COMMERCE COMMISSION NEW ZEALAND
Te Komihana Tauhokohoko

WELLINGTON
Level 9, 44 The Terrace
PO Box 2351, Wellington 6140
New Zealand
Tel: +64 4 924 3600

AUCKLAND
Level 12, 55 Shortland Street
PO Box 105-222, Auckland 1143
New Zealand
Tel: +64 4 924 3600

www.comcom.govt.nz

11 February 2020

[redacted]

By email only: [redacted]

Dear [redacted]

Official Information Act #19.121 – Livestock Improvement Investigation Report

1. We refer to your request received on 13 January 2020 for an online version of the *Livestock Improvement: Access to the National Dairy Herd Improvement Database* report, published on 14 December 2006.

2. We have treated this as a request for information under the Official Information Act 1982 (OIA).

Our response

3. We have decided to grant your request. The public version of the report is **attached**.

4. Please note the Commission will be publishing this response to your request on our website. Your personal details will be redacted from the published response.

5. Please do not hesitate to contact us at oia@comcom.govt.nz if you have any questions about this request.

Yours sincerely

Mary Sheppard

Mary Sheppard
OIA Coordinator

Investigation Report

Livestock Improvement

Access to the National Dairy Herd Improvement Database

14 December 2006
Public version

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Livestock Improvement

Access to the National Dairy Herd Improvement Database

Susan Begg, Impetus Group Limited[1]

1 Introduction

1. This report considers whether Livestock Improvement Corporation Limited's (LIC's) prices and procedures for access to information held in the National Dairy Herd Improvement Database (the national database) are contrary to the Commerce Act 1986, and in particular s 36 of the Act. It considers whether LIC's pricing and/or behaviour indicate that it may be taking advantage of a substantial degree of market power in the dairy cattle database services market, for the purposes of deterring competitive conduct in the downstream artificial breeding and herd recording markets.

2. This report looks at the following potential areas of concern:

   - In respect of herd recording, LIC's prices for access to:
     - Issue 1: 'Non-core data' (the value-added data created by LIC from the core data) along with 'core data' (production data obtained by herd testing) for cows
     - Issue 2: Non-core data for calves and yearlings
     - Issue 3: Core data for cows
     - Issue 4: Historical core data.
   - In respect of artificial breeding, LIC's prices for access to:
     - Issue 5: Information that would allow Ambreed to compile a 'top cow' list
     - Issue 6: Data required for Ambreed New Zealand's (Ambreed's) GeneScreen products
     - Issue 7: Data required for Ambreed's TGRM (total genetic resource management) product.

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[1] Commerce Commission staff (Michael Pickford, Ritchie Hutton, Nicky Beechey, Ben Hamlin, Anthony Casey and Lesley Cornish) have provided significant input into this report.

- Issue 8: LIC's ability to impede competition through delaying the release of data.

3. The report reaches the following conclusions:

   - Issues 1 and 2: The price LIC charges Ambreed for non-core data (along with core data) for its herd recording service for cows, calves and yearlings is likely to be above the efficient component pricing rule (ECPR) price, suggesting that it may breach s 36 of the Commerce Act.

   - Issue 3: LIC's charge for initial extracts of core data required by Ambreed to provide a basic herd recording service does not appear to be in breach of s 36.

   - Issue 4: LIC's charge for historical information may act as something of a barrier to Ambreed acquiring new clients, but there is insufficient evidence to conclude that it breaches s 36.

   - Issue 5: Assessing whether the fixed charge Ambreed must pay for access to LIC's database to compile a top cow list is anticompetitive is not straightforward because of the difficulty of applying ECPR to this service, and because alternative analysis is inconclusive. Overall, there is insufficient evidence to conclude that LIC's pricing for this service breaches s 36.

   - Issue 6: LIC's price for data for Ambreed's GeneScreen product appears to be above the ECPR price suggesting that it may breach s 36.

   - Issue 7: LIC's price for data for Ambreed's TGRM product appears to be above the ECPR price suggesting it may constitute a breach of s 36.

   - Issue 8: While LIC may be able to disadvantage Ambreed by delaying the release of data, the information available to us is not sufficient to suggest or prove a breach of s 36.

4. Section 2 of this report provides background to the investigation of LIC, including a description of LIC's pricing. Section 3 describes Ambreed's complaints. Section 4 discusses the Commerce Act framework applicable to the investigation and considers the ECPR as a test of anticompetitive pricing. LIC's pricing of access to the database in relation to the downstream herd recording and artificial breeding markets is examined in Sections 5 and 6. Sections 7 and 8 briefly consider the TGRM and GeneScreen products provided by Ambreed and the quality of the access service provided by LIC. Concluding comments are provided in Section 9.

2 Background

2.1 Parties

5. The focus in this report is on LIC, the owner of the national database and Ambreed, the party that has complained to the Commerce Commission (Commission) about LIC's prices and terms for access to the database.

6. Detailed information on these and other parties in the industry is included in three reports prepared by the Commission: *Draft LIC Investigation Report*, 2004; *Livestock Improvement Corporation: Litigation Brief*, 1998; and *Investigation Report: Livestock Improvement Corporation/Animal Breeding Services/Rissington Breedline/Veterinary Enterprises Ltd*, 2003. Detailed information on the services of relevance to the investigation, the national database, the restructure of the dairy industry and the relevant markets, is contained in these reports. That information is presented in summary form in this study.

2.1.1 LIC

7. LIC was established in 1988, with the amalgamation of various livestock improvement organisations, as a wholly owned subsidiary of the New Zealand Dairy Board. It was given responsibility for implementing the dairy herd improvement plan, which had been established decades earlier and funded by the government in collaboration with the dairy industry.

8. LIC has evolved through a number of structures, and is currently a user owned cooperative established under the Dairy Industry Restructuring Act 2001 (DIRA). LIC owns the national database at issue in this investigation. The database contains detailed information on most cows and bulls in New Zealand.

9. LIC supplies artificial breeding, herd testing, herd recording, and farm advisory services, as well as DNA analysis to approximately 12,000 dairy farmer clients. It supplies allied services to other agricultural sectors and exports dairy semen to a number of countries. LIC also undertakes research, some of which is conducted jointly with other parties. LIC applies the information held in the national database to all of its services.

2.1.2 Ambreed

10. Ambreed, which was established in 1969, is the second largest artificial breeding company in New Zealand with a [ ] share of this market. It processes and collects semen on behalf of private bull owners, as well as from its own bulls.

11. Ambreed provides herd testing (it was granted a licence in 2002 and is the only alternative herd tester to LIC), herd recording and a genetic screening programme.

12. Ambreed was bought by a Dutch company, CR Delta VRV Holding in 2003.

2.1.3 Other

13. There are a number of other small artificial breeding companies in New Zealand, specialising in the marketing of bull semen. Some deal only in imported semen while others collect and process semen in New Zealand and market it domestically or internationally.

2.2 Services and Activities

2.2.1 Herd Recording

14. Herd recording involves the maintenance of records of clients' herds. The service provider receives and analyses detailed mating, calving, herd testing, animal health and other information on animals in the client's herd. Farmers use the herd recording information to make farm management decisions such as calving patterns, animal health, culling and selection of replacements.

15. LIC's herd recording service is called Minda (Management Information for Dairy Animals). LIC offers both an electronic and a paper based service which it provides to around [ ] of New Zealand's dairy farmers. LIC produces 'value-added' indices measuring the value of individual animals (breeding and production worth) which draws on the information in the national database. LIC's clients can choose a number of management reports as part of their Minda service, and can purchase additional reports, which provide information on a range of different matters, including breeding and production worth.

16. Ambreed also provides a herd recording service (AM-Link), and in 2005, its share of the herd recording market was approximately [ ]. It obtains the information required to provide such a service from LIC (although Ambreed itself obtains the raw data for the herds it tests). Ambreed has developed its own genetic selection index called the New Zealand Merit Index. Ambreed's index uses herd test information for cows, and breeding value data for bulls (available from the Animal Evaluation Unit), and places less weighting on production and more on animal management traits than LIC's index. Ambreed also on-sells breeding and production worth information from LIC for clients that request it.

2.2.2 Herd Testing

17. Herd testing involves the analysis of milk production and composition from individual cows. The productivity of individual animals is assessed by testing them at intervals through the milking season. Each test involves metering milk production on a particular day, and taking samples for quality testing.

18. Herd testing services are currently offered by LIC and Ambreed. Every certified herd tester must supply herd testing data to LIC for inclusion in the national database as required by the Dairy Industry (Herd Testing and New Zealand Dairy Core Database) Regulations 2001.

2.2.3 Artificial Breeding

19. Around 85% of New Zealand's dairy cows are artificially inseminated. When using artificial breeding, dairy farmers are supplied with semen from bulls of high genetic merit for insemination of their cows. Insemination can be undertaken by trained technicians or by the farmer.

20. LIC has around [ ] of the artificial breeding market. Ambreed has around [ ] with a number of smaller companies making up the balance.

21. A major cost of providing an artificial breeding service is 'bull proving' or 'progeny testing' which involves the testing of the genetic quality of young bulls. Based on a pre-selection process, LIC selects and purchases around 400 bull calves each year. Around 300 yearlings enter LIC's progeny testing programme each year. Ambreed progeny tests around 100 bulls each year. Daughters of the bulls are evaluated and some four years later, the top 5 to 10% of bulls are selected for use.

22. A 'top cow' list may be used in breeding high quality bulls. A top cow list can be complied using information in the national database, to select for characteristics such as production and temperament. There is no industry consensus over the characteristics of top cows, and Ambreed (when it obtained access to a top cow list) and LIC have adopted different criteria for selecting top cows.

2.2.4 Animal Evaluation

23. The ranking of dairy animals in New Zealand is known as animal evaluation. The dairy industry has established a system for determining and reviewing the national breeding objective. The objective is to identify animals whose progeny will be the most efficient converters of feed into farmer profit.

24. New Zealand Animal Evaluation Limited (NZAEL) is a wholly owned subsidiary of Dairy InSight which undertakes the following:

    - Sets the national breeding objective;
    - Determines the weightings of different characteristics which are used in the animal model which produces evaluations. The weightings of different traits reflect the medium term benefit expected to flow from improvements in each trait;
    - Ensures that all enrolled dairy bulls are evaluated.

25. A ranking of active sires is produced based on the criteria set by NZAEL. A database of over 3,500 bulls giving their breeding worth and trait breeding values is maintained and accessible to all.

26. Two types of evaluation are undertaken for New Zealand dairy animals: trait evaluations and economic evaluations. Trait evaluations are a measure of an

animal's genetic merit (breeding value); lifetime productive ability (production values) and current season productive ability (lactation values).

27. Economic evaluations take the animal's individual trait evaluations, and ascribe a value to these. Breeding worth ranks animals on their expected ability to breed profitable and efficient replacements. The economic weighting placed on each trait is calculated using the predicted average prices of farm outputs, minus the cost of producing them. Production worth ranks cows on their expected ability to be profitable and efficient lifetime producers.

28. Sires are also evaluated for traits other than production (of their daughters), which cover a range of physical standards such as adaptability to milking, shed temperament, milking speed, etc. The traits other than production information do not contribute to a bull or cow's breeding worth.

29. Each value is given a reliability factor. The more ancestry records, herd tests and progeny information included in the evaluation, the more confidence can be placed in the figure and the higher the reliability factor.

30. The Animal Evaluation Unit (AEU) is a division of LIC. NZAEL subcontracts AEU to carry out animal evaluations on the enrolled dairy bulls in accordance with the national breeding objective. NZAEL also contracts AEU to carry out certain day-to-day operations on its behalf.

2.3 LIC Database

31. LIC owns the national database in which data on cows obtained from herd testing and other sources is stored. The database contains data on mating, calving, identification, location, milk production and other information on individual cows. As noted above, the DIRA requires those undertaking herd testing to supply specified information to LIC for inclusion in the database. The data specified in the DIRA constitutes the core database.

32. The government, at the time that it established LIC as a stand-alone cooperative, elected not to separate the national database from it and instead established regulations under the DIRA to police:

- Herd testing and the information that had to be supplied to the national database (Part 1);
- Access to data in the core database (Part 2); and
- Publication, audit, offences and transition (Part 3).

33. Access to the core database is regulated by the DIRA and the Commerce Act 1986. Regulations under the DIRA require LIC to publish its pricing methodology and prices for access to the core database, along with other specified information.

Neither the DIRA nor the regulations provide a specific model for establishing access prices.

34. The regulations also establish the New Zealand Dairy Core Database Access Panel (the Access Panel). Parties seeking access to the core database must apply to the Access Panel. The Access Panel decides applications for core database access, and determines other circumstances in which LIC must make core data available. The Panel must grant an application for access to data in the core database only if it is satisfied that to do so is likely to be beneficial to the New Zealand dairy industry. If it is not satisfied, then it may grant access only if it is satisfied that to do so would not be harmful to the industry. The Panel appoints an auditor who is responsible for auditing LIC's compliance with its obligations to provide access to the core database.

35. LIC collects and stores additional information on cows in the database including 'traits other than production', and produces additional data such as the 'breeding values' of cows through manipulation of the raw data. This data is termed non-core data. Access to the non-core data is not governed by special legislative provisions.

2.4 LIC's Pricing Methodology

36. LIC is required by the DIRA and regulations under that Act to publish its pricing methodology and charges for access to the core database. LIC devised its pricing regime with input from the New Zealand Institute of Economic Research.[2] It advised the Commission of its proposed charges and the basis for their calculation and sought the Commission's comments in August 2002. LIC's charges and methodology for accessing data are published annually in the *New Zealand Gazette.*

37. LIC has adopted a three part tariff for access to core data comprising a fixed charge and two variable charges.

38. Businesses accessing the 'full' core data (i.e. seeking core data other than that relating to specific herds or farms) incur a fixed charge, which allocates some of the fixed annual costs of operating the database, including a return on physical capital but not on the value of the database, between the businesses that access such core data in any one year.

39. The first variable charge is set above marginal cost and therefore provides a contribution towards fixed costs. This charge is levied for the initial access to a data record in any season. The second applies to updated records obtained in any season and is set close to marginal cost.

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[2] MinterEllisonRuddWatts, *Briefing Paper to the Commerce Commission*, 16 August 2002, p 1.

40. LIC's charges for core data are set using an 'activity based costing' approach. The principal costs are those incurred in collecting, verifying, correcting, storing and extracting core data. These costs are incurred in three of LIC's divisions: genetics, computer services and information. The costs incurred in these divisions that relate to the core database are identified and accumulated to give the total fixed and variable costs of the database. We have not audited the veracity of the information LIC has used in deriving its prices.

41. LIC classifies as variable costs those that vary with the number of cows in the database and fixed costs as those that do not vary with cow numbers.

42. The core database 'variable' costs are allocated on the basis of 'service units' (a measure of computer processing) to LIC's 12 divisions, including the Minda division. The allocation to the Minda division is then shared between the Minda division and third parties. LIC calculates a per extract charge on the basis of the number of initial cow records expected to be extracted. Updated records are charged at marginal cost.

43. LIC's complex cost allocation method is also used to determine a total allocation of fixed costs. As with the variable costs, the fixed costs are allocated across LIC's divisions on the basis of service units. The allocation to the Minda division is then shared equally between parties that wish to access the full database in any one year.

44. LIC's charges are summarised in Table 1 for the 2004/05 and 2005/06 years. The prices for core data are based on a cost allocation approach. LIC is not required to publish its charges for access to non-core or 'value added' data such as breeding values and traits other than production. LIC has supplied the Commission with the prices for the latter data, which are based on an ECPR approach. They are also shown in Table 1.

Table 1: LIC's Charges and Methodology 2004/05 and 2005/06[3]

Charge 2004/05	Charge 2005/06	Methodology for Calculating Charge (2004/05)
Core Data		
$78,300 fixed charge per season Fixed charge applies to all parties accessing the core database except where the core records relate to specific herds or farms	$77,500	Core database infrastructure fixed costs of $1m were allocated between Minda/3rd parties ($0.4m) and other LIC divisions ($0.6m). The $0.4m was divided by the estimated number of large volume users (including LIC's Minda[4] division). Based on five users, the charge was set at $78,300. The charge may be higher or lower depending on the expected number of users in any year
$0.40 per animal record per season Variable charge for producing and extracting the first record in each season	$0.37	The 'variable' costs of the core database comprising database content ($3.1m), database operation ($2.6m) and printing/postage ($0.4m) were allocated between Minda/3rd parties ($2.7m) and LIC's other divisions ($3.4m). The $2.7m was split into $1.9m for initial reports and $0.7m for additional updates. An estimated 4.9 million records gave the $0.40 per record charge for initial reports
$0.03 per animal record per extract Variable charge for producing updates per output record	$0.03	The $0.7m allocation (noted above) covers 26.8 million records, giving a per record charge of $0.03
Royalty of 5% of gross income	5%	For core data used for R&D and other commercial purposes, the charge is 5% of the income earned from products and services

[3] *New Zealand Gazette*, issue no 90, 21 July 2004, and issue no 106, 7 July 2005; MinterEllisonRuddWatts, *LIC – Core Database Pricing Methodology*, letter on behalf of LIC responding to Commerce Commission request for further information, Appendix 1; LIC, *Livestock Improvement Responses to the Commerce Commission's Queries*, March 2006; and MinterEllisonRuddWatts, *Responses to Commerce Commission Queries (from Sue Begg) of 16 March*, 26 April 2006.

[4] LIC's herd recording service is marketed under the Minda brand. Minda clients are provided with access to core and non-core data.

Charge 2004/05	Charge 2005/06	Methodology for Calculating Charge (2004/05)
Other		
Programming charge of $96 per hour or actual cost if outsourced	$117 per hour	Charged for specific programming that might be required
18% of total development cost	18% total development cost	Charged for programme maintenance
$500 application fee	$500	Fee payable to LIC to cover administration costs
$200 application fee	$200	Fee payable to Access Panel for processing application for access to core data
Non-core data		
$2.52 per record charge (discounted by $0.40 if core data has already been purchased, and by a further $0.11 if the fixed access fee has been paid)	$2.57 per record (with discounts of $0.37 and $0.10)	Price charged by LIC for access to non-core data. It is based on LIC's price to its clients for its Minda services (which includes access to core and non-core data) less 'avoidable costs'
$0.03 per record charge for access to data on traits other than production.	$0.03	Price charged to Ambreed for access to information on traits other than production. This charge recognises that Ambreed supplies the relevant information to the database.

2.5 Previous Case

45. The Commission investigated LIC for anti-competitive behaviour in 1999. The Commission considered at the time that LIC's behaviour was in breach of the Commerce Act on two counts.

46. First, the Commission considered that LIC had used its involvement in the process for determining access to the core database by competitors to delay and hinder such access.

47. Second, LIC marketed service packages which contained a mix of non-contestable services which only LIC could provide (at that time) such as herd recording and herd testing, with services that were contested by independent operators. The Commission considered that LIC's bundling of contestable and non-contestable services meant that discounts were offered which could only be provided due to the non-contestable nature of some of the services.

48. Although LIC did not agree that it had breached the Commerce Act, it entered into a Deed of Settlement with the Commission on 7 September 1999 to avoid litigation. In the Deed, LIC gave signed undertakings to:

    - Institute arrangements that would make access to the national database easier;
    - Not offer discounts on products which combined contestable and non-contestable services once its existing contractual commitments ended.

49. The Commission reserved the right to take further action if there was any breach or frustration of the Deed and was able to publicise the settlement.

3 The Current Issues

50. Ambreed has made a number of complaints to the Commission in relation to LIC's prices. These were included in: submissions dated 18 July 2002, 20 August 2002 and 30 September 2003; letters dated 3 October 2002 and 28 March 2003; and an email of 21 October 2002. Updated information was provided via email in December 2006. A meeting was held between Commission staff and Ambreed on 24 September 2002.

51. Ambreed has sought access to the core and non-core data to allow it to provide a number of services in competition to LIC in downstream markets. Ambreed has expressed concern about the terms and conditions for access to data in the national database (both core and non-core data). Ambreed's key concerns are summarised below.

Non-Core Data for Herd Recording

- Issue 1: LIC's price for non-core data on breeding worth, production worth, lactation worth and breeding values sought by Ambreed as part of its herd recording service for cows is excessive ($2.52 in 2004/05 and $2.57 in 2005/06).

- Issue 2: LIC's price for non-core data sought by Ambreed as part of its herd recording service for calves/yearlings is excessive ($2.52 in 2004/05 and $2.57 in 2005/06).

Core Data for Herd Recording[5]

- Issue 3: LIC's variable charge for each core data record extracted for Ambreed's basic herd recording service is high ($0.40 in 2004/05 and $0.37 in 2005/06).

- Issue 4: LIC's charge for historical data is not justified, or if it is justified, is excessive. Historical data records on cows currently being recorded and their ancestors (dams and grandams) would allow Ambreed to offer a higher quality herd recording service.

Core and Non-Core Data for Artificial Breeding

- Issue 5: The fixed fee for searching the database for 'top cows' is too high ($78,300 for 2004/05 and $77,500 for 2005/06). The top cow list would assist Ambreed's artificial breeding programme. A variable core data record charge for each top cow would also apply.

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[5] Prices quoted are for the 2004/05 year.

- Issue 6: The charges for data for Ambreed's GeneScreen services are too high.
- Issue 7: The charge for data for Ambreed's TGRM service is too high.

Quality Issues

- Issue 8: Ambreed has suggested that LIC is disadvantaging it, by delaying the release of data.
    - LIC can access data relevant to Ambreed's clients on an unrestricted basis, and can obtain such information before it is available to Ambreed.
    - The time taken to obtain written approval from the Access Panel and then a contract between Ambreed and LIC is too long and is detrimental to Ambreed. Delays in the supply of data by LIC adversely affect the quality of Ambreed's product offerings to its clients. This includes concerns over the time taken to undertake programming to meet Ambreed's data requirements as well as the cost of programming.
    - The regulations require Ambreed as herd tester to forward core data to the national database. LIC has refused to accept the data for a number of apparently minor reasons.

52. LIC provided the Commission with a briefing paper which described its cost allocation and pricing methodology on 16 August 2002. Further information was provided by LIC in letters dated 31 October 2002, 9 August 2004 and 21 September 2005. LIC also provided a report commissioned from Castalia (initial report dated 2 September 2005 with an updated version as at 28 November 2005). LIC provided a spreadsheet of financial information in December 2005. Commission staff met with LIC on 25 September 2002 and 14 December 2005. Responses to questions were supplied by LIC on 8 March 2006, 26 April 2006, 5 May 2006, 5 July 2006 and 4 August 2006.

53. Commission staff met with the Access Panel on 3 December 2003.

54. The analysis in this report has relied on the file of information collected by the Commission over the past four years from Ambreed and LIC, the meetings with both parties, as well as information in the public domain.

4 Commerce Act Framework

4.1 Introduction

55. Section 36 of the Act prohibits a person with a substantial degree of power in a market from taking advantage of that power for the purpose of:

- restricting the entry of a person into that, or any other market; or
- preventing or deterring a person from engaging in competitive conduct in that, or in any other market; or
- eliminating a person from that or any other market.

56. Thus, there are three elements to consider: whether LIC has a substantial degree of power in a market; whether it has taken advantage of that power; and, whether it has taken advantage of that power for a proscribed anti-competitive purpose.

4.2 Substantial Market Power

57. For there to be a breach of s 36 it must be established that LIC has a substantial degree of market power in a market.

58. This report finds that, consistent with past Commission analysis, LIC has substantial market power in the national market for dairy cattle database services.

4.2.1 Analysis Framework for Substantial Market Power

59. The purpose of defining a market is to provide a framework within which the competition implications of the behaviour of concern can be analysed.

60. The Act (s 3(1A)) defines a market as:

> a market in New Zealand for goods and services as well as other goods and services that, as a matter of fact and commercial common sense, are substitutable for them.

61. The focus on substitutability, both demand-side and supply-side, between goods and services is a key criterion for determining market boundaries and for assessing competition.

62. The Commerce Commission has adopted an approach to market definition that encompasses five possible dimensions of a market, although not all may be relevant in particular cases.[6] These dimensions are as follows:

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[6] Commerce Commission, *Mergers and Acquisitions Guidelines*, pp. 14-20.

- the *product* dimension: concerns the goods or services provided;
- the *geographic* dimension: concerns the area within which the goods or services are supplied or acquired;
- the *functional* dimension: concerns the level within the production or distribution chain;
- the *temporal* dimension: concerns the relevant timeframe; and
- the *customer* dimension: concerns the different customer types within that market.

63. Market power is the ability to behave independently of competition and competitive forces in a market. The following factors have been identified as relevant in determining whether a person has market power:[7]

- the barriers to entry into the relevant market;
- the level of constraint from competitors or potential competitors;
- the level of constraint from suppliers or acquirers;
- access to raw materials or capital;
- technical knowledge; and
- market share.

64. There is not yet any New Zealand case law on the meaning of a substantial degree of market power. Guidance can be obtained from the Australian courts and their interpretation of the phrase as it appears in s 46 of the Trade Practices Act 1974.[8] In *Eastern Express Pty Ltd v General Newspaper Pty Ltd*, the Court described substantial as "considerable or large".[9] In *Dowling v Dalgety Australia Ltd*, the Court considered substantial did not mean a high degree of market power in, or the

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[7] *Eastern Express Pty Ltd v General Newspaper Pty Ltd* (1992) 35 FCR.

[8] Commerce Committee Report on the Commerce Amendment Bill, p 12:

> The New Zealand Courts will be able to look to 14 years of Australian jurisprudence.

[9] *Eastern Express Pty Ltd* v *General Newspaper Pty Ltd* (1992) 35 FCR, p 43:

> For a corporation to have a substantial degree of market power it must have a considerable or large degree of such power. The difficulty lies not in defining the word 'substantial' but in applying the concept of a substantial degree of market power to the circumstances of each case and in identifying whether the requisite degree of market power exists. This is a relative concept.

ability to control a market; rather the Court considered substantial meant "large, weighty, considerable, solid or big".[10]

4.2.2 New Zealand Market for Dairy Cattle Database Services

65. The Commerce Commission's report, *Livestock Improvement Corporation: Litigation Brief*, 1998, pp 40-41 (Litigation Brief) defined a market for dairy cattle database services. The market is New Zealand wide in extent.

66. To provide database services, a provider needs a database containing information on dairy animals, their ancestry, and related production data. The data may be sorted in ways that are of value to potential customers and 'value-added' information may be created by manipulation of the raw data and/or by the contribution of intellectual property or other knowledge. The information may be recorded and accumulated over time, from a variety of sources. A database is likely to have greater value, the more comprehensive (both over time and the number of animals recorded) and accurate it is, and the greater the investment in developing value-added data.

67. The objective of such a database is to provide information that is useful for a variety of purposes such as dairy cattle evaluation and breeding, farm management, disease control, milk production forecasting and scientific research.

68. The Commission's analysis in the Litigation Brief concluded (p 46) that LIC had a dominant position in the database market. This is a higher test than 'substantial market power' introduced by subsequent changes to the Commerce Act. Current conditions in the database market suggest that LIC retains a substantial degree of market power.

69. As discussed above, market power is the ability to behave independently of competition and competitive forces in a market. Thus, the focus of analysis is on the constraints on a business' market power.

70. LIC owns the national database in which all herd records, testing and related data are held.

71. Ambreed has also developed a database using records obtained from LIC and information on sires which are publicly available. Using this data, it has developed value added data (the New Zealand Merit Index). Ambreed therefore also operates in the market for dairy cattle database services and may impose some constraint on LIC.

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[10] *Dowling v Dalgety Australia Ltd* (1992) 34 FCR 109.

72. However, the constraint imposed on LIC by Ambreed, appears to be small:

- LIC's database is comprehensive. It includes information dating back to the 1950s and contains comprehensive information from 1986 onwards. The information in the database has been built up over a number of years with the help of government and industry subsidies. LIC and the industry have made a significant investment in the development of value added data (breeding value and breeding worth). Ambreed does not have this information and it could not obtain it without access to LIC's database.

- Ambreed's database contains only a fraction of the information in LIC's database. In relation to dairy cows, it only contains information relating to the animals that it records.

- Information obtained from herd testing must (legislatively) be supplied to LIC's database. Thus, the information from herd testing by Ambreed is supplied to LIC at no cost, but Ambreed must purchase the equivalent information obtained by LIC through its herd testing activities.

- Ambreed's small market share in the herd recording/herd testing market means that it can only obtain on-going access to information on a very small proportion of the national dairy herd without using LIC's database. In any case, Ambreed chooses to purchase records for its own clients from LIC because (presumably) the cost of itself verifying and entering data into its own database, exceeds the cost of obtaining that information from LIC.

- Obtaining access to all of the existing records in LIC's database is unlikely to be economically practical for Ambreed at LIC's existing charges. It is also possible that the Access Panel would oppose any such request, given the belief that it is in the industry's interests to have a single comprehensive database. Ambreed has not sought this information.

- LIC's analysis and interpretation of the raw data (i.e. its breeding value and breeding worth indices) is of particular value. The development of this information involves a substantial investment of intellectual property by LIC and the industry which could not be readily replicated by Ambreed. While Ambreed has developed a competing index, it is not considered a good substitute by many farmers (many of Ambreed's customers pay for LIC's breeding worth information).

- Because Ambreed's database contains only a fraction of the information in LIC's database, it is not able to offer the same services as LIC, or the same quality of service where it does compete with LIC. Further, the services that it does supply, rely on its continued access to LIC's database. Because of this, its constraints on LIC are very limited.

73. Other potential entrants are likely to face similar issues to those faced by Ambreed. It is highly unlikely that a new entrant could, in the short to medium term, establish a database that was sufficiently comprehensive to provide a substantial constraint on LIC. Thus, the constraint imposed on LIC from the threat of additional market entry is minimal.

74. The supply of information to LIC's database is controlled by the Regulations. Core data must be submitted to LIC by all herd testers and must be entered in the database by LIC. Thus suppliers may not legally interfere with the functioning of LIC's database and therefore do not impose a constraint on LIC.

75. There are no purchasers with significant countervailing market power.

76. In conclusion, it is likely that LIC has substantial market power in the dairy cattle database market.

4.2.3 Downstream Markets

77. The downstream markets that are relevant to the current investigation are the New Zealand market for the provision of dairy herd recording services to dairy farmers, and the New Zealand market for the provision of dairy cattle insemination services for dairy farmers.

4.3 Taking Advantage

78. To establish a breach of s 36, it must also be shown that LIC is taking advantage of its substantial degree of market power in the database market.

79. Parties that have substantial market power are allowed to compete.[11] What is not permissible is the taking advantage of that power for a proscribed anti-competitive purpose. The phrase 'take advantage of' describes the causal connection between the market power and the prohibited purpose.

80. In *Telecom v Clear*, the Privy Council considered the use of a dominant market position under s 36. The Privy Council said:

> In their Lordships' view it cannot be said that a person in a dominant market position "uses" that position for the purposes of s36 unless he acts in a way a person not in a dominant position but otherwise in the same circumstances would (not) have acted.[12]

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[11] *Queensland Wire Industries Pty Ltd v Broken Hill Proprietary Co Ltd* (1989) 167 CLR and *Boral Besser Masonry Ltd v Australian Competition and Consumer Commission* (2003) 195 ALR 609.

[12] *Telecom Corp of NZ Ltd v Commerce Commission* (1991) 4 TCLR 473, 499-500.

81. Under this test a use of market power could only be established by showing that a person in a competitive market would not have acted in the same way. If it could be shown that a person in a competitive market would have behaved in the same way, then there could be no use. This has been called the counterfactual test.

82. In *Carter Holt Harvey Building Products Group Ltd v Commerce Commission,*[13] the Privy Council again considered the meaning of the word 'use'. The Privy Council recognised that the word 'use' requires a causal connection between the conduct and market power.[14] Most significantly, the Privy Council stated that in determining whether a person has used its position of dominance, it is both 'necessary and legitimate' to apply the counterfactual test.[15]

83. Although s 36 now refers to taking advantage of market power, the High Court of Australia has confirmed that taking advantage of, means use and therefore it appears that the Privy Council counterfactual test remains relevant.[16]

4.4 Pricing and Taking Advantage

84. Where a person provides a valuable service they can be expected to charge a fee which contributes towards the cost of providing the service and reflects the value of the service. However, where the fee is excessive and would not have been charged in a competitive market, and it adversely affects competition in a market, the fee may amount to taking advantage of market power. Of concern in the current case is the possibility that LIC, a vertically integrated business with substantial market power, might charge an excessive fee for access to the database, making it difficult for operators in the downstream market to compete.

85. The Privy Council in the *Telecom* case determined that the proposed use of the ECPR (there termed the 'Baumol-Willig' rule) to determine access prices to be

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[13] [2006] 1 NZLR 145 (PC) per Lord Hope.

[14] Ibid [50]:

> The word "use" requires that a causal relationship is shown between the conduct which is alleged against the dominant firm and its dominance or market power. Only if that connection is shown can it be said that its conduct is a use of that dominance.
>
> It follows that if a dominant firm is acting as a non-dominant firm otherwise in the same position would have acted in a market which was competitive it cannot be said to be using its dominance to achieve the purpose that is prohibited. That is the basis on which the counterfactual test is founded.

[15] Ibid [60]:

> It is as the Board said in *Telecom Corporation of New Zealand Ltd v Clear Communications Ltd* [ ] 1 NZLR 385, 403, both legitimate and necessary when giving effect to section 36 to apply the counterfactual test to determine whether the defendant has used its position of dominance.

[16] *Queensland Wire v BHP* (2001) ATPR 40-925.

charged by Telecom, the incumbent owner of telecommunications network, to Clear would not breach s 36 of the Commerce Act. Although the markets involved in that case were substantially different to those currently under consideration, the court's approach to the ECPR rule suggests it may be relevant to other access situations. The Commission has assumed this to be the case and has applied the ECPR rule in other access investigations.

86. The ECPR has been used in the current investigation. However, as discussed in more detail in the sections below, applying it to define acceptable prices for access to data in LIC's database suffers from practical difficulties in most of the situations examined.

4.5 Efficient Component Pricing Rule (ECPR)

87. The ECPR provides the following rules for setting an access price for a bottleneck facility:

    a) access price = direct average incremental cost of providing the input + opportunity cost to seller of sale of input; or

    b) access price = final retail price – cost saved as a result of competitor supply + additional costs incurred in providing access; or

    c) the incumbent must charge the entrant the same prices as it charges itself, allowing for any differential costs (competitive parity).

88. The ECPR allows the business supplying access to recover both the direct costs of supplying the input to another party and to recover the contribution towards fixed costs and the profit that it foregoes by supplying the component (the 'opportunity cost'). This ensures that the business continues to recover a contribution towards its common costs and profits foregone despite providing access to a competitor. The appropriate contribution of a competitor towards common costs and foregone profits is defined as the contribution that would otherwise have been obtained by the incumbent selling the final output.

89. The ECPR avoids the difficulty of having to determine the appropriate contribution towards common costs by assuming any profit foregone (including contribution towards fixed costs) as a result of competition to sell the final product is the appropriate contribution.

90. The opportunity cost figure used to calculate the ECPR should be modified when a gain of N final product sales by the entrant leads to a loss of fewer than N sales by the bottleneck owner. This may occur when the final product offered by the entrant is an imperfect substitute for the bottleneck owner's product. In these circumstances the opportunity cost must be adjusted before it is used to calculate the ECPR. Thus, if the additional sale of 12 units by a new entrant results in the loss of only three sales by the incumbent, then the opportunity cost is confined to

those three sales.[17] If the additional sales by the entrant are not at the expense of the incumbent then the opportunity cost of the sales would be zero. Unfortunately, it is not always straightforward to assess the degree to which market share won by a new entrant is at the expense of the incumbent, particularly when there are significant differences between the products each is offering. This is an issue for some of the products/services that are the subject of this investigation.

91. The ECPR rule is sometimes criticised because it does not constrain the owner of the monopoly input from charging monopoly prices for access. This feature of the rule is acknowledged by the proponents of the ECPR rule who note that the objective of the rule is to establish a level playing field for entry to competitive downstream markets, rather than to achieve the erosion of monopoly rents earned from the monopoly input. Other regulatory instruments are needed to achieve the latter whereas the former is designed to set access rules that do not favour entrants or incumbents artificially. The ECPR allows entry to a downstream market if a competitor is more efficient at supplying downstream services than the incumbent. It prevents entry by a competitor that is less efficient.

92. A further criticism of the ECPR is that it is essentially a static rule. It does not consider the implications for investment in the bottleneck facility. Nor does it take account of the possibility that competition in downstream markets would have dynamic efficiency benefits even if the new entrant's costs were higher than the incumbent's.

93. The application of the ECPR rule is complex when an entrant has by-pass opportunities. The modifications to the rule to ensure incentives for efficiency are maintained are unlikely to be practically applicable.[18] A number of other concerns are expressed by critics of the ECPR rule.[19]

94. It is generally considered that the ECPR rule sets maximum acceptable access prices and that prices for access to the monopoly input above those suggested by the ECPR would provide strong evidence that such pricing was likely to be anticompetitive.

95. The use of two part tariffs (non linear pricing) involving a fixed charge that recovers fixed costs and a variable charge set close to marginal cost is widely

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[17] Baumol, W.J., Ordover, J.A. and Willig, R.D., "Parity Pricing and its Critics: A Necessary Condition for Efficiency in the Provision of Bottleneck Services to Competitors", *The Yale Journal on Regulation*, vol 14:85, 1997, pp 154-155.

[18] See for example, Armstrong, M., "Access Pricing, Bypass, and Universal Service", *The American Economic Review*, vol 91, no 2, Papers and Proceedings of the Hundred and Thirteenth Annual Meeting of the American Economic Association, 2001, pp 297-301.

[19] See for example, Economides, N. and White, L.J. (1995) "Access and Interconnection Pricing: How Efficient is the 'Efficient Component Pricing Rule'?", *Antitrust Bulletin*, vol XL, No 3, 1995, pp 557-579.

discussed in the economics literature, in the context of establishing prices that recover fixed costs in an allocatively efficient manner.

96. However, there is limited discussion of the implication of non-linear pricing for access in the context of the ECPR rule.[20] In some circumstances, non linear prices could foreclose smaller rivals.[21] The imposition of a substantial fixed charge could have the effect of converting a competitive downstream activity into one characterised by economies of scale. Thus, the same fixed charge applied to an incumbent supplying most of the market, and a new entrant capturing a small part of the market, could result in a material difference in the per unit cost of items in the downstream market.

97. Where the fixed charges levied on an entrant are larger than the opportunity cost of supplying access to a new entrant, they are inconsistent with the ECPR. Thus, if entry results in a loss of contribution from end users towards fixed charges and profits of 5%, the ECPR would indicate that the new entrant should contribute 5% of the fixed charges and foregone profits. Imposing the 'same' fixed charge to a new entrant as that borne by the incumbent (i.e. 50% of fixed costs if there is one entrant and one incumbent) would not necessarily be consistent with the ECPR. This is despite such a charge appearing to be consistent with a requirement of 'parity pricing'; i.e. the incumbent and the new entrant should face the same prices. This confusion appears to arise because non-linear pricing of access is rarely contemplated in the literature on the ECPR and as a result the competitive parity rule is not precisely specified. However, it is clear that ensuring the incumbent is compensated for the opportunity cost involved with supply of access is the primary focus of the ECPR.

98. Determining how a fixed charge should be allocated between an incumbent and a new entrant could, as discussed above, depend on the market share likely to be won. However, the market share itself is likely to be influenced by the allocation of fixed costs, complicating the determination of an appropriate allocation. Thus, in principle, the incumbent should review its access prices as the entrant's market share changes.

4.6 Purpose

99. Purpose under s 36 of the Commerce Act can be assessed subjectively or objectively according to the circumstances:

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[20] Vogelsang, I., "Price Regulation of Access to Telecommunications Networks", *Journal of Economic Literature*, vol XLI, 2003, p 844.

[21] Vogelsang, I., *Price Regulation of Access to Telecommunications Networks*, Department of Economics, Boston University, undated, p 24.

- Subjective purpose can be shown by statements of officers or internal memoranda of the company concerned which may reveal a desire to deter competitors, although the Courts have acknowledged that firms in competitive markets commonly have that goal, and hence that such comments cannot necessarily be relied upon.

- Objective purpose can be shown by a lack of commercial reasons for the behaviour at issue, implying that, contrary to the protestations of the firm, the ulterior motive was to deter competition.

100. In *Union Shipping v Port Nelson* the Court noted that:

> Proof of purpose, in the nature of these cases often will turn upon inferences drawn from actions and circumstances, with a sprinkling of internal memoranda and correspondence. Protestations of inner thoughts which do not reconcile with objective likelihoods are unlikely to carry much weight. In many cases, and this ultimately is one, both objective and subjective standards are met.[22]

101. The test for 'objective purpose' just given appears to be very close to the Privy Council test for 'use'. Hence it is not surprising that the Courts have recognised that illegal purpose may be inferred from use of a dominant position. In *Telecom v Clear*, the Privy Council made the following comment:

> If a person has used his dominant position it is hard to imagine a case in which he would have done so otherwise than for the purpose of producing an anti-competitive effect; there will be no need to use the dominant position in the process of ordinary competition. Therefore, it will frequently be legitimate for a Court to infer from the defendant's use of his dominant position that his purpose was to produce the effect in fact produced. Therefore, as the Court of Appeal in the present case accepted, use and purpose, though separate requirements, will not be easily separated.[23]

102. By virtual of s 2(5)(b) of the Act, the prohibited purpose need be only one of the person's purposes, provided it is substantial. The relevant purpose was not the sole purpose in *Union Shipping NZ Ltd v Port Nelson Ltd*:[24]

> The subsidiary purpose, deliberately pursued and desired, ... to inhibit the use by others of non PNL plant and manpower, thus facilitating greater PNL plant utilisation ... is an aim, and thus a purpose, deliberately pursued in its own right.

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[22] *Union Shipping New Zealand Limited & Anor v Port Nelson Limited* [1990] 2 NZLR 662 at 709.

[23] *Telecom v Clear* [1995] 1 NZLR 385, at 402.

[24] *Union Shipping NZ Ltd v Port Nelson Ltd* [1990] 2 NZLR 662 at 710.

4.6.1 LIC's Purpose

103. LIC has explained that its pricing methodology has three objectives: [25]

- To reflect the underlying costs of collecting, verifying, correcting, storing and extracting data from the core database so that the anticipated users of the core database bear a cost relating to their 'share' of all the costs (both fixed and variable);
- To be non-discriminatory, i.e. LIC 'charges itself' on the same basis it charges third parties;
- In the case of [ ] 'exploited' data, to enable LIC to share in the returns from the exploitation of its intellectual property in the core database.

104. The Commission has not used its statutory powers to obtain documents or information from LIC that might establish its subjective purpose(s) to the extent that these are relevant.

105. In this case, the Commission considers that an objective anticompetitive purpose may be inferred from the effect of LIC's use of its substantial degree of market power on its downstream competitor; and that the purpose may be to deter competitive conduct in the downstream herd recording and artificial breeding markets.

106. In calculating an access price for non-core data for herd recording of cows and calves, LIC appears to have based its approach on the ECPR. We conclude in the analysis that LIC has made an error in calculating the ECPR price, and this has resulted in its price for non-core data for cows and for calves/yearlings being too high. The prices do not appear to have been deliberately set above the ECPR price. Further, when LIC became aware of the issue, it offered to provide calf/yearling data with value-added cow data for no additional charge. In any case, it needs to be noted that a number of assumptions must be made in deriving the ECPR price, and that it is not possible to determine the ECPR price with a great degree of precision. Overall, it is not clear that LIC's purpose in setting the access price for non-core data for cows and calves/yearlings was anticompetitive.

107. In relation to GeneScreen and TGRM, LIC's behaviour is arguably less defensible. When Ambreed launched the GeneScreen and TGRM products in 2002, LIC did not provide a competing product (according to Ambreed). LIC supplied the data for these services in 2002 at marginal cost (around $0.03 per record, with three records generally sought for each animal receiving the service). In the first year of offering the service, Ambreed supplied [ ]animals).

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[25] MinterEllisonRuddWatts, *LIC- Core Database Pricing Methodology*, 9 August 2004, p 2.

108. In 2003, LIC increased the price for data for GeneScreen to approximately $0.50 in 2003, and charges $0.43 currently. Ambreed uses this data for its basic and advanced GeneScreen products. Initially, Ambreed sought value-added data for the advanced GeneScreen product, but discontinued this, given the price for this data. Following LIC's increase in prices in 2003, demand for Ambreed's GeneScreen fell to [ ].

109. LIC increased the price for data for the TGRM product from marginal cost in 2002 to include the non-core data price in 2003. The current price is $2.97. TGRM is used by around [ ] customers each year for around [ ]animals.

110. Since 2003, LIC has introduced products which compete with GeneScreen and TGRM. It offers these services at a price which is generally below the access charge it levies on Ambreed.

5 Herd Recording

5.1 Introduction

111. This section begins by providing some background on LIC's herd recording service, including information on revenues and costs. It then assesses LIC's prices for supplying non-core data (bundled with core data) for herd recording against the prices suggested by application of the ECPR. LIC's price for the non-core data required for Ambreed's basic herd recording service is then considered.

5.2 Background on LIC's Herd Recording Service

112. LIC's herd recording service (Minda) provides its clients with access to core data on their herds (i.e. cow identification and registration, and information on production) and non-core data (breeding worth, production worth, lactation worth and so on). LIC does not offer clients a 'basic' service involving only core data.

113. LIC offers both a paper-based and an electronic service, with the lower charges for the electronic service reflecting the savings in variable costs achieved. For the electronic service LIC levies a herd fee of $156 per annum, a fee per cow of $2.16 and a fee for other animals (calves and yearlings) of $1.08 per annum.[26]

114. LIC provided the Commission with revenue and cost information for its electronic and paper-based Minda business in 2004/05.[27] The data for the electronic service is presented below in Table 2.

Table 2: LIC Actual 2004/05 (Electronic Minda Service)

	Number	Revenue ($)	Average Price ($)
Herds	[ ]	[ ]	[ ]
Cows	[ ]	[ ]	[ ]
Other Animals	[ ]	[ ]	[ ]
Other Revenue		[ ]	

[26] *Published Prices*, Information supplied to the Commission by LIC in an Excel spreadsheet, 5 December 2005. The prices relate to the 2004/05 year.

[27] Information supplied to the Commission by LIC in an Excel spreadsheet, 5 December 2005.

115. The total number of cows recorded by LIC in 2004/05 was [ ]. Of those, [ ] were recorded by LIC's electronic Minda service. The total number of animals (cows plus others) recorded by the electronic service was [ ]. The total revenue for cows (cow fee plus herd fee plus other) for the electronic service was [ ] Including other animal revenue brings the total to [ ].[28]

116. LIC's Minda customers record, on average, [ ] cows and [ ] other animals (calves and yearlings). The average customer pays in the order of [ ] per annum to LIC for the Minda service.

5.2.1 Herd Recording for Calves and Yearlings

117. A significant number of LIC's clients pay to have their calves and yearlings herd recorded. The price LIC charges its clients does not include a database access fee, because access to the database is not required for this service. LIC notes that the main benefit to farmers from recording calves and yearlings is to keep their herd records accurate and up-to-date. Animals that have their ancestry recorded have a higher breeding worth, and therefore a higher market value than non-recorded animals. Thus, for herd recording calves/yearlings, farmers are not paying to obtain information from the database, but rather to ensure that their animals are accurately recorded on the national database.[29]

118. Since calves and yearlings are not subject to herd testing (they are not yet milking), no production information on these animals is held on the database. However, breeding and production values for such animals can be calculated based on information from ancestors and relations (sisters, cousins etc). The breeding worth and production worth information is updated regularly as LIC processes information on related animals. This information can be valuable to farmers when deciding whether to sell, cull, or keep calves and yearlings. LIC sells management reports to its clients for calves and yearlings which provide the relevant value-added information. This value-added information may also be sought by Ambreed on behalf of its clients.

5.3 Price for Non-Core (and Core) Data for Herd Recording

5.3.1 LIC's Pricing for Non-Core (and Core) Data

119. LIC's price for supplying non-core data (breeding worth etc) to Ambreed was $2.52 per cow and/or other animal (i.e. calves and yearlings) for 2004/05 ($2.57 for 2005/06). Access to core data was included in this price. Data updates for a cow during a season were supplied at $0.03.

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[28] Numbers differ because of rounding. Some of LIC's numbers are based on forecasts rather than actuals.

[29] LIC, *Responses to Commerce Commission Queries (from Sue Begg) of 16 March*, 26 April 2006.

120. A discount of $0.40 applied if Ambreed had already paid for core data ($0.37 in 2005/06). A further discount of $0.11 ($0.10 for 2005/06) applied if Ambreed had paid the fixed fee for access to the full core database.[30] The discounts are designed to ensure that Ambreed does not pay twice for the same data.

121. LIC supplies both core and non-core data (breeding worth etc) to its Minda clients as a bundled product. It does not offer a herd recording service based on the supply of core data only.

5.3.2 Relevance of ECPR to the Pricing of Non-Core Data

122. LIC's advisor, Castalia, comments that the ECPR concept can be used to estimate access prices for supplying the data required for herd recording because access to the database enables Ambreed to displace LIC's service on a one-for-one basis.[31] We agree that the ECPR is relevant to the pricing of non-core data, and that the ECPR is still relevant even with the relaxation of the one-for-one assumption. Given there are differences between LIC's and Ambreed's products and/or market positioning, it is possible that Ambreed has expanded the herd recording market. Assessing the extent to which this might have occurred is difficult. On the other hand, when LIC loses a client to Ambreed, that client may opt for the basic service, or may choose not to purchase value-added information for calves/yearlings. LIC then loses some of the revenue associated with the value-added service and is not compensated for that. These different effects will be offsetting to some extent. The analysis below assumes a one-for-one substitution.

123. Castalia notes that the electronic service is more efficient (lower cost) than the paper based service and provides the appropriate basis for estimating the contribution lost when Ambreed wins a client from LIC. We concur with this assumption.

5.3.3 Relevance of ECPR to the Herd Recording of Calves and Yearlings

124. For the most part, access to the core database is not required to provide a herd recording service for calves and yearlings because no relevant production information is held on the database. Although LIC loses revenue when Ambreed successfully competes for calf and yearling recording, the loss is not directly attributable to access to the database.

125. LIC argues that granting access to the database for cow records results in the loss of a whole herd and the associated revenues derived on a per herd, cow, yearling and calf basis. Because access to the database for cow records results in the loss of all

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[30] LIC (C Purcell), email to Steve Forsman at Ambreed, 11 December 2002. The letter notes a discount of [ ] per cow, which presumably relates to the per record charge calculated in earlier years. A justification for the [ ] discount is not offered.

[31] Castalia, *Access Prices on ECPR Basis – An Update*, 28 November 2005, p 2.

of this revenue, LIC suggests that yearling and calf revenue should be aggregated with cow revenue in calculating the opportunity cost (ECPR price) of a cow lost to a competitor.

126. LIC and Ambreed both levy their own clients with separate charges for recording cows and calves/yearlings suggesting that the recording of calves/yearlings and cows are separate services. In principle, it would be possible for a farmer to record some of its cows with LIC and its calves/yearlings with Ambreed. The ability to do this may be limited by the economies of scope in providing both services (both Ambreed and LIC levy a fixed per herd fee, which may reflect the costs incurred per herd, and comparative information on animals may be more informative with greater numbers). In these circumstances, the loss of revenue from herd recording calves/yearlings may be relevant to assessing access prices.

127. When Ambreed obtains breeding worth information for calves and yearlings, access to the database is required, and an ECPR price for access can be calculated. This is discussed further below.

5.3.4 Revenue and Cost Information for Minda Service

128. LIC supplied the Commission with a spreadsheet detailing its breakdown of the total revenue and costs for the electronic Minda service and an estimate of per unit costs and revenues based on the number of cows only. LIC calculates the opportunity cost by deducting per unit variable costs from per unit revenue. The figures for the 2004/05 year are presented below in Table 3. We have also estimated the revenues, costs and per unit costs separately for cows and other animals, and present these in Table 3. The estimates are based on LIC's definition of fixed and variable costs. The later discussion examines the impact of different cost assumptions.

Table 3: Total and per Unit Revenue and Costs for Cows and Other Animals for LIC's Minda Service 2004/05

	All Animals Total[i] ($)	Cows Total[ii] ($)	Other Animals Total[iii] ($)	All Animals Total/Cows[iv] ($)	Cows Total/Cows[v] ($)	Other animals Total/Other Animals[vi] ($)
Revenue	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Variable direct Costs	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Variable indirect Costs	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Total Variable	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Fixed Costs	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Opportunity Cost	[ ]	[ ]	[ ]	2.56	2.25	0.94

i Revenue and costs for cows and other animals (including Minda equipment and customised reports).

ii Revenue from cows only (including herd revenue, Minda equipment and customised reports). Costs are taken as [ ]of total (the same proportion as cow revenue to total revenue).

iii Revenue from other animals only. Costs taken as[ ] of total (the same proportion as other animal revenue).

iv The revenues and costs for cows and other animals are divided by the number of cows to obtain the per unit costs and revenues.

v The revenues and costs for cows are divided by the number of cows.

vi The revenues and costs for other animals are divided by the number of other animals.

5.3.5 Calculating the ECPR – Cows or Total Animals

129. In calculating opportunity cost, the choice of 'unit' makes a significant difference to estimated price for supplying non-core data to Ambreed.

130. LIC derives the per unit cost and opportunity cost of a cow lost to Ambreed by taking the revenue and costs for both cows and other animals and dividing this by the number of cows only. Castalia/LIC justified using cows as the denominator (rather than total animals or accounting for cows and other animals separately) on the basis that the loss of cow recording to Ambreed results in the loss of both cow and other animal revenue.

131. LIC's methodology yields an opportunity cost (ECPR price) for each cow lost to Ambreed of $2.56. Because this exceeds the price LIC charged Ambreed for the core and non-core data ($2.52) LIC suggests its pricing is consistent with the ECPR, and therefore acceptable under the Commerce Act.

132. LIC also levied the $2.52 charge for value-added data for calves and yearlings sought by Ambreed. Given that the per cow cost calculated by LIC includes the opportunity cost of calves and yearlings, the levying of a $2.52 charge for calf and yearling data as well as for cows, appears likely to result in an over-recovery of the total opportunity cost.

133. LIC has stated that it did not anticipate Ambreed seeking records on calves and yearlings because there is no event or production data on these animals. Thus, the possibility Ambreed would seek such data was not factored into its pricing model.[32]

134. LIC has since acknowledged that Ambreed has sought and paid for calf and yearling records, so that the assumptions underlying its analysis were wrong.

135. LIC, in its March 2006 response to questions by the Commission, indicated that in the future it would be prepared to change its pricing of non-core data to include the records of yearling and calf offspring with any non-core data for cows, charging only the non-core data price for a cow. Thus for the payment of a cow record, the client would obtain both cow and related calf/yearling records. This would effectively reduce LIC's prices.

136. LIC's proposed approach would bundle information on a cow and its offspring together. Since the data on calves and yearlings under this approach would essentially be free to Ambreed clients who wanted cow records, it is possible that the number of records sought would increase significantly.

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[32] LIC, *Livestock Improvement Response to the Commerce Commission's Queries*, March 2006.

137. A problem with LIC's proposed approach is that a farmer who is seeking value-added information on a cow may have little or no interest in value-added information on the related calf or yearling. Further, a farmer may wish to obtain value-added information on a calf/yearling but not want such information on the cow. Because of this, there is limited justification for providing this information on a bundled basis.

138. An alternative approach would be to calculate the opportunity cost for cows and calves/yearlings separately. Taking the estimated revenues and costs for cows and dividing by the number of cows (not total animals), gives an opportunity cost (ECPR price) for supplying core and non-core data associated with a cow of around $2.25. The opportunity cost (ECPR price) of calves/yearlings lost to Ambreed would be approximately $0.94 per animal. These individual ECPR prices are less than the $2.52 which LIC has charged for cow and calf/yearling records in the past.

139. Under an approach involving separate access charges for the data required to record cows and calves/yearlings, LIC would receive compensation for the loss of calf/yearling business to Ambreed, only when Ambreed sought access to the database for non-core data for such animals. It would not be compensated for the loss of calves/yearlings where value added information was not sought (and therefore access to the database was not required). It seems likely that with an access charge in the order of $0.94, Ambreed would seek more value-added records for calves/yearlings than at present. Our view is that establishing separate access prices for cows and calves/yearlings is preferable to bundling the provision of information as proposed by LIC.

5.3.6 Calculation of Variable Costs Saved

140. In calculating an ECPR-based price, LIC would be entitled to include the marginal costs of supplying the information to Ambreed. LIC notes that the marginal costs are relatively small, and are not taken into account in the analysis.

141. The calculation of opportunity cost requires an estimate of the variable costs saved as a result of Ambreed taking over some of LIC's clients. LIC estimates that the direct variable costs saved would be [ ] per cow and the 'indirect' variable costs saved would be [ ] This is based on total revenues and costs divided by cow numbers; the per unit values would be somewhat lower if costs and revenues related to cows only (as shown in Table 3).

142. LIC's data provides a backward looking view of the costs avoided, based on past costs. LIC's estimate takes a short timeframe, and is based on Ambreed's current market share.

143. LIC's estimate of direct variable costs saved is very small at [ ] per recorded cow (and their associated calf and yearling), [ ]of revenue, or around [ ] dollars for an average herd of 381 cows and 127 other animals lost to Ambreed. The costs saved relate mainly to process centre staff and operations staff. LIC considers call centre

and sales staff to be fixed costs. In relation to the latter, LIC argues that sales staff do not change with the number of clients, and that it is LIC's policy to visit all dairy farms whether they are LIC clients or not. LIC notes also there is little dedicated marketing or liaison with Minda clients. Data is emailed to clients, and there is little need for interaction. Specific computer processing and handling of individual reports is not important in terms of overall costs.

144. While LIC's analysis provides a 'feel' for possible costs, in principle costs saved should be forward looking. This raises two important issues. The first is the appropriate time frame for the analysis because the longer the time frame, the more costs are variable. Second, as the saving in costs (particularly those considered fixed in the short term) may tend to increase with the share of the market gained by the new entrant, an estimate of the costs saved may depend on the assumed size of market entry. The latter assumption, to the extent it affects the price for access, may itself affect the scale of entry.

145. LIC's approach, which considers most costs as being fixed, and assumes only limited market entry may understate the cost savings that LIC might make when it loses business to Ambreed (or another entrant). While Ambreed's current market share may be a reasonable starting point for any estimate, it would be appropriate to make adjustments for any disadvantage it may have suffered because access prices have been too high. As well, possible growth in market share in the short to medium term (say three to five years) should be taken into account.

146. The assumption that very few costs are variable is questionable. Ambreed's operations indicate that costs can be scaled in response to market share. LIC's calculation of variable costs effectively assumes that the magnitude of market share lost does not necessitate a change in its business model. However, if a long-run perspective were taken, and it was assumed that costs were 'scalable' then fixed costs would be included in the costs that would be avoided by LIC i.e. the relevant costs would be set to average incremental costs. The costs considered variable under such an approach could be significantly greater than those assumed by LIC.

147. If all of the direct fixed costs identified by LIC were considered variable a further $0.09 would be added to the $0.06 direct variable costs to give $0.15, which is still a relatively modest estimate. These costs exclude sales costs which LIC considers are indirect fixed costs.

148. The other major cost included in LIC's estimate of avoidable costs is the core data variable input cost of [ ] or [ ] per unit (an 'indirect variable' cost) if estimated per cow. LIC states that the [ ] estimate does not include the processing charge

from the database which is charged separately and is not considered by LIC to vary with loss of business to Ambreed.[33]

149. LIC has provided a breakdown of the [ ] variable cost estimate. It is shown below in Table 4.[34] Within LIC's cost allocation system, these costs are recharged to the core database and are shown as indirect costs. LIC's logic for treating these costs as variable is that if there were fewer cows recorded, there would be less mating data collected and processed, fewer animal events to process, fewer animal records to maintain and fewer queries to resolve.

Table 4: Breakdown of Indirect Variable Cost of [ ]

Costs Allocated to Herd Recording	Unit Cost
Mating recorded by AB technician	[ ]
Mating detail processing	[ ]
Animal detail form processing	[ ]
Animal records and reports	[ ]
Queries	[ ]

150. The [ ] may overstate to some extent the costs saved by LIC (i.e. they may not all be saved if a herd recording customer transfers from LIC to Ambreed). If Ambreed provides both artificial breeding and herd recording, then LIC would save on the mating recording and mating detail processing because this would be undertaken by Ambreed. Thus, [ ] of the first two items would be appropriately treated as a variable cost. However, LIC would continue to face at least some of the animal detail form processing and animal records and reports costs, because the animals lost to Ambreed would still be recorded. Thus, up to [ ] may not be variable. The queries cost is an avoidable cost (presumably being related to the [ ] per record charge for updates) which covers the "marginal costs of the computer processing,

[33] The core database charge of $0.40 was set before the beginning of the year based on budget, whereas the product costing (including the [ ]) is calculated after the end of the year based on actual costs, so the amounts can vary. The core database charge was set at $0.40 at the beginning of the year, but the total cost per animal (outturn) was [ ]

[34] MinterEllisonRuddWatts, *Responses to Commerce Commission Queries (from Sue Begg) of 16 March*, 26 April 2006.

printing and postage only".[35] However, the estimate of [ ] appears to be somewhat low. Information supplied by LIC suggests that in a season around [ ] updates per animal are requested on average.[36] At $0.03 per record, and assuming this charge is set to cover marginal costs, this would account for [ ] Further, one would expect that extraction of the initial record would involve a marginal cost in the order of $0.03. Overall, it is possible that LIC's estimate of [ ] may overstate the costs that are variable in terms of the ECPR.

151. LIC's estimate of direct variable costs appears low, while its estimate of indirect variable costs may be high – these effects are likely to be offsetting. Overall, a consideration of LIC's cost estimates for non-core data does not change the conclusion that its charges appear to exceed the ECPR levels.

5.3.7 Treatment of Revenue Earned from Ambreed

152. LIC receives revenue from Ambreed for supplying core and non-core data. The revenue (and associated costs) received from Ambreed are assigned to the Business Information business unit within LIC, so are not included in the Minda operations information used to generate unit revenue and costs. The sales activity volumes are also exclusive of Ambreed activity, so LIC's revenue and cost figures are presented on a consistent basis. An exception to this is that the costs of verifying and correcting Ambreed data input are included within the costs of the Minda business unit. These costs are absorbed by LIC and are not charged back to Ambreed.

5.3.8 Summary - Non-Core (and Core) Data

153. Overall, our analysis suggests that LIC's price for supplying Ambreed with non-core (and core) data for herd recording exceeds the ECPR price suggesting that it is anticompetitive, and potentially adversely affecting Ambreed's ability to compete in the downstream herd recording market.

154. LIC proposed addressing the concerns that its prices exceeded the ECPR by providing calf/yearling data at no additional cost when value-added data was purchased for a cow. Our preference is to calculate separate ECPR prices for cows and calves/yearlings, because these are separate services, which farmers do not necessarily wish to purchase on a bundled basis. The analysis undertaken suggests that the ECPR price for a value-added cow record should be around $2.25, and for a calf/yearling approximately $0.94. Overall, the impact on LIC's revenues of bundling or setting separate prices, is likely to be similar (differences may arise to the extent that the proportion of cow and calf/yearling records sought by Ambreed is different to the proportions recorded by LIC, and also because LIC proposes

[35] MinterEllisonRuddWatts, *LIC –Core Database Pricing Methodology*, 9 August 2002, Letter to Commerce Commission, schedule, p 9.

[36] See for example MinterEllisonRuddWatts, *LIC – Core Database Pricing Methodology*, 9 August 2002, Letter to Commerce Commission, Appendix 2: Core Database Cost History.

using its value-added price of $2.52 rather than the $2.56 that might be justified by the ECPR).

5.4 Price for Core Data Only for Herd Recording

155. Ambreed offers a basic herd recording service to its clients, using core data provided by LIC.[37] Ambreed's basic service includes value-added data created by Ambreed. Ambreed's breeding worth index does not require access to LIC's non-core data, and is much simpler than those developed by LIC. Ambreed charges $1.60 per cow and $0.70 for other animals for herd recording. An additional charge of $150 applies per herd, or $50 if its clients use electronic recording software.[38]

156. LIC charged Ambreed $0.40 per cow per season during 2004/05 ($0.37 for 2005/06) for basic core data records. The price is derived from LIC's cost allocation model rather than the application of an ECPR approach.

157. The ECPR is less applicable to the pricing of core data for herd recording than to the provision of the bundled core and non-core herd recording service discussed above. LIC does not offer a basic herd recording service, and a herd recording service without value-added information is quite different to the full service. Further, the option of Ambreed by-passing LIC by establishing its own database for its basic service appears to be a realistic possibility. The ECPR has limited relevance to the setting of efficient prices once bypass is feasible.[39]

158. Despite the concerns over the applicability of the ECPR, the discussion below considers the opportunity costs associated with competition by Ambreed in the hope that it provides some insights into LIC's pricing.

159. At one extreme, if Ambreed's service results in a one-for-one displacement of LIC's Minda clients, the ECPR price could be close to the $2.25 per cow calculated for the full service above. However the basic service appears to be significantly different to LIC's service which bundles core and non-core data. Some farmers may prefer a lower cost, lower quality service and Ambreed's offering of a cheaper, although more basic service may have expanded the herd recording market. Thus, the ECPR price would have to be adjusted to account for the possibility that an

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[37] Ambreed collects core data from its herd testing service and provides it to LIC for entry to the database. LIC notes that it is more cost effective for Ambreed to obtain the verified core data from the database than supplying the data itself.

[38] Ambreed's website www.ambreed.co.nz.

[39] The pricing adjustments that are required to ensure the ECPR leads to efficient prices are not likely to be a realistic regulatory option. The adjustment required is to set the access price to marginal cost, and levy a tax on the end product irrespective of whether the essential facility is used. See Vogelsang, I., "Price Regulation of Access to Telecommunications Networks", *Journal of Economic Literature*, vol XLI, September 2003, p 836.

increase in Ambreed's customers is not necessarily matched one-for-one by the loss of LIC's customers.

160. At the other extreme, if it could be argued that Ambreed's basic service did not substitute for LIC's bundled service at all, the ECPR price (opportunity cost) would arguably be close to marginal cost ($0.03). Ambreed's service does appear to substitute for LIC's, although because of the differences between them, there is probably not one-for-one switching. Thus the ECPR likely lies between $2.25 and $0.03.

161. In calculating the opportunity cost, the avoidable costs need to be estimated. While LIC has not calculated the additional variable costs that would be avoided if Ambreed customers did not require value-added data, these are likely to be small as long as Ambreed's market share is small. This is because the breeding worth and breeding value information is calculated for all current animals in the database, even if the animal is not part of LIC's Minda service, or the farmer does not request the information.

162. It could possibly be argued that the ECPR should be based on a basic service (and/or should exclude all of the costs of animal evaluation), even though LIC does not provide a basic service. In this view, Ambreed's clients would not be required to pay LIC compensation for a service they did not want. However, even if all of the animal evaluation costs attributed to Minda were excluded from the opportunity cost, it seems likely that LIC's levy of $0.40 ($0.37) for core data would be below the opportunity cost of a client lost to Ambreed.

163. If LIC were to charge for core data based on the opportunity cost of the full service, it may be economic for Ambreed to bypass use of LIC's core data. The full ECPR charge may be above the stand alone costs of Ambreed offering a basic service using its own database. Ambreed already collects the relevant core basic information during herd testing, and its farmers will have some of the relevant historic data if they have been herd recording with LIC. If herd testing and historic information is held electronically, the costs of importing it into an Ambreed database may be relatively modest, making by-pass possible. Ambreed notes, however, that currently it is unable to access data electronically, directly from farmers.[40]

164. With LIC's current charges, Ambreed finds it cost effective to obtain the data extracts from LIC, because of the costs of having to verify and enter data into its own database. We do not know what price would make Ambreed opt to bypass LIC's database and enter its own data directly into its database. However, it seems

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[40] *Information requested from Commerce Commission (Nicky Beechey) related to LIC charges for data*, 13 December 2006.

possible that the threat of bypass is a factor in LIC's pricing. It is in LIC's interests to ensure that Ambreed continues to use LIC's database, rather than establish its own, as long as it covers its marginal costs and makes some contribution towards the fixed costs.

165. The $0.40 ($0.37) levied for core data, although termed a 'variable' charge by LIC, is set above the marginal cost of accessing the database. It therefore provides a contribution towards the fixed costs of the core database. Given the need to recover fixed costs, LIC has to set its prices above marginal cost for some services, and would be likely to do so whether or not it was competing in a downstream market. The price of $0.40 is not set so high that it has discouraged entry by Ambreed.

166. Overall, taking account of the possibility that Ambreed's basic service is likely to substitute to some extent for LIC's bundled service and noting that LIC needs to price above marginal cost for some services to cover its fixed costs, it seems unlikely that LIC's charges for core extracts for current season data are anticompetitive.

5.4.1 Historical Records

167. To improve the quality of its herd recording service, Ambreed requires historical records. Cows have around four lactations in their productive lifetime. Assuming on average that the cows in a herd are half way through their productive life, historic records for the past two seasons would be required. Under LIC's current pricing methodology this would cost $0.80 (2 x $0.40). Ambreed has also suggested that information on the dams and grandams of cows would be desirable.[41] Data for the full productive life of dams and grandams would require four records per cow, which, under LIC's current pricing would cost $1.60 (4 x $0.40) or $3.20 for both ancestors for a total cost of $4.00 for all historical records.[42] Obtaining historical data for all three generations would add substantially to the data costs. Ambreed has noted that it would only need to request and pay for the historic information once (for a basic herd recording service).[43]

168. The additional cost to Ambreed of purchasing the historical records for the recorded cow only would be $0.80 on average. If this cost were spread over the current year and the future season (i.e. the remaining productive years of the cow), the additional average cost per season would be approximately $0.40 which, with the current season data charge of $0.40 for each year, would result in an annualised cost of data of $0.80.

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[41] Ambreed interview, 24 September 2002, p 17.

[42] Ambreed, letter to B Naik, 3 October 2002.

[43] Ambreed interview, 24 September 2002, p 5.

169. As discussed above, if Ambreed's core service were considered a close substitute for LIC's, the ECPR price would be approximately $2.25. On the other hand, if we concluded that Ambreed's basic service was not a close substitute for LIC's and/or if the animal evaluation costs were excluded, or we estimated the hypothetical cost of LIC providing a basic service only, then the ECPR price may be in the order of $1.00 to $1.50 per cow.[44] With these estimates of the ECPR, the total annualised data cost of current year data and historical records for the cow itself (for the average cow) would be lower than the ECPR suggesting that LIC's charges for such data would not be anticompetitive.

170. Ambreed has noted that its current policy is to buy two years of core data (two mating/calving records and two lactations including the current season record). It considers this is the minimum to provide clients with a satisfactory service. It allows Ambreed to provide basic information such as expected calving dates and to verify calving information.[45] LIC's price for this data is likely to be below the ECPR price (as discussed above).

171. Ambreed notes that access to dam and grandam information in addition to the cow's historical records would allow Ambreed to provide a full 3-generation report for the current animals in the herd and would allow Ambreed to provide more robust animal evaluation reporting.

172. Ambreed does not generally purchase this historical information because of its cost. The purchase of historical records for the recorded cow, dam and grandam, would, with the current year data, result in a total annualised data cost of approximately $2.40 (assuming the costs were spread over two years). With the purchase of full dam and grandam data, the annualised price would exceed the ECPR, for this time horizon. Of course, if a longer time horizon were adopted, and it were considered that the purchase of historical records allowed Ambreed to capture a client which it then kept into the future, the costs could be amortised over a longer period, and the annualised costs might then be less than the ECPR.

173. The ECPR requires Ambreed to pay the opportunity cost to LIC of a client that is lost plus any incremental costs. It could be argued that the client is lost when Ambreed obtains access to the two years of data (past and current core records) which Ambreed considers are required to offer a basic service. Access to historical

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[44] Suppose, for example, that LIC could sell a basic service at the same price as Ambreed ($1.60 per cow). Deducting the variable costs estimated earlier in the paper for LIC's full Minda service (on a per cow basis) of $0.30, would suggest an ECPR price of $1.30. Alternatively with a rate of substitution of say 50% to 70% between the full and basic service (i.e. only half Ambreed's clients were previously LIC's clients) the ECPR would be $1.12 to $1.57.

[45] *Commerce Commission Investigation – Access to National Data Base LIC*, email from Phil Beatson, 14 December 2006.

records would allow Ambreed to offer a higher quality service. Although this might increase Ambreed's ability to win business, LIC's loss would be at the margin and the associated opportunity cost would be small. In this view, LIC's charge for historic data would be likely to exceed the opportunity cost of providing that data and therefore would not be consistent with the ECPR.

174. Overall, the price LIC charges Ambreed for historical records may act as something of a barrier to Ambreed gaining additional customers, although the impact is likely to be modest in the longer term. LIC's pricing for historical data raises some concerns, particularly for the dam and grandam information which Ambreed does not currently purchase because of LIC's prices. However, the information available to us is not sufficient to prove a breach of s 36.

175. The charge for updating records of $0.03 is likely to be close to marginal cost and is appropriately levied on Ambreed, other users and LIC's own business.

6 Artificial Breeding (AB)

6.1 Introduction

176. Ambreed has sought access to LIC's database to compile a top cow list. Compiling such a list requires access to the core data, the non-core data on breeding values etc, as well as additional data collected by LIC (and supplied in part by Ambreed) on 'traits other than production', which includes information on cow temperament, udder attachment, milking speed and so on.

177. LIC's charge for access to the full core database is calculated using a complex cost allocation model. LIC determines a total allocation of fixed costs for use of the full database by assigning costs according to an activity measure (service units, a measure of data processing). Such an approach to cost allocation is largely arbitrary although commonly employed. The total fixed charge is then allocated between LIC's different divisions, including the Minda division and separately to LIC's artificial breeding division, on the basis of service units. The total fixed fee allocated to the Minda division is then divided by the number of parties seeking access to the full database in any year.

178. Generally, there are four to five parties that pay the fixed fee each year. These include LIC's Minda division, the breed societies, parties in joint ventures with LIC, and independent parties. In most years, there are only one or two independent parties that pay the fixed fee.

179. LIC has noted that while the breed societies would be levied the fixed charge for access to the full database, LIC would be likely to subsidise them if they were not able to afford the charges.[46]

6.2 Problems with Applying the ECPR

180. Applying the ECPR to the artificial breeding business is less straightforward than for herd recording. Castalia's view is that applying the ECPR to artificial breeding and the top cow list "would be a stretch".[47] We concur that there are significant practical difficulties in calculating an ECPR price for access to the data required to compile a top cow list.

181. Castalia questions whether the ECPR can be applied to LIC's artificial breeding business because LIC's intellectual property (IP) is used to compile the 'top cow list'. However, Ambreed would use its own criteria to generate a list different to LIC's list. Therefore it would not necessarily use LIC's IP in relation to the

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[46] MinterEllisonRuddWatts, *Briefing Paper to the Commerce Commission*, 16 August 2002, p 7.

[47] Castalia, *Access Prices on ECPR Basis – An Update*, 28 November 2005.

weighting of different traits although it may draw on LIC's breeding worth and breeding value information.

182. LIC also argues that its IP is involved in the database as a whole, and in particular in the non-core data that Ambreed might use and LIC's process for calculating it (i.e. breeding worth etc). However, the fact that LIC's IP is involved in generating data does not exempt it from the purview of the Commerce Act.

183. The database includes non-core information on traits other than production which are important in breeding decisions. Both LIC and Ambreed contribute this information to the database, and LIC has stated that Ambreed has access to this information at [ ] per record, presumably in recognition of its contribution.[48]

184. Castalia notes that access to LIC's full database is not essential for Ambreed to provide an artificial breeding service. As noted earlier, with realistic by-pass opportunities, the ECPR price may not be optimal.

185. Ambreed entered the artificial breeding market without access to LIC's full database. Further, while it paid for access in 2003, it has chosen not to purchase access in subsequent years because of the associated cost. Ambreed claims to have a [ ] market share, achieved largely without access to a top cow list. (LIC suggests that Ambreed's market share is around [ ]

186. While access to the core database to generate a top cow list does not appear to be essential to Ambreed providing an AB service, access may allow it to improve its offering in the future. Ambreed's decision not to pay the fixed access fee indicates it believes that LIC's charges outweigh the potential benefits of access to a top cow list.

187. With a top cow list, Ambreed could approach the owners of top cows to arrange to purchase or contract for the use of unproven young sires. To the extent that Ambreed's selection criteria for top cows differed from LIC's, Ambreed would not necessarily be competing for access to the same top cows. Better access to the top cows would probably improve the overall quality of Ambreed's semen and thereby contribute to improving the overall genetic merit of the national herd. Having two companies with different selection criteria determining top cows for breeding could increase the diversity of traits that are selected for and reduce the risk that the criteria of a single company are wrong. To the extent that the businesses have different selection criteria, their semen products will be less close substitutes.

188. The lack of access to a top cow list would not entirely prevent Ambreed arranging to purchase high potential young sires. Ambreed could still solicit offers from

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[48] LIC, *Livestock Improvement Responses to the Commerce Commission's Queries*, March 2006.

farmers, who would have information on the breeding worth of their cows and associated calves based on the non-core data supplied by LIC. Farmers would be aware of cows that were high-scoring but would not necessarily know whether they were on LIC's top cow list (until approached by LIC). They would be even less sure that such cows would meet Ambreed's criteria. Nevertheless, farmers would have incentives to offer high quality animals to Ambreed to obtain higher returns. In this scenario, the top cows are more likely to be those conforming to LIC's criteria, because Ambreed would not have generated its own top cow list and farmers would not know whether they had cows/calves that would be on such a list.

189. However, without a top cow list of its own, Ambreed does not have the information it would need to approach farmers with top cows. Thus, it is at a disadvantage in identifying and contracting with the owners of such animals.

190. Applying the ECPR to artificial breeding also suffers from practical problems. In particular it is difficult to establish a linkage between access to the database and changes in market share, particularly since Ambreed's service may not be a close substitute for LIC's. The value obtained from access to LIC's database, for example, would depend on the criteria Ambreed used to choose the top cows rather than the data per se. If Ambreed were to choose inappropriate criteria, then its bulls would not be improved and access to LIC's database would not result in an increase in market share. Further, an improvement in the quality of Ambreed's product offering may result, at least in part, in LIC lowering its prices to retain market share. Alternatively, Ambreed may choose to capture some of the benefit of any improvement in the quality of its products by raising its prices rather than increasing its market share. As well, forecasting an impact that occurs in the distant future (which is inevitable given the time to prove a bull) is also problematic. This makes it difficult to calculate the opportunity cost with any degree of accuracy.

191. If the ECPR does not provide an appropriate benchmark, we are left with the difficult task of assessing what pricing might be 'reasonable' (i.e. which would not constitute the use of the LIC's market power in the database market to deter competition in the downstream market). Access to the core database is still an essential element of compiling a top cow list, and the fixed costs of maintaining the database need to be recovered. This is discussed further below.

6.3 Calculation of the ECPR Price for Artificial Breeding

192. Applying the ECPR approach to the artificial breeding business is problematic for the reasons discussed above. The input under consideration is not 'essential' for the downstream product and/or can be bypassed, and the impact of access still depends on the criteria Ambreed uses to select top cows. These considerations mean that the link between access to the core database and the impact on Ambreed's and LIC's market share is difficult to assess with any certainty.

193. However, because calculating the ECPR may offer some insights, the analysis is presented below. In the analysis, it is assumed that access to LIC's database to compile a top cow list results in Ambreed increasing its market share at the expense of LIC. Making that assumption, it is possible to derive estimates of the opportunity cost and the ECPR prices. This is the approach adopted by Castalia in its November 2005 analysis for LIC (despite Castalia's reservations as to the relevance of the ECPR).[49]

194. Data supplied by LIC on its artificial breeding business for 2004/05 is presented in Table 5. LIC offers both technician assisted and 'do it yourself' artificial insemination with the latter constituting a small part of the market. The total output, revenue and costs for the technician assisted service are shown in Table 5.

Table 5: Total and Per Unit Revenues and Costs for LIC's Insemination Business 2004/05[50]

	Technician Assisted ($)	Per Unit Tech Assisted ($)
No of Inseminations	[ ]	
Revenue	[ ]	[ ]
Variable Direct Costs	[ ]	[ ]
Direct Fixed Costs	[ ]	[ ]
Indirect Fixed Costs	[ ]	[ ]
Opportunity Cost	[ ]	[ ]

195. Unit revenue for the technician assisted artificial breeding service is [ ] per insemination, and variable costs are [ ] Fixed costs ([ ]) include some personnel, vehicle overheads, farm operations and so on. Given an assumed time frame of twenty years (as modeled by Castalia), it is likely that many of these fixed direct costs would be variable. Indirect fixed costs include a contribution towards LIC's database, corporate overheads and sales staff.

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[49] Castalia, *Access Prices on an ECPR Basis – An Update*, November 2005. Castalia however, had reservations about the relevance of the ECPR to the artificial breeding service.

[50] The numbers provided by LIC are an estimate based on the previous year (see Excel spreadsheet, supplied by LIC in December 2005). The actual market size for AB inseminations in 2004/05 was [ ]. LIC semen doses inseminated were [ ] for 2004/05, giving a market share of [ ].

196. Castalia assumes that access to the database in year one will result in Ambreed's market share increasing starting in seven year's time. The delay in effect on market share reflects the time it takes to breed and prove a bull. Castalia calculates the NPV of the opportunity cost associated with a 1% loss of market share in year seven; 2% in year eight and so on, using LIC's estimate of the per unit opportunity cost. Using the NPV of each year's losses, an annuity is estimated. The annuity is compared with LIC's charge for Ambreed's access to the core database. Castalia's overall approach appears to be reasonable.

197. Castalia assumes that Ambreed's market share without access to the database is [ ] and that it would increase by 7% overall (base scenario) starting in seven year's time, with a 1% per year gain. Castalia also models a 12% increase in market share (high growth). The base assumption seems not unreasonable, given the uncertainty associated with the likely impact, although it is likely to be on the high side. A 7% increase in Ambreed's market share is equivalent to an increase in its sales of nearly 40%. The high grown assumption seems unlikely. The fact that Ambreed has chosen not to purchase the top cow list at the price offered by LIC, suggests that the data is not essential to its business, and/or that the impact on market share of obtaining access is likely to be relatively modest.

198. Castalia's assumption that that there would be a delay of seven years between Ambreed compiling a top cow list and improving its market share seems reasonable, as is the assumption that market share would increase over a seven year period.

199. We have tested the analysis with more conservative assumptions about Ambreed's success at increasing market share, as well as assuming that a greater proportion of costs would be variable.

200. Because of the size of the market and the revenue earned per insemination, the opportunity cost associated with any significant gain of market share is high. A gain in market share by Ambreed as low as 1% in seven year's time still results in an opportunity cost that is above the access charge levied by LIC if LIC's estimates of variable costs are accepted. A 2% gain in market share is required if all of LIC's fixed direct and fixed indirect costs are assumed to be variable. While an estimate of the gain in market share that might be achieved with access to a top cow list is speculative, a 2% increase does not seem an unreasonable expectation.

201. The estimated annual charge based on the ECPR exceeds LIC's fixed charge under a wide range of different scenarios of market share losses, market numbers, discount rates and so.

202. As noted above, many of the costs that LIC assumes are fixed are likely to be variable in the longer term. Even if all of the fixed direct costs and the indirect fixed costs are assumed to be variable, LIC's charges fall below the likely ECPR price under most scenarios. However, as noted above, the relevance of the ECPR

to artificial breeding is questionable at best, so limited weighting can be placed on these results.

6.4 Non-Discriminatory Pricing

203. LIC has claimed that it is complying with the Commerce Act because its charges are non-discriminatory (i.e. it charges its own divisions the same price as competitors). However, in relation to artificial breeding, it is not clear that LIC's fixed charge is non-discriminatory.

204. While LIC's Minda division is notionally allocated the same access fee as others using the database, this is largely irrelevant. Such an internal recharge of fixed costs does not change the overall returns that LIC earns. It just shifts the profits made in one division to another.

205. Some of the other parties that pay the fixed fee are collaborating or in joint ventures with LIC. This means that the observation that they pay the same fixed fee is largely irrelevant because the terms of the joint venture arrangement could be adjusted to compensate for the fixed fee charge.

206. LIC has also noted that it may subsidise the breed societies, effectively reducing their costs for access to the database.

207. In any case, while charging all parties the same rate appears to be non-discriminatory, such an approach can favour the incumbent because the incumbent is its own largest access user. A fixed charge generally results in lower per unit charges for the larger (incumbent) user. The difference in per unit charges is likely to be significant where an entrant has a relatively small market share. Overall, it is not clear that LIC's charge is non-discriminatory, and even if it were, it could still be anticompetitive.

6.5 Other Approaches to Assessing LIC's Charge for Top Cow List

208. Case law in New Zealand suggests that an action would not be considered anticompetitive if a person in a competitive market would have acted in the same way. The ECPR attempts to operationalise this insight. However, as noted in the discussion above, applying the ECPR to artificial breeding is somewhat problematic.

209. It may be useful to consider whether LIC's pricing arrangements might be consistent with those observed in competitive markets and/or how a database owner that was not vertically integrated might hypothetically behave.

210. LIC operates the core database, and recovers the costs of doing so from the services it sells and the prices it sets for others to obtain access. The costs of operating the database are largely fixed. Although they are affected by the number of animals that are in the database, and costs are incurred in inputting data, costs are largely

invariant to access. Thus, the variable costs associated with accessing the database are a relatively small component of overall costs.

211. The problem of recovering common and fixed cost arises in workably competitive markets (for example gyms and movie theatres) where costs may be covered by a mix of fixed and variable charges. Price discrimination is often observed (e.g. time of day discounts, students pay less than others), and prices are commonly set above marginal cost. Fixed charges are often levied to recover fixed costs (e.g. gym membership fees). Thus, in a competitive market, a user of a facility might be expected to make a contribution towards fixed costs even if access to the facility involved no opportunity costs. However, while this suggests that a fixed charge as levied by LIC might not be anticompetitive, such considerations provide little guidance as to the level that might be reasonable. In a competitive market a purchaser could shop around for alternative services if a particular company's terms were unreasonable, an option that is not available for parties seeking access to LIC's data.

212. Another option is to consider how an owner of the animal database might behave if it were not integrated into providing services in downstream markets and therefore had no incentive to foreclose the downstream market.

213. A stand-alone database owner would have strong incentives to allow access to the database to all parties willing to contribute towards the costs (and profits). Although the owner may have incentives to set prices at a monopoly level, it would not have incentives to exclude any party from access so long as they were willing to cover marginal costs and make some contribution towards fixed costs. Such an owner is likely to use a two-part (or multi-part) tariff for access, with a fixed charge and a variable charge.

214. If an independent party owned the database, and could price discriminate, it would be unlikely to set its access price at a level that would prevent Ambreed obtaining a top cow list. On the other hand, if the database owner could not price discriminate and had to set a single fixed charge, then the charge that maximised its profits might be higher than the fee some parties, such as Ambreed, might be willing to pay for access. Price discrimination is generally possible where customers cannot on-sell the output they receive. This seems to be possible for LIC's database so long as appropriate conditions are applied. However, there could be other reasons for not discriminating, particularly when prices must be disclosed (as is the case with LIC's prices). One reason might be a concern about customer relations, given the perception that price discrimination is unfair.

215. Ambreed's current position that it is not prepared to pay an access fee in the order of $78,300 indicates that the fixed charge exceeds Ambreed's willingness to pay.[51] This suggests that the fixed charge may be inefficient and/or inconsistent with the approach an independent database owner might take. Ambreed paid a lower fixed fee of around $10,000[52] plus $6 per cow for a total of around $20,000 in the past,[53] so a fee of that order of magnitude appears to be within its willingness to pay and would still result in a significant contribution towards the fixed costs of the database.

216. Of course, one should be cautious in drawing strong conclusions from Ambreed's behaviour given the scope for Ambreed to refuse to pay LIC's fixed charge for strategic reasons (i.e. in a hope to negotiate a fixed price that is less than its willingness to pay or to encourage regulatory intervention in its favour).

6.5.1 Summary: Artificial Breeding

217. Overall, LIC's current charge for access to the core data that would allow Ambreed to compile a top cow list has resulted in Ambreed choosing not to purchase access. Because Ambreed cannot readily identify the top cows without access to the database, the quality of Ambreed's bulls is likely to be lower than if it did have access. Given Ambreed's selection criteria for top cows is likely to be different to LIC's, it also means that the options for farmers accessing top bulls to meet criteria that differ to LIC's is constrained. The overall outcome is likely to be that Ambreed's bulls and resulting cows are of somewhat lower quality than they would otherwise be. This result is inconsistent with the dairy industry objectives of improving the quality of cows.

218. However, it is less obvious that the pricing is inconsistent with the Commerce Act. As discussed above, if LIC were not integrated into downstream markets, it seems likely it would offer access to Ambreed as long as Ambreed was willing to cover marginal costs and make a contribution towards the fixed costs of the database. Ambreed has demonstrated its willingness in the past to pay a substantial fixed access fee, albeit lower than that proposed by LIC. On the other hand, LIC's charge appears to be below prices indicated by application of the ECPR, although the practical difficulties of applying the ECPR to artificial breeding services are significant. However, by making a number of assumptions, and drawing on data provided by LIC, it is possible to derive estimates of the ECPR price. From this analysis, it appears LIC's fixed charge is likely to be less than the opportunity cost (ECPR price) of allowing Ambreed access to a top cow list if such access results in

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[51] Ambreed, *Submission to Commerce Commission – NZ Dairy Database Charges and Access to Information,* 30 September 2003, p 3.

[52] Ambreed has indicated that it considers this figure is in the order of $15,000, plus $6 per cow making a total of around $25,000.

[53] Ambreed interview, 24 September 2002.

Ambreed increasing its market share by 2% or more. While an assessment of the likely gain in market share is speculative, an increase of 2% or more does not seem an unreasonable expectation. Overall, the evidence is insufficient to conclude that LIC's pricing for this service breaches s 36.

7 GeneScreen and TGRM

219. Ambreed suggests that LIC's prices for access for GeneScreen and TGRM are not consistent with LIC's published list of charges, or are unreasonable.

220. Ambreed notes that it developed a service, GeneScreen, which alerts farmers to matings which would result in undesirable inbreeding, genetic defects and undesirable genetic make up.[54] GeneScreen uses the individual cow's breeding as recorded on the database. The better the data the more thorough the possible screening.

221. Ambreed offers two services: the basic service, priced at $0.50 per cow, and the advanced service, priced at $1.25.[55] The basic service screens out matings that would result in 6.5% or more inbreeding. It checks for two genetic defects in Holstein-Friesian cows. The advanced screen checks also for traits other than production faults. Ambreed pioneered this service, but LIC now offers a competing product.

222. In 2003, Ambreed noted that LIC was charging Ambreed [ ] per cow for the data it required.[56] Ambreed doubted that the charging was consistent with LIC's published methodology, or that LIC paid a comparable cost for the data.

223. Ambreed also offers a service called TGRM (total genetic resource management). TGRM is a breeding tool (software) which is run interactively and allows breeders to make their own decisions regarding the rate of genetic gain and inbreeding consequences. TGRM was developed by X'prime.[57] Ambreed assisted in developing the dairy breeding model used by X'prime, and has the New Zealand licence for the TGRM product.

224. LIC provided updated (2005/06) prices for the data that is used for Ambreed's GeneScreen and TGRM products as follows: GeneScreen $0.43; and TGRM $2.97.[58] LIC notes that the prices differ from LIC's standard published prices

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[54] Ambreed, *Submission to Commerce Commission – NZ Dairy Database Charges and Access to Information*, 30 September 2003, pp 4-5.

[55] Ambreed's website, www.ambreed.co.nz, March 2006.

[56] Ambreed, *Submission to Commerce Commission – NZ Dairy Database Charges and Access to Information*, 30 September 2003, pp 4-5 suggests [ ]; in the September 2002 meeting with the Commission a cost of [ ] was quoted.

[57] Ambreed, *Submission to Commerce Commission – NZ Dairy Database Charges and Access to Information*, 30 September 2003, p 5. X'prime emerged from the University of New England as a vehicle to commercialise the TGRM product.

[58] In response to a request for information for Ambreed's GeneScreen and TGRM products, LIC commented that its understanding was that GeneScreen and TGRM were the same product. They presented

because the information draws on several animal records as show below in Table 6.[59]

Table 6: LIC's Charges for Ambreed's GeneScreen Product

Basic GeneScreen	**LIC's Price**
Cow Record Core Data Price	$0.37
Maternal Grand Sire Marginal Price	$0.03
Maternal Grand Dam Marginal Price	$0.03
Total Basic GeneScreen	**$0.43**
TGRM	**LIC's Price**
Cow Record Value Added Price	$2.57
Maternal Grand Sire Marginal Price	$0.03
Maternal Grand Dam Core Data Price	$0.37
Total TGRM	**$2.97**

225. In terms of the ECPR, if LIC were not providing a comparable service, there would be no opportunity cost associated with supplying the data to Ambreed. A strong case can be made that because Ambreed pioneered the TGRM and GeneScreen products and LIC was a later entrant into the provision of similar services, no compensation for the opportunity cost of access to the database is warranted. This argument would have particular force if LIC would not have offered such a service in the absence of entry by Ambreed. Given that the opportunity cost of Ambreed's service could be close to zero, the ECPR would suggest a price close to marginal cost.

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the higher price as relating to Ambreed's Advanced GeneScreen product. However, it appears likely that this information is used by Ambreed's TGRM product.

[59] MinterEllisonRuddWatts, *Responses to Commerce Commission Queries (from Sue Begg) of 16 March*, 26 April 2006.

226. Alternatively, it could be argued that there is an opportunity cost associated with Ambreed's continued access to the database, given that LIC now provides products which compete with TGRM and GeneScreen.

227. As noted above, LIC charges Ambreed $0.43 for the data for its GeneScreen product. Data on traits other than production (TOP) which Ambreed uses for the Advanced GeneScreen product are provided by LIC at marginal cost.

228. LIC's competing service for the basic GeneScreen comes in at least two forms. The first is provided as part of LIC's Premier Sires artificial breeding service. LIC's technicians undertaking artificial inseminations, use DataMate hand held computers to enter mating information. When the technician enters information on the cow and sire into the computer, an inbreeding warning shows if the cow is the daughter, granddaughter, or half sibling of the bull about to be used. DataMate requires similar information to that used by the basic GeneScreen. This service is not separately charged for.

229. For DIY clients, inbreeding information can be obtained through the Minda service. One of the reports offered with Minda is a sire progeny list. This shows the cows that are daughters or half siblings of the majority of bulls that are Premier Sires. In 2004/05 a sire progeny report cost $15 plus $0.06 per animal. In 2006/07 the report cost $24 plus $0.08 per animal. Depending on the number of cows in a report, this suggests that the average cost of LIC's service could be in the order of $0.20 to $0.30 per cow (for 200 or 100 cows).

230. LIC's simple Customate service identifies bulls to meet a farmer's trait requirements. This service competes in part with Ambreed's advanced GeneScreen product. The simple Customate service is offered to LIC's clients at no cost. Thus, there is no opportunity cost associated with this product.

231. LIC's price for the GeneScreen information therefore appears to be above the price it charges its own clients for inbreeding screening (at least for the Minda service and simple Customate product).

232. LIC offers a service termed Customate Plus which competes in part with Ambreed's TGRM. This allows individual mating outcomes to be optimised using complex software. It was introduced in 2003/04 after Ambreed had marketed its product. The price for the Customate Plus service is included in LIC's 2006/07 price list at $2.00 per cow. LIC's price of $2.97 for the data Ambreed needs for its TGRM service is above the full price charged by LIC for its product (i.e. before avoidable costs are considered). Thus, LIC's charge exceeds the ECPR price on this basis.

233. It should be noted that LIC has included the revenues and costs of the genetic screening services described above into its calculation of the opportunity cost of its Minda and artificial breeding services. Calculating a separate opportunity cost for GeneScreen would amount to double counting of the opportunity cost. Thus, if the opportunity cost is attributed to competition from Ambreed's GeneScreen product,

the relevant revenues and costs should be taken out of the Minda/artificial breeding opportunity cost calculations.

234. In summary, for both the TGRM and GeneScreen products, it appears that LIC's charges are above the ECPR price. This is true even if it is assumed that Ambreed's services involve an opportunity cost to LIC, an assumption which is debateable given that Ambreed pioneered these services.

8 Quality Issues

235. The bureaucratic processes involved in new entrants obtaining access to the core database appears likely to result in an inevitable disadvantage to a new entrant vis a vis LIC. The requirement to apply for access to the Access Panel and LIC inevitably involves delays and costs which raise the barriers to entry. LIC in contrast has unfettered access to the database.[60]

236. As well, by delaying the release of data, LIC can potentially reduce the quality of the service Ambreed offers, placing it at a competitive disadvantage. Ambreed has complained about the timeliness of data provided by LIC. It has noted 'stalling tactics' by LIC in relation to core data Ambreed needs to offer herd testing services and delays in obtaining data downloads for the total genetic resource management service.[61] [

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237. However, an audit conducted by Ernst & Young for the Access Panel in 2003, concluded that there was no evidence to indicate that LIC was contravening Parts 2 and 3 of the Regulations (access to data in the core database and publication, audit etc) and that the published pricing methodology had been consistently and accurately applied by LIC when charging for the release of core data.[63]

238. LIC responded to earlier complaints about delays in data by detailing its responses to Ambreed's requirements, and by noting that many delays had been created by Ambreed itself.

239. There is a significant risk that LIC can use its market power to disadvantage Ambreed by delaying the release of data. However, while there is some evidence to suggest this is happening, the information is not sufficient to support conclusive findings on this matter.

240. Ambreed also notes concerns about the refusals by LIC to accept data for herds tested by Ambreed for reasons which Ambreed considers are pedantic, such as the herd owner name being submitted as Mr J J Smith versus J J Smith.[64] Ambreed asserts that such requirements are not imposed where LIC is the herd tester. If true,

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[60] File note, *Meeting with NZ Dairy Core Database Access Panel and Dairy Insight*, 3 December 2003, p 4.

[61] Ambreed, *Submission to Commerce Commission – NZ Dairy Database Charges and Access to Information*, 30 September 2003, pp 2 and 5.

[62] File note, *Meeting with NZ Dairy Core Database Access Panel and Dairy Insight*, 3 December 2003, p 2.

[63] Ernst & Young, *New Zealand Core Database Access Panel Review*, November 2003, p 4.

[64] Ambreed, *Submission to Commerce Commission – NZ Dairy Database Charges and Access to Information*, 30 September 2003, p 6.

LIC's requirements could be a means of raising Ambreed's costs, to its competitive disadvantage. On the other hand, LIC is charged with maintaining the integrity of the database, and should therefore be entitled to ensure that data integrity is maintained. Distinguishing between reasonable and unreasonable requirements is likely to be difficult in these circumstances.

9 Summary

241. The price LIC charges Ambreed for non-core data (along with core data) for its herd recording service, appears to exceed the charges indicated by the ECPR. LIC charged Ambreed $2.52 per cow and per calf/yearling for the relevant data in 2004/05. Because the opportunity cost associated with herd recording calves/yearlings was already included in the $2.52, levying separate charges for calves/yearlings involved an element of double counting, with the result that LIC's price are likely to exceed the ECPR price. LIC has since proposed bundling together calf/yearling data with cow data for the $2.52 price. However, bundling makes limited sense because a farmer seeking value added information on a cow, may not want this information for calves/yearlings and vice versa. Instead, a separate charge, based on the opportunity cost of supplying value added data for cows and calves/yearlings would be preferable. A calculation on this basis suggests an ECPR price per cow in the order of $2.25 and a per calf/yearling price of around $0.94. These charges are below LIC's price for non-core (together with core) data for cows and calves which suggests that LIC's price may breach s 36 of the Commerce Act.

242. LIC's charge of $0.40 ($0.37) per cow per season for initial extracts of core data which are required by Ambreed to provide a basic herd recording service does not appear to raise competition concerns. The levying of the $0.40 charge for historical data (i.e. ancestry information) may act as something of a barrier to Ambreed acquiring new clients While LIC's pricing for historical data raises some concerns, the information available to us is not sufficient to prove a breach of s 36.

243. LIC levies a fixed charge in the order of $70,000 to $80,000 for parties wishing to search the whole database. This is the fee that Ambreed would face if it wished to compile a top cow list. The ECPR is difficult to apply in practice to this situation given that Ambreed can provide artificial breeding services without access to the data; the products produced by LIC and Ambreed are differentiated; forecasting impacts that are more than seven years in the future is problematic; and the link between access to the database and any loss of market share by LIC is indirect. However, leaving aside these concerns, it is possible to calculate an ECPR price by making a number of assumptions. It appears that under a wide range of scenarios, LIC's charge is below that indicated by application of the ECPR.

244. An alternative approach is to consider hypothetically, the likely behaviour of a business that owned the database but was not integrated into downstream markets. It would be in the interests of the database owner to allow access to all parties that were willing to pay the marginal costs of access, and contribute towards fixed costs (and profit). In these hypothetical circumstances, it seems unlikely that the owner would set an access price above Ambreed's willingness to pay, given that in the past Ambreed has been prepared to make a substantial contribution towards fixed costs. The observation that LIC has set an access price above Ambreed's willingness to pay, provides an indication that the pricing might be anticompetitive.

However, little weighting is placed on this conclusion because of the difficulty of determining an unbiased estimate of a party's willingness to pay. Overall, the evidence is insufficient to conclude that LIC's pricing for this service breaches s 36.

245. LIC's price for data for Ambreed's TGRM product appears to be above the ECPR price suggesting it may be in breach of s 36.

246. LIC's price for data for Ambreed's GeneScreen product appears to be above the ECPR price, suggesting it may be in breach of s 36.

247. There is a significant risk that LIC could use its market power to disadvantage Ambreed by delaying the release of data. However, while there is some evidence to suggest this is happening, the information is not sufficient to suggest or prove a breach of s 36.