

# Some Advantages of Structural Separation

<i>Introduction</i>	2
<i>Competitive Environment – Focussed on Profits</i>	2
<i>The ASX Advantage – Investment Solution</i>	2
<i>Executives and Directors – Redeployed and Focussed</i>	2
<i>Infrastructure Business – Now Highly Efficient</i>	3
<i>Regional Reselling – Competitive Business</i>	3
<i>Regional Infrastructure Business – Future Proofed</i>	4
<i>Universal Service Obligation - Solved</i>	4
<i>Mobile Towers – Sanity Achieved</i>	5
<i>Emergency Operator Assisted Services - Solved</i>	6
<i>Regulatory Legislation - Minimised</i>	6
<i>Outdated XIC Legislation Removed</i>	7
<i>The ACCC – Competition Without Bias</i>	7
<i>The ACMA – Now a Comfortable Regime</i>	7
<i>Network Interconnect – Costs Minimised</i>	8
<i>Stop-Gap ADSL Technology - Bypassed</i>	8
<i>Public Inquiries - Minimised</i>	9
<i>National Economics – Significantly Boosted</i>	9
<i>Conclusion</i>	9
<i>Background – Malcolm Moore JP BE(Elect)</i>	10

# Some Advantages of Structural Separation

## *Introduction*

There are many hidden advantages of Structural Separation that were not covered in my original submission. This addendum spells out the 'what next and why'.

### ***Competitive Environment – Focussed on Profits***

Commercially based competitive businesses manage their bottom lines by minimising the infrastructure expenditure, and in the case of telecommunications, this means to provide the minimum (most congested) network possible at, the lowest service standard (no maintenance) and charge as high a possible to maximise the ROI. This is why and how commercially based telecommunications companies maximise their profits, and that is why commercially based companies currently praise the virtues of Broadband access, and say precious little (if any) about the essential connecting infrastructure network that is imperative to make the Broadband access a somewhat viable high capacity service over a large geographic area.

Just as feeding a dead horse won't make that horse get up and gallop, so, forcing competition onto a telecommunications infrastructure won't make cheaper user rates! It has to be understood that infrastructure-based competition can never produce sufficient profit margins compared to competitive business without the restrictions of substantial infrastructure. The competitive business environment is expert in reselling bundled wholesale products as retail products as this process contains a very high ROI with a very wide choice. By structurally separating Telstra, its reselling part moves into line with other major retail chains, and it opens the door for other competitive resellers to emerge into this environment.

### ***The ASX Advantage – Investment Solution***

With the structural separation of Telstra, it will become two distinct bodies. One will be the agile (privatised) reseller, and the other a sub-government commission. The privatised reselling side will sit very comfortably on the ASX share market, with a very large continual cash flow, and the ability to change product ranges within as few weeks of conception. This will be a particularly powerful competitive business, but it would also have considerable ongoing expenses in sponsoring, advertising and marketing.

This would be very good news for (Superannuation) Investment Companies looking to position their investments into Australian businesses and make profits. What this competitive business needs from the ASX fraternity is a board of Directors that match the competitive business of retail reselling, and the answer is from within!

### ***Executives and Directors – Redeployed and Focussed***

In general the current Telstra Executives and Directors can be split along infrastructure and competitive lines and it is an amazingly neat fit. Almost all the current Board of Directors appear to have virtually no telecommunications infrastructure knowledge or expertise, but a wealth of competitive business expertise. I believe that, some of the Executives have a wealth of telecommunications infrastructure expertise and knowledge and are in general limited in competitive business. This leaves some Executives that need to consider their futures.

By placing most of the current Directors with the privatised part of Telstra (Bigpond?) as the separate private competitive business, this gives the new (Bigpond?) the business status that it needs. Most of these Directors are already well known to the ASX fraternity by their heavy involvement in other competitive companies that they also part-time work in, and this would serve well to strengthen the (Bigpond?) share price. Some of the existing Executives could be included on the (Bigpond?) board – on release from Telstra.

## **Some Advantages of Structural Separation**

By placing a few of the current Executives with the telecommunications infrastructure (Telstra?) board, this gives it part of the appropriate management that it needs. There are many desirable candidates for Executives in Telstra (infrastructure) that are experienced and have expertise in the management and development of telecommunications infrastructure. Sourcing candidates from outside Telstra is both unnecessary and undesirable, as most would have to be trained before being of any use.

### ***Infrastructure Business – Now Highly Efficient***

With the second part of Telstra as a (sub-government) commission and will be a very efficient infrastructure business, without the contortions of retail product packaging/bundling and its associated issues with pricing, and its wholesale pricing will be entirely consistent for all competitive resellers – meaning that these players will be in a close to level playing field, and it will be retail product differentiation that will determine their sales/turnover figures.

Because its agenda is then infrastructure focussed, it will quickly move from minimum network alteration/growth strategies into maximum network coverage strategies. The larger the Infrastructure business is, the more efficient it will be – this is very simple economies of scale and market/equipment (purchasing) power attributes that will drive prices down.

In the short term (less than 5 years) Australia's telecommunications infrastructure business would on a national basis strive on to replace the pair copper wire based customer access network (CAN) with a 'Broadband friendly' passive optical fibre network (PON) to the premises (FTTP) for every premises in Australia – urban, metropolitan and non-metropolitan, regional and remote. With this new Broadband CAN, will also come a considerably bolstered inter-exchange network (IEN), and this is of major importance as no matter how high capacity the CAN will become, the IEN has to match and exceed the CAN capacity – else the CAN will be highways to nowhere (congestion).

In due course, most other competitive telecommunications providers will see financial sense in selling their established networks to the commission at fair market rates – providing those infrastructures were there before the structural separation of Telstra happened, and that the commission has a useful purpose for the equipment (i.e. the equipment is up to standard, not obsolete and compatible with the commissions current infrastructure).

In selling their infrastructure equipment these telecommunications providers/carriers will also move into the highly competitive and profitable reselling business, and compete on a level footing with the (Bigpond?). That means fair trading competitive rules apply!

By the government fostering the growth of Australia's telecommunications infrastructure business, this provides the platform for a multitude of Australian competitive businesses to really get off the ground and be highly successful on the world stage. It is these competitive companies that will be the new investment favourites for superannuation investors on the ASX.

### ***Regional Reselling – Competitive Business***

Regional telco reselling competitive businesses may well be established and thrive as they would be able to 'keep the money in their community', and that is a very strong selling point in virtually all country towns/cities/districts. (Even as a child/adolescent in a smaller country town I was acutely aware of this powerful community attitude!)

This model of competitive business as telecommunications resellers places competition in country areas and in the proper business environment, where the reselling business is not tied down with financial constraints related to long-term infrastructure purchasing, network connection and equipment life-cycle management.

## **Some Advantages of Structural Separation**

### ***Regional Infrastructure Business – Future Proofed***

Virtually no regional infrastructure development has happened in the past 20 years and little will happen in the future if the structural separation does not happen. This is because competitive business forces simply do not see a fast ROI for investing in infrastructure in non-metropolitan areas – so all infrastructure investment goes to easy money areas – as per competitive business rules.

Following structural separation regional telecommunications infrastructure business will be going through a major re-engineering process – as it will not be tied down with competitive networks, or competitive product reselling. The major programme will involve a complete re-engineering of the non-urban communications infrastructure to future proof non-metropolitan (regional) Australia will follow this strategy:

In most non-metropolitan Australia the current inter-exchange network (IEN) is a thin tiered star structure, based on Plesiosynchronous Digital Hierarchy (PDH) and Asynchronous Transfer Mode (ATM) optical fibre (OF) based transmission networks carrying a mixture of IP and telephony/data traffic. This network has very little meaningful network management (NM) functionality built-in, and it simply has nowhere near the necessary traffic capacity to carry what will be capable through Optical Fibre CAN.

The new generation technology CAN consisting of Passive Optical Fibre Networks (PON) to the Premises (FTTP) has a bandwidth extending upwards of 1000 MHz, and in metropolitan areas its distance (limited by passive splitting) is nominally limited to about 6 km. Without fibre splitting the distance can extend to beyond 60 km without signal regeneration. Old generation copper pair has a nominal bandwidth of 0.004 MHz, and a distance limit of about 4.2 km. With line conditioning (using ADSL) the one-way bandwidth can be pushed to about 1.1 MHz, and length still limited to less than 4.2 km. Therefore the IEN infrastructure requirement for PON FTTP far exceeds that for twisted copper pair. It is therefore imperative that the IEN infrastructure be re-engineered to match the new generation CAN and they both need to be installed and commissioned in concert.

Regional IEN will have to be augmented by converting many of the tiered star optical fibre based PDH networks into thick Synchronous Digital Hierarchy (SDH) optical fibre rings that are linked at major centres. These thick SDH rings will become the backbone network to carry the IP (data) / voice (telephony) / vision (CATV and teleconferencing) traffic and support the new technology CAN consisting of Passive Optical Fibre Networks (PON) to the Premises (FTTP). The major regional centres will need mirrored Internet Servers to manage the data flow, CATV and network switching capabilities.

### ***Universal Service Obligation - Solved***

Structurally separating Telstra will provide this golden opportunity and ‘take the monkey off the back’ about the USO, and provide the necessary communications infrastructure that our farmers and other primary produces require to be more effective in their competitive businesses. The USO has been a major bone of contention with competitive businesses finding any excuse possible to not contribute in any way as it directly impacts on the competitive business bottom line of maximised profits.

With the structural separation of Telstra, the USO moves directly into the commission, and as the commission is an infrastructure business, this fits very comfortably with its prime business objectives – including providing high service standards – which directly translates to installing and life-cycle managing telecommunications equipment that works at an equitable standard to that in metropolitan and non-metropolitan areas alike.

## Some Advantages of Structural Separation

As for the costs – they are included in the wholesale service pricing to the resellers, and as these prices are consistent (and considerably lower than a competitive business arrangement), then there is really no argument. Further, as the inter-exchange network becomes a grid or large number of touching circles, inter-urban metropolitan service standards will also improve in Internet speed handling – so it truly is a win-win situation, and it is no longer a situation that the Government of the day need to be further concerned about!

### **Mobile Towers – Sanity Achieved**

Considering that currently there are at least three (3) competitive networks, and inside that there are at least two transmission protocols (GSM and CDMA) and these work on dual frequency bands and/either spread spectrum technologies, are mostly low power and covering relatively small footprints, then it is not surprising that the number of towers and associated antennas is insanely high in urban areas, and conspicuously low in non-metropolitan areas.

Compounding this situation is that in many instances radio using dish antennas is used to beam to these mobile towers base stations and these additional antennas serve to further aesthetically degrade the (urban) landscape and frustrate and frighten people by the outstanding presence of this technology – which could be replaced by buried optical fibre as the transmission bearer to the mobile base stations.

Mobile phone usage is approaching saturation in metropolitan areas – but has a long way to go in non-metropolitan areas to have reasonable geographic coverage. The problem here is twofold, initiated by competitive business and perpetuated by the current regime.

Economically on competitive business terms it is a good investment to install and run a network that is being continuously used at near to full capacity. In Engineering terms the frequency bands used for mobile phone usage is effectively line-of-sight and cellular, meaning that in urban areas there has to be proportionately many more antennas per unit area, compared to non-metropolitan situations. With competitive business, the tower/antenna numbers multiply with every competitive carrier – hence the insanely high number of towers.

In non-metropolitan situations the base stations and associated antennas need to be located in the highest vantage points to get the biggest footprint coverage possible. Network dropouts are inevitable. The problem with competitive carriers is that they all seek to service the highest use areas for the easiest and biggest financial return over the shortest time period, and this means to provide a minimum service network – so network dropouts in commonly known ‘black areas’ will always happen with this competitively driven regime.

The over-supply of mobile base stations and associated antenna towers caused by competitive business is a blatant waste of at least \$3 Bn to \$5 Bn in financial resources that could have otherwise been used to provide a far better urban coverage with far less black areas and a solid covering of non-metropolitan areas, that to date is almost non-existent.

With a reversal in philosophy of the current regime to work with infrastructure business and let the ACCC/TPA work with competitive business, through the structural separation of Telstra, and appropriate legislation, the first stages of mobile tower sanity will appear.

With time, as various competitive carriers also structurally separate, they would ‘sell’ their networks to the commission, and the commission would rationalise the number and positions /locations of mobile base stations and their associated towers/antennas. With this approach the base station / tower density in metropolitan areas could be at least halved and have an

## **Some Advantages of Structural Separation**

improved coverage (less drop-outs), and poorly covered non-metropolitan areas would also have far better geographic mobile access coverage.

### ***Emergency Operator Assisted Services - Solved***

These services are essentially infrastructure business services and not a competitive business services, but they have been caught up in competition hype since about 1988 when the financial rules were changed and the associated management were instructed to run these on competitive business lines, and not infrastructure business lines. Competitive 'bottom line minimisation' was effected through; minimising of 'bums on seats', various techniques to redirect calls through interactive voice responders (IVRs), utilisation of remote call centres, minimisation of free services, minimisation of customer service.

With the structural separation the function of (Emergency) Operator Assisted Services (OAS) should move to the infrastructure (commission) and this will bring with it considerably increased service standards as the main focus, a reduction of IVR usage, minimisation of remote call centres in favour of district, and regional call centres. Because of infrastructure business priorities, the regional OAS would be considerably larger and call transfers would be considerably minimised – and that saves lives!

As ROI in terms of monetary profit is not high on the list of imperatives it is however an issue. (E)OAS has overheads, but as being part of the infrastructure, its operational costs would be part of the overhead costs in the wholesale pricing of telecommunications products, and this takes away the issue of legislative determinations to force competitive business to provide infrastructure business products. In other words, this is a very comfortable business fit for competitive businesses and the infrastructure business, and the Government.

### ***Regulatory Legislation - Minimised***

Aesops fable (about the sun and the wind challenge each other to remove the mans jacket) – says it all! Inappropriate legislation for successive years has only hardened the resolve of Telstra to keep alive under severe oppression. A little bit of positive (sunshine) would have done the trick – but no, legislation had to use the big stick! And it didn't work!

The use of competitive legislation (the big stick approach) is futile, because the Telstra network is an infrastructure business – not a competitive business. While the legislation may well attack or regulate the competitive business side of Telstra, the same legislation is in itself a powerful catalyst in causing conflicts of interest within Telstra – which is torn between two masters: its customers and the regulators, and it can't please both concurrently.

Legislation to manage an infrastructure needs to be a specification setting out the boundaries in infrastructure business terms, and not competitive business terms. The real problem here is that those involved in creating laws are not conversant with infrastructure business and resort to competitive business references, and this is why they have always got it wrong!

Once the legislation is rewritten in infrastructure business terms, and Telstra has its competitive reselling arms removed to work as a shareholder interested, limited liability company – with its ASX-friendly board members, then the sub-government (commission) can operate very efficiently with a minimum of restrictive legislation and do what it was intended to do – provide a high service standard of telecommunication infrastructure throughout Australia as wholesale products to all retail resellers.

## **Some Advantages of Structural Separation**

### ***Outdated XIC Legislation Removed***

On a slightly closer inspection of the XIC legislation it is apparent that it is very 'dated' in that it talks of the PSTN (public switched telephone network) was the predominantly manually operator switched predecessor for the Inter-Exchange Network (IEN) which strictly speaking was an analogue based network and this was replaced by an IDN (Integrated Digital Network) which was a mix of analogue and digital exchange switches, and this is in the process of being replaced with IPN (Internet Protocol Network), and this uses VOIP (Voice on IP). In other words the PSTN was long gone (redundant).

In consideration that Internet is probably bigger than telephony, and that most of the Broadband Internet products have not hit the sales yet, it is be time to reconsider the XIB and XIC legislation and re-write it in infrastructure business terms that relate to service standards and not specific 'deemed carriage service', (that relate to competitive business terms) and in any case the infrastructure business should be only to happy to assist and get it right.

### ***The ACCC – Competition Without Bias***

As I understand it the role of the ACCC is the heavy end of unethical competitive business, but with structurally separating Telstra, this takes a very awkward load off the ACCC. To reflect this separation, the ACCC needs to be void of the legislation that specifically ties it to Telstra of old, that is Parts XIB and XIC of the Trade Practices Act need to find new homes, and XIB needs to be rewritten in terms of an infrastructure business or completely repealed.

By removing Parts XIB and XIC from the Trade Practices Act (TPA), this frees up the TPA and the ACCC to work highly effectively and somewhat efficiently in the competitive business framework, with the TIO as a feeder to the ACCC.

I believe that Optus and other competitive carriers would want the current regime to persist, as it provides a powerful 'cover' or 'foil' for these carriers to introduce duplicated networks in the name of competitive business (when in fact it is competitive infrastructure). It has already been proven that duplicated (competitive) infrastructure is in no way as efficient as one infrastructure business – but the bullet of truth is very hard to swallow. After 20 years of persistent regime abuse on Telstra and its people, Telstra is still strong. It must therefore be obvious that the legislation of the current regime is dysfunctional and should be removed.

### ***The ACMA – Now a Comfortable Regime***

By rewriting Part XIC in infrastructure business terms (not competitive business terms) as the Telecommunications Infrastructure Act (TIA), this ties the ACMA to the telecommunications and broadcasting infrastructure businesses. As today's telecommunications technology has the ability to live report traffic and service performance – then this tie directly links infrastructure businesses service standards reporting directly to the ACMA. In keeping the ACMA independent, it by default becomes the infrastructure reporting body and this removes the need for future Inquiries, and a range of 'action groups/associations/forums'.

I believe that the ACIF would not want the current regulatory regime to change as this festering situation gives it reason to exist. With the transfer of the inappropriate legislation out of the TPA and into the TIA, this provides a golden opportunity for the ACIF to be rationalised and positioned alongside Telstra (commission), as I believe that a large amount of its workings would then coincide with infrastructure management processes.

# Some Advantages of Structural Separation

## ***Network Interconnect – Costs Minimised***

One of the very well hidden, big competitive costs that impacts on profit margins of competitive telecommunications carriers is the interconnect infrastructure. The more competitive carriers there are – the more complex and expensive is the Gateway interfaces that connect and communicate between these carriers. Gateway interfaces are imperative to prevent unethical competitive practices and this results in a multi-duplication of interfacing signalling equipment (exchanges), databases and network transmission systems, and this adds up to gross inefficiency which articulates itself as high interconnect costs, and these drive the end customer/user costs up – not down!

This is not rocket science! As I understand Telstra has borne the cost of these expenses, and areas like ATUG, SPAN, CTN and other competitive business based action groups can't seem to comprehend that these expenses are a major contributor to interconnect prices.

With an infrastructure business approach the number of competitive carriers would be substantially reduced, resulting in a considerable decreasing the complexity of the Gateway network switching, transmission and signalling structures. Although this initiative would not immediately drive down interconnect prices, it would provide an avenue to restructure the Gateway infrastructure so that customer service could be infrastructure based – and personalised for the reseller's customer, cutting through multiple handling. This effectively out-sources the customer service / fault area from resellers to those with the expertise and equipped to directly solve the customers' service issues: leading to much higher service standards.

## ***Stop-Gap ADSL Technology - Bypassed***

In the last few years there has been an almost panic determination to install the cheapest (and least appropriate) Broadband technology in the form of ADSL. This technology is very cheap as it literally sits at the local exchange and connects to the customers voice grade copper pair line, between the existing telephony switching equipment and the copper cable, and then has a parent infrastructure that can sit on (and often at the expense of) existing telephony transmission infrastructure. This technology is also very inappropriate as connects to copper pair cable that is the voice grade technology, which is incapable of the necessary bandwidth and distance requirements as a functional Broadband Customers Access Network.

While people in regional country cities will unwittingly herald this as major progress in competitive business infrastructure, people beyond the city limits will be competitively disadvantaged by this stop-gap Broadband access technology, because of distance limitations.

Just like the fascial CATV dual rollout in circa 1992, costing Australia a huge unnecessary BOP blowout, and providing double the network in most major urban areas, so to I believe that major competitors to Telstra's infrastructure (eg Optus) are probably gearing themselves up for a major assault by tentatively programming in seriously outdated and totally inappropriate ADSL technology, on dated copper pair CAN.

By making Telstra (commission) the prime (PON FTTP) infrastructure provider, the panic determination to rush install ADSL would stop almost immediately, an infrastructure competitive fight (with the customers caught in the crossfire) will be totally avoided, and PON FTTP will be expeditiously rolled out, minimising another enormous BOP blowout, which will otherwise seriously damage our national economy.



## **Some Advantages of Structural Separation**

### ***Public Inquiries - Minimised***

On the surface, any inquiry is no more than a gathering of facts to present a situation – be it past, present or proposed. Inquiries are favourite tools of competitive business to probe into situations and get a shallow understanding of the business and an insight on how to financially raid those areas being investigated. Inquiries are usually very expensive and gird themselves with all the legal armoury they can arrange, and it should be obvious that in almost all cases where an infrastructure is being investigated by an inquiry, that there is a very well hidden (unethical) competitive business agenda underneath.

In my opinion the Estens Inquiry fits this mould to perfection. My understanding of it is that there was a large contingent of regional and remote customers that innocently ‘stooged as victims’ and a much smaller number of people with technical and engineering backgrounds may have been called to ‘give evidence’.

Apart from that, telecommunications equipment is able to accurately report on the traffic flow in detail – so that really asks the questions; Why the enquiry? Why weren't factual engineering performance reports used instead? If the people on the panel do not understand the content and causes that make Network Performance/Customer Service Standards reports then why were those people there? What was the real intent of the inquiry?

### ***National Economics – Significantly Boosted***

The consideration of laws that specifically apply to infrastructure business and not to competitive business, makes the point as a major economic reform in the structuring of industry and business in Australia, and it puts the onus squarely on the Government (and Opposition) parties that the elected politicians are the Executive Directors of Australia's Infrastructures and that is their prime function.

This might come as a shock to politicians, but it is exceedingly obvious in hindsight. In Australia, Governments are essentially the Executive Directors of infrastructure at three levels: Federal, State and Local. The problem of party based “executive director” infighting is a major concern as political parties are essentially competitive businesses and will do “whatever it takes” (ethical or not) to belittle their oppositions and fight for ascendancy of their own party; oblivious to their elected role in legislating for the good of Australia as their prime objective.

These same political identities continue their competitive business antics into legislating laws and this has resulted with inappropriate legislation based on competitive business prime foci, when these laws needed to their prime foci to be infrastructure business based. Unfortunately very few politicians have a working knowledge of infrastructure business prime foci, and even less politicians are aware that infrastructure business prime foci are virtually diametrically opposite to that of the prime foci for competitive business.

### ***Conclusion***

Economically for Australia, the structural separation of Telstra is a vital imperative, and this supplementary paper has demonstrated very clearly that a wide range of situations dogging the Government can be amicably solved; and it provides the necessary telecommunications infrastructure for our current and future competitive businesses to prosper on in this global business economy.

## Some Advantages of Structural Separation

### **Background – Malcolm Moore JP BE(Elect)**

Malcolm Moore was raised in Central NSW, educated at The Kings School, trained as a technician in the PMG, specialising in telecommunications equipment specification, design, construction and commissioning. Advanced through TAFE, senior technician, technical officer ranks with specialist streams in research, radio and broadcasting, transmission systems and computer programming while managing a large technical staff base.

Qualified as an Electrical Engineer (NSWIT/UTS Sydney) and gained experience in Forward Network Planning, transmission and switching planning and finance and project management. Took on a leading role in the national analogue replacement programme, involved in nationally rationalising maintenance centres and then was head hunted to resolve intractable customer service issues; because of strong network knowledge and transmission expertise. Identified systematic degraded service standard issues and with HQ cooperation and national teamwork at all levels and technologies; resolved and mitigated a very wide range of customer impacting service issues.


Guided specialist Engineer/Technical teams and developed a series of live network monitoring systems, techniques and facilities that pinpointed customer-impacting issues for resolution, and then aligned regional network equipment to known issues on a national basis – completing the link between customer service issues, service specifications, equipment limitations, and service training requirements.

Extended significant digital network/optical fibre expertise in NZ as a project engineer and as a project manager for telephony/data on CATV using HFC in Victoria. As a Bid Manager gained a wealth of corporate relations knowledge as well as extending engineering expertise in several areas including as wide range of IT infrastructures and business models.

Took on the role of the Development Manager for the Australian Seniors Computer Clubs Association, giving it a national focus, championed Broadband for seniors and aligned their course structures in teaching seniors how to use and get the best out of personal computers.

Developed a comprehensive in-depth knowledge of stock exchange technical indicators and through theoretical analysis, created a range of indicators specifically optimised for live data trading. Developing software that monitors, records, analyses and reports on live ASX data.

Malcolm Moore is available to lead and/or guide this vision of telecommunications industry restructure process and develop the necessary Broadband telecommunications infrastructure throughout Australia, as this is the imperative for Australia, if it is to continue to be a force in the global competitive business economy.



Malcolm Moore JP BE(Elect.)  
Managing Director: Moore and Moore Consultancy Services  
PO Box 147  
Turrumurra  
NSE 2074