VIEWS ON THE COMMERCE COMMISSION DRAFT MARKET STUDY REPORT ON GROCERY RETAILING IN NEW ZEALAND

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I have been asked to provide some views on the draft report issued by the New Zealand Commerce Commission in connection with its retail grocery market study (which I will refer to generally as the Study), with particular reference to the potential recommendations the Commission has made on policy options to create new access arrangements, forms of separation and forced divestment.

The views expressed are my own.

General Observations

- 1. I have some general observations to make before addressing the primary issues related to regulated separation of business assets I have been asked to address.
- 2. First, I was struck by the way perceptions (eg of higher prices in New Zealand than overseas) are given additional weight in concluding on issues drawn to the Commission's attention, even though it is acknowledged that that they are anecdotal and not evidence.
- 3. This matters, when the audience for the Study is less seemingly well-versed in understanding the limited value of anecdote. And it is a particular weakness where there is debate about the Commission's other data sources (in this example, the price of groceries around the world).
- 4. Acknowledging what consumers think is not unreasonable. Ultimately, however, deciding a contested matter by favouring perception is not a sound basis for drawing conclusions.
- 5. Second, consumer-focused innovation (or lack thereof) by grocery retailers is given substantial attention, but production or process-focused innovation is given relatively little.
- 6. This matters, because the latter is much more likely to be the source of net national benefit via productivity improvements, whereas the former may or may not be temporary phenomena. The examples of consumer-oriented innovation given appear demonstrably to be of limited utility to the bulk of consumers. Whereas an efficient supply chain is of benefit both to the national economy and to a large number of end-consumer in terms of reliability and product quality.
- 7. An economic analysis would note the important differentiation between the two, perhaps, but not seek to rate one as more important than the other; and explore likely sustainable benefits from each more thoroughly. Failing to recognise that production process innovation (ie the stuff that generally occurs outside the supermarket) could prove to be the larger contributor to productivity (and the net national benefit of that to employment and income growth) is surprising. The Study does not have to become a discourse on productivity, but in the context of New Zealand's (and

indeed the developed world's) persistently poor productivity performance since 2000 or so, it deserves some recognition.

- 8. The Commission could do this best in its final report by assessing both process and consumer-facing innovation somewhat more empirically, eg through scrutiny of the efficiency gains expected in in business cases for improved production processes; and via the assessed value to the proportion of the consumer group who are likely to benefit in the case of consumer innovations.
- 9. Third, the Commission is clear at the outset of the Study to set a standard of 'workable competition' as its benchmark for assessing behaviour and outcomes, rather than perfect competition. It uses the former term often in subsequent discourse.
- 10. But with one of its pivotal analyses that of profitability the Commission uses a benchmark which is only relevant in a modelled environment.
- 11. I refer to the use of a grocery firm WACC as a benchmark for determining whether profitability (specifically return on capital employed) is excessive.
- 12. The Commission is an expert in constructing a WACC in regulated pricing policy environments, effectively attempting via a model to construct a circumstance of perfect competition.
- 13. That does not make its use in a competition study justifiable when, as noted above, the audience for the Study is unlikely to realise that the WACC is not a commercial benchmark of profitability. It is more the measure of inadequate performance ie 'this firm barely covers its cost of capital'.
- 14. Firms under conditions of perfect competition might expect to see their returns on capital competed down to a level just above WACC. But the Commission by its own standard in the Study recognises that perfect competition is not the appropriate standard. Workable competition, where returns are going to be materially higher than a WACC, is that standard.
- 15. The Commission notes adversely in its comments that business cases have been discovered in this real world situation to be seeking to earn well above WACC.
- 16. Of course they are, because the circumstances of perfect competition are a theoretical construct, not a standard against which to judge whether the market is workably competitive. Firms only invest when they expect to do better than their WACC. It is likely many firms in New Zealand are earning substantially above their WACC.
- 17. The situation is compounded when the Commission equates a capital return equal to WACC with a situation of "normal returns". Borrowing language from theory (well known to economists, but not to most politicians and media) leaves an impression that apparently abnormal returns are the exception in workably competitive markets. But they are not. Very few potential competitors are ever going to enter a new market on the basis that they will earn what an economist would be comfortable calling normal returns.

- 18. If this was simply a question of the lines on a Figure (ie Fig 3.2), the matter may be of little consequence. But the use of a benchmark like this, in an environment where the stated standard of the Commission for assessing performance is quite different ie workable competition allows the use of language and terms that carry a meaning to economists that is not the same as in the world of policy-makers.
- 19. In its Appendix to the Study, the Commission indicates it does not know why neither the ACCC in Australia or the UK Competition Commission in their analyses of the grocery market used returns on capital as a relevant measure rather than WACC.
- 20. My assessment is these authorities took this course for the reason I have indicated WACC is a theoretical factor inconsistent with a Market Study.
- 21. There are better measures of returns developed by the Commission. If its true objective is to judge whether there is workable competition, it should depend on them and eschew the use of WACC.
- 22. Finally, I found the Study at times to fail to set context objectively, compared with others of its kind (eg UK Competition Commission into Grocery Retailing). At times there is a leaning towards simply constructing a case for intervention, rather than first seeking to inform in an objective fashion the merits and otherwise of what are common market practices.
- 23. I was particularly struck by this in the case of the competition effects of private label products, which contained barely a mention of the counter-factual iewould consumers be better off in the absence of private label products?
- 24. It would hardly be controversial to at least note that invariably the first step in the introduction of private label products is likely to be one exhibiting clear benefit to consumers there will be more choice, and usually at differentiated price points.
- 25. As evidenced by innumerable studies by business schools in every developed country, brand development is significantly about maximising supplier returns through maintaining consumer loyalty and strengthening price insensitivity.
- 26. The subsequent competitive situation may or may not always unfold in a manner that simply benefits consumers. The Commission worries that innovation by suppliers may cease, yet if so that must also be a fault with the level of competition amongst suppliers. Overall (and intellectual property breaches aside) this interaction between pioneer innovator and follower is a strong efficiency device, desirable in a competitive market.

Matters related to Policy Options put forward by the Commerce Commission

27. I have been asked specifically to consider the policy measures proposed in the draft Study, where they may impact on competition, productivity and/or efficiency.

- 28. There are three primary measures raised by the Study on which I have expertise.
- 29. First, the Commission gives thought to measures "to improve access to a wide range of wholesale groceries at competitive prices". From the text of the Study and the subsequent comments of interested parties, this appears to envisage one or other form of separation of incumbent firms' capability, or some other form of access arrangement, at the wholesale level. Wholesaling is a service, by and large.
- 30. Structural or operational separation of *services per se* (rather than the traditional infrastructure asset that is subsequently used to provide a service) is not a well traversed policy path. And given the breadth of separation concepts in the Study draft and some submitters' views I will need to undertake some speculative narrowing down of separation choices to create focus, so better to deal with the competition, innovation and efficiency implications.
- 31. Second, "measures to facilitate or create entry by further major grocery retailers. These could include direct facilitation of entry by the Government or divestment by the major grocery wholesalers of existing assets to create additional market participant(s)". Again, my assessment from interpreting the text and subsequent comments on the draft Study is that this involves a divestment of stores by one or more incumbent firms. Divestment of this kind is a better known policy path, albeit one which does not have a strong record of success.
- 32. Third, the question of *enforceable undertakings* should it arise at a later point. I do not address this other than in passing at this stage, as the Commission notes it is apparently unable to accept such undertakings. Access Undertakings to govern the relationship and obligations of access seeking are a well-known form in Australia. I have been on both sides of the table in attempting to design Undertakings, in the airport and telecommunications industries. For now, I simply note that Undertakings need to marry a *defined* public interest and private interest in a manner likely to prove sustainable for a medium to long term period. This is a challenging task when the public interest objective in para 29 above is to deliver a constantly variable outcome from a process dependent on a variety of human interactions and skills, and involving third party suppliers and access seekers who are (presumably) not easily bound by the Undertaking.

Expertise

- 33. I have experience in identifying, designing and implementing structural separation options for the Australian Government.
- 34. First, in telecommunications in the early 1990s in the failed debate to break-up the then monopoly Telecom Australia to allow competition from Optus and Vodafone.
- 35. Second, in the mid-1990s in interstate freight rail to successfully create and operate what is now the Australian Rail Track Corporation, separating train from track.
- 36. Third, in the late 1990s, designing the pricing and competition rules governing the break-up of the Federal Airports Corporation and the privatisation of Commonwealth airports across Australia.

- 37. Finally, in 2009, I returned to the Commonwealth for four years to do the telecommunications wholesale separation task more comprehensively with the investment in NBN Co. and Telstra's structural separation agreement.
- 38. In between, amongst other jobs I had responsibility for accounting separations for Victoria's water authorities for a period.
- 39. Along with one of my colleagues in the Prime Minister's Department at the time, I was responsible for setting up the Hilmer Inquiry into National Competition policy in Australia, and explaining to Professor Hilmer and his panel what we hoped to get from the Inquiry. One such deliverable was the Access Regime, which is referenced below.
- 40. I then assisted in the drafting of Part IIIA of what is now the Competition and Consumer Act in Australia, which put into effect the Hilmer Inquiry's solution to situations where separation has not eventuated, yet competition is being prevented by an incumbent operator of a natural monopoly or like asset. This is widely known in Australia as the access process.
- 41. Regulated access to declared facilities can and does in Australia substitute for separation. It is particularly relevant to the circumstances of *private* natural monopoly or like assets, although it is a general law and applies to assets and markets both public and private. There are lessons for policy processes that seek to consider divestment or forced separation of private assets in the development and operation of Part IIIA. And the Study itself refers to access as a desired outcome at times, suggesting this experience is relevant to the matters under consideration.
- 42. And finally I had six years delivering other policy reform advice to the Commonwealth as Chair of Australia's Productivity Commission.

Regulated access/separation - international experience suggests great care before use

- 43. The OECD and the European Commission have published a series of reviews since 2000, seeking to learn from and update the experience with various forms of separation. The reviews cover the views and experiences of member nations and offer guidance about future opportunities.
- 44. It is fair to say that the OECD analyses are more strongly supportive of the principle of separation as a public policy tool than is the European Commission.
- 45. Despite that, the OECD summary view in its 2016 (most recent) review was:
- 46. "The copious economic evidence ...indicates that structural separation can be efficient...but such an outcome is not a given in **any** circumstance. Thus particular weight needs to be placed on a comprehensive and nuanced balancing exercise of potential advantages and disadvantages."
- 47. In the text of its review, the OECD was particularly concerned that policy-makers consider closely the investment incentives for the separated business.
- 48. The EU has experienced a few successes with separation, but more often a number of false starts in applying its Directives in support of the use of separation as a tool. Member States have

often ended up substituting less than clear separation arrangements of an administrative kind. Possibly as a consequence, the European Parliament appears generally unconvinced by the use of structural separation as a competition tool – its most recent debate with the Commission over its use (in the context of banking reform after the Global Financial Crisis) stalled in 2015 over strong doubts by legislators about its prior efficacy. Its application to private assets may have also contributed to reservations.

- 49. For the most part, these reviews deal with public sector assets. This is not a sign of narrowness of inquiry. It reflects that the bulk of interventions to separate assets for the purposes of encouraging competition are those held in public hands at the time of separation (even if privatisation subsequently sometimes follows).
- 50. Australia is a large contributor to the OECD reviews on experience of separation as a public policy competition tool.
- 51. Since 1995, Australia has had in place a unique and thorough mechanism for judging the utility of separation and access for competition purposes; and this mechanism consciously addresses *private* natural monopoly or like assets that may be used to stymie pro-competitive entry. There is widespread international policy recognition of this pro-competitive model.
- 52. This is the policy paradigm into which the draft Market Study has ventured, but without any appearance yet of the careful and deep considerations that the OECD suggests should be undertaken; nor without reference as far as I can find to the policy model next door.
- 53. In Australia, the National Competition Principles and the legislative construct under Part III A of the Competition and Consumer Act (CCA) creates a process that allows examination of separation of private or public natural monopoly or like assets via a Declaration and access arrangement.
- A National Competition Council assesses applications against a set of legislative criteria, all of which must be satisfied before an asset is declared. Ministerial review of declaration is required, given the significance of declaration (one of the criteria is that the facility to be declared must be of national significance) to the relevant firms. Both limited merits review and review by the Federal Court are available to the parties. This access process is meant to be a reserve power, rarely used but available as an incentive to spur negotiations between access seeker and asset owner.
- The history of its use shows it is indeed rarely used; but also that it has proven to be highly material to commercial negotiations when it is called into play.
- 56. The Act and the processes under it allow putative or real competitors to seek to use Declaration as a way to obtain access under negotiate/arbitrate principles managed by the competition regulator, the ACCC. The criteria applied under the CCA ensure that a comprehensive review aimed at ensuring any declaration access arrangement is highly likely to deliver improved national economic benefits through allocative efficiencies sufficient to offset the likely loss in technical efficiency (see Attachment on the allocative efficiency vs technical efficiency trade-off that is necessarily inherent in access to or breaking up a natural monopoly or like asset) at the firm required to offer access.

57. It is well accepted, regardless of economists' different views on the general desirability of intervention to create competition and innovation/investment, that separation or regulated access involves a loss of economies of scale or scope, and an addition of costs. The question for the declaration process is to demonstrate that these are in probability outweighed by the economic benefits of reallocating resources away from other uses and into this industry or sector via competitive entry.

58. The criteria are:

- that access will materially increase competition in a market other than the market for the service to be declared
- the facility used to supply the service is effectively a natural monopoly
- the facility is of national significance; and
- access is in the public interest.
- 59. The experience from actual application of the Part IIIA model is that fewer than 20 applications for Declaration have been made over more than twenty years of operation, of which 7 were successful. Two were subsequently over-turned on appeal. A number were withdrawn when commercial negotiation turned positive for access seekers. While most applications were about public sector facilities, private freight rail access was the most likely infrastructure to be declared. And from the processes associated with these applications and the subsequent appeal processes, some important learnings have merged.
- 60. In particular, those learnings have implications for access arrangements that involve assets integral to the production process of the business.
- 61. The best example of this involves the major iron ore miners in Western Australia. Fortescue Metals as a new iron ore miner sought formal Declarations of access to a number of mine-to-port rail lines in the Western Australian Pilbara iron export region.
- 62. The assets on their face were clearly natural monopolies. Fortescue argued it would not be economic for it to replicate the lines in the sense that it would involve a misallocation of national economic resources, as was the intent of the law.
- 63. BHP and Rio Tinto argued it would be possible for Fortescue to replicate these rail lines and still earn a return on its mine ie they took the view that the correct test was a commercial argument that it building new lines could still allow Fortescue to operate profitably, despite the extra capital cost.
- 64. They also argued that separation/access was not lawful as the Act prevented declaration where the asset proposed to be separated/accessed was part of a production process.
- 65. A factor in this lengthy legal process was the contention by BHP and Rio that access to their railway lines by Fortescue would involve the "use of a production process" (which would disqualify it from access). In 1998 (in Rio's case) and in 2008 (in relation to BHP), the High Court considered whether access would involve the "use of a production process". In 2008, the High Court accepted that BHP's railway did constitute part of an integrated production process for iron ore products, but determined the issue on a technical point that Fortescue's use of the line alone

would not involve the use of all of BHP's "production process". Notwithstanding this technical construction of the Australian legislation, the underlying policy is clear - that "production processes" should not, in the ordinary course, be the subject of access regulation.

- 66. Hilmer said: "These criteria may be satisfied in relation to major infrastructure facilities such as electricity transmission grids ports, but not in relation to products, processes or most other commercial facilities." (Hilmer et al P 251)
- 67. The rationale in the Hilmer process for excluding production processes from declaration (including not just public but private production processes) is best exemplified by considering steel-making. A blast furnace is a large infrastructure asset that might be difficult for a new entrant into steel-making to replicate. But the intent of the access regime was not to open up regulated access to assets simply because they are expensive or difficult to replicate. They must beuneconomic to replicate. And moreover where the asset is essential to the efficient operation of the whole process of production, forcing it to be shared with competitors is likely to reduce the efficiency of, in this case, steel-making to an extent where the net benefit of access is quite doubtful.
- 68. It is well-recognised therefore that when judging whether to implement separation (or access), examining whether the asset is integral to the production process for the good(s) concerned is essential.
- 69. The run-on-time/just-in-time nature of wholesale warehousing and logistics set up for large national retail businesses like groceries has a number of factors in common with the embedded nature of rail services within a 'run when ready' mine to port operation. While other WWNZ advice should be given greater weight than my simple descriptions, it seems obvious that wholesale purchasing, shipping, re-packaging and distribution decisions are influenced strongly by daily feedback from stores; and on the other side, stores themselves are regularly adapted to promoting or clearing stocks that can make the task of managing further purchasing, shipping etc difficult, certainly less efficient unless managed as a continuous adaptable process.
- 70. A further learning from the Australian competition law context comes from a formal Inquiry conducted by the Australian Productivity Commission (2013) into the National Access Regime subsequent to the rail lines decisions.
- 71. Some submissions to that Inquiry suggested that access should, as a consequence of Fortescue and other failed attempts at seeking access, be expanded to include facilities which were not natural monopolies but would nevertheless require competitors to duplicate existing facilities at high cost to the entrant.
- 72. This seems similar to the situation covered by the draft Market Study.
- 73. The Productivity Commission (p 80-81) took the view in a Report that was in an overall sense supportive of the Access Regime that extending mandatory access beyond natural monopoly to facilities that were simply expensive to duplicate was not desirable.
- 74. It based its view on the fact that it is a normal part of the competitive process for businesses to have to duplicate each others' facilities in order to compete.

- 75. The Productivity Commission view suggests that, while regulators may feel they can judge better than the market precisely when and how such duplication is inefficient, the risks of being pulled into arguments about how profitable or unprofitable it might be for entrants to build systems that are valuable to entry but not essential are high.
- 76. The Productivity Commission's view was accepted by the Australian Government and amendments were made to the CCA to ensure that in future courts did not consider the 'profitability' argument (as used by BHP and Rio, noted above) but instead restricted declarations and the forcing of access to economic assessments.
- 77. In my view, an additional important argument against such an extension of access to circumstances <u>not</u> characterised by natural monopoly is the difficulty in defining what facilities should be declared once the criterion is simply whether it is difficult or expensive for access seekers to replicate facilities.
- 78. Unlike a natural monopoly infrastructure asset railway line, telecoms switch, transmission line etc, relatively easily identified a service derived from a facility that is not relatively easily identified eg undefined other than by outcome, as in this case, will produce arguments about scope and consequently cost that are a serious additional regulatory cost and efficiency risk, beyond the economic and legal learnings noted above.

Separation in the context of the grocery industry

- **79.** Separation of the assets and processes of incumbent firms sufficient to 'Improve the access of new or smaller entrants to a wider range of wholesale groceries at competitive prices' is a highly aspirational objective, for the following reasons:
 - (a) As just noted, the assets and processes to be separated will prove hard to define, unlike the asset in focus in traditional separation policies which tends to be overt, physical, of very large scale and stable for long periods
 - (b) Dispute over what assets and processes should be separated (or, in the event that this becomes a voluntary offer of access to an incumbent's wholesale prices, the percentage of the costs of the incumbent's assets and processes to be 'separated' and applied to this new service) is likely to persist into the future, as consumer tastes change, supplier business structures change, competitors' business plans change and the need for investment in improving wholesaling and logistics processes arise
 - (c) These future new investment choices will be affected by the different firms' business structures, resulting in conflict and a likely cessation of productive improvement to wholesaling processes (eg IT systems, new storage, tracking etc) as the only plausible outcome of such dispute is that the lowest common view is adopted
 - (d) With separation options, exclusivity is going to be a very important issue for the Commission to come to an early view on, under all separation options. Commercially, wholesale purchasing networks tend to lock in stability by becoming the exclusive supplier to a retailer or chain. The separated entity will need this for credibility with suppliers, so they can indicate volumes and negotiate discounts etc; and for their banks to lend them money to buy the goods and fund the business assets and people. Exclusivity may not be essential in

- dense and highly competitive markets, but to make a new wholesaler viable in the size of the New Zealand market, it appears unavoidable. Metcash in Australia is in an exclusive arrangement with IGA stores.
- (e) But this commercial necessity under separation arrangements has a consequence for competitive behaviour at the retail level. It is likely all parties to the new wholesale arrangement will expect and get the same unit price (plus a fee for costs of the wholesaler). Competition between retailers then will (to a greater or lesser extent, but unarguably to some extent) revert substantially to non-price factors. Is this what New Zealand consumers need or expect from a reform process?
- (f) And finally, if the wholesale arrangement is <u>not</u> to be exclusive and participants are free to also negotiate separately with suppliers, another issue arises: the viability of the separated entity, if it cannot rely on volumes.
- 80. The root cause of these complexities is that the asset being separated is a sort of right to a set of prices, not a natural monopoly asset of a physical infrastructure kind, as is commonly the case with separation or access arrangements under competition policy around the world. Because of this, the tool it proposes to use is not designed and based on the list above could not reliably be redesigned for this purpose.
- 81. It takes part of the production process of creating a retail sales item and shares it. Like the blast furnace, this is inefficient for the incumbent and problematic when it comes to investment.
- 82. The impact on investment is the most serious potential failure evident in this approach.
- 83. The views of participants in the Study consultation process demonstrates many different ideas on how separation could be designed. I have chosen the separation of wholesale from retail business processes not because it is wise or possibly even effective, but because it reflects the aspiration (ie 'wholesale prices') as outlined by the Study and some participants, even though at some points in Ch 9 the Commission suggests it is really more interested in attracting incumbents retailers to volunteer a general wholesale pricing offer (or undertaking).
- 84. I could not call this volunteering a form of separation, as it could just as readily be done as commercial agreement between some parties, so it is not dealt with here. I would however note that there will still be new costs associated with it; and those costs will need to be paid by someone. Under normal separation or access arrangements, new entrants are obliged to pay for the services they obtain and the marginal costs they impose on the business to which access is sought. That may prove to be shock to some. To date, the Commission appears not to deal with it.
- 85. I have used the term 'access' interchangeably here with 'separation'. That is because they are in outcome and often even business structure the same thing, aside from dispute settlement, particularly when looking at operational separation. And it features often in policy references in Chapter 9 of the Study.
- 86. The process used to develop access is a good way of more closely examining the implications of the Commission's policy options. Substantial work has been done on access arrangements as they apply to private sector assets around the world (and certainly in Australia), whereas separation has mostly been a tool applied to assets in public ownership (to see this in detail, see OECD reviews mentioned elsewhere in this paper).

- 87. There is a range of variants in formal separation. They are best described by the 'six degrees of separation' which were developed by Professor Martin Cave, a well-known academic on the topic.
- 88. The six degrees are:
 - i. 1 Creation of a wholesale division by the incumbent firm
 - ii. 2 Virtual separation
 - iii. 3 Functional separation
 - iv. 4 Functional separation with governance or incentive structures
 - v. 5 Legal separation
 - vi. 6 Ownership separation.
- 89. The Study and participants interested in this option seem most interested in either 3 or 5/6 above.
- 90. Under **functional separation** (equivalent to the Commission's **operational separation**), the regulator would need to involve itself long-term in the business of access to the "wide range" of wholesale items that are the subject separation activity. This range will be a matter for the regulator from the outset, or disputes over it; and items to be included in the range as consumer tastes change will also become matters for regular input by the Commission or a new oversight entity.
- 91. Functional separation is often preferred by competition authorities because it is less extreme a step than ordering structural separation or divestment. But it is also the most regulator-intensive step, in the initial years at least.
- 92. This need for intense regulator oversight is well-described in the economic literature and policy experience with non-structural separation. Scrutinising the new business division's pricing and also its costs of business (it would be a serious misallocation of resources for customers of the separated entity to receive the efforts of the new entity for free, but undoubtedly customers will object and seek to involve the regulator), plus overseeing other disputes, will be a constant regulatory task. That will add a public expense, to cover regulator costs.
- 93. In the particular case of groceries, shifts in consumer tastes may well become a matter for the regulator. As an example, consider international supply of out-of-season products. A decade or so ago, it was not expected by consumers that they could buy cherries out of season. Now, Californian cherries are a regular feature of supermarket offerings. The logistics needed to make this and like products available at competitive prices are significant. Future consumer shifts will thus be something the regulator could also be called upon to consider should all supermarkets in New Zealand gain equal access to competitively priced novel products such as out-of-season fruit? This constant engagement would be a highly questionable use of public resources. Undoubtedly, the regulator will start out avoiding involvement. But the risks of failure will be greatest if the regulator is hands off the Commission itself notes at various points that trust in such an arrangement will not be high. But someone will have to solve it, if separation is pursued, and all participants in the separated wholesale arrangement will have to invest in it.
- 94. Under any separation option, and consistent with the economic perspective above there will be losses of synergies for the existing business. In the absence of voluntary offers by incumbents to

separate, **compensation** may need to be paid, depending on the degree of intrusiveness on the prior business. This may prove to be a difficult question.

- 95. The Commission should expose these matters in its final Study, so interested parties are not surprised to learn that there will be such separation costs. It would be misleading not to clarify that, as with the National Access Regime in Australia, entrants seeking access must absorb their induced costs of entry. And taxpayers will need to absorb the other costs cited above.
- 96. Moreover, functional separation, as implied by Cave's fourth degree (see above), is likely to prove unsatisfactory without incentives to see the newly-separated business unit act in a manner that supports competition.
- 97. Or, to look at it from the obverse, there will by definition be a loss of incentives to negotiate hard with suppliers and take risks risk-taking is the core of pro-competitive behaviour if a new business unit is given no opportunity to gain reward in return for innovation and risk.
- 98. How will participants in any common access wholesale group incentivise its management to focus on their interests? It should not be assumed that that the incumbent would manage this. Its interests, as a separated retailer, will be to restructure its incentives internally to favour its retail activities where it will be under potentially greater threat of losing market share.
- 99. This loss of incentives to maximise performance arises, as noted earlier, because the asset to which access is being forced is not a natural monopoly or like asset. Natural monopolies are by definition unavoidable inputs into a business in a downstream market. New entrants and the former incumbent alike want to see its performance maintained and pay to achieve that. They may dispute future investment, but maintaining present-day performance is not usually questioned. But in retailing, where there are other ways for retailers to obtain goods, if they find another, they will take it. We look later at exclusivity as a general incentive, but performance incentives eg for those expected to push suppliers to get the best deal and to deliver on time (if required) will become a shared responsibility.
- 100. The questions of how and who will pay for future capital expenditure (eg new IT systems, or even more prosaic but important matters like warehouse technology and safety systems) will also need to be determined before separation. Or another and more damaging dispute as far as productivity of the new entity is concerned will be generated at a later point.
- 101. Under the access declaration model in Australia and also in Europe when access arrangements have been put in place, the question of who pays for future investment to keep the asset delivering the required services is an inherent part of negotiate/arbitrate.
- 102. There are good real world examples of the issues that can arise with future new investment in shared access schemes eg in banking payment systems. Multiple banks are members of payments systems both domestically and internationally (eg Swift). This shared access is useful to ensure that potential new entrant banks are not discriminated against and can offer customers similarly competitive and reliable funds transfer choices.
- 103. But as technology moves on, some banks are keener to update payment systems than others due to different judgments about cost and efficacy. This has plagued Swift in recent years

as it faces a digital threat from multiple sources, including some of its own members (see The Economist, multiple reports).

- 104. What this experience shows is that, even with agreement up-front, there are new incentives introduced by the new members of any collective access arrangement that are likely over time to reduce investment to the lowest common denominator. This will, all other things remaining equal, reduce national productivity given that the assets which are at risk of underinvestment are likely to be nationally significant.
- 105. Whereas in the observable counter-factual ie today's market, different levels of quality of service are delivered by retailers which invest in their own wholesale supply system improvements, and those who prefer not to. Consumers can choose and the market eventually sorts out who has made the better investment choice. Productivity is not at risk, given that the relatively swift response of weight of consumer decisions to drive the outcome, rather than the disincentivised decisions of a collective.
- 106. In the grocery market, if the separation structure is created by government intervention, it is possible that the government will own this problem, ultimately. The regulator is unlikely to be able to order new investment.
- 107. In this context of potential failure, there is a questionable statement in the Study:
 - 9.56 "Any of these options could be brought to an end at the time that new entry or expansion meant it was no longer required".
- 108. This is quite cavalier regarding the interests of existing shareholders and investment risk-takers, and potentially even of some employees (operational separation tends to see shared jobs in an integrated firm separated too) if the separation experiment fails.
- 109. Finally, the Commerce Commission must clarify how such a separation policy is applied equitably over the three incumbent retailers. It is never made clear how all three incumbents are expected to separate their wholesaling. Presumably, each will have to develop separate cost structures and price offers, future investment regimes and contract arrangements. This seems a substantial trebling of efficiency cost, for the sake of an unknown number of (small) entrants.
- 110. Moreover, the entrant(s) would not unreasonably then attempt to play any offer against any other offer. There is no obvious stable outcome from such a process. But stability is very important to both efficient buying in the present and future investment.
- 111. To be workable, an incumbent must be able to withdraw its offer in the face of unreasonable negotiating behaviour by the entrant. With the presence of a regulator, it can expect to be called upon to make judgments which in normal market circumstances are left to commercial processes to resolve.
- 112. Attempting to apply game theory, the concept appears to be only stable where there is only one wholesaler.

- 113. Such a single merged wholesaler (assuming all three incumbents must contribute to separation) would seem to be a challenging separated entity to create. Whether this would be a more competitive outcome than present circumstances for the whole market appears quite questionable. Aside from the practicalities, such an outcome would appear most likely to encourage a reduction in price competition at the retail level, simply because all competitors would have a common wholesale price.
- 114. I would accept that this is all somewhat speculative. My intention is to point out a practical problem with separation across three providers, when it is traditionally used with one (due to being applied to natural monopolies, ie there is only one). The important point is that it is hard to envisage how separation can be equitably applied across different incumbent retail groups.

Structural Separation

- 115. Under the usual options for structural separation (ie legal or ownership separation), it may be argued that the incentives for the separated firm will be strong enough for it to seek, in the interests of its own viability, to cover as many grocery items as possible; to price competitively; and to respond to changing consumer tastes.
- 116. Relative to operational separation, the regulator's role may diminish, but will never be zero. This is consistent with global experience.
- 117. However, the assumption of the separated entity having the incentive to ensure a wide and constantly updated range of goods is available simply due to the incentive of needing to remain commercially viable raises the question of how to ensure that the access seekers and incumbents commit to support the viability of that new wholesaler.
- 118. Exclusivity and contractual commitments to meet common costs, now and in the future, will help support viability of a newly separated entity in a comparatively small market like New Zealand. Financiers to the new entity, both shareholders and banks, are likely to see this as essential before putting money at risk.
- 119. Yet it is also likely that new competitors will seek to minimise any such obligation. Incumbents may not, out of familiarity with the true costs and needs.
- 120. Under exclusivity and the gaze of the regulator, each would presumably have access to the same set of wholesale prices (but likely not the same promotional budgets, which are dependent on suppliers' choices).
- 121. Such a move towards common wholesale prices may not encourage retail price competition. Small and new entrants may well simply take the opportunity to expand margins, if they are at a continuing price disadvantage due to lack of promotional budget support from big suppliers. All other things being equal, price competition might even diminish. The attitude of large suppliers and the degree to which they choose to share promotional budgets amongst any expanded set of retailers will consequently be of great interest.

- 122. Of course, competition could increase in particular niches: we can hypothesise about circumstances where there may be a very substantial difference in overhead costs between a new entrant and an incumbent eg one was entirely digital and the other had to support a large bricks-and-mortar footprint. Should both exclusively deal with the new wholesaler and have access to common wholesale prices (and ignoring promotional budgets for the moment), the pure digital retailer may have an advantage without the legacy costs of a bricks-and-mortar store. Price competition could theoretically improve in such a niche.
- 123. But the market for digital grocery services of the weekly shop kind is still small, even in countries which the Commission points to overseas. And although there is a movement for weekly shoppers into obtaining what might be termed digital delivery, this is still the environment where range and reliability genuinely matter. Amazon is often cited as a case study for indicating that digital services will improve *price* competition, but its great competitive advantages are range and reliability with delivery.
- 124. And absent Amazon-scale advantages, niche competitors and the limited investment created by such entrants seems very unlikely to be capable of making the case for offsetting the reduced efficiency and incentives to improve productivity that comes with structural separation.
- 125. Desirable though it may be for the commercial future of the new structurally separated wholesaler, it is unlikely in my judgment for all retailers to accept an obligation for exclusivity.
- 126. In the absence of exclusivity, the Commerce Commission (or the Government?) will need to produce a strong viability analysis of its own, in order to convince banks to continue to fund the new stand-alone wholesale business. I could envisage circumstances where a Government guarantee might be sought. This might sound a radical thought. However, viability and the crucial role of who will supply on-going risk capital for a structurally separated entity needs to feature in the Commission's policy options thinking.
- 127. Future investment decisions will potentially be less complex for the regulator under legal or ownership separation. They will be a matter for the new shareholders, and the new bankers. But ultimately the separated wholesaler's customers (ie retailers) will need to pay rates that are sufficient to deliver a sustainable business or the venture will collapse.
- 128. The Commerce Commission should consider the costs of failure. This is not a remote possibility, in the circumstances of new entry into a small and well-invested market.
- 129. Sunk costs are just that, on entering into grocery supply and distribution. The German giant Kaufland spent by reports in excess of \$300m over more than two years, with sites for 30 stores, IT systems, regulatory approvals and 200 employees, before pulling out of the Australian market without opening in 2020. Costs of entry into New Zealand may be lower, sites can of course be resold but overall sunk cost is substantial nonetheless.
- 130. Unlike the situation with operational separation, where failure sees the assets remaining with an incumbent that can still make use of them and loss of jobs and capital may thus be minimised, legal or ownership separation will maximise these losses.

131. In a receivership, but with a regulator as an adjacent party, the sophistication of the regulatory regime will need to consider how not to enmesh the State in a commercial failure, for which it was initially responsible.

Forced Divestiture of Assets

- 132. On the spectrum of change, forced divestiture of assets is at the outer extreme.
- 133. Other than in the context of M&A transactions (where the action is a choice for the acquirer to make), there are no examples of forced divestment that I can find in Australia or New Zealand.
- 134. There have been attempts at nationalisation, where the new owner would be a national authority or entity appointed to act as such (eg proposed nationalisation of the banking system in Australia in the 1940s, which failed; or the negotiated acquisition of Tranz Rail assets in New Zealand) but not of forced divestment.
- 135. Some major developed nations do have a power of divestment under their national competition laws (the US and UK for example) but almost always this requires a prior finding of abuse of market power. Moreover, such powers are not the common position. In 2011, an OECD survey listed 19 of 35 responding member countries that had such laws. And the evidence in the OECD reviews in both 2011 and 2016 on the use of these powers was that this occurred almost exclusively in sectors characterised by government ownership specifically electricity and telecommunications. Generally, where divestments actually have occurred, it has been the government choosing amongst assets it owns.
- 136. The OECD has also more recently reviewed a diverse list of such divestments around the world (Divestiture of Assets as a Competition Remedy, OECD 2019). It notes that many of the more celebrated forced separations and divestments in competition lore were in fact**volunteered** by the owning firm in order to "avoid a competition investigation or to put an end to an existing one" (p 38).
- 137. The OECD further suggests that the remedy in the case of divestment must be proportionate to the competitive situation; and that a proportionate remedy "does not attempt to make the market more competitive than it would have been absent the ...conduct it is trying to address". This is of course consistent with the earlier stated view that divestment is usually considered in a context where adverse competitive conduct has been proven.
- 138. It goes on to say "Given the substantial government constraint on the use of private property implied by structural remedies in anti-trust cases, the proportionality principle would suggest that the imposition …only occur in extreme circumstances".
- 139. The Hilmer Review, in its otherwise strongly pro-competitive report that led to the founding of the National Access Regime in Australia (discussed in prior sections) found that:
 - a general divestiture remedy would give rise to a number of difficulties. It will often be arbitrary since it will not be clear what parts of a firm should be divested (contrast the case of mergers, where it is clearly the acquired assets or shares which should be divested). To

break up a firm may eliminate economies of scale and/or scope or generally decrease economic efficiency. Divestiture could involve reshaping an entire industry with consequent disruption to all who deal with it. It would involve the courts in a process with inevitable political implications, something more appropriate for decision by governments than by the courts.

- 140. A number of Australian Parliamentary Committees have had the proposition put to them of a divestment power being made available to the ACCC or its predecessor organisations and rejected it.
- 141. In the US, the use of divestment as an anti-trust tool is well-established, even if the history suggests that most of the large divestments did not create competitive circumstances. The celebrated split of AT&T that produced the Baby Bells in the US in the 1980s was in factvolunteered by AT&T during a case against it on anti-trust grounds, in an attempt to preserve its ownership of another asset, Western Electric, the dominant supplier of telecoms equipment at that time. However, the outcome was that the Baby Bells did not prove to be pro-competitive entities within their new local empires; in addition, the famed innovator Bell Labs was broken up and later spun off; and Ma Bell was later taken over by one of her babies. Competition was enhanced despite this by FCC rule changes and the advance of mobile telephony.
- 142. Technology shifts similarly overtook the celebrated IBM divestments; and even Standard Oil was brought to heel more by entry from entities that were not part of the former empire and which they did not acquire than by that celebrated break-up: see

https://www.brookings.edu/wp-content/uploads/2016/06/12 competition crandall.pdf

- 143. Most recently, anti-trust style divestiture has been raised in both the US and Europe as a potential way of dealing with the power of digital platforms. However, there is a clear difficulty already recognised by competition authorities with doing so under traditional competition law, because of the inability to determine robustly in what market the apparent power is being exercised.
- 144. Instead, the imposition of fines, and Code of Conduct dealing with specific market power issues in sub-sectors search, advertising, news services rather than general actions aimed at obtaining judgments applying structural changes or divestments, seems to have emerged as the preferred approach. The ACCC in Australia has applied this with good effect in the issue of platforms paying for news content, after many years of failed commercial negotiation.
- 145. Approaches like issue-specific Codes of Conduct, with the threat of mandatory involvement by the regulator if outcomes are not delivered, are a practical step to take when alternatives involve difficulties in defining the asset to be divested and reducing efficiency in business relationships between parts of a former integrated group.
- 146. And where the risks of getting divestiture wrong are high.
- 147. Defining the assets to be divested appears to be a similar problem for this Study. Whose stores, amongst three incumbents, should be forcibly divested? Where? What is a reasonable price? With what effect on third parties staff, lessors, facility managers?

- 148. The Commission cannot, as with M&A, rely on the willing parties to a deal to iteratively offer up solutions to it, for approval. Because there are no willing parties.
- 149. Also because, unlike a merger, the parties are not allowed to walk away and satisfy a regulator's interest by simply reverting to the status quo if the cost to business is too high. The incentives that allow a negotiated settlement are not present.
- 150. Repeating a point made earlier, this difficulty of defining the asset to be divested arises because the Commission is looking to apply a tool designed and most often applied to monopoly infrastructure situations (telecoms, electricity, a cement plant in the UK) in an environment that does not feature it.
- 151. Aspirant local competitors may express the view that they could readily define the list of assets to be divested. Such a pathway is doubly undesirable it creates an impression of favoured entrants, a dependency that a regulator would do well to avoid; and there is no guarantee that competition would be enhanced. Changing the banner on a store in a location that gives a retailer local market power is unlikely to reduce that market power.
- 152. Finally, divestment may have an impact on confidence amongst both local and foreign investors. A country dependent on foreign investment to develop its resources should also consider this matter closely before acting.

Investment and Productivity

- 153. This seems a sensible point to give thought to the matter of investment. It has arisen earlier as part of consideration of the features of different forms of separation and the incentives altered by them, but here it is worth reiterating because it is at the heart of what may be lost if forcible changes to the structure of grocery retailing in New Zealand are undertaken.
- 154. As noted earlier, access arrangements in Australia and separation arrangements around the world are a contest between the highly likely loss of scale and scope efficiencies and incentives for improving quality of service that arise naturally within an integrated business; and the potential nationally significant efficiency gains that may come from competitive entry in a downstream market.
- 155. It is an accepted part of the analysis usually performed before separation that the separated asset will operate less efficiently in a technical sense than it had done. Accordingly, having a high level of confidence that investment plans of entrants feature offsetting changes to resource allocation both by direct investment and by creating opportunities for producers and consumers in other related markets thus are crucial to any calculation of the net benefit from access or separation.
- 156. In say telecommunications where operational and structural separation around the world has broadly worked, the natural monopoly asset owner that is targeted for access has usually persisted after separation in investing in that business either because its own retailer is as dependent on it as its new access seekers are; or because it must invest to survive and access seekers accept the responsibility for funding that. Competitive entry has introduced new

technologies earlier than expected, stimulating much higher use of telecommunications and related market services. Demand was anticipated to boom, and it did.

- 157. Both Australia and New Zealand have seen this with the transition to a broadband-enabled society (and extremely clearly seen with work-from-home during Covid) in the last decade. Access *can* work in circumstances of natural monopoly, agreement on future investment and expected demand growth to justify resource reallocation.
- 158. But we are not dealing with such a situation here, even though the term access is regularly used by the Commission. We are dealing with the proposed task of trying to separate elements of a production process, one which is readily capable of being replicated (ie not a natural monopoly).
- 159. The asset to separate is challenging to define and consequently at high risk of being wrongly extracted from its integrated business structure. The production process involved is part infrastructure, part skills, part data management, part risk finance. And as we noted earlier, in the Australian competition policy environment by law and elsewhere by general practice as examined by the OECD, separation and access arrangements do not attempt to disaggregate production processes.
- 160. Actions that put this production process at risk of lower efficiency need serious comparative analysis, beyond the scope of this Market Study.
- 161. This is because on-time, reliable, quality groceries are central to a smoothly functioning society. The efficiency with which they are sourced, stored, repackaged and delivered to locations is central to the consumer relationship and to day-to-day planning by each household.
- 162. As outlined earlier, the incentives to persist in investing in this unseen and largely unrecognised element of a production process will be materially altered by separation: in the case of **operational separation**, by the change of incentives for the owning firm; in the case of**structural separation** by the need for a viable business model to support risk funding for new investment.
- 163. The former asset, once under constant improvement to ensure quality and reliability as well as price, is now in a situation more like the manager of a common user overhead for each retailer. Each future dollar invested in it is a dollar whose benefits must be shared with common users, yet there is less certainty that the unit (relative to the status quo) can recover that cost.
- 164. New entrant(s) with likely shallower pockets will be disinterested in introduction of new process improvements. If so, for a time at least, the productivity of the supply chain will be reduced unless carried by the former integrated owner. As a material contributor to the nationally significant social and economic matters noted above, the risk of under-investment like this is a risk to overall living standards in the longer term.
- 165. The alternative shift in incentives is also plausible: ie the incumbent decides to reduce its investment in the separated asset (eg if its market share is altered by forced divestment of retail assets). The willingness of entrants and incumbents alike to reinvest in the separated entity also needs serious thought and policy choice.

- 166. The future investment question is potentially addressable by more options in structural separation, as long as viability is assured; and the credit-worthiness of customers is high. Nevertheless, the new business itself may postpone new investment risk in its early years, on the entirely reasonable grounds that it needs to settle on its best business model first. This cost to innovation too should form part of the analysis needed before taking the step into separation.
- 167. Only in the circumstance where the market has expanded such that both new and old retailer are doing better may there be a common view on additional new investment. But grocery sales are not like telecommunications an explosion in new demand is not an anticipated consequence of access or separation in this industry.
- 168. The risks of failure of a structurally separated firm that does not have the built-in protection of being a natural monopoly are always higher than when part of an integrated entity, other things being equal. The former owner owes no obligation to keep the now-separated business running if its costs blow out and its customers are tardy payers, and is free to develop its choices for future business operations. The parties most at risk in this scenario would seem to be the employees of the separated entity. Competition also is not enhanced.
- 169. My conclusion in both cases is that new investment and the technical efficiency of the former integrated entity must fall relative to the status quo in the short term; and most likely persist at a lower relative level in the long term under operational separation.
- 170. The investment situation under structural separation in the longer term is a risk judgment. Convincing financial markets to take that risk has not been addressed.

Productivity

- 171. Stalled investment in assets of material significance to the national economy has negative implications for overall living standards.
- 172. The striving of an incumbent firm that has built up a substantial efficiency advantage over rivals that do not own or control assets that benefit from scale economies in order to retain that edge is one of the strongest motivators in any economy.
- 173. Taken as an aggregate, that striving is a key contribution to a nation's productivity growth, which is as every economist knows from Paul Krugman's famous dictum 'in the long run, productivity is not everythingbut it's almost everything' for an economy.
- 174. The incentive to innovate and build scale is a constant investment and reinvestment process. The choice between building your own logistics and warehousing capability and contracting it out is a useful example. Firms with scale can lower costs by managing their own supply chains, because they can spread the cost of the big lumpy investments over a larger volume and variety of products.
- 175. The benefit of scale is thus delivered through a lower cost per good sold of logistics and warehousing (an efficiency gain to society, as well as a benefit to the investing firm) and the ability to innovate (eg robotics, high tower picking devices etc) because you control the facility. The risk is not left to third parties but becomes yours to manage. And the incentive (ie benefit) needs to be there to pay the price of well-managed risk-taking.

- 176. Firms that cannot build scale can still compete by contracting out that work, but will have less control, less ability to innovate technologically and less ability to spread the cost over volume and variety. But they may be cheaper operations overall and thus offer lower prices or specialise in a narrower range (as some warehouse retailers do). Price-sensitive consumers may gravitate to the latter, quality and reliability consumers to the former.
- 177. Aggregating the outcomes of these investment choices delivers a nation's productivity growth.
- 178. New Zealand, like most developed countries since the turn of the century, has suffered a national productivity decline (see New Zealand Productivity Commission, *Productivity by the Numbers* May 2021). The impact of this can be shown in steadily falling living standards is notable. Policy decisions that reduce scale and scope economies in a situation of adversity like this need even closer than normal attention.
- 179. It is generally accepted amongst economists (and most business and political leaders) that countries with lagging productivity growth consequently have lagging national income growth reflected amongst other things in lower sustainable individual wage growth. There is often an argument about whether labour or capital takes more of the hit when productivity growth stalls, but the evidence of late is that the impact is greater on labour ie wage rates.

External Investment

- 180. New Zealand is dependent on inflow of foreign capital to keep developing its economy. Australia is New Zealand's largest source of foreign direct investment, the form of capital most exposed by the separation and divestment options under consideration in this paper.
- 181. A decision requiring a foreign investor to forcibly divest an asset would seem to require some serious consideration of this matter by authorities responsible for international financial flows.
- 182. This consideration should also extend to New Zealand's investment treaty obligations. The 2013 Protocol on Investment to the ANZ CERTA (the Treaty) suggests that high level diplomatic relationships are vested in reasonable treatment of foreign investment.
- 183. The legal basis for forced divestment would need to demonstrate how it met the principles of the Protocol to the Treaty.
- 184. Article 7 1 (f) would seem to be pertinent if the asset to be divested was similar in form to a structural separation ie the forced transfer of intellectual property or process.
- 185. As shown earlier, the wholesale function in an integrated business is a business process.
- 186. The Protocol on Investment would seem to have adopted to the same thinking on divestment of process or intellectual property that is reflected in Australian competition law.

187. Much would ultimately depend on whether the forced transfer was found to be due to anticompetitive conduct (see Article 4 (a)). To date, the Market Study specifically states that it has not established any such outcome.

Conclusion

- 188. It is hard to escape the conclusion that the forced separation or divestment measures examined in this paper amount to trying to create higher levels of competition by making large-scale, technically efficient retailing smaller scale and less efficient.
- 189. It seems to be presumed that an offset in the form of a competitive investment response by new or smaller existing parties and a strong reallocation of resources will arise. The evidence in support of such a response has, however, not been brought to light.
- 190. There appear to be other, lower risk options to promote competition. The draft Study covers some of them, and experience suggests they are to be preferred.

ALLOCATIVE EFFICIENCY VS TECHNICAL EFFICIENCY

The economic case for forcing structural separation of, or an open access arrangement to, an integrated firm's monopoly or like asset is in effect a clash between two forms of efficiency.

A natural monopoly asset is the most technically efficient was of delivering a service supplied by that asset. Natural monopolies exist where a single facility can supply all the capacity needed to satisfy the current and reasonably forecasted demand over a period for the service. The cost per service falls as the spare capacity in the asset is taken up. Duplicating the asset in order to compete with it would be wasteful, as two such assets guarantee that the excess capacity is in any forecast period less likely to be used than if there was only one such asset. Rail lines and bridges are classic natural monopolies.

Bottleneck assets, ie facilities that are not natural monopolies but are characterised by high costs to replicate and include technologies or other complementary services that make replication difficult for the purposes of competitive entry are often posited as 'like' natural monopolies.

But there are fewer such monopoly assets than is popularly imagined eg mobile telephony has undermined the former natural monopoly held by telephone exchanges. Various computer operating systems have at times been suggested as natural monopolies, but have been replaced over time, invalidating the claim.

Where natural or like monopolies are held within integrated businesses active in both the market for the monopoly service (eg transmission of electricity) and a downstream market (eg retailing of that electricity), governments around the world over decades since the 1990s have structurally or operationally separated the monopoly asset from the contestable market asset.

Separation is contentious because it sets up a conflict between the technical efficiency of a single firm holding the natural monopoly having by definition the lowest cost of service supply and so being the most technically efficient way to deliver the service; and the potential for allocative efficiencies under circumstances of enhanced competition reallocating resources across economies and so creating better use of capital and labour over time than the technically efficient firm could claim.

Telecommunications is the pre-eminent example of such national resource reallocation being encouraged by pro-competitive access to subscribers and copper lines. The rise of broadband and mobile telephony has been slower in countries that persisted with a single monopoly telco, as the incentives facing it were to maximise the return from its sunk investment in copper lines, and slow the switch to alternative services via either cell or fibre technologies. Thus businesses and sectors where demand growth and technology challenge incumbent sunk investment are often where we see separation being used as a tool to encourage resources to switch into that sector.

Accounting separation is a transparency device primarily. It is not generally effective, and is usually associated with an active price regulator.

Operational or functional separation create a form of transparency and are usually accompanied a change of incentives inside a business, so there is a business unit responsible for all operational aspects of delivering access on an equitable basis to parties competing with the incumbent business in a downstream market. It is often used where complementary services – such as the service to

which access is being offered under regulation is more complex than simply a question of setting a price for use of the natural monopoly asset (eg requires installation and maintenance of competitors' equipment) or where departure times are crucial (eg in passenger or freight rail terminal entry and unloading/loading).

Structural separation creates separately owned or controlled (or owned and controlled) businesses by dividing up the formerly integrated natural monopoly and downstream competitive business. It is often sued where investment obligations into the future are likely to prove important to maintaining competitive access and the incentive of being a stand-alone firm controlling its own assets and revenue stream is likely to give customers confidence that vital asset upgrades will be undertaken in a timely and efficient fashion.

It is generally well-accepted amongst economists that structural separation is undesirable, unless the gains from new resources flowing into the industry are strong enough to offset the loss of technical efficiency. There are significant administrative costs to separation; plus on-going additional costs of duplicated management; and uncertainty over alterations to the incentives (and access to capital) necessary for the separated entity to invest in the maintenance and expansion of the asset to meet future demand.