. Separation of retail and network would result in difficulty in coordinating product needs and investment plans resulting in a slower rate of convergence between voice, data, internet and multimedia services.	Negative. Separation of fixed and mobile would result in difficulty in coordinating product needs and investment plans, resulting in a slower rate of fixed-mobile convergence and innovative bundles involving fixed and mobile services.	Negative. Separation of core and access would result in difficulty in coordinating product needs and investment plans, resulting in a slower rate of investment in access network required to deliver higher bandwidth services.

3.5.1 Loss of option

As the OECD noted, any separation between core and access would require a definition of the scope or border that would be considered the local loop and related access elements of the incumbent's network to be separated. They highlighted "particularly intractable problems at a technical level, given the growing complexity of modern systems and the presence of intelligence in different network layers".

Most importantly, the vertical layers in modern communications services are increasingly interdependent with service design features being embedded in the software and technology in the network. The implication of this, as the OECD noted is that:

> *"Drawing a line between services and infrastructure may also be complicated by the increasing technological sophistication in telecommunications. It may be difficult to excise particular services that are effectively embedded in the infrastructure and which could readily be characterised either as retail or wholesale activities."*

It should be clear from the above that if a decision were made to separate Jersey Telecom into two or more businesses, there is no unambiguously "right" place to draw the line. There is no clear dividing line, for example, between core and access, network and retail or even fixed and mobile. Furthermore, deciding where to draw the line would entail a judgement about the future development of technology and in particular, would involve taking a risk that technological developments may proceed in a way that renders the chosen dividing line inappropriate.

Separating core and access networks, for example, using the current location of the main distribution frame (MDF) could prove a very expensive mistake if the boundary changes over time as projected. The intended result of a separation of core and access would be for alternative carriers to interconnect at the point at which the networks are separated. But, as is widely recognised, the boundary between core and access will have to change over time as incumbents replace copper with fibre in the loop in order to provide higher speed services.

The boundary between fixed and mobile is also likely to change over time. New technologies such as Wimax that promise to allow high-speed connectivity over relatively wide areas is expected to enable fixed network operators to provide mobile services. Another technology that could blur the distinction between fixed and mobile is the use of Wifi phones such as those provided by Rabbit Point. Technologies such as Unlicensed Mobile Access (UMA) are also on the horizon and could further blur the distinction between fixed and mobile services.

For these reasons, a dividing line that may appear logical at the time (if one can be found at all) could easily cease to be logical as technology changes over time, whilst any structural separation would most likely be irreversible.

Table 7.

Evaluation of the four options on the loss of option for the future

Selling Jersey Telecom in its current form	Separation of retail and network	Separation of fixed and mobile	Separation of core and access
Neutral. Selling Jersey Telecom in its current form would retain the ability to consider various structural options in the future.	Negative. Separation of retail and network would be difficult or impossible to reverse if the effects were not as intended, if the boundary between retail and network were defined incorrectly or if, due to technological evolution, the logical boundary changed over time.	Negative. Separation of fixed and mobile would be difficult or impossible to reverse if the effects were not as intended, if the boundary between fixed and mobile were defined incorrectly or if, due to technological evolution, the logical boundary changed over time. New wireless technologies on the horizon are likely to affect the boundary in due course.	Negative. Separation of core and access would be difficult or impossible to reverse if the effects were not as intended, if the boundary between core and access were defined incorrectly or if, due to technological evolution, the logical boundary changed over time. The introduction of fibre in the loop will affect the boundary between core and access.

3.5.2 Impact on ability to recruit scarce talent

Finally, it is worth nothing that breaking Jersey Telecom into two or possibly more structural entities would create very small entities, which could impact its ability to attract scarce talent.

Jersey Telecom already experiences difficulties of appropriate staffing due to the limited market available with telecommunications/engineering experience and knowledge. On several occasions Jersey Telecom has struggled to meet in-house projects as well as demands caused by regulatory intervention. One such example is the Mobile Number Portability project, which demanded constant input from key technical and IT staff over a period of several months. This intervention caused in-house projects to be affected, some of which had been planned for months, or even years (particularly those impacting the core network). There is only a handful of staff in the business that possesses the technical ability, together with the level of experience required. This fact is re-iterated by the figures provided in the latest Census[10], which illustrate that only 7% of the total economically active working age adult's fall within the engineering bracket.

Table 8.

Evaluation of the four options on the ability to attract scarce talent

Selling Jersey Telecom in its current form	Separation of retail and network	Separation of fixed and mobile	Separation of core and access
Neutral.	Negative, separating into two or more smaller entities could reduce the perception of the entities as "prestige employers", increasing the difficulty of recruiting scarce talent.	Negative, separating into two or more smaller entities could reduce the perception of the entities as "prestige employers", increasing the difficulty of recruiting scarce talent.	Negative, separating into two or more smaller entities could reduce the perception of the entities as "prestige employers", increasing the difficulty of recruiting scarce talent.

[10] Report on the 2001 Census, Jersey

4 Conclusion

In conclusion therefore, there appears to be little evidence to support a case for the structural separation of Jersey Telecom. However, proposals that suggest such a move would have merit would need to be fully assessed by means of a cost benefit analysis and Regulatory Impact Assessment, in order to establish the costs of such and the impact to the economy.

Within such an assessment, the complexities raised by separation should be discussed. The benefits remain unclear and certainly seem to not exceed the associated costs, costs that seem to be very large, even at this initial review stage.
In addition, where the line should be drawn across a fully integrated company is also unclear and the developments in technology are constantly changing the logical boundaries between functions such as between fixed and mobile, retail and network and core and access.

Furthermore, structural separation should only be introduced in the specific instance where the regulatory measures, which were introduced to govern any dominance issues in the market, are failing. This does not appear to be the case in the Jersey market. Regulatory measures such as separated accounting practices, price capping, transparent pricing, etc have all been imposed by the JCRA without any further consideration as to whether they are meeting the needs of the market and the regulator. As stated earlier, two sets of accounts have been submitted to the JCRA and not one question has been raised by them over in this regard. Until such time as it has been established that these regulatory practices are failing or ineffective, then extreme measures such as structural separation should not be adopted. It should be remembered that the competitors made their business cases on the basis that effective regulation exists in this market. They made their case knowing Jersey Telecom's structure and determined that they would be able to effectively compete with us.

The JCRA should also be mindful that in accordance with the Telecommunications Law they have the power to review the market at any time and intervene where they feel that any abuse of a dominant position is taking place. It would seem, at this time, to be a more pragmatic approach to complete a review of the regulatory measures that have already been introduced by the JCRA in order to ascertain whether they have been successful in their current form or whether amendments need to be made to ensure their objectives are achieved.