

OCCASIONAL PAPERS

**Market Inquiry into the Supply of Formula
Milk for Infants and Young Children in
Singapore**

10 May 2017

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Director, Policy & Markets Division

The Competition Commission of Singapore

45 Maxwell Road

#09-01 The URA Centre

Singapore 069118

Email: ccs_feedback@ccs.gov.sg

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Contents

EXECUTIVE SUMMARY	4
I. BACKGROUND OF MARKET INQUIRY	7
II. OVERVIEW OF FORMULA MILK SUPPLY CHAIN IN SINGAPORE.....	10
III. REGULATIONS IN RELATION TO FORMULA MILK IN SINGAPORE	12
IV. MANUFACTURERS	22
V. DISTRIBUTORS.....	32
VI. RETAILERS.....	33
VII. HOSPITALS.....	39
VIII. CONSUMER BEHAVIOUR AND PREFERENCES	44
IX. PRICES AND COST ANALYSIS	50
X. BRAND RECOGNITION AND LOYALTY	58
XI. BARRIERS TO PARALLEL IMPORT	61
XII. RECOMMENDATIONS	65
XIII. CONCLUSION.....	74
Annex A.....	75
Annex B.....	80
Annex C.....	86

Market Inquiry into the Supply of Formula Milk for Infants and Young Children in Singapore

EXECUTIVE SUMMARY

CCS started a market inquiry into the supply of Formula Milk in Singapore in late 2015 to understand the significant increase in prices of Formula Milk in Singapore in recent years. This market inquiry sought to understand the Formula Milk supply chain in order to assess the nature of competition at each level of the supply chain, and thereafter provide recommendations to improve the functioning of competition in the Formula Milk market(s) in Singapore. CCS completed the inquiry in December 2016.

At the wholesale level, CCS found that Formula Milk manufacturers engage mainly in non-price competition rather than price competition. They adopt strategies which seek to build a premium image for their products, and to entrench consumer brand loyalty instead of competing aggressively on price. For example, all manufacturers invest heavily in research and development on a global level and have continuously introduced new Formula Milk products with modified formulations. Despite the similarity in nutritional standards with other countries, manufacturers often choose to bring in premium formulation into Singapore. To further build up the premium image, some manufacturers also import their Formula Milk products from Europe, Australia and New Zealand because they believe consumers in Singapore have a preference for products from these countries.

Manufacturers also invest in a broad range of marketing activities to expose their brands to consumers, communicate the benefits of their products and encourage early adoption (i.e. lock-in) and/or switching by a minority of consumers at the margins. In this regard, CCS notes that marketing expenditure by manufacturers increased significantly over the period of study. In particular, the hospital channel receives a significantly higher share of marketing expenditure compared to its share of total revenue. Manufacturers provide sponsorship and/or payments to the private hospitals for participation in their milk rotation systems. Given that majority of parents who use Formula Milk in hospitals do not have a preferred brand and tend not to switch brands of Formula Milk after leaving the hospital, manufacturers have invested significant efforts and resources into the marketing activities in the hospital channel to gain a 'first-mover' advantage.

Such features of the Formula Milk market can present significant barriers to entry for new brands or barriers to expansion for existing brands which do not engage in such efforts. It may be challenging for a new entrant to gain traction among consumers in a short period of time as awareness and trust in a brand takes

time to build up. Manufacturers who wish to enter the market must devote significant resources to convince consumers of the 'premium' status of their products through a combination of marketing and innovation. It may be even more challenging for a new entrant to impose significant competitive pressure on the incumbents in view of the incentives of retailers and how consumers are influenced.

At the retail level, CCS found that retailers such as supermarkets and pharmacies are keen to stock mainly what consumers demand. To this end, they assess the manufacturers' marketing plans when making decisions on what Formula Milk brands to stock. This may further reinforce the brand loyalty displayed by consumers, exacerbate information asymmetry and present significant barriers to entry for new brands or expansion for existing brands. Major retailers (i.e. supermarkets, hypermarkets and pharmacies) prefer to obtain their Formula Milk supply only from the local authorised distributors of the Formula Milk manufacturers, and do not consider parallel importing as a viable alternative. Given that they do not have alternative sources of supply (i.e., parallel import), these major retailers tend to be price takers and have limited ability to counter the price increases by the manufacturers and/or distributors.

At the consumer level, CCS found that brand-name, nutrition and safety are top attributes that consumers look out for when deciding on which brand to use. Parents in Singapore exhibit strong brand loyalty when purchasing Formula Milk. Word of mouth and the brand of Formula Milk that is used in the hospital's maternity ward are important ways by which parents are influenced in their choice of the brand of Formula Milk. There is also a certain degree of information asymmetry on the nutritional content and requirements of infants and young children, as some parents appear to perceive the more expensive or premium products to be of better quality and, therefore, better for their children. The resulting brand loyalty and the limited effectiveness of price competition in encouraging parents to switch to a new brand could pose as a formidable barrier to entry for new Formula Milk brands.

Intra-brand competition (i.e. competition between retailers selling the same brand) also appears to be weak due to the negligible presence of parallel imports in Singapore. This could be due to the labelling and import documentation requirements, for which compliance is challenging for parallel importers. While parallel importing is not impossible, it is not occurring on a sufficient scale so as to pose a significant competitive constraint on the major Formula Milk manufacturers.

The significant barriers to entry and weak price competition have given the major Formula Milk manufacturers the market power to increase prices. CCS's analysis of the prices and costs of Stage 1 (for babies aged 0 to 6 months) and Stage 2 (for infants aged 7 to 12 months) Formula Milk products over the period of study supported this. The costs of manufacturing the Formula Milk (excluding

operating expenses such as marketing and manpower expenses) (also known as “cost of goods sold”) have been increasing for some but not all manufacturers. Instead, the difference between the wholesale prices charged by the manufacturers and their unit cost of goods sold for the products under study has been increasing in general and is the main driver for the increase in retail prices. The increase in mark-up of wholesale prices over costs of goods sold was likely driven by the heavy investment into marketing and research & development activities undertaken by the Formula Milk manufacturers. Such “premiumisation” strategies further strengthen consumer perceptions and entrench consumer purchasing behaviours, which in turn give the Formula Milk manufacturers the market power to increase wholesale prices. CCS has observed that Formula Milk prices in Singapore were higher than most benchmarked economies, along with China and Hong Kong.

As price competition for Formula Milk appears to be weak in Singapore, CCS has three broad recommendations to lower barriers to entry and to improve the level of price competition particularly between manufacturers:

1. Educate consumers on the nutritional content of Formula Milk and the nutritional requirements of infants and young children, and to improve consumer awareness of the availability of a variety of Formula Milk products at different price points. This will allow consumers to understand the choices available in the market and to make more informed decisions rather than relying on perceptions such as “more is better” or “more expensive means better quality”. This would help to increase price competition over time;
2. Encourage price competition (i) within the same brands by reviewing parallel importation rules while still maintaining food safety and security, as well as (ii) between brands through exploring the introduction of private labels. Both measures will help to widen the pool of Formula Milk suppliers in Singapore; and
3. The sponsorships and payments that Formula Milk manufacturers provide and their impact on the milk rotation programmes in the hospitals could be reviewed. This can help to reduce a barrier to entry and expansion for new and existing brands.

The recommendations complement each other as a wider pool of Formula Milk suppliers will provide more options to consumers, while more informed consumers who are able to exercise their choices wisely will incentivise suppliers to price competitively and improve price competition in the market.

I. BACKGROUND OF MARKET INQUIRY

Impetus for Market Inquiry

1. Singapore's birth rates have been falling and our Total Fertility Rate ("TFR") has been below the replacement rate of 2.1 for more than three decades.¹ Multi-faceted factors affect Singaporeans' decisions to marry and have children, including practical concerns such as the cost of child care, healthcare expenses and other costs of raising a family.²

2. One aspect of the cost of raising children is the cost of formula milk for babies, infants and young children (collectively "Formula Milk"). While breast milk is encouraged and recommended for babies³, it can be challenging for mothers to continue breastfeeding when they return to work after their maternity leave. There could also be medical or other reasons which result in the need for Formula Milk.

3. In this respect, the rising price of Formula Milk is a potential concern and forms the impetus for this inquiry. According to statistics from the Singapore Department of Statistics, the average retail price of Formula Milk has more than doubled over the past nine years (see Chart 1). There have also been reports and articles in newspapers reflecting the concerns of parents regarding this issue (see Figure 2). Hence, in October 2015, CCS started a market inquiry into the supply of Formula Milk in Singapore with the following objectives:

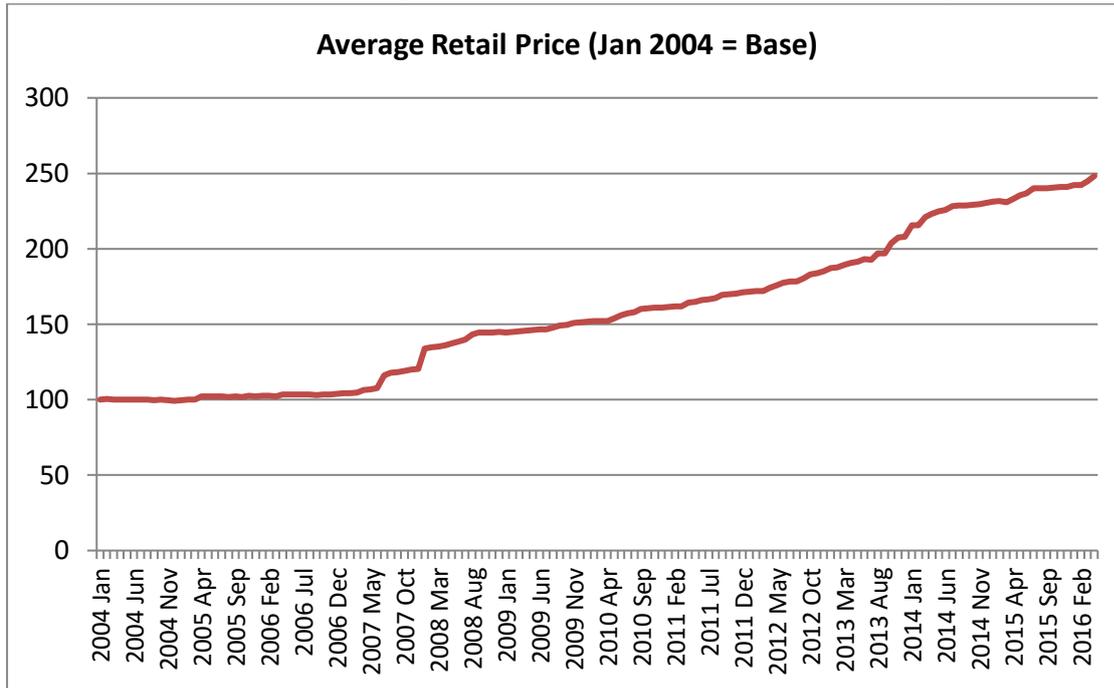
- a. To understand the supply chain, namely the market structure, market features and industry participants involved at each level of the supply chain, related to the supply of Formula Milk;
- b. Assess the nature of competition at each level of the supply chain; and
- c. Assess if there is scope to increase competition in any parts of the supply chain and develop recommendations to improve the functioning of these markets.

¹ Paragraphs 1.2 and 1.3, *A Sustainable Population for a Dynamic Singapore (Population White Paper)*, National Population and Talent Division, January 2013.

² Paragraph 2.4, *A Sustainable Population for a Dynamic Singapore (Population White Paper)*, National Population and Talent Division, January 2013.

³ <http://www.hpb.gov.sg/HOPPortal/article?id=5498>.

Chart 1: Average Retail Prices of Formula Milk in Singapore



Source: Singapore Department of Statistics

Figure 2: Article on Rising Formula Milk Prices

Parents sour over baby-milk prices

From: Parents sour over baby-milk prices **Tag:** switching from formula to milk

It costs twice as much to feed your baby today
Milk formula prices here have more than doubled on average since 2004
 By Kash Cheong, The Straits Times, 15 Dec 2014

THE average price of baby milk has more than doubled in the past decade and parents say they are feeling the pinch.

In 2004, the average price of formula, including that for infants and for babies six months and older, was \$22.66 for a 900g tin. It has climbed steadily to hit \$50.01 in October this year from an average of \$44.30 last year, according to figures obtained recently by The Straits Times from the Department of Statistics.

Baby milk showed the steepest price rise among dairy products.

According to Department of Statistics figures, prices went up by 11 per cent for eggs and 68 per cent for condensed milk over the last decade. A one-litre pack of fresh milk increased by 14 per cent from \$2.53 in 2004 to \$2.89 this October.

PUNCH LINES

NEWS ITEM #1 First SG50 gift sets ready to welcome babies next year

Next year...

What?? No milk powder vouchers??

NEWS ITEM #2 Steep increase in baby milk prices: Parents feel the pinch

Source: The Straits Times, 15 Dec 2014

Methodology and Stakeholders Consulted

4. In this market inquiry, CCS utilised a variety of approaches to engage stakeholders to better understand the supply chain. CCS met with selected Formula Milk manufacturers, distributors and retailers to understand their roles in the supply chain, model of operations in Singapore and strategies in relation to Formula Milk. CCS also met representatives from selected hospitals to understand how Formula Milk

is used in hospitals in Singapore and how Formula Milk manufacturers partner hospitals to conduct activities and programmes. CCS also engaged relevant government agencies to understand the various regulations governing the import and sales of Formula Milk in Singapore. CCS exercised powers under section 61A of the Competition Act (Chapter 50B) (“the Act”) to request documents and information from identified stakeholders.⁴ CCS thanks all stakeholders who have provided valuable inputs to this inquiry.

Timeline of Market Inquiry

5. CCS engaged stakeholders in the Formula Milk industry between October 2015 to August 2016 to obtain information for the purpose of the market inquiry. The report was finalised in December 2016.

Limitations and Suggestions for Further Study

6. CCS also notes the following limitations to this market inquiry. First, as most of the manufacturers’ manufacturing facilities are located outside of Singapore, CCS was unable to obtain sufficient information to study developments at the upstream manufacturing level in greater detail. Many decisions are made at the global headquarters level and local related entities may not be privy to such decisions. Second, most of the insights on consumer behaviour were obtained from industry reports, feedback from stakeholders such as private hospitals and retailers, and discussions with other experts such as healthcare professionals. Further understanding of consumer behaviour and decision making will be useful to shape the implementation of the recommendations and for other areas of policymaking which go beyond the scope of this report.

⁴ 61A. **Power to require documents or information**

—(1) Where the Commission —

(a) has reasonable grounds for suspecting that any feature, or combination of features, of a market in Singapore for goods or services prevents, restricts or distorts competition in connection with the supply or acquisition of any goods or services in Singapore;

[...]

the Commission may, by notice in writing to any person, require the person to produce to the Commission a specified document, or to provide the Commission with specified information, which the Commission considers relates to any matter relevant to such purposes.

II. OVERVIEW OF FORMULA MILK SUPPLY CHAIN IN SINGAPORE

Formula Milk Products

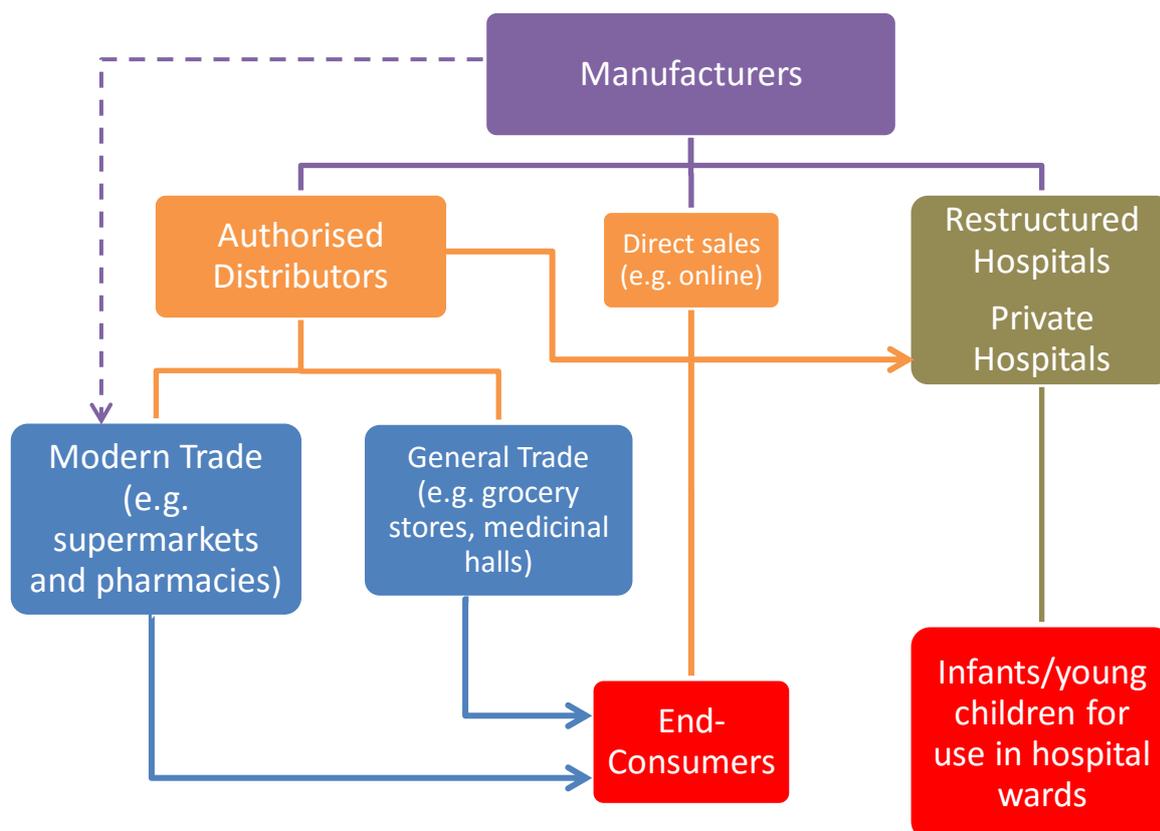
7. For the purposes of this market inquiry,
- a. “Baby” or “Babies” shall refer to a person or persons respectively of not more than six months of age;
 - b. “Infant” or “Infants” shall refer to a person or persons respectively of not more than 12 months of age;
 - c. “Young Children” shall refer to persons who are more than 12 months but not more than six years of age;
 - d. “Baby Formula Milk” shall refer to Formula Milk for Babies; and
 - e. “Infant Formula Milk” shall refer to Formula Milk for Infants.
8. While there are many different types of formula milk products catering to diverse target groups from babies to the elderly and their diverse needs, the scope of this inquiry is confined to products for Babies, Infants and Young Children, i.e., from 0 months to 6 years of age. Typically, these Formula Milk products are categorised into four groups:
- a. **Starter Milk**, also known as Stage 1 Milk (for 0-6 months);
 - b. **Follow-on Milk**, also known as Stage 2 Milk (for 7-12 months);
 - c. **Growing-up Milk**, or Stage 3 onwards (for 1-6 years); and
 - d. **Specialty Milk** (special formula for Babies, Infants and Young Children with special dietary needs).
9. The brands of Formula Milk available in Singapore typically cover the entire range from Starter Milk to Growing-Up Milk and even Specialty Milk (“milk segments”). There are price differences across the four segments, with Starter Milk being typically more expensive, and products for infants and older children being cheaper on a per 100 grams basis.
10. Formula Milk can be in powder, liquid concentrate and ready-to-feed (“RTF”) forms. RTF forms come in small-sized, individual bottles and are generally only available in the hospitals in Singapore⁵ when breastfeeding is not possible, when there are medical reasons which prevent breastfeeding, or when the parents request for it (although it is noted that RTF form for certain brands of Follow-on Milk has recently entered the market). The packages available in retail outlets for powder form come in different packaging sizes ranging from 400g to 1.8kg. There may also be packages comprising multiple packs or tins for sale as one entire package during promotions.

⁵ Paragraph 5.8, Sale of Infant Foods Ethics Committee Singapore (SIFECs) Code of Ethics, <http://www.hpb.gov.sg/HOPPortal/health-article/7112>.

Formula Milk Supply Chain in Singapore

11. The Formula Milk supply chain in Singapore consists of various stakeholder groups and the relationships between them are depicted in Figure 3 below. The main players in each group, their activities and the relationships between the different groups, as well as the regulations governing their activities are elaborated in the sections that follow.

Figure 3: Formula Milk Supply Chain in Singapore (Simplified)



III. REGULATIONS IN RELATION TO FORMULA MILK IN SINGAPORE

Section Summary:

- There are several sets of rules and regulations governing various aspects of Formula Milk in Singapore including (i) nutritional content; (ii) labelling; (iii) import; and (iv) sales and advertising of Formula Milk.
- These include the Agri-Food and Veterinary Authority of Singapore's ("AVA") Food Regulations under the Sale of Food Act (Cap. 283), as well as the Code of Ethics on the Sale of Infant Foods in Singapore formulated by the Sale of Infant Foods Ethics Committee Singapore ("SIF ECS") under the Health Promotion Board ("HPB").
- Such regulations on Formula Milk might have an impact on or influence competition in the market(s) for Formula Milk. The potential impact on competition of these regulations, taking into account features in other parts of the supply chain, is explored further in Section XI.

12. Regulators and policymakers are particularly concerned over the safety and nutritional aspects of Formula Milk given that it is consumed by a highly vulnerable segment of the population. In particular, Infants are unable to detect or clearly communicate any concerns on their key source of nutrition. Drinking tainted Formula Milk will have dire and possibly fatal consequences for them. As such, there is a need to ensure that the Formula Milk available in the market is of a suitable quality and obtained from a trusted source.

13. In this regard, CCS understands that **there are four key sets of rules and regulations governing various aspects of Formula Milk in Singapore including (i) nutritional content; (ii) labelling; (iii) import, and (iv) sales and advertisements of Formula Milk.**

(i) Requirements on Nutritional Ingredients

14. The permissible ingredients and contents of Infant Formula Milk⁶ are set out under regulations 251, 252 and 253 of the Food Regulations, Sale of Food Act (Cap. 283) ("Food Regulations"). Specifically, regulation 252(3) of the Food Regulations is prescriptive of the levels of protein, vitamins, minerals, etc. in Infant Formula Milk. Extracts of the relevant Food Regulations are set out in Annex A.

⁶ "Infant" is defined in Food Regulations, Sale of Food Act (Cap. 283) as a person not more than 12 months of age.

15. The national standards for Infant Formula Milk⁷ around the world usually take reference from the Codex Alimentarius⁸ (“Codex”), which is also known as “Food Code”. The Codex is put together by the Codex Alimentarius Commission which is an intergovernmental body with over 180 members established by the Food and Agriculture Organization of the United Nations (“FAO”) and the World Health Organization (“WHO”). The Codex is a set of international food standards, guidelines and codes of practice whose goal is to protect the health of consumers and ensure fair practices in the food trade.⁹ International governmental and non-governmental organizations can become accredited Codex observers to provide expert information, advice and assistance to the Commission.¹⁰ AVA is a member of the Codex Alimentarius Commission.

16. The requirements under our Food Regulations are generally less strict than Codex as Singapore’s acceptable ranges for the minerals and nutrients are wider than the levels recommended by Codex. However, the mid-point of Singapore’s acceptable ranges tends to fall within the mid-point of the ranges of the European Union and other international standards. Therefore, all Infant Formula Milk sold in Singapore that conform to the nutritional requirements set out in the Food Regulations should address the nutritional needs of infants, as determined by FAO and WHO. In addition, most Infant Formula Milk from other countries that conforms to Codex is likely to meet Singapore’s standards under the Food Regulations (see Section XI).

(ii) Requirements on Labelling

Under Food Regulations

17. Formula Milk for sale in Singapore is required to be labelled in the English language¹¹. The Food Regulations regulate milk products in general¹² and it also has provisions specifically for Infant Formula Milk¹³. Regulation 248 read with Twelfth Schedule to the Food Regulations imposes general requirements for the labelling of Infant Formula Milk including the format of the label. When there is a representation that suggests or implies that the Infant Formula Milk has a nutritive property, regulation 8A of the Food Regulations requires the label to state the quantity of each nutrient.

⁷ http://npaf.ca/wp-content/uploads/2014/02/CXS_072E-Codex-Standard-Infant-Formula-.pdf. See also <http://www.fao.org/docrep/meeting/005/x7839e/x7839e0r.htm>.

⁸ <http://www.fao.org/fao-who-codexalimentarius/en/>.

⁹ See Preface of Codex Alimentarius, Milk and Milk Products (Second Edition, 2011) <http://www.fao.org/docrep/015/i2085e/i2085e00.pdf>.

¹⁰ <http://www.fao.org/fao-who-codexalimentarius/about-codex/en/>.

¹¹ Regulation 5(2) of the Food Regulations. See also page 3 of *A Guide to Food Labelling and Advertisements* published by AVA (<https://www.ava.gov.sg/docs/default-source/tools-and-resources/resources-for-businesses/aguidetofoodlabellingandadvertisementsversionjuly2.pdf?sfvrsn=2>).

¹² Regulations 34B and 93 to 109 of the Food Regulations.

¹³ Regulations 251 to 254 of the Food Regulations.

18. Regulation 254 of the Food Regulations sets out specific additional labelling requirements for Infant Formula Milk where the following information is to be stated on the label:

- a. directions as to the method of preparation;
- b. the amount of energy and the number of grams of protein, fat and carbohydrate per 100 ml or other equivalents of formula prepared in accordance with the directions on the label;
- c. the total quantity of each vitamin and mineral per 100 ml or other equivalents of formula prepared in accordance with the directions on the label;
- d. a statement suggesting the amount of the prepared food to be given each time, and the number of times such amount is to be given per day; such statement shall be given for each month of the infants' age up to six months;
- e. directions for storage and information regarding its keeping qualities before and after the container has been opened; and
- f. information that infants over the age of six months should start to receive supplemental foods in addition to the formula.

Under SIFECS Code of Ethics

19. There are also further labelling requirements under the SIFECS Code of Ethics on the sale of infant foods which are elaborated below in paragraphs 46 to 49.

(iii) Requirements on Importation of Formula Milk into Singapore

20. A permit is required to import Formula Milk into Singapore unless the import is for personal consumption. Further, AVA requires importers to submit the following documents when applying for an import permit for Infant Formula Milk:¹⁴

- a. Documentary proof (one time submission) that the imported Formula Milk is manufactured in a premise regulated by the competent authority (e.g. certified true copy of the manufacturer's licence);
- b. Health certificate or manufacturer's quality control reports on chemical and microbiological test once every six months;
- c. Health certificate for every consignment must contain the following attestation by the relevant competent authority of the exporting country:

¹⁴ <https://www.ava.gov.sg/docs/default-source/default-document-library/import-requirements-of-specific-food-products.pdf?sfvrsn=0>.

- i. Formula Milk is produced using milk ingredients originating from foot and mouth disease (“FMD”) free countries and that the liquid milk used is pasteurized by heating at a minimum of 72°C for at least 15 seconds or an equivalent process;
 - ii. If the Formula Milk is from FMD affected countries, the Formula Milk had undergone:
 - 1. a sterilisation process applying a minimum temperature of 132°C for at least one second (ultra-high temperature [UHT]);
 - 2. if the milk has a pH less than 7.0, a sterilisation process applying a minimum temperature of 72°C for at least 15 seconds (high temperature - short time pasteurisation (“HTST”), or
 - 3. if the milk has a pH of 7.0 or over, the HTST process applied twice.
- d. The health certificate should include the following information:
- i. Description of the products including brand name and nature of product;
 - ii. Quantity in the appropriate units;
 - iii. Lot identifier and date of production;
 - iv. Name and address of the manufacturer or the processing establishment;
 - v. Name and address of the importer or consignee;
 - vi. Name and address of the exporter or consignor;
 - vii. Country of dispatch; and
 - viii. Country of destination.

21. As of 1 January 2014, importers of Formula Milk from Malaysia are subject to the Enhanced Regulated Source Programme (“ERSP”) (i.e. they must be obtained from Malaysian food manufacturing establishments that have been registered with the Malaysian Ministry of Health).¹⁵ The only two permitted sources of Formula Milk from Malaysia are Danone Dumex Sdn. Bhd. and Dutch Lady Industries Sdn. Bhd.¹⁶

22. Under the ERSP, importers of food products monitored under ERSP are required to produce documentary proof including laboratory reports that the producers

¹⁵ <https://www.ava.gov.sg/explore-by-sections/food/bringing-food-into-singapore-and-exporting/commercial-food-imports>.

¹⁶ <https://www.ava.gov.sg/docs/default-source/default-document-library/list-of-registered-export-establishment-of-food-product-to-singapore-updated-30-september-2015.pdf?sfvrsn=0>. Nestle Products Sdn. Bhd. is a permitted source for only infant cereals.

or manufacturers in Malaysia are from registered sources certified by the Malaysian Ministry of Health. Importation will not be allowed without these documents. The ERSP consequently ensures an upstream control at its source and better management of food safety for the protection of public health.

23. AVA allows individual consumers to bring into Singapore processed food products (which includes Formula Milk) from overseas for their personal consumption provided that the limit of either 5 kg/5 litres or \$100 in value is not exceeded, and¹⁷

- a. the type of food product is allowed;
- b. the source country is approved by AVA; and
- c. the food products will not be sold commercially.

24. The general personal consumption allowance (“Personal Allowance”) referred to in paragraph 23 will also apply to consumers who purchase Formula Milk from overseas retailers over the internet and subsequently import them into Singapore. However, should the individual consumer wish to bring in larger quantities of Formula Milk from overseas, an import permit is required and the food products may be considered as a commercial food import subject to AVA’s import regulatory procedures.

(iv) Requirements on Sale of Infant Foods

25. The WHO advocates exclusive breastfeeding for the first six months of an infant's life as it provides all the energy and nutrients needed for growth, development and protection against infectious and chronic diseases.

26. To guide the marketing practices of the infant food industry as well as protect and promote the practice of breastfeeding in Singapore, the Ministry of Health (“MOH”) established SIFECs in 1979. With the establishment of HPB in 2001, the administration of the SIFECs was transferred from MOH to HPB. SIFECs is primarily made up of healthcare professionals from the public and private healthcare sector. SIFECs formulated and implemented the “Code of Ethics on the Sale of Infant Foods in Singapore” (“SIFECs Code”) and it would decide if any company has violated the SIFECs Code. In response, the Singapore Infant Food Industry (“SIFI”) Self-Regulatory Committee, comprising Abbott Nutrition, Danone Asia Pacific Holdings, FrieslandCampina Singapore, Mead Johnson Nutritionals, Nestle Singapore and Wyeth Singapore¹⁸, was established to evaluate the marketing practices of the milk manufacturers.

¹⁷ <https://www.ava.gov.sg/explore-by-sections/food/bringing-food-into-singapore-and-exporting/bringing-food-for-personal-use>.

¹⁸ <http://apiycna.org/singapore/>.

27. The paragraphs below summarise the main provisions of the SIF ECS Code. A full exposition of the SIF ECS Code is provided in Annex B.

Aim, Functions and Objectives of SIF ECS Code

28. The aim of the SIF ECS Code is to contribute to the provision of safe and optimum nutrition for infants, by protecting and promoting the practice of breastfeeding, through the provision of guidelines to guide the marketing and distributing practices of breast milk substitutes in Singapore.¹⁹

29. The SIF ECS Code also recognises that there is a legitimate market for Infant Formula Milk, which is formulated to provide an alternative, if breastfeeding is not possible. However, the sale and distribution of infant formulas should be carried out in such a way so as to avoid competing with breast milk. Therefore, the marketing of Infant Formula Milk requires special attention.

Scope of the SIF ECS Code

30. The SIF ECS Code applies to the promotion, marketing and distribution practices of all defined breast milk substitutes, when marketed to be suitable for use as a partial or total replacement of breast milk.²⁰

31. HPB considers the adherence to the SIF ECS Code as obligatory on the entire Baby food industry operating in Singapore, regardless of whether the companies are signatories to the SIF ECS. Companies of the Baby food industry are responsible for monitoring their marketing practices in order to ensure that they follow the guiding principles and aims of the Code. This will be supervised by the SIF ECS.²¹ However, it is noted that there are no specific remedies set out in the SIF ECS Code in the event of a breach of the Code.

¹⁹ Paragraph 1, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

²⁰ Paragraph 3, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>). Breast Milk Substitutes refer to any food marketed or otherwise represented as a partial or total replacement for breast milk, whether or not suitable for that purpose. These include:

- Infant formulas (for infants from birth to six months of age)
- Complementary food such as cereals, juices, water and other baby food (for infant after 6 months of age).

²¹ Paragraph 10.1, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

Informational and Education Materials²²

32. The Baby food industry must ensure that informational and education materials provided on feeding are objective and consistent with guidelines of HPB.

33. The materials must carry a notice that breast milk is the best for babies and exclusive breastfeeding is recommended by WHO for the first six months of life and, thereafter, infants should receive age-appropriate foods while breastfeeding continues for up to two years of age or beyond. All nutrient claims must be evidence-based and not supersede breast milk. Materials can only be distributed through healthcare professionals. All informational and educational materials on breast milk substitutes, within the scope of the Code, must be approved by the vetting committee of the SIF ECS.

Baby Food Industry Practices²³

34. Company personnel must not, as part of their job responsibilities, provide advice or any type of educational services to pregnant women or parents of Babies and young children. All advice on the use of breast milk substitutes can only be given by doctors, nutritionists/dietitians, nurses, voluntary consumers' group and breastfeeding specialists. Company personnel are to be excluded from speaking at, or organising public education events and/or parental counselling sessions on Baby feeding. This includes doctors, nurses and nutritionists/dietitians in the company's employment.

35. Sales and marketing personnel responsible for marketing and promoting breast milk substitutes must not have their sales incentive schemes tied to the volume of sales of these products. No financial inducements are allowed to be offered to hospitals, clinics and retail pharmacies.

36. The Baby food industry may sponsor medical events such as health talks and public forums only with the relevant professional bodies and societies as the main organisers. They cannot speak at these events, regardless of the content.

37. Baby Formula Milk must not be sold online. The Baby food industry should discourage retailers and other third parties from selling their Baby Formula Milk online or offer delivery services. Baby Formula Milk sold at supermarkets must not have 'point of sale' materials such as shelf-talkers or be in a blockstack display. Baby Formula Milk must only be displayed within the allocated/normal shelf space.

²² Paragraph 4, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

²³ Paragraph 5, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

38. The Baby food industry must not give discounts on the bulk purchase or provide any financial or material inducement, directly or indirectly, that would encourage such bulk purchases. This restriction applies to all sales channels including retail, institutional and online channels.

39. The Baby food industry may sponsor healthcare professionals' attendance and participation in symposiums, congressional meetings and other medical/healthcare or education programmes. However, the sponsorship should be limited to the invited healthcare professional's meals and registration fees and, if the event is held overseas, travel and accommodation costs.

Supplies to Hospitals²⁴

40. The use of Baby Formula Milk must be decided by healthcare staff based on the Baby's and mother's clinical condition. Bottles of pre-prepared milk should be treated as medications and should not be distributed and left on baby cots as a routine. Hospital staff should ensure that bottles of Baby Formula Milk are kept in storage, out of sight of parents and visitors, to avoid the implication that anything other than breastfeeding is the preferred method of feeding in the hospital. RTF Baby Formula Milk must only be used in hospital wards and must not be offered for sale to the public.

41. Donations of Formula Milk by the Baby food industry may not be made to hospitals, with the exception of RTF Formula Milk for pre-term Babies. Only healthcare professionals such as doctors and state registered nurses are entitled to order Formula Milk and at a special pricing which cannot be resold at a higher price.

Product Samples²⁵

42. Manufacturers are not allowed to distribute samples and retail packs of breast milk substitutes within the scope of SIF ECS to pregnant women, mothers or members of their families or healthcare professionals. Home deliveries of Baby Formula Milk samples or any gifts of equipment or utensils which may promote the use of breast milk substitutes are also not allowed. Samples of Baby Formula Milk cannot be distributed to public and private clinics. The restriction applies to distributing samples to doctors.

²⁴ Paragraph 6, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

²⁵ Paragraph 7, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

Product Advertisement and Promotion²⁶

43. Direct advertising (including advertisements on the internet) of Baby Formula Milk to the general public is prohibited, except when the advertisements are approved by the vetting committee of the SIF ECS and/or targeted at healthcare professionals.

44. The Baby food industry cannot organise point-of-sale promotions to induce sales at the retail level. These include price-off offers and discount coupons.

45. The Baby food industry can mention certain nutrients on their websites and also link to peer-reviewed scientific references (with links to the full paper). However, the websites must not provide links to the products, use terms like 'smart', 'intelligent' and 'intellectual potential' or other such terms that imply or create a belief that the products are equivalent or superior to breastfeeding.

Labelling Requirements²⁷

46. The labelling cannot imply that the products are superior to breast milk. All product information should appear on labels as part of the milk can and not in the form of can inserts or attachments (e.g. stickers, shelf-talkers).

47. Can labels can only provide information on the appropriate use of the product and not instructions or illustrations which encourage progression to follow-on formulas, or interfere with the promotion of breastfeeding. Violation of this article will entail immediate removal of the product off the shelf without a grace period.

48. Can labels must carry a prescribed notice stating that breast milk is the best for babies and recommended by WHO to be exclusive for the first six months. Specifically, can labels must carry the term 'Important Notice', under which, the following information must be printed in letters, not less than 1.5 millimetres in height:

“Breast milk is the best for babies. The World Health Organisation recommends exclusive breastfeeding for the first six months of life. Unnecessary introduction of bottle feeding or other food and drinks will have a negative impact on breastfeeding. After six months of age, infants should receive age-appropriate foods while breastfeeding continues for up to two years of age or beyond. Consult your doctor before deciding to use infant formula or if you have difficulty breastfeeding.”

²⁶ Paragraph 8, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

²⁷ Paragraph 9, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

49. Such prescriptive labelling requirements on both the language used and how they are to form part of the can could effectively limit or prevent parallel imports of the same product from other countries which do not use the English language or do not have the specific labels required.

Implications of such Regulations on the Supply of Formula Milk in Singapore

50. The rules and regulations on Formula Milk discussed in this section might have an impact on or influence the extent of competition in the market for Formula Milk. Their potential impact on competition, taking into account features of the other parts of the supply chain discussed below, are explored further in Section XI.

IV. MANUFACTURERS

Section Summary:

- There are six major manufacturers which supply Formula Milk in Singapore, namely, Abbott, Mead Johnson, Nestle, Wyeth, Danone and FrieslandCampina.
- All major Formula Milk manufacturers in Singapore engage third-party distributors in Singapore.
- Most manufacturers adopt a global or regional strategy with regard to decisions such as manufacturing sites, research and development (“R&D”) focus and packaging sizes.
- Most manufacturers shared that their main strategy for competing with competitors is in quality and innovation.
- All manufacturers invest heavily in R&D on a global level. As a result of R&D efforts, Formula Milk manufacturers have continuously introduced new Formula Milk products with modified formulations or packaging during the period of study.
- Formula Milk products can be classified based on pricing into standard or premium brands. Consumers have a range of products from different brands at different price points to choose from. However, it is estimated that about 95% of Formula Milk sales in 2015 were premium and Specialty Milk, with 5% being standard milk.
- Manufacturers invest in a broad range of marketing activities to expose their brands to consumers, communicate the benefits of their products and encourage early adoption and/or switching by a minority of consumers at the margins.
- There has been an increase in marketing expenditure over the period 2010 to 2014, for which data was available. CCS found that total marketing expenditure by all major manufacturers increased by 42.4% between 2010 and 2014. The increase can be attributed to more product launches and expanded product portfolio which necessitates higher marketing investments to build brand equity and strengthen market positioning.
- Price competition generally takes two forms: (i) lower product list prices, and, more commonly, (ii) promotions such as discounts, bundled packages and coupons at the retail level.
- It is considerably easy for a new manufacturer to enter the Singapore market by adopting an import and distribution model. This is insofar as the product formulation meets local regulatory requirements such as labelling requirements.
- However, consumers’ perceptions and brand loyalty, coupled with the extensive marketing and branding efforts by incumbent Formula Milk manufacturers are likely to make it challenging for a new manufacturer to enter the Singapore market successfully with a new brand.

Manufacturers' Products and Market Shares

51. There are six major manufacturers which supply Formula Milk into Singapore, namely Abbott Laboratories (Singapore) Pte. Ltd. ("Abbott"), Mead Johnson Nutrition (Singapore) Pte. Ltd. ("Mead Johnson"), Nestle Singapore Pte. Ltd. ("Nestle"), Wyeth Nutrition (Singapore) Pte. Ltd. ("Wyeth")²⁸, Danone Dumex Early Life Nutrition Singapore Pte. Ltd. ("Danone") and FrieslandCampina (Singapore) Pte. Ltd. ("FrieslandCampina"). The smaller Formula Milk manufacturers which supply to Singapore include Bellamy, Hipp, Holle, Wakado and Bimbosan. All of these manufacturers supply organic Formula Milk, which is a type of Specialty Milk, except Wakado which supplies Stage 3 Formula Milk.

52. Although all major manufacturers supply Starter, Follow-on, and Growing-up Formula Milk products, these products can be further classified into standard or premium brands ("milk categories") based on pricing. Manufacturers tend to focus on premium brands in Singapore with only two of them offering standard brands in addition to premium brands. All standard, premium and specialty brands/products meet AVA's nutritional regulations while premium brands include additional ingredients such as Docohexaenoic acid ("DHA"), Fructooligosaccharides ("FOS") or Galacto-oligosaccharides ("GOS"). Specialty milk products are tailored to suit young children with special dietary requirements such as lactose intolerance or indigestion. Table 4 below shows the list of Formula Milk brands supplied by each manufacturer in Singapore.

Table 4: Formula Milk brands in 2015²⁹

Manufacturer	Standard brand(s)	Premium brand(s)	Specialty brand(s)
Abbott		Similac Gain Grow	Isomil Total Comfort Similac Reduce Spit Up Similac Human Milk Fortifier Similac Neosure Similac Special Care Alimentum Pediasure Propimex Prophree
Danone	Dulac Dupro	Mamil Gold	Mamil Gold HA Mamil Gold Soy

²⁸ Wyeth was acquired by the Nestle Group in December 2012.

²⁹ Full list of manufacturer products are shown in Annex C.

	Dugro		Mamil Gold
Friesland Campina		Friso Gold	Frisolac Comfort Frisolac Soy
Mead Johnson		Enfagrow Enfamil	Enfalac/Enfamil AR Enfamil HA Enfamil Gentlease Enfamil Post discharge Lactofree Nutramigen Prosobee
Nestle	Lactogen	Nan Pro Nan Gro Nan Kid	Nan AL Nan Lactose Free Nan Sensitive
Wyeth		S26 Gold S26 Promil Gold S26 Progress Gold S26 Promise Gold	S26 Picky Eater Gold S26 Gold Nursoy

53. In 2015, approximately 95% of Formula Milk sales were premium and specialty milk while only around 5% were standard milk. Table 5 below shows the range of retail prices of a selection of brands for Stage 1 Formula Milk supplied by manufacturers in Singapore. Within standard and premium categories of Formula Milk, consumers have a range of brands at different price points to choose from. This applies for all stages of Formula Milk.

Table 5: Price comparison between Formula Milk brands³⁰

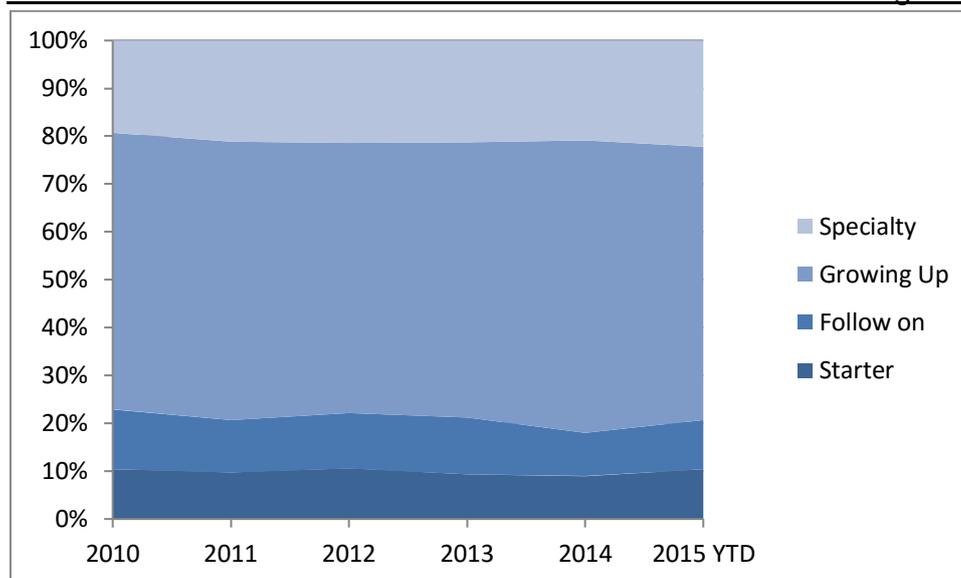
Manufacturer	Brand	Stage 1 Retail Price (Packaging Size)	Retail Price/900g
Abbott	Similac	\$59.90 (850g)	\$63.42
Mead Johnson	Enfamil	\$59.10 (900g)	\$59.10
FrieslandCampina	Frisolac Gold	\$55.00 (900g)	\$55.00
Danone	Mamil	\$51.90 (850g)	\$54.95
Danone	Dulac	\$19.90 (800g)	\$22.39
Nestle	Nan	\$52.60 (800g)	\$59.18
Nestle	Lactogen	\$39.60 (1.8kg)	\$19.80
Wyeth	S-26	\$57.20 (900g)	\$57.20

³⁰ Retail prices are applicable as at October 2015.

Trends in Formula Milk Segments

54. Out of the different segments of Formula Milk, Growing-up Milk has consistently formed the largest share of the market (57.12% in 2015) with Specialty Milk forming the next largest segment (22.18% in 2015). This is because Formula Milk classified in these segments cater to children of a wider age range as compared to Starter or Follow-on Milk. The market shares of each milk segment have remained relatively constant over the years as seen from Chart 6 below.

Chart 6: Share of total sales revenue for each Formula Milk segment



Manufacturing Strategies

55. Formula Milk manufacturers adopt a range of strategies in relation to their Formula Milk's route to market. With regard to the location of manufacturing facilities, there are several key considerations, including proximity to key markets, availability of skilled labour, consumer preferences, logistics and image of products. Economies of scale is also an important consideration to fully utilise factory capacity. That said, most manufacturers adopt a global or regional strategy with factories supplying to more than one country. Hence, such decisions on manufacturing sites are often taken on a global basis and local subsidiaries generally do not make such decisions.

56. Majority of the manufacturers prefer to import their Formula Milk products into Singapore from their overseas manufacturing facilities instead of setting up a manufacturing facility in Singapore. The downside to manufacturing in Singapore would be high utility costs and the lack of local sources of raw materials. The need to import from other countries raises raw material costs although manufacturer(s) may

import from Europe, Australia and New Zealand because they believe consumers in Singapore have a preference for products from these countries.

57. Some manufacturers operate Formula Milk manufacturing facilities in Singapore. The advantages for locating manufacturing facilities here include the presence of numerous free trade agreements between Singapore and its trade partners, which lower or remove trade tariffs in relation to Formula Milk products, access to quality talent, lower freight costs to countries in the Asia Pacific and government incentives and grants. Products that are manufactured in Singapore are also valued by other markets due to the stringent food safety and quality standards.

Distribution Strategies

58. All major Formula Milk manufacturers in Singapore engage third party local distributors. Although manufacturers have to pay a distributor margin and may lose a degree of control in certain areas such as focus and immediacy to market conditions, local distributors help manufacturers save costs and time, and ensure greater efficiency by tapping into their distribution networks. Distributors also facilitate sales to general trade retailers (which tend to be smaller but greater in number) due to their good trade relationships with this category of retailers. On top of that, distributors can exploit economies of scale in delivery.

59. Some Formula Milk manufacturers rely solely on third party local distributors while others might perform a combination of direct sales to retailers and/or hospitals and sales through distributors. There is also a trend of manufacturers selling their Formula Milk products online to consumers although the online channel currently contributes a very small share of total sales.

Competition between Manufacturers

60. The nature of competition has to be understood within the context of the relevant market in question. In this respect, although this market inquiry studies the Formula Milk industry generally, the competition assessment below makes reference to possible narrower market definitions and how the narrower market definitions might affect the assessment.

61. Standard, premium vs specialty milk categories. Based on general feedback collected, standard and premium products appear to form separate markets as consumers generally do not consider them to be substitutable. Consumers tend to identify a pool of two to three brands which are substitutable based on their benefits, i.e., nutrition levels. In this regard, it should be noted that manufacturers also tend to classify their Formula Milk products into standard, premium and specialty brands to target different segments of the market. Manufacturers also consider competing products with similar nutritional values to be close substitutes to their products.

62. Starter, Follow-on, Growing-up milk. The possibility of defining narrower markets based on the age of the child is intuitive. Consumers choose from the relevant milk segment based on the age of their child and do not generally switch between segments as the Formula Milk formulation is based on the nutritional needs of the child during that particular age range. This narrower market definition has been supported by at least one Formula Milk manufacturer. Formula Milk products are defined in a similar manner in industry reports.

63. While its relative importance might differ depending on the specific milk category and/or segment, competition between manufacturers of Formula Milk generally takes the following dimensions:

- a. innovation;
- b. branding and marketing; and
- c. pricing.

64. Innovation. All manufacturers engage in non-price competition by investing heavily in R&D on a global level. Most manufacturers shared that their main strategy for competing with competitors is in quality and innovation.

65. Some manufacturers operate R&D facilities in Singapore. R&D activities generally focus on understanding nutritional needs, identifying suitable new ingredients and conducting studies on the target population's palate, in order to introduce new formulations and/or product features. Manufacturers generally undertake R&D initiatives on a global basis, i.e., initiatives undertaken by a local or overseas R&D facility could cater to more than one country and product.

66. As a result of R&D efforts, Formula Milk manufacturers have continuously introduced new Formula Milk products with improved formulations or packaging since 2007. Given the increasing demand for premium products and specialty milk, most of the products introduced since 2007 have been focused on the premium and specialty milk categories. Certain manufacturers are focusing on introducing new specialty milk products targeted at special needs such as digestive care, allergy care and growth development. Some of these products introduced have proven successful in helping the manufacturers capture demand.

67. Innovation also takes the form of new product packaging and package sizes to suit consumer preferences and provide consumers with more choices. That said, package sizes in Singapore are generally chosen from the available package sizes in their factories globally and it would not be feasible to tailor package sizes to Singapore's small market. Changes in package sizes in Singapore have similarly been made to align to changes made at the factories' level globally. In general, Formula Milk products are available in pack sizes ranging between 400g, 650g – 900g and 1.5kg - 1.8kg. The pack sizes cater to different groups of consumers; the small pack sizes

(400g, 650 – 900g) cater to first time or trial users while the larger pack sizes (1.5kg - 1.8kg) cater to heavy brand users. CCS has observed a general downsizing of pack sizes over time. The variety of package sizes provides choices for consumers although attempts at comparing prices might be made more difficult for consumers.

68. Branding and Marketing. Branding and marketing is another critical dimension of competition in the Formula Milk market. Manufacturers invest in a broad range of marketing activities in order to expose their brands to consumers, communicate the benefits of their products to consumers and encourage early adoption and/or switching by consumers at the margins. Feedback suggests that mothers tend to stick to a brand of Formula Milk if it suits their children.³¹ In this regard, it is important for manufacturers to expose their brand to mothers right from the point of birth of their children, i.e., in hospitals, and to invest in marketing activities to influence parents to use their brands at the early stages. In addition, manufacturers also invest in marketing activities to build brand awareness, especially for new products, and to encourage marginal consumers to switch.

69. The marketing activities that manufacturers engage in generally are listed in Table 7 below.

Table 7: Marketing activities by Formula Milk manufacturers

S/N	Marketing Channel	Marketing Activity
1	Hospitals	Below the line (“BTC”) activities: 1) Sponsorship activities – providing funding or support for medical education, e.g., CME talks and workshops, conferences, events, shuttle buses etc. Through sponsorship activities, manufacturers compete to supply their RTF milk for a longer duration to private hospitals. 2) Sales representatives/Nutritional representatives – providing product brochures and samples to health care professionals.
2	General/Modern Trade outlets ³²	BTC activities: 1) Price discounts and bundle promotions. 2) Promotional campaigns including redemptions, lucky draws and in-store road shows and promotions.
3	Traditional media	Above the line (“ATC”) activities: 1) TV/Radio advertisements, print advertisements, events etc.

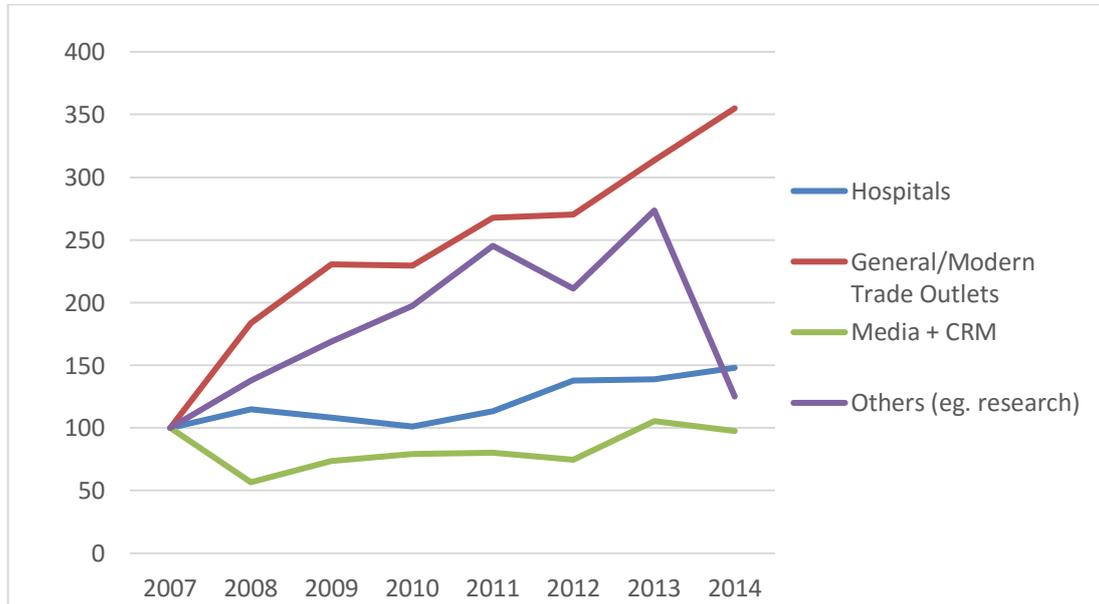
³¹ See Section VIII on Consumer Behaviour and Preferences.

³² General trade generally refers to the smaller retailers such as provision shops and traditional Chinese medicine halls. Modern trade refers to the big retail chains such as supermarket and pharmacy chains.

4	Digital media	ATC activities: 1) Product website, social media.
5	Customer relationship management	BTC activities: 1) Customer hotline and customer membership programs. 2) Samples requested by consumers.

70. There was a general increase in marketing expenditure for all manufacturers from 2010 to 2014.³³ CCS found that total marketing expenditure by all major manufacturers increased by 42.4% between 2010 and 2014. There are numerous factors affecting the marketing expenditure incurred including the launch of products, the number of products within a manufacturer’s portfolio, changes in hospital sponsorship requirements and inflation. Marketing expenditures are higher during the launch phase of a product when television, outdoor advertising, digital media are used to drive mass awareness among target audiences; print and digital media are used to drive educational and content engagement; and promotions are used to drive consumer uptake. The general increase in marketing expenditure can be attributed to increased innovation which in turn resulted in more product launches and expanded product portfolio, that necessitate higher marketing investments to build brand equity and strengthen market positioning.

Chart 8: Annual Marketing Expenditure by Activities (Base = 2007)



71. Over the period from 2007 to 2014, at an industry level, the general and modern trade outlets received the sharpest increase in marketing expenditure (see Chart 8). The traditional and digital media channel, after suffering a drop in 2008, generally received an increased share of the marketing expenditure over this period.

³³ The manufacturers were only able to provide full-year marketing expenditure data from 2010 to 2014.

72. The hospital channel also experienced an increase in marketing expenditure from the Formula Milk manufacturers. The hospital channel receives a significantly higher share of marketing expenditure compared to its share of total revenue. The purpose of marketing through the hospital channel (directly or through healthcare professionals) is to gain early exposure for manufacturers' Formula Milk brands although regulatory requirements may limit the extent of such activities. For example, the SIFECs Code restricts marketing for Starter Formula Milk. Moreover, the hospital rotation system in restructured hospitals ensures that manufacturers supply their RTF milk for an equal duration. Further details are provided in Section VII.

73. Manufacturers carry out their marketing activities in general/modern trade outlets sometimes with the help of their distributors and third-party service providers like merchandisers. Such marketing activities are fully or co-funded by the manufacturers and could be island-wide or targeted at particular retail outlets. Such promotions could take different forms including buying two cans at a discounted price, buying a bundle with freebies or a cost discount to retailers.

74. A majority of the manufacturers adopt the same marketing strategy for different milk segments. One competitor noted, however, that the marketing for Specialty Milk products would be more focused on educating healthcare professionals ("HCPs") in order to provide appropriate recommendations to parents. Marketing strategies for standard and premium products may differ, for example, providing price discounts for standard products while offering other promotions such as free gift redemption for premium products.

75. Pricing. Price competition generally takes two forms: (i) lower product list prices and, more commonly, (ii) promotions such as discounts, bundled packages and coupons at the retail level. Price competition generally takes place more strongly for Growing-up Milk products, perhaps in part reflecting the greater availability of substitutes in terms of food choices for children in this age group.

76. In relation to product list prices charged to retailers and/or distributors, a manufacturer generally takes into consideration its product branding and reputation, cost of raw materials, operating cost and competitors' prices when setting prices. Manufacturers seek to exert an influence on the retail prices of their Formula Milk by providing recommended retail prices ("RRPs") to their retailers, in most instances through their distributors. Such RRP's serve as a guide to retailers and is carefully determined to be the optimal price position to drive sales, build brand loyalty and compete against other Formula Milk brands. However, it is noted that the RRP's are not mandatory; retailers are free to set their own prices.

77. Promotions are typically funded by the manufacturers or co-funded by the manufacturers and retailers. Depending on the distribution agreement, some

distributors will assist the manufacturers in driving such promotions. According to one manufacturer, such promotions help to retain existing customers and gain 'wobbly users' who would be more inclined to switch within their own brand pool in response to price changes.

78. Entry barriers. It is easy for an existing manufacturer to enter the Singapore market by adopting an import and distribution model since it takes approximately two months to obtain the necessary importation licence and appoint a local distributor. This is insofar as the product formulation meets local regulatory requirements such as labelling requirements. Products manufactured in countries with nutritional standards that are aligned to the Codex standard would not face much difficulties meeting Singapore's standards as the latter tends to be slightly less stringent than Codex (see paragraph 16).

79. However, as discussed in Section X, consumers' perceptions and brand loyalty, coupled with the extensive marketing and branding efforts by incumbent Formula Milk manufacturers is likely to make it challenging for a manufacturer that is new to the Singapore market to enter successfully with a new brand. The new entrant not only needs to put in a high amount of sunk investment into marketing, it must still stay within the restrictions against marketing by SIF ECS while trying to build up brand awareness and acceptance.

V. DISTRIBUTORS

80. All major Formula Milk manufacturers engage third-party distributors to distribute their products to retailers. Some engage a single distributor while others have more than one distributor to cater to different types of retailers. Some distributors also distribute for more than one manufacturer.

81. The services provided by the distributors to the manufacturers range from importing, warehousing, logistics, to marketing and sales services. The specific services required may vary from manufacturer to manufacturer. For manufacturers with multiple distributors, the distributors target different categories of retailers or customers. Distributors compete for the businesses of manufacturers in terms of the level of relationships they have with customers (e.g. retailers), experience and understanding of customers' needs and reliability of service, for example in terms of logistics and transportation.

82. In return, distributors charge the manufacturers service fees. Typically the manufacturers' contracts with distributors also specify the sources for supplies to the distributors, and the geographic boundaries of the distributors' coverage. Generally, there are also terms to avoid conflict of interest in terms of distributing products of other competitors.

VI. RETAILERS

Section Summary:

- The bulk of Formula Milk is sold via supermarkets and hypermarkets in Singapore.
- Supermarkets obtain their Formula Milk supply only from authorised distributors of the Formula Milk manufacturers in Singapore, i.e., none of them currently parallel import. Supermarkets have not considered parallel importing due to the amount of work arising from the import process.
- Believing that consumers are brand conscious, and are loyal to their preferred brand, supermarkets focus on stocking the brands and products demanded by consumers. Sales performance (or potential sales performance) is an important consideration.
- When considering whether to stock a new product, supermarkets consider the marketing plan proposed by manufacturers for the new product.
- Retailers tend to be price takers and are subject to price increases by the manufacturers and/or distributors. They do not appear to exert much countervailing buyer power.
- Formula Milk is promoted in conjunction with many other wide ranging products including other baby products and possibly with other unrelated products that supermarkets retail. If Formula Milk is featured in these marketing or promotional activities, they are always conducted in partnership with the manufacturers and/or their authorised distributors.
- There is no evidence that price promotions would result in brand switching. Rather, it appears that the consumer will stock up more of the same brand that they are currently purchasing during a promotion.
- Cheaper Formula Milk brands may not necessarily enjoy higher volume in the market.

83. The main retail distribution points for Formula Milk are modern trade outlets such as supermarkets and pharmacies (including those found in hospitals), and general trade outlets such as provision stores and TCM medical halls.

84. Sales to supermarkets and hypermarkets make up around 65% to 75% of sales by volume and revenue for the manufacturers while sales to general trade outlets makes up around 10% to 25% of sales, with the rest being made up by sales to convenience stores, pharmacies, private hospitals and online sales. According to an industry report, consumers tend to purchase food for their children when they do their usual grocery shopping. In addition, supermarkets and hypermarkets have great accessibility, provide extensive choices and hold frequent promotions. Formula Milk sold in supermarkets and hypermarkets may also be priced more competitively than pharmacies and convenience stores. Pharmacies on the other hand tend to focus on Specialty Formula Milk which is more expensive. The neighbourhood TCM medical

halls sell certain popular brands of Formula Milk at very low prices as part of their marketing strategy to attract customers to patronise their shops.

85. Due to the significance of the modern trade channel, the rest of this section will focus mainly on this channel, i.e., the activities and strategies of supermarkets, hypermarkets and pharmacies (collectively, “supermarkets”) in relation to Formula Milk.

Sources of Formula Milk Supply

86. Supermarkets obtain their Formula Milk supply only from the authorised distributors of the Formula Milk manufacturers in Singapore. Supermarkets prefer to purchase from authorised distributors because Formula Milk is a highly regulated product (as discussed in Section III). The manufacturers and/or authorised distributors will handle the necessary documentation and processes in relation to importing the Formula Milk supplies and ensure that the supplies comply with all relevant regulations in Singapore. In addition, supermarkets also prefer to buy from authorised distributors because of the marketing support provided by the manufacturers’ or distributors’ marketing teams to boost their brands. There will be consistent stocks in supply, better management of that brand of Formula Milk (e.g. product quality) and better traceability in the case of product recalls. Supermarkets may also receive the services of sales merchandisers who can help the stores on merchandising (e.g. replenishment of stocks and checks on the expiry date of the product).

87. As such, none of the supermarkets currently parallel import any of their Formula Milk supplies, despite their large volume of sales. Supermarkets have also expressed that they have not considered doing so, especially in light of the amount of work required for them to go through the import process.

Key Focus: To Stock What Is In Demand

88. According to the supermarkets, parents in Singapore generally do not switch brands once they perceive that a certain brand of Formula Milk that they have used is suitable for their child. The Formula Milk market is driven by consumer brand loyalty which in turn appears to be driven by advertising and promotion efforts by manufacturers. A supermarket opined that the Formula Milk manufacturers take the view that end-customers are likely to stay with the same brand as the child progresses in age.

89. Believing that consumers are brand conscious, and are loyal to their preferred brand, supermarkets will focus on stocking the brands and products demanded by consumers. Supermarkets have indicated that sales performance (or potential sales performance) is the most important determinant.

90. When considering whether to stock a new product, supermarkets will consider the marketing plan proposed by manufacturers for the new product. For example, a supermarket will try to stock and sell the products that are advertised and promoted extensively in the media. Country of origin and marketing plans are also factors in deciding on the size of the Formula Milk bay for the item to be listed in the supermarkets.

91. Supermarkets may stop selling some brands or products if the sales rank very low in the retailer's category sales, i.e., compared to sales of other Formula Milk products. Supermarkets may also refer to sales information from industry reports when making such decisions. For example, a pharmacy indicated that it had discontinued with the sales of a particular brand of Formula Milk less than a year after it started due to a lack of demand. Manufacturers may also withdraw brands which do not perform well.

92. There could be other reasons for a certain brand of Formula Milk to exit or appear to exit the market (i.e. re-enter the market under another brand). A supermarket indicated that a few types of a particular brand of Formula Milk were discontinued by the manufacturer in 2014 due to a change of formula.

Retail Price Setting and Bargaining Power

93. Manufacturers provide RRP's but retailers are free to set their own prices. However, retailers tend to be price takers and are subject to price increases by the manufacturers and/or distributors. They do not appear to exert much countervailing buyer power.

94. Manufacturers appear to enjoy bargaining power when they offer "must stock" Formula Milk brands and that could be a reason for their ability to dictate prices as well as their reluctance to negotiate on price. Supermarkets are of the opinion that consumers will look to other retail outlets to purchase their preferred brands if they cannot find them in a particular retail chain or outlet. At the retail level, Formula Milk is subject to intense price competition, presumably for the same brand and type of Formula Milk. Customers are brand conscious and would search the vicinity to buy that specific brand at a cheaper price. Hence, supermarkets need to stock all brands and products which are in demand. Given that they do not have alternative sources of supply (i.e., parallel import), supermarkets generally have not been successful in convincing manufacturers to delay price increases. Some supermarkets indicated that they require reasons to be officially provided by manufacturers in writing before implementing any price increase; they may also try to negotiate a delay in the price increase or propose to implement it in stages. Supermarkets will have to proceed with the price adjustments thereafter.

95. Some of the reasons that were given by manufacturers to supermarkets to justify the price increases are:
- a. improved or revised formulation;
 - b. increase in raw material prices (e.g. global market prices for milk had increased due to a drought) and packaging material;
 - c. increase in business costs relating to labour, production and transportation;
 - d. investments in research and development; and
 - e. cost of ensuring high quality products.
96. According to the supermarkets, price increases are typically passed through to the consumers given that Formula Milk are “low margin” products.

Retail Marketing Activities

97. Supermarkets run a wide range of marketing or promotional activities and these activities are not limited to Formula Milk on a stand-alone basis. Formula Milk is promoted in conjunction with a wide range of products including other baby products and possibly with other unrelated products that supermarkets retail. For example, supermarket advertisements in major newspapers or promotional catalogues feature promotions for many products, including Formula Milk.

98. However, if Formula Milk is featured in these marketing or promotional activities, they are always conducted in partnership with the manufacturers and/or their authorised distributors. Most of the time, promotions are proposed by manufacturers which offer supermarkets a better cost price for a limited period through the distributors. Supermarkets would then pass on the lower cost to consumers in the form of promotional prices. Discounts can also be in the form of discount vouchers issued by manufacturers to customers to be used in the partner retailer’s outlets. Another form of promotion is loyalty programmes whereby retailers work with manufacturers to allow customers to accumulate receipts to a stated amount in order to redeem prizes or gifts. Formula Milk manufacturers may also provide free gifts of mugs, toys, water bottles or vouchers for meeting a certain amount of spending.

99. A common marketing activity that most supermarkets participate in is baby-themed exhibitions and fairs. Such baby fairs typically feature products such as Formula Milk, diapers, children toothpaste and toothbrush, baby food, lotions and wipes. These are held once every few months. During such periods, supermarkets may put out baby-themed advertisements in newspapers featuring discounts or other promotions such as bulk discounts. Supermarkets may also participate in atrium sales (pop up sales counters at atriums of shopping malls that take place from time to time) of Formula Milk. The mechanics of such events are similar to those described for general promotions above. Supermarkets will try to include as many brands of Formula Milk in the promotions as possible. This is dependent on the support of the manufacturers in terms of stock availability and discounts. Manufacturers may also

provide promoters and merchandisers to help out at these events. However, some manufacturers may decide not to participate in the baby fairs and such brands will not be featured in the related advertisements or fairs.

Impact of Promotions

100. Consumers appear to respond to price promotions by stocking up more of the same brand that they are currently purchasing. However, there is no evidence that price promotions would result in brand switching.

101. For example, a supermarket reported much higher sales in terms of units sold during a promotion when a brand of Formula Milk was sold with additional quantity but without an increase in price. Conversely, however, an increase in price for the same product did not reduce the number of units sold. A pharmacy was also of the impression that price promotions typically drive additional sales but price increases do not negatively impact sales volumes in terms of units sold. Another supermarket provided information to show significant increases in sales quantities for relatively small decreases in prices. However, sales quantities appear to return to normal after the end of the promotion. Another supermarket indicated that customers tend to buy in bulk during baby fair promotions to enjoy special price discounts. Another competitor supermarket also noted an upward trend in volume and revenue for Formula Milk when they participated in the Baby Exhibition. When the same supermarket ran an exclusive promotion for one particular brand, overall sales increased significantly year on year.

Attempts to Introduce New Lower-Priced Formula Milk

102. Despite the fact that promotions appear to drive sales, cheaper Formula Milk may not necessarily enjoy higher volume in the market. The sales figures for various standard and premium brands reflect the trend towards premiumisation as discussed earlier at paragraph 66.

103. This trend is also observed through the experience of a supermarket. The supermarket had previously worked with a manufacturer to bring in a “value-for-money” Formula Milk in response to customer feedback on high prices of Formula Milk. This particular brand is an established brand of milk in Singapore and its Formula Milk was priced lower than other premium brands. Despite various marketing activities by the manufacturer, sales were weak and the product was discontinued by the manufacturer as it was not commercially viable and the manufacturer could not meet the minimum order quantity from its factories. Another competitor supermarket similarly reported that this same brand was an underperforming brand of Formula Milk. A pharmacy indicated that it had discontinued with the sales of this brand after less than a year due to a lack of demand.

104. CCS notes that in January 2016, the “Aptamil” brand of Formula Milk was launched in Singapore. It is understood that “Aptamil” is a premium brand overseas but it is priced relatively lower than other premium brands here. For example, Abbott’s Similac Gain IQ Stage 3 Intellipro (850g) retails at \$43 per can on NTUC’s website while Aptamil’s Toddler Gold+ Stage 3 (900g) retails at \$34.50, which is about 20% cheaper.³⁴ It remains to be seen if this product will be successful in the medium to longer term.

Commercial Barriers of Entry for New Brands of Formula Milk

105. As the marketing plan (and presumably the marketing budget) and demand of a Formula Milk brand may be taken into account by the retailers when determining whether to stock the product, and if so, its position on the retailers’ bay or shelves, a new entrant has to expend a significant amount of resources on marketing and branding when competing with the other established competitors for retail space and for optimal positions on the bays/shelves that can catch the attention of consumers.

106. Such high costs may pose a big challenge for smaller Formula Milk manufacturers with less resources, particularly those that want to offer a full range of Formula Milk products (i.e. all milk segments).

Observed Competition amongst Milk Manufacturers

107. The supermarkets observed that manufacturers compete in terms of nutritional value, value added ingredients for better growth, eyesight, neuro development, etc. It should be noted that none of the supermarkets or pharmacies indicated that the Formula Milk manufacturers competed on price.

108. The supermarkets and pharmacies consistently observed that the Formula Milk manufacturers compete very aggressively for new customers and to retain their existing customers. In particular, Formula Milk manufacturers compete strongly by running large scale advertising and promotion campaigns to encourage customers to select their brand of Formula Milk. Their share of the market will in turn affect their share of the in-store display.

109. The Formula Milk manufacturers do not approach pharmacists to promote their products. Paediatric recommendations do not influence the brand of Formula Milk a pharmacy chooses to sell as such decisions are based on assessed commercial demand.

³⁴ Information obtained from www.fairprice.com.sg on 18 August 2016.

VII. HOSPITALS

Section Summary:

- If Formula Milk is required or requested, parents, especially those in private hospitals, are able to express their preference for and obtain a particular brand of Formula Milk.
- If no preference is indicated, both restructured and private hospitals provide the “default” brand for that particular period, which is established through a “milk rotation” system.
- The level and quality of support provided by Formula Milk manufacturers to the private hospitals can affect the duration of the milk rotation period allocated by these hospitals. Manufacturers provide sponsorship and/or support to the private hospitals through a wide variety of activities. Some manufacturers have also made monetary contributions to some private hospitals for participation in their milk rotation systems.
- Generally, such sponsorship and contributions by Formula Milk manufacturers to hospitals have been increasing.
- Formula Milk manufacturers’ representatives contact hospitals and healthcare professionals regularly to keep them up to date about new Formula Milk products or ingredients.
- Given that majority of parents who use RTF Formula Milk in hospitals do not have a preferred brand and tend not to switch brands of Formula Milk after leaving the hospital, manufacturers have invested significant efforts and resources into the marketing activities in relation to the hospital channel to gain a ‘first-mover’ advantage.

110. Hospitals are one of the first avenues where parents come into contact with Formula Milk. Hence, besides the retail sales channel, the hospital channel is an important sales channel for Formula Milk manufacturers.

111. Due to the attendant health benefits which come with breastfeeding, hospitals encourage mothers to breastfeed their babies as much as possible, and implement practices which encourage breastfeeding. However, there is a small proportion of mothers who are not able to breastfeed their babies, or do not do so due to medical conditions of the baby or mother, or due to personal choice. There are also mothers who complement breastfeeding with some amount of Formula Milk during their stay in the hospital. As such, Starter Formula Milk is used in hospitals.³⁵ Estimates of newborn babies who consume Starter Formula Milk in hospitals, either exclusively or together with breast milk, range from 15% to 60%. The majority of these cases are due to parents choosing to use Formula Milk as opposed to medical or physiological issues.

³⁵ Formula Milk for older infants and children may also be used by hospitals. However, for the purposes of this inquiry, the focus is on the use of RTF Starter Formula Milk.

112. Starter Formula Milk in hospitals generally come in RTF forms. RTF Formula Milk is only for Babies (i.e. Stage 1) and comes 'pre-mixed' (ready packed) in small bottles (not more than 100ml each). The brand of the Formula Milk is indicated on the bottle. RTF Formula Milk is typically charged at the same price per bottle for all brands of Formula Milk within each hospital. This is for ease of administration, as per unit cost is low and variation in cost is marginal, and parents would not need to "shop around" based on price.

113. If Formula Milk is required or requested, CCS understands that parents are able to express their preference for a particular brand of Formula Milk if they have a preferred brand in mind. This is especially so for the private hospitals. The private hospitals stock all major brands of Formula Milk available in Singapore at any point in time and are generally able to meet the preferences of parents. According to estimates by private hospitals, only a minority of parents (around 30%) who use Formula Milk indicate their preferences for a particular brand. Choice is also available in restructured hospitals, but may be more limited, depending on the practice of the individual restructured hospitals. How such preferences of parents could be shaped or influenced will be discussed in greater detail in Section VIII on Consumer Behaviour and Preferences below.

114. If the parents do not indicate their preference for any particular brand of RTF Formula Milk, both restructured and private hospitals would provide the 'default' brand for that particular period to the Babies. The "default" brand for a period is established through a milk rotation system which is in place in every hospital, although the specific details vary from hospital to hospital. There are also general differences between the milk rotation system practised in private hospitals and restructured hospitals.

Milk Rotation in Private Hospitals

115. In private hospitals, the rotation periods are generally not equally distributed amongst the participating brands. Besides the usual criteria of service standards and responsiveness, the period for which a particular brand is the 'default' brand used in wards is generally allocated based on the extent and quality of the support provided by the Formula Milk manufacturer to the hospital's programmes, or the amount of rotation 'fees' paid by the manufacturers. The higher the level and quality of support, the more likely a longer rotation period will be allocated. The rotation schedule within a particular hospital is typically determined by a committee comprising the hospital management and staff, based on these considerations and the number of months requested by Formula Milk manufacturers. This schedule is typically renewed once a year or once every two years, depending on the individual hospital's practice. All six major brands in Singapore participated in the milk rotation system of the private hospitals which CCS engaged. According to these hospitals, manufacturers of other

brands of Formula Milk can approach them if they wish to participate in the milk rotation schedule.

116. Formula Milk manufacturers provide sponsorship and/or support to private hospitals through a wide variety of activities. These programmes or events are typically targeted at parents and parents-to-be, as well as the staff of the hospitals such as nurses. Examples of such events include talks on topics such as pregnancy and parenting for first-time parents, and seminars and conferences (which may or may not be related to Formula Milk) for nurses' training. Manufacturers may help to source for speakers and experts, support venue rental or provide sponsorships for refreshments or gifts at these events. Manufacturers' sponsorship may also cover training course fees, conference fees or training materials for hospital staff. Hospitals may also provide discharge gift bags, maternity bags and complimentary 'starter-kits' (including baby shirts, diaper changing mats and breastfeeding shawls) and these items are sponsored by the hospitals' partners, which include Formula Milk manufacturers. These are usually during the rotation months assigned to the particular brand. The logos of Formula Milk manufacturers are typically shown on the gifts but Formula Milk is not featured. The manufacturers also provide sponsorship for some hospital activities such as shuttle buses for staff, patients and visitors, printing of maternity brochures, Dinner & Dance, Nurses' Day or Mother's Day gifts.

117. Such collaborations with Formula Milk manufacturers can generally arise in two ways. The hospitals will indicate their needs to the Formula Milk manufacturers for them to select the relevant sponsorship events. The sponsorship needs could then be divided out amongst the interested manufacturers. Alternatively, manufacturers can approach hospitals to indicate that they would be able to contribute in certain areas (e.g. provision of gifts) and the hospitals will assess whether such potential contributions suit their needs.

118. In addition, some Formula Milk manufacturers have also made monetary contributions to some private hospitals for participation in the milk rotation system. These could be in the form of monetary sponsorship for the events described above or other payments. These monetary contributions could be computed based on a per month rotation value, multiplied by the number of months of milk rotation allocated to or requested by the Formula Milk manufacturer (for example, a RTF brand that is allocated a rotation for two months would contribute twice the amount of that allocated one month), or as a lump sum per cycle of rotation.

119. According to the hospitals contacted by CCS, such payments and 'in-kind' and monetary sponsorship by Formula Milk manufacturers are important in helping them to reduce the costs of running such activities and to defray the cost of nursing education and training. These partnerships with Formula Milk manufacturers also help to garner resources for hospitals to be able to reach out to more parents and would-be parents to educate them and prepare them for parenthood. Other educational

events, seminars and continuing education for healthcare and nursing staff may also benefit other patients.

120. CCS notes that such sponsorship and contributions by Formula Milk manufacturers have been on an increasing trend. This could reflect the hospitals' increasing needs in terms of nursing training and holding more events and activities for their customers. It could also reflect the importance of the hospital channel to the manufacturers as a form of marketing and brand outreach. CCS also notes that more babies are born in private hospitals than restructured hospitals.³⁶ However, not all manufacturers are equally involved or active in such sponsorship activities. Some manufacturers also drop out of the milk rotation programmes of some hospitals temporarily from time to time.

121. Based on information available to CCS, there are usually no open tenders or formal supply contracts between the private hospitals and Formula Milk manufacturers or distributors (although confirmation letters might be sent in relation to the rotation periods). Hospitals will order RTF and other types of Formula Milk (e.g. Formula Milk for older children for use by child patients in wards) on demand and in accordance with the milk rotation schedule for RTF Formula Milk.

122. Formula Milk manufacturers' representatives also contact the hospitals and healthcare professionals regularly to keep them up to date about new Formula Milk products or ingredients. This could be through letters, emails, product launch events or presentations by representatives from the manufacturers to the hospital staff. However, the degree to which this occurs varies across the different manufacturers.

123. Besides use in hospital wards, some private hospitals also operate retail pharmacies which stock Formula Milk for sale to the general public. In this respect, their considerations are similar to other retailers such as supermarkets. A description of the retailers of Formula Milk is in Section VI.

Milk Rotation in Restructured Hospitals

124. In restructured hospitals, the major brands of RTF Formula Milk in Singapore are rotated equally throughout the year. This is allocated by a committee comprising management and staff from various departments. Similar to private hospitals, CCS understands that the Formula Milk manufacturers also support activities of the restructured hospitals such as inviting speakers to deliver talks to hospital staff, supporting medical conferences or hospital events. This could in turn help to increase the awareness of the brands amongst healthcare staff. However, the milk rotation

³⁶ Based on the 2014 Report on Registration of Births and Deaths by the Immigration and Checkpoints Authority, 59.2% and 40.4% of babies were born in private hospitals and restructured hospitals respectively.

schedule in restructured hospitals is not determined by the level of support or contribution provided.

Impact on Consumer Behaviour

125. Unlike other products where switching is prevalent and common, it appears that majority of parents do not typically switch between different brands of Formula Milk, unless their babies or children experience problems when consuming the Formula Milk. Hence, once babies use a particular brand of RTF Formula Milk in hospital and do not show any adverse reactions to it, it is very likely that parents will continue to use the same brand of Formula Milk after leaving the hospital. Such brand loyalty behaviour exhibited by consumers will be discussed in greater detail in Section VIII.

126. About 70% of parents who use Formula Milk do not have a preferred brand and would use the “default brand” provided by the hospital (see paragraph 113). Manufacturers have therefore invested significant efforts and resources into the marketing activities in relation to the hospital channel to gain a ‘first-mover’ advantage.

127. In addition, there are parents who need to discuss and seek the advice of their doctors on the type of Formula Milk that would suit their children’s needs. For example, would-be parents could consult the obstetricians to address any Formula Milk concerns. Concerned parents might seek the opinions of doctors if their children experience reactions or difficulties, for example, constipation with some brands of Formula Milk. Babies might also have health conditions after birth which might require Speciality Formula Milk. Individual doctors might then assess and recommend based on their own experience and knowledge. The sponsorships and outreach to healthcare professionals by the Formula Milk manufacturers could subtly influence their Formula Milk choices.

VIII. CONSUMER BEHAVIOUR AND PREFERENCES

Section Summary:

- When deciding on the brand of Formula Milk to use, parents rely most heavily on word-of-mouth from family and friends. Views of healthcare professionals, such as obstetricians, paediatricians and nurses are also important.
- Branding, the scientific image of the brand and safety are top attributes that parents consider when deciding on the brand of Formula Milk to use.
- A majority of parents appear to continue with the brand of Formula Milk that their babies were exposed to at the hospital. Overtime, a large proportion of parents continue to buy the same brand, demonstrating strong brand loyalty.
- More parents are buying premium brands of Formula Milk as they perceive more expensive brands as having better quality.
- The factors influencing parents' choice of Formula Milk brand, the resulting brand loyalty and the limited effectiveness of price competition in encouraging parents to switch to a new brand could pose as a formidable barrier to entry for new Formula Milk brands. A new entrant would have to invest significantly in branding and marketing efforts in order to compete with the incumbents.

Breastfeeding Trend & Demand for Formula Milk

128. Breast milk is widely recognised as the best first food – it provides complete nutrition for young babies, immunity against diseases and comfort and security to babies through nursing.³⁷ Formula Milk, on the other hand, is 'scientifically formulated' as an alternative³⁸ but imperfect substitute³⁹ to breast milk. Given the potential substitutability, to understand the demand for Formula Milk in Singapore, it is necessary to first consider the prevalence of breastfeeding and reasons why mothers switch from breast milk to Formula Milk.

129. WHO recommends exclusive breastfeeding⁴⁰ up to six months of age of the child, with continued breastfeeding along with appropriate complementary foods up to two years of age or beyond.⁴¹ Since 2012, HPB has worked with public and private

³⁷ KK Women's and Children's Hospital.

<https://www.singhealth.com.sg/PatientCare/ConditionsAndTreatments/Pages/Breastfeeding-Give-Your-Child-a-Headstart.aspx>.

³⁸ Introduction, Code of Ethics on the Sale of Infant Foods in Singapore.

<http://www.hpb.gov.sg/HOPPortal/health-article/7112>.

³⁹ Formula milk is not a perfect substitute for breast milk, as breast milk contains antibodies to protect babies against diseases, which formula milk manufacturers have not been able to replicate.

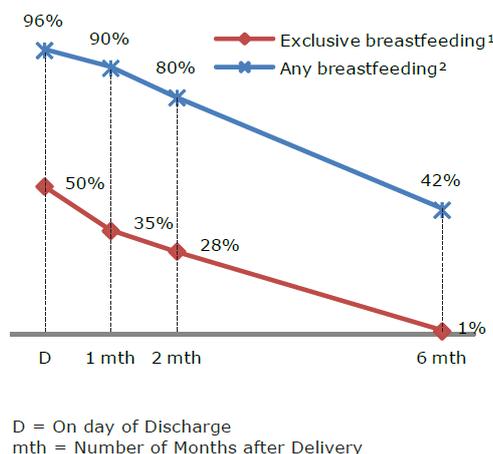
⁴⁰ WHO defines exclusive breastfeeding as "no other food or drink, not even water, except breast milk (including milk expressed or from a wet nurse) for 6 months of life, but allows the infant to receive ORS, drops and syrups (vitamins, minerals and medicines)." http://www.who.int/nutrition/topics/infantfeeding_recommendation/en/

⁴¹ WHO's recommendation is on the premise that breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers:

hospitals to implement WHO's Baby Friendly Hospital Initiative⁴² to help mothers achieve long term breastfeeding success by supporting them before birth, during their stay in hospital and after they are discharged.⁴³

130. With the efforts to encourage breastfeeding, there has been greater awareness amongst mothers that breast milk is the best source of food for infants.⁴⁴ Almost all mothers breastfeed after discharge from hospitals, but this was not sustained as many mothers give up full or partial breastfeeding within the first six months.⁴⁵ As shown in Chart 9, while 90% and 80% were still breastfeeding on an exclusive or partial basis in the first and second month respectively, the proportion falls drastically to 42% by the sixth month. Similarly, for the 50% of mothers who breastfeed exclusively at the point of discharge from hospital, only 35% and 28% were doing so in the first and second months. By the sixth month, only 1% of mothers were breastfeeding exclusively.

Chart 9: Prevalence of breastfeeding in Singapore⁴⁶



http://www.who.int/nutrition/topics/infantfeeding_recommendation/en/.

⁴² The Baby Friendly Hospital Initiative is a global effort led by WHO to implement practices that protect, promote and support breastfeeding. <http://www.who.int/nutrition/topics/bfhi/en/>.

⁴³ Health Promotion Board Press Release, 12 January 2012.

http://www.hpb.gov.sg/HOPPortal/content/conn/HOPUCM/path/Contribution%20Folders/uploadedFiles/HPB_Online/News_and_Events/News/2012/PRESS%20RELEASE-%20Baby%20Friendly%20Hospital%20Initiative_FINAL.pdf.

⁴⁴ Prevalence of Breastfeeding in Singapore, Health Promotion Board, September 2013.

https://www.singstat.gov.sg/docs/default-source/default-document-library/publications/publications_and_papers/health/ssnsep13-pg10-14.pdf.

⁴⁵ Prevalence of Breastfeeding in Singapore, Health Promotion Board, September 2013.

https://www.singstat.gov.sg/docs/default-source/default-document-library/publications/publications_and_papers/health/ssnsep13-pg10-14.pdf.

⁴⁶ Prevalence of Breastfeeding in Singapore, Health Promotion Board, September 2013.

https://www.singstat.gov.sg/docs/default-source/default-document-library/publications/publications_and_papers/health/ssnsep13-pg10-14.pdf.

131. The most commonly cited reason for giving up breastfeeding and introducing Formula Milk is insufficient breast milk supply.⁴⁷ For working mothers, the need to return to work is also a deterrent to breastfeeding.⁴⁸ Mothers also choose to switch to Formula Milk as they are of the view that breast milk is not sufficiently filling.

132. The market for Formula Milk in Singapore therefore remains sizable – the majority of mothers would have introduced their child to Formula Milk to varying degrees before six months of age. The lack of a substitute source of food (other than breast milk) suitable for Babies⁴⁹, makes the demand for Stage 1 Formula Milk very price inelastic relative to later stages of Formula Milk. This may explain the relatively higher prices for Stage 1 Formula Milk as compared to later stages.

Choice of Formula Milk brand

133. Having made the decision to introduce Formula Milk, parents' choices of Formula Milk brand is influenced by a combination of factors -

- a) Parents rely heavily on the recommendations of their family, friends and healthcare professionals.
- b) Parents also show loyalty to the brand that they used in hospitals at the birth of their child.
- c) In addition, parents prefer premium brands and view certain attributes (i.e. enhance immunity) as important in their decision making.

These are described in further detail in the following paragraphs.

(i) Influence of friends/family and healthcare professionals

134. According to industry reports, parents rely most heavily on word-of-mouth from family and friends when they decide on the brand of Formula Milk. Thus, well-known brands or brands which have a higher market share (i.e. used by more parents) are in

⁴⁷ Prevalence of Breastfeeding in Singapore, Health Promotion Board, September 2013.

https://www.singstat.gov.sg/docs/default-source/default-document-library/publications/publications_and_papers/health/ssnsep13-pg10-14.pdf.

⁴⁸ Prevalence of Breastfeeding in Singapore, Health Promotion Board, September 2013.

https://www.singstat.gov.sg/docs/default-source/default-document-library/publications/publications_and_papers/health/ssnsep13-pg10-14.pdf.

⁴⁹ WHO recommends that infants start receiving complementary foods at 6 months of age in addition to breast milk, initially 2-3 times a day between 6-8 months, increasing to 3-4 times daily between 9-11 months and 12-24 months with additional nutritious snacks offered 1-2 times per day, as desired. http://www.who.int/nutrition/topics/complementary_feeding/en/.

turn more likely to be selected by parents, a self-perpetuating cycle which could create a barrier to entry for new brands of Formula Milk.

135. The next most important source of influence of Formula Milk brands are the views of healthcare professionals, such as paediatricians and nurses. This suggests that healthcare professionals' perceptions on the different brands of Formula Milk matter. Formula Milk manufacturers who are able to engage with healthcare professionals to communicate the outstanding qualities of their Formula Milk brand can indirectly influence parents' choices.

(ii) Presence in Hospitals

136. It appears that a majority of parents tend to continue with the brand of Formula Milk that their babies have been exposed to at the hospital. This could reflect status quo bias and risk aversion; given that their child did not experience problems (e.g. diarrhoea or constipation), parents do not see a need to switch to alternative brands which they have not tried. Parents may also perceive Formula Milk brands used in hospitals as an endorsement of the quality of the Formula Milk brand by healthcare professionals.

137. Nonetheless, parents may be open to switching to another brand of Formula Milk, mainly if they find the Formula Milk brand causes constipation, or through the influence of family and friends.

(iii) Preference for premium brands

138. More parents are buying premium brands of Formula Milk, with additional ingredients such as DHA. In turn, more brands in the market are positioned as premium brands or the manufacturers view their brands as premium brands. Hence, some standard brands, despite being established brands in Singapore in the past, have exited the market due to poor sales over time.

139. The increase in affluence and young couples having less children suggests that Singaporeans parents have more purchasing power. This income effect could account for some of the shift towards premium brands.⁵⁰

140. Anecdotal feedback also suggests that some parents perceive more expensive brands as having better quality. This could be in part due to the aggressive marketing and advertising efforts by Formula Milk manufacturers. This could also be due to the inability of parents to accurately assess the price versus quality trade-off in the Formula Milk market. Some parents may find it difficult to understand the nutritional content of Formula Milk, a child's nutrient requirements and the significance of the

⁵⁰ Euromonitor International Passport, *Baby Food in Singapore*, March 2015.

additional “premium” ingredient. As a result of the information asymmetry, parents may rely on pricing as a signal for the quality of the Formula Milk brand. This in turn implies that the constraint on price increases is weak. This mentality appears to enable Formula Milk manufacturers to “justify” price increases arising from modifications in formulations or even packaging (see paragraph 95). Thus, there may be scope to address the information asymmetry with respect to the nutritional content of Formula Milk and a child’s nutrient needs (see CCS’s recommendation in paragraph 197).

(iv) Preferred attributes of Formula Milk brands

141. Branding and scientific image of the brand is an important influence on parents’ choice of brand. Parents also look out for brands that provide adequate nutrients, enhance immunity and do not cause constipation. Beyond one year of age (i.e. Stage 3 and beyond), parents also look for Formula Milk brands that improve the brain development of the child. It is observed that Formula Milk manufacturers typically focus on the amount of nutrients their products contain in their marketing messages⁵¹ and parents may assume that more of such ingredients is better for their child as they may find it difficult to assess the extent of benefits from these ingredients.

142. More fundamentally, safety is of paramount concern and therefore the country of origin is likely an important consideration for parents. Thus, a number of well-known premium brands are imported from Europe, Australia, New Zealand, or manufactured in Singapore.

Brand Loyalty and Impact of Marketing and Promotional Activities

143. Once parents decide on the Formula Milk brand based on the combination of considerations outlined above, it appears that a large proportion of parents continue to buy the same brand over time, demonstrating strong brand loyalty.

144. There are instances where some parents may consider alternative brands and select two to three brands into their decision pool. These brands typically have similar attributes which fulfil the parents’ considerations. These parents will compare prices between brands *within* the pool but not between brands *outside* the pool. This suggests that promotions (such as discounts, free gifts and rebate coupons) may only be effective in driving competition between brands *within* the same decision pool; otherwise they may be ineffective at driving brand switching *outside* of the pool. As such, even though Formula Milk retailers reported higher sales during promotion periods, this could reflect loyal customers stocking up to take advantage of the price discount. It is possible that only a small group of parents will switch to other brands *within* their decision pool due to a reduction in relative prices.

⁵¹ For example, see <http://abbottfamily.com.sg/products/page/similac-follow-on> and <http://www.enfagrow.com.sg/products/product-family-singapore/enfamil-stage-2>.

145. Further, it has been observed that sales and promotions for Formula Milk often involve bulk purchase. For example, consumers have to purchase a fixed quantity (e.g. four tins) or reach a minimum spending to qualify for discounts and/or free gifts. If parents tend to make bulk purchase and stock up on their preferred brand, they have less incentive to switch to alternative (or less preferred) brands or consider a new entrant brand. This discourages switching and perpetuates brand loyalty.

Implication on Barriers to Entry for New Brands

146. In summary, the factors influencing parents' choice of Formula Milk brand, the resulting brand loyalty and limited effectiveness of price competition in encouraging parents to switch to a new brand could pose a formidable barrier to entry for new Formula Milk brands. New entrants into the market have to understand the relative importance of non-price competition over price competition in this market. In this respect, a new brand will have to invest significantly in branding and marketing efforts in multiple channels (including participating in hospital milk rotation programmes) to convince parents that it is similar or even superior to other brands within their decision pool, especially given the market power and branding that the incumbents currently enjoy. The new brand may also need to overcome the aggressive marketing and promotion campaigns of the incumbents, which tend to encourage parents to make bulk purchases. The interactions between the demand-side features of this market and the activities undertaken by manufacturers are explored further in Section X.

IX. PRICES AND COST ANALYSIS

Section Summary:

- CCS chose each Formula Milk manufacturer's flagship Stage 1 product and flagship Stage 2 product, in packaging size of around 800g to 900g to analyse the trends in prices and cost of goods sold.
- Unit cost of goods sold for both the Stage 1 and Stage 2 formula milk products increased for some manufacturers over the period from 2007 to 2015.
- The gap between the unit cost and the retail price for all products under study has increased over the years. This is largely attributed to the increase at the wholesale price level as distributor and retail margins remained relatively constant.
- Increases in wholesale prices of Formula Milk products generally occurred when there was a change in the product, for example new formulation or packaging.
- Marketing expenditure generally increased for most Formula Milk manufacturers. A couple of manufacturers' marketing expenditures increased at a significantly higher rate compared to their cost of goods sold and revenue.
- Manufacturers engage in more non-price competition than price competition, making use of marketing and parents' preference for premium brands to drive sales of higher-priced products.
- Formula Milk prices in Singapore were higher than most benchmarked economies, along with China and Hong Kong.
- Based on financial data provided by the manufacturers on their Formula Milk operations in Singapore, while gross margins are typically high, operating margins appear to be lower. Due to a lack of data, CCS is unable to conclude whether margins for Formula Milk manufacturers are higher or lower in Singapore as compared to their overseas operations.

147. In this section, CCS sought to understand how the price of Formula Milk is affected as it moves through the various levels of the supply chain.

Methodology

148. As manufacturers typically sell a range of Formula Milk products and in various packaging sizes, it is not possible to analyse each and every product. Instead, CCS chose each manufacturer's flagship Stage 1 product and flagship Stage 2 product, in packaging size of around 800g to 900g. This is because there are fewer nutrition substitutes for Formula Milk for Babies and Infants (other than breast milk), and hence the insights from this analysis could be more instructive for CCS's recommendations as compared to Stage 3 and Stage 4 Formula Milk, for which there are other nutrition choices (i.e., Formula Milk prices may be less critical). The data collected by CCS also

shows that consumers typically purchase more units of 800g to 900g packaging sizes as compared to 400g or 1.6kg-1.8kg packaging sizes of the same product. The brands and products selected are listed in Table 10 below.

Table 10: Brands and Products Selected for Analysis

S/N	Formula Milk Manufacturer	Products and Packaging Sizes Selected⁵²	Remarks
1	Abbott	<ul style="list-style-type: none"> • Similac 1 (900g and 850g) • Similac 2 (900g and 850g) 	-
2	Danone	<ul style="list-style-type: none"> • Mamex Gold and Mamil Gold Step 1 (700g – 900g) • Mamil Gold Step 2 (700g – 900g) • Dulac Infant Formula (900g and 800g) • Dupro Follow On Formula (900g and 800g) 	<ul style="list-style-type: none"> • Mamex Gold (former brand) and Mamil Gold are relatively more expensive than Dulac and Dupro.
3	FrieslandCampina	<ul style="list-style-type: none"> • Frisolac Gold 1 (900g) • Friso Gold 2 (900g) 	-
4	Mead Johnson	<ul style="list-style-type: none"> • Enfalac and Enfamil Stage 1 (900g) • Enfalac and Enfamil Stage 2 (900g) 	-
5	Nestle	<ul style="list-style-type: none"> • Nan Pro 1 (900g and 800g) • Nan Pro 2 (900g and 800g) • Lactogen 1 (2kg and 1.8kg) • Lactogen 2 (2kg and 1.8kg) 	<ul style="list-style-type: none"> • Nan Pro is relatively more expensive than Lactogen
6	Wyeth	<ul style="list-style-type: none"> • S26 Gold (900g) • S26 Promil Gold (900g) 	-

⁵² Packaging sizes for some products changed over the period of study and hence a range of sizes are listed for some products.

149. After selecting two products per brand, CCS studied the price and cost trends of these representative Formula Milk products over the period from 2007 to 2015⁵³. This is done by matching cost of goods sold data, volumes, cost per unit, and wholesale prices in relation to Formula Milk sold in Singapore, with the distributor prices and average or actual retail prices. CCS has also obtained financial reports from each manufacturer.

150. Based on the datasets above, CCS has studied the trends in total revenue, cost of goods sold and marketing expenditure of each manufacturer, over the period from 2007 to 2015.

Caveats

151. It should be noted that the products selected did not remain the same over the nine-year period studied. CCS observed rebranding, changes in formulation, and changes in packaging sizes regularly for each product, especially for the premium brands. As such, using any single specific product would not yield data of sufficient duration to study any trends meaningfully. Hence, the data is derived from matching successive flagship Stage 1 and Stage 2 products, and more appropriately represents changes in the same category overtime, rather than the same product over time. However, combining the data posed its own challenges as relevant products had to be identified over the period of inquiry in order to ensure the right data was being used in the inquiry. Finally, CCS has not had the opportunity to clarify the data in great detail with each manufacturer and retailer.

152. The challenges highlighted above mean that when analysing the data, long term trends are more instructive as focusing overly on specific changes month to month (perhaps even year to year) when analysing the results could provide an incomplete picture. Similarly, it may not be meaningful to compare levels across manufacturers, brands or products. Consequently, CCS's analysis has focused on common features in the trends across manufacturers and products.

Total Revenue, Cost of Goods Sold and Marketing Expenditure Trends⁵⁴

153. CCS studied the trends on total revenue, cost of goods sold and marketing expenditure of the six major manufacturers in Singapore.

154. First, CCS observes that total revenue, cost of goods sold and marketing expenditure have generally increased over the period of nine years. Further analysis on the cost per unit is discussed in the next sub-section.

⁵³ Only data up to October 2015 is provided.

⁵⁴ Total Revenue refers to the total sales obtained by multiplying the price per unit with the number of units. Cost of Goods Sold refers to the total cost obtained by multiplying cost per unit (excluding operating expenses) with the number of units.

155. CCS also observes an important trend relating to the marketing expenditure by Formula Milk manufacturers: marketing expenditure generally increased for most manufacturers. A couple of manufacturers' marketing expenditures in fact increased at a significantly higher rate compared to cost of goods sold and revenue. The quantitative evidence supports the earlier qualitative discussion on the importance of marketing to Formula Milk manufacturers generally, and its impact on strengthening branding and market power of the incumbents, which could in turn account for some of the increase in Formula Milk prices.

Price and Volume Trends

156. CCS also studied the trends of prices and volume of Formula Milk sold at the industry level, as well as for selected Stage 1 Formula Milk products from each manufacturer in Singapore. At the industry level, it is observed that while the average Formula Milk prices have increased, the volume sold has declined. Similar trends are observed through the data for selected Stage 1 Formula Milk products. Some manufacturers have experienced a slight decrease in volume sold, while others have remained stagnant. Further, the data shows that in spite of the stagnant or even declining volume, revenues for manufacturers have increased. This means that the increase in prices has more than made up for the loss of revenue from declining volume. This may be explained by the effects of increased demand or more inelastic demand from strengthening branding and market power of the manufacturers together with the effects of increased cost of goods sold, resulting in higher prices and lower equilibrium quantity demanded. The rest of this section explores possible explanations for the increase in prices.

Prices and Costs

157. CCS studied the prices and unit costs trends⁵⁵ for each product identified for all six major manufacturers in Singapore.

158. **Cost per unit.** The cost data of manufacturers suggests that the unit cost of goods sold for both the Stage 1 and Stage 2 formula milk products generally increased over the period from 2007 to 2015 for some manufacturers. For the other manufacturers, while there is no distinct upward trend in costs, it should be noted that there is a general downsizing of packaging size over time and hence the costs by weight would have increased.

159. **Supply chain mark-up.** The second observation is that each level of the supply chain introduces a mark-up over the price that it faces, and the gap between the unit

⁵⁵ Cost per unit data was derived from data on total cost of goods sold and volume (with exponential smoothing to smooth out fluctuations from month to month).

cost and the retail price for all products has increased over the years. The widening gap is largely attributed to the increase in the wholesale price level as the distributor and retail margins remained relatively constant. Increases in retail prices generally reflected the increases in wholesale prices. This provides supporting evidence that competition at the retail level is relatively intense (see paragraph 94), while the manufacturers could have market power due to brand loyalty⁵⁶ (which will be explored in Section X) thereby limiting the extent of price competition.

160. Price increases coincide with product changes. The third observation is that increases in wholesale prices of the products generally occur when there is a change in the product, for example new formulation. While prices may increase within the 'lifetime' of a product, it is noted that a change in the product invariably comes with an increase in price. Even when there is no increase in price, the packaging size could be reduced and hence the wholesale price on the basis of weight would be higher. This could be another indication of premiumisation of Formula Milk whereby manufacturers leverage consumers' apparent willingness to pay for 'premium' products to introduce new and more expensive products. It could also be the result of an increase in R&D (see paragraph 66). While R&D costs may not be directly allocated to the subsidiaries in Singapore due to the global nature of such activities and hence may not have a direct impact on prices, R&D could have an indirect impact as new ingredients are added to the products, thus possibly increasing cost of goods sold over time.

161. Prices for Stage 1 Formula Milk increased more. Lastly, it is observed that wholesale prices for Stage 1 products had increased more in percentage terms compared to the corresponding Stage 2 products, and retailers in turn had increased their prices accordingly. This is especially so for the premium products. The differences in percentage wholesale price increases between Stage 1 and Stage 2 products over the entire period is typically less than 10 percentage points. This may be the result of demand being more price inelastic for Stage 1 products as compared to Stage 2 products where Babies are starting on solid food and less dependent on Formula Milk.

Financial Data from Formula Milk Manufacturers⁵⁷

162. CCS studied the financial data reported by the manufacturers on their Formula Milk sales in Singapore. Based on the available data, it appears that the gross margins are typically high, i.e., the mark-up of the wholesale price over the cost of goods sold is high. However, operating margins appear to be lower, as much of the margin is

⁵⁶ However, CCS also notes that the unit cost does not include the operating expenses of the manufacturers. The mark-up of wholesale price over unit cost may in part reflect changes in operating expenses.

⁵⁷ Gross Margin is the difference between revenue and cost of goods sold, divided by revenue, expressed as a percentage. Operating Margin is the ratio of operating income divided by revenue, where operating income is a measure of a firm's profit after accounting for all expenses except interest and income tax expenses.

taken up by operating expenses such as the significant marketing expenditure explained earlier. CCS does not have sufficient data on long term trends for the margins, but on the whole, manufacturers may not be enjoying high returns once operating costs are taken into account.

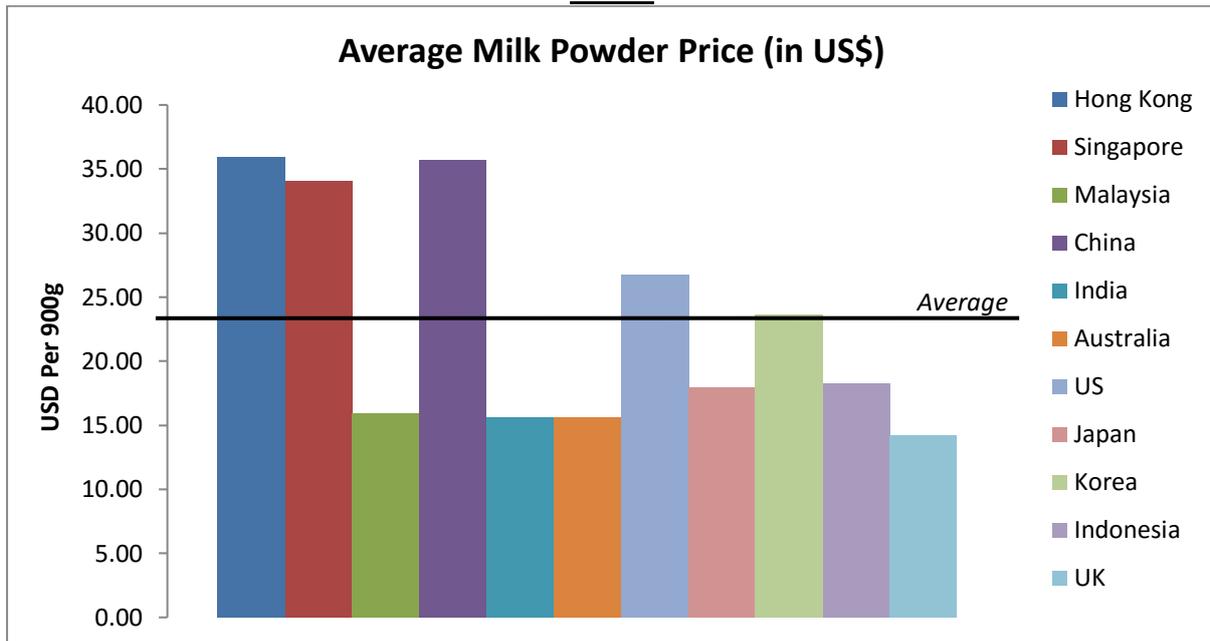
163. Due to the lack of publicly available financial data relating to the global Formula Milk operations of these manufacturers, CCS compared operating margins of these manufacturers for their worldwide operations (which include non-Formula Milk products) with that for their Formula Milk operations in Singapore, and found that the former appear to be higher generally. However, this is an imperfect comparison and CCS is unable to conclude whether margins for Formula Milk manufacturers are higher or lower in Singapore as compared to their overseas operations.

Comparisons with Overseas Formula Milk Prices

164. For the purposes of benchmarking, CCS had also compared Formula Milk prices in Singapore and other economies. It is noted that there are differences in the products available in Singapore and other economies, and the product prices available from online sources which CCS was able to obtain, for example, websites of overseas supermarkets, may not be representative of prices paid by customers within those economies. Hence, the results of the comparison, while useful, would need to be interpreted with caution. Further, CCS was unable to obtain trend data for Formula Milk prices in other economies, and hence was unable to determine if the rate of Formula Milk price increase in Singapore was faster than that in other economies.

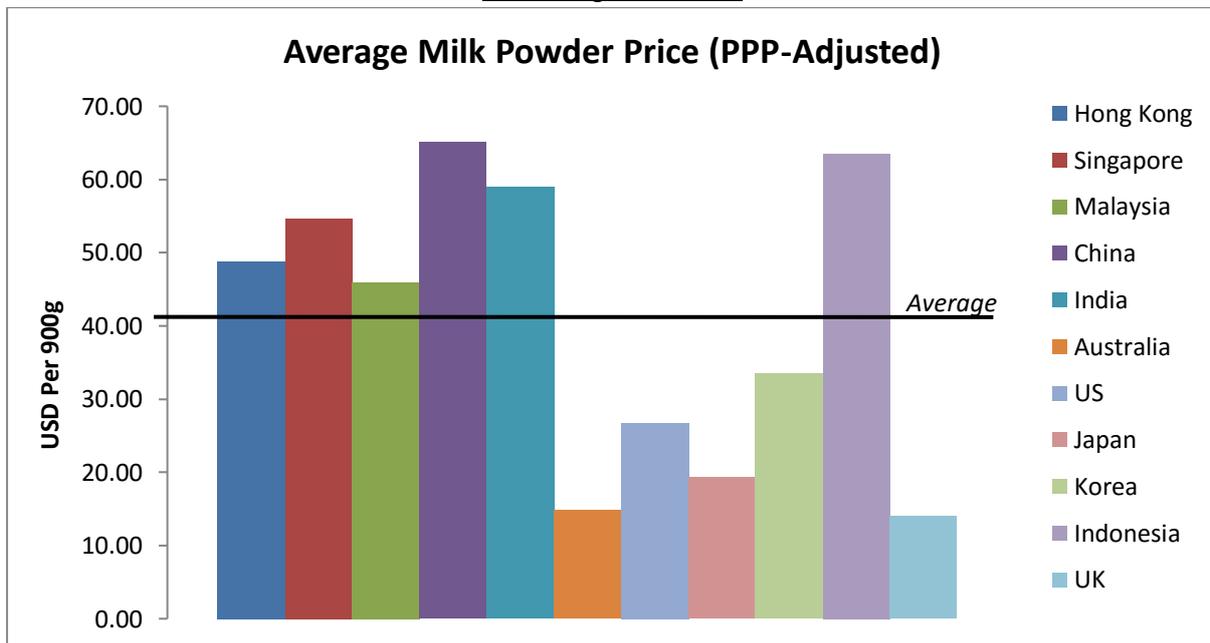
165. As can be seen in Charts 11 and 12 below, Formula Milk prices in Singapore were higher than most economies in May 2016. Using US dollar market exchange rates as comparison, Singapore Formula Milk prices were the third highest amongst the economies in the sample. Using purchasing power parity (PPP) exchange rates also provided a similar picture; Singapore Formula Milk prices were the fourth highest amongst the economies in the sample. This comparison highlights that Formula Milk prices are not the same around the world, using both market exchange rates and PPP exchange rates. Singapore together with China and Hong Kong experience higher Formula Milk prices. There are potentially unique features in the Singapore market which could have led to the higher prices.

Chart 11: International Comparison of Formula Milk Prices using Market Exchange Rates



Source: CCS's survey of prices on overseas supermarkets' websites

Chart 12: International Comparison of Formula Milk Prices using PPP-adjusted Exchange Rates⁵⁸



Source: CCS's survey of prices on overseas supermarkets' websites

⁵⁸ Purchasing power parity (PPP)-adjusted prices derived using Economy Watch 2014 Implied PPP Conversion Rate, taken from the International Monetary Fund (http://www.economywatch.com/economic-statistics/economic-indicators/Implied_PPP_Conversion_Rate/). PPP is a theory in economics that approximates the total adjustment that must be made on the currency exchange rate between countries that allows the exchange to be equal to the purchasing power of each country's currency (<http://www.investopedia.com/terms/p/ppp.asp>).

166. Although CCS was unable to obtain trend data for Formula Milk prices in other economies, it appears that rising Formula Milk prices are not unique to Singapore. For example, rising Formula Milk prices was a concern in countries such as United Kingdom⁵⁹ and China⁶⁰ since 2008. More recently in late 2015 and early 2016, there were also concerns over rising Formula Milk prices in Australia.⁶¹ These news articles have linked the increase in prices to increasing demand from Chinese consumers since news of Formula Milk in China being tainted with melamine first broke in 2008.⁶² These anecdotal information may indicate that some other countries have also experienced increasing Formula Milk prices.

Conclusions from the Data

167. CCS's analysis of the quantitative data shows that while the unit cost of goods sold generally increased for manufacturers, it was not true across the board. The bulk of the Formula Milk price increase was due to mark up at the wholesale level, rather than an increase in the unit cost of goods sold. In this respect, CCS found that marketing expenditure increased for most manufacturers and that price increases tend to take place when new products were being introduced. This supported the qualitative feedback that indicated manufacturers placed more emphasis on non-price competition than price competition at the wholesale level. The manufacturers have made use of marketing and parents' preference for premium brands to drive the sales of higher-priced products. This could have driven Formula Milk prices in Singapore to be higher than most of the other economies CCS could obtain data on.

⁵⁹ The Guardian (12 July 2008). *Baby Milk Price Rise Angers Parents*. Retrieved from: <https://www.theguardian.com/money/2008/jul/12/consumeraffairs.retail>.

⁶⁰ The New York Times (25 July 2013). *Chinese Search for Infant Formula Goes Global*. Retrieved from: http://www.nytimes.com/2013/07/26/world/asia/chinas-search-for-infant-formula-goes-global.html?_r=0.

⁶¹ The Australian (4 March 2016). *A2 Lifts Infant Formula Prices as Shortage Eases*. Retrieved from: <http://www.theaustralian.com.au/business/companies/a2-lifts-infant-formula-prices-as-shortage-eases/news-story/cc830a680966cb90b9210573e853257a>.

⁶² Time (26 September 2008). *China's Tainted Milk Scandal of 2008*. Retrieved from: <http://content.time.com/time/world/article/0,8599,1844750,00.html>.

X. BRAND RECOGNITION AND LOYALTY

168. As discussed in the section on Prices and Cost Analysis, a significant portion of the price increase of Formula Milk was due to increases in the wholesale prices. As seen in the discussion on manufacturers in Section IV, non-price competition in terms of innovation and marketing appears to be more important than price competition. Brand loyalty displayed by consumers is an important feature in this market as it enables manufacturers to increase prices particularly through the introduction of new and more expensive products. Manufacturers in turn spend huge amounts of resources to expose their brands and communicate the benefits of their products to parents in the early stages of pregnancy and raising a child. This reinforces the brand loyalty displayed by customers, and in turn can present significant barriers to entry for new brands or barriers to expansion for existing brands which do not engage in such efforts. This is discussed in detail in this section.

Brand Exposure

169. As many parents first come into contact with the issue of Formula Milk in their interactions with healthcare professionals, manufacturers devote a disproportionate extent of their marketing efforts to healthcare professionals, especially in relation to the contribution of RTF Formula Milk sales *vis-à-vis* total sales of Formula Milk.⁶³ The marketing efforts can be in terms of educating healthcare professionals on new products, sponsorships of talks and seminars (see Section VII for more details of such marketing activities). These efforts help manufacturers to expose their brands and products to healthcare professionals who may then advise their patients accordingly.

170. Participation in the milk rotation programmes of hospitals is also critical to Formula Milk manufacturers as reflected in the increasing expenditure spent on such programmes. Being placed as the default brand of RTF Formula Milk in the hospital wards helps to expose the brand to new parents. As consumers do not typically switch unless the child experiences health issues, securing such customers at the very beginning of their parenting journey could be critical to secure future sales.

171. In addition, manufacturers also engage in significant “above the line” marketing efforts to increase brand awareness and exposure to the general public, and to reinforce the brand loyalty.

172. Due to these efforts and the resulting brand loyalty, Formula Milk manufacturers are likely to find that it is important to bring into the market an entire range (from Stage 1 to later stages) of products to secure a significant market share. This is the case for

⁶³ Revenue from RTF Formula Milk make up a very small proportion of revenue for manufacturers, hence, the relatively higher proportion of marketing expenditure on the hospital channel could be for reasons other than to drive RTF Formula Milk sales.

all the major Formula Milk manufacturers supplying the local market. While there are brands that focus on later stages, these tend to be specialty products such as organic milk.

173. The entry barrier is heightened as supermarkets will only stock what is in demand and those brands with strong marketing plans. Manufacturers who are considering entering the Singapore market without incurring significant marketing expenditure may not be successful at convincing retailers to carry their products or to secure sufficient shelf space to be successful.

174. Aptamil, which entered the market recently, is a significant exception as it only offers Stage 3 and onwards products with limited marketing activities. It remains to be seen if such a model can succeed.

Premiumisation

175. Another aspect of consumer behaviour is the preference for premium brands, and that consumers appear to associate higher prices with higher quality. This observation is supported by sales data from manufacturers where a higher volume of premium brands were sold as compared to standard brands, even though the price points of standard brands were much lower. Brand name, nutrition and safety which are top attributes that consumers look for, further support the trend towards premiumisation (see Section VIII for further details).

176. CCS notes that manufacturers are aware of such trends and have sought to leverage them by investing in R&D to introduce new products and marketing them as premium products. Thus, manufacturers who wish to enter the market must devote significant resources to convince consumers of the 'premium' status of their products through a combination of marketing and innovation.

177. CCS also notes that premiumisation is not a trend that is unique to Singapore. Euromonitor notes that across Asia, manufacturers increasingly focus on premiumisation to retain margins as rising breastfeeding rates and low birth rates constrain growth in terms of volume.⁶⁴

'Success Breeds Success'

178. As one of the top influences of consumers' choice of Formula Milk is family and friends, there is a certain positive dynamic from success. Securing more market share means that more consumers are exposed to and have used the products and this in turn would lead to more recommendations to use the products. This is reinforced by retailers' focus on only stocking products that are demanded by consumers. Hence, it

⁶⁴ Euromonitor International, *Global Infant Formula Industry: Focus on Asian Markets*, July 2016.

may be challenging for a new entrant to gain traction among consumers in a short period of time as awareness and trust in a brand takes time to build up. It may be even more challenging for a new entrant to impose significant competitive pressure on the incumbents given the positive dynamics from current success.

Conclusion

179. In conclusion, consumer behaviour such as brand loyalty and focus on premium products has driven manufacturers to invest heavily in marketing and R&D, which could in turn reinforce such behaviours by consumers. Competition between manufacturers is not focused on price. Investments into marketing and R&D could have driven prices higher in terms of the market power they provide to manufacturers, and in terms of rising costs from marketing and new ingredients.

XI. BARRIERS TO PARALLEL IMPORT

Section Summary:

- While Singapore's nutrient regulations for Formula Milk products are generally less restrictive than the Codex, there remain other hurdles that discourage parallel imports into Singapore.
- The labelling requirements under the Food Regulations and the SIFECs Code requirement effectively prevent a parallel importer from importing Formula Milk from countries where the labels are not in English or where the labels do not comply with the Food Regulations.
- Parallel importers must obtain documentation from the manufacturers or overseas distributors they are obtaining their supplies from in order to import their supplies. Manufacturers are unlikely to provide such documents to facilitate parallel importing in order to protect their distribution channels in Singapore.
- On top of labelling and import documentation concerns, security and quality assurance considerations might also discourage major retailers from parallel importing Formula Milk.

180. Given the strong brand loyalty exhibited by consumers, parallel imports could increase competition, particularly for the popular brands, by allowing consumers to acquire the Formula Milk products through other sources besides the major retailers (which obtain their Formula Milk supplies from authorised distributors). However, in practice, the ability to parallel import depends on the degree to which products sold in Singapore are similar to those sold in other countries.⁶⁵ In other words, if the products manufactured for Singapore are also sold in other countries, parallel importers should theoretically face less regulatory burden to bring such products into Singapore. Although some manufacturers have observed parallel imports of their products in Singapore, competition from parallel imports is limited at present due to issues discussed below.

Nutritional Content of Formula Milk Sold in Singapore vis-à-vis Other Countries Not Likely to be a Barrier

181. Despite there being only slight differences between Singapore's nutritional requirements for Formula Milk vis-à-vis Codex, most manufacturers have submitted that their formulations sold in Singapore are manufactured specifically for the Singapore market or may vary in the exact proportion of ingredients as compared to other countries. It appears that manufacturers brought in premium formulation into Singapore despite the similarity in nutritional standards with other countries.

⁶⁵ Singapore's nutritional requirements for Formula Milk contain small differences from the international Codex Infant Formula standard but manufacturers might be able to find a formulation that meets both requirements.

182. Singapore's nutrient regulations for Formula Milk products are generally less restrictive than Codex, i.e., Formula Milk products manufactured in countries which adopted the Codex standard, such as Philippines and Indonesia, would generally meet local regulations, except for labelling requirements. This view was also supported by one manufacturer, which noted that Singapore's regulations contained small differences from the Codex standard and manufacturers could generally adjust product specifications to accommodate Singapore's standards.

183. Notwithstanding the above, there remain other hurdles that discourage parallel imports into Singapore.

Strict Labelling Requirements

184. The labelling requirements under the Food Regulations (in terms of content, format and language of the label) in combination with the SIFECs Code requirement (that labels must be part of the Formula Milk can and not in the form of can inserts or attachments such as stickers or shelf-talkers) would effectively prevent a parallel importer from importing Formula Milk from countries where the labels are not in English or where the labels do not comply with the Food Regulations. The parallel importer is unable to rectify any deficiency in the existing labelling by sticking a complying sticker label on the Formula Milk.

185. Any parallel importer must therefore obtain the support of the manufacturer to provide the right packaging before it is able to comply with Singapore's labelling requirements. However, in practice, manufacturers would generally protect their own authorised distribution channels rather than entertain the parallel importers with smaller volume requirements. This is seen by how Formula Milk manufacturers police the TCM medical halls proactively to report (by reporting to AVA) any failure by them to comply with the labelling requirements (e.g. language of label not being in English, non-compliant label format and the omission of mandated details).

Difficulty in Meeting Import Documentation Requirements

186. To obtain the documents required for importing Formula Milk into Singapore, parallel importers must obtain the documentation from the manufacturer or overseas distributors they are obtaining their supplies from. A Formula Milk manufacturer is unlikely to facilitate parallel importing in order to protect their distribution channels in Singapore. While overseas distributors will have the incentive to supply to parallel importers, they may not be able to do so as manufacturers may contractually restrict their sales to only local retailers and/or for local consumption. Although parallel importers could obtain such documents from overseas government authorities, the authorities are not obliged or likely to provide the documents.

187. The views of the supermarkets on the challenges of parallel importing are instructive. A supermarket chain indicated that it is not able to directly import Formula Milk due to its inability to meet AVA's requirement for:

- a. a certified true copy of the manufacturer's certification from the factory; and
- b. compliance with labelling requirements.

188. A pharmacy indicated that the additional administrative burden and financial risk of directly importing Formula Milk is not commercially viable as this is not part of its core business category. In particular, the importation requirements (e.g. under the Food Regulations) are extensive and there will be a need to use a third party with expertise in handling such imports. The financial risks are also high due to minimum order quantities, long stock holding periods and potential write-offs due to goods expiry. Another supermarket similarly prefers using the local authorised distributors/manufacturers instead of directly importing Formula Milk which requires it to go through the stringent controls and approval process. Another pharmacy does not import Formula Milk into Singapore after due consideration of the volume of stocks commitment and the administrative back-end work, i.e., health regulatory procedures.

189. While regulations on nutritional content of Formula Milk sold in Singapore may not pose significant barriers to entry into the Singapore market, the import documentation and labelling requirements pose significant challenges to companies interested in parallel importing Formula Milk into Singapore. While parallel importing is not impossible, it is unlikely to occur on a significant scale so as to pose a significant competitive constraint in the near future. Manufacturers may seek to limit such parallel import should it threaten sales through the authorised channels in Singapore.

Security and Quality Assurance Concerns

190. There is an expectation from parents who purchase Formula Milk that the products are of good quality and are obtained from trusted and safe sources. Product safety and traceability is therefore important. A supermarket indicated that there is quality assurance when using local authorised distributors/ manufacturers as they would have to obtain the necessary approvals from AVA Singapore before they can supply the Formula Milk. Another supermarket purchases Formula Milk from local distributors instead of importing Formula Milk directly as Formula Milk is a product which requires special care and storage and is subject to very stringent regulations. One supermarket indicated that it did not import Formula Milk directly as the product's nature is highly sensitive and it does not want to incur this risk as traceability is of utmost importance to that supermarket. A separate supermarket also considers Formula Milk to be in a very brand sensitive category of products. It prefers to buy from manufacturers or appointed official distributors/agents to ensure that the products have been approved by AVA, ensuring the traceability of these products should there be any product recall. A pharmacy considers it more advantageous to purchase from

authorised local distributors as, in the event that there are issues with the product quality of the Formula Milk, that pharmacy will be able to contact local distributors immediately.

191. Therefore, it appears that on top of labelling and import documentation concerns, security and quality assurance considerations might also discourage major retailers from parallel importing Formula Milk. Smaller players will have even less economic incentive to parallel import Formula Milk due to the difficulties involved in securing the necessary documentation for the importation process (see paragraphs 185 and 186) and finding downstream retailers thereafter that are willing to retail parallel imported Formula Milk to end consumers.

Limit on Direct Online Purchase of Formula Milk from Overseas

192. Other than Stage 1 Formula Milk which is not allowed for sale online due to the restrictions under SIFECs, online sales of Formula Milk constitutes less than 5% of the local supermarkets' revenue. Although, local supermarkets' online platforms and other local online grocers compete in the sales of Formula Milk, their ability to negotiate with the local authorised distributors for lower prices is similarly weak as they appear unable or unwilling to parallel import from overseas.

193. Local third party online shopping sites allow consumers to purchase Formula Milk online. Based on CCS's preliminary research, it appears that these online sellers also obtain their supply from local authorised distributors. It is not clear how popular Formula Milk offered via third party online shopping sites is.

194. Currently, online purchases from overseas sources for personal consumption that is within the Personal Allowance limits are allowed by AVA to be brought into Singapore if such a service is available. However, the consumers' only means of assessing the quality of the Formula Milk would be from the ratings, comments and feedback from previous buyers. Their recourse is likely to be limited if the Formula Milk is of poor quality, tainted or a counterfeit. Attempts by CCS to purchase Formula Milk online from the websites of supermarkets based overseas such as Malaysia, Indonesia, China and Australia were unsuccessful as it appeared that they do not deliver their products into Singapore.

XII. RECOMMENDATIONS

Section Summary:

- CCS has three broad recommendations to lower barriers to entry and to improve the level of price competition in the market, particularly between manufacturers.
- *Recommendation 1 – Improving Consumer Awareness.* To reduce information asymmetry on nutritional content and requirements of Babies, Infants and Young Children, awareness of Singapore consumers in this area can be raised. Addressing the information asymmetry allows consumers to counter simple heuristics such as ‘more is better’ or ‘more expensive means better quality’ and in turn, price competition may become more effective over time.
- *Recommendation 2 – Encouraging Entry.* To encourage greater price competition within brands, it is worthwhile to review parallel import requirements while still maintaining food safety and security. Private labels may be another alternative option to bring down prices (as seen in South Korea and Italy).
- *Recommendation 3 – Review of Sponsorship in Healthcare Sector.* The sponsorship activities and payments and their impact on the milk rotation schedules within the hospital channel could be reviewed.

195. In light of the features of the market and the key issues highlighted in the preceding sections, CCS has three broad recommendations to lower barriers to entry and improve the level of price competition in the market, particularly between manufacturers. These broad recommendations are to improve consumer awareness of the availability and content of the Formula Milk products, encourage entry into the Singapore market and to lower the barriers to entry in the hospital channel. CCS has also examined other potential interventions in the market but found that their effectiveness in terms of enhancing price competition and/or lowering Formula Milk prices is likely to be limited.

196. It should be noted that it is unlikely that any single one recommendation will be the silver bullet to address the rapidly increasing prices of Formula Milk. Rather, they complement each other in order to increase the level of price competition in the market, so that consumers can derive more value for money.

Recommendation 1: Improving Consumer Awareness

197. **Reducing Information Asymmetry on Nutritional Content and Requirements of Infants and Young Children.** The Infant formula milk products available in the market, including standard brands which typically cost less than half the price of the premium brands, are required to meet the safety standards and nutrient

composition requirements under the Singapore Food Regulations, which is administered by the AVA and meet the nutritional needs of these children⁶⁶. This fact however appears to be little known. There also seems to be few public messages to help consumers understand the nutritional content of Formula Milk which in turn can help them select the appropriate products for their children. What consumers face instead are the aggressive marketing and “premiumisation” messages driven by Formula Milk manufacturers, which perpetuate consumers’ belief that the more expensive and the more ingredients there are in the Formula Milk, the higher quality it is.

198. CCS is of the view that it is important to close this information gap in the public domain so that consumers are able to better discern whether they need or want to purchase premium Formula Milk.

199. To address this information asymmetry, awareness of Singapore consumers about the nutritional content of Formula Milk products and developmental needs of the child can be raised. Information to parents on alternative sources of nutrition, especially for older age groups may also be useful. Indeed, CCS has received feedback that fresh milk can be a substitute for Formula Milk for children above one year old. Such information allows consumers to counter simple heuristics such as ‘more is better’ or ‘more expensive means better quality’ and in turn, price competition may become more effective over time. The role of advertising content for Formula Milk in affecting consumer choices and behaviour, which in turn affect the demand for Formula Milk, can also be studied. This will help to shape appropriate approaches to resolve the issue of information asymmetry.

200. It was suggested that such a role could be played by infant nutrition and healthcare experts. CCS considers that an established research institution or non-governmental organisation could also take on this role. More importantly, significant support is required to provide an effective alternative source of information for parents on top of the marketing carried out by the manufacturers. In addition, the messaging needs to be clear such that it does not compromise the encouragement of breastfeeding.

201. **Availability of Products at Different Price Points.** Another aspect of consumer education is to highlight to consumers that there are Formula Milk products at different price points. In particular, there are standard brands which are more affordable but would still meet the general nutritional needs of a child as these have been approved by AVA for sale in Singapore. Consumers need not focus on the premium brands if such standard products suit their children’s needs as well.

⁶⁶ “Infant” is defined in Food Regulations, Sale of Food Act (Cap. 283) as a person not more than 12 months of age.

202. There is also scope to increase consumer awareness on the availability of alternative channels for the sales of Formula Milk. So long as there is clear evidence that such products have been approved by AVA, consumers should be made aware that it is safe to purchase and consume such products.

Recommendation 2: Encouraging Entry

203. **Encourage Parallel Imports.** Currently, there is limited competition within any brand of Formula Milk (i.e., intra-brand competition) as the local supply is mainly obtained through the same authorised distributors. Parallel imports can help to introduce alternative sources of supply which in turn can increase price competition.

204. The difficulty in obtaining the necessary import documents as well as the local labelling requirements are likely hurdles to parallel importation (see paragraphs 185 and 186). It is worthwhile to review labelling and import documentation requirements while making sure that legitimate and important food safety and security considerations are not compromised. It might increase the availability of parallel imports (including enabling retailers to parallel import on their own) and increase price competition in Singapore.

205. SIFECs may also consider a review of its restrictions against online sales, discount on volume sales and delivery services in relation to Stage 1 Formula Milk in view of the greater propensity for consumers to make online purchases. This in turn would allow parallel importers more scope in terms of the Formula Milk products they are able to sell locally.

206. CCS notes that the Formula Milk manufacturers may respond to the threat of parallel imports by limiting the supply from overseas sources but this threat may reduce their ability to raise prices due to the competitive constraint imposed by these parallel imports. Further, there may be other reasons on top of labelling and import documentation requirements which result in the major retailers preferring to obtain their Formula Milk supplies from authorised distributors. Hence, this measure needs to be complemented by other measures proposed in this section to incentivise retailers to consider parallel importing. For parallel imported Formula Milk to become widely accepted by consumers, there needs to be accompanying measures to help consumers ascertain that these products are genuine and safe for consumption. For example, there could be ways for consumers to verify (via a self-help verification portal) that the retailers are authorised to import the Formula Milk. This will then provide the necessary incentives for parallel importers to grow and impose some competitive constraints on the manufacturers.

207. **Foster Entry of Private Labels (or ‘House Brands’).** CCS notes that there have been overseas cases of successful entry by private label brands, which have mitigated the increase in prices of Formula Milk. For example, in South Korea,

Euromonitor International noted that the constant unit price of Formula Milk declined with the launch of private label products.⁶⁷ In Italy, the entry of a private label (COOP) in November 2004, priced at €10 as compared to average prices of €29 (Starter Milk) and €22 (Follow-on Milk) was successful in gaining a market share of 17% after one month and 25% after three months. This prompted the entry of another private label by pharmacies which gained 20% of market share. The price of Formula Milk correspondingly fell by 18% and 30% in the pharmaceutical and modern retail channels respectively.⁶⁸

208. It is noted that entry by an unbranded product in Italy in 1998 was unsuccessful as consumers stuck with known and expensive brands which were perceived to be of higher quality and reliability. Mothers were reluctant to experiment with Formula Milk brands other than those tried at hospitals or prescribed by paediatricians, many of whom warned against low cost entrants. The subsequent entry by private labels in 2004 was more successful because of a combination of focus created by consumers' associations and government as well as intervention by the Italian competition authority against anticompetitive conduct in this market. These presumably generated the necessary awareness by consumers which enabled the right conditions for private labels to enter and become successful.

209. The Italian example sheds some light on the factors that will increase the success rate of new entry. It is quite likely that sufficient consumer awareness and interest would have to be generated (e.g. through Recommendation 1) before entry by private labels or house brands can be successful. The discussion in Section X on brand recognition and loyalty provides further factors to consider. Firstly, due to consumers' perceptions of quality, the production location of the Formula Milk may be an important consideration. Singapore consumers may have a preference for products from Europe, Australia and New Zealand. Secondly, having the entire range of products (i.e., Starter Milk to Growing-up Milk) is likely to increase the chances of consumers accepting the brand given consumers' preference for not switching brands during a child's growing up years. Thirdly, marketing to raise consumer awareness and acceptance of the new brand is critical to ensure success. Both above the line and below the line marketing strategies would need to be adopted. The level of marketing resources required will depend on the extent to which consumer awareness on Formula Milk nutritional content has increased (see Recommendation 1 on Improving Consumer Awareness at paragraphs 197 to 200). It should be noted that there might be an inherent tension between catering to consumers' preferences (e.g. for premium branding and image) to ensure successful entry *vis-à-vis* keeping prices low. The case study of entry by Aptamil into Singapore in 2016 will be a useful case study in this regard.

⁶⁷ Euromonitor International, *Global Infant Formula Industry: Focus on Asian Markets*, July 2016.

⁶⁸ [http://old.unipr.it/arpa/defi/econlaw/econlaw%20non%20collegati/Sabbatini\(2007\).pdf](http://old.unipr.it/arpa/defi/econlaw/econlaw%20non%20collegati/Sabbatini(2007).pdf).

Recommendation 3: Reviewing Sponsorship to Healthcare Sector

210. CCS has earlier noted that marketing expenditure in the hospital channel by manufacturers is increasing generally and it makes up a significant proportion of the total marketing expenditure of manufacturers relative to the proportion of sales in hospitals *vis-à-vis* total sales. Furthermore, the level of sponsorship and payments affect the duration of milk rotation allocated to the manufacturers in the private hospitals. Given that more babies are delivered in private hospitals, majority of parents who use RTF Formula Milk in private hospitals do not have a preferred brand in mind, and a large proportion of parents generally do not switch away from the brand they have used in hospitals, this could become a significant barrier to entry for new brands in terms of brand exposure. Hence, there could be scope to review the sponsorships and payments that manufacturers can provide to the hospital channel and the link between such sponsorships and payments to the milk rotation schedules.

211. In this respect, CCS notes that the World Health Organisation's ("WHO") 69th World Health Assembly ("WHA") held in May 2016 provided guidance on ending inappropriate promotion of foods for infants and young children (up to 36 months). One of the recommendations in the guidance was that companies that market foods for infants and young children should not create conflicts of interest in health facilities and health systems. Similarly, health workers, systems, professional associations etc. should avoid conflicts of interest. The sponsorship activities and payments by manufacturers in the hospital channel and the impact on milk rotation schedules could be reviewed to determine if these activities are in keeping with the spirit of WHA's guidance. A further point to consider is if RTF Formula Milk supplied for use in hospitals can be "brand-free" (i.e. parents would not be able to identify which brand of Formula Milk had been provided) or if the rotation schedule can be delinked from sponsorship.

212. CCS recognises that the sponsorship activities by the manufacturers benefit the hospitals and parents in terms of defraying the costs of training, educational talks and seminars. Nonetheless, the escalating relationship between such activities and the milk rotation schedule could be of concern. These will need to be weighed carefully in the review.

Revision and alignment of Singapore's regulations on nutritional standards to Codex

213. CCS understands that AVA will benchmark Singapore's regulations on compositional requirements for the nutrients in infant formula for infants aged 6 months and above with the Codex Standard for Follow-up formula. This Codex Standard is currently being reviewed with a target to complete in 2019.

214. While alignment with Codex mean that Singapore's regulations on nutritional standards for Formula Milk may become stricter, the complete alignment with Codex, an international standard, could actually facilitate trading of Formula Milk between countries. However, the impact on new entry into the Singapore market may be limited because Singapore's current standards are not far from Codex. More importantly, to import infant formula, there are still food safety and health certifications requirements for traceability of the source of supply to comply with, which would be challenging for parallel importers to obtain.

Would government subsidies for Formula Milk help to lower prices?

215. CCS also considered if other forms of government intervention that have been raised by the public in the past would be effective in lowering prices of Formula Milk. Subsidies for consumers to purchase Formula Milk is one regular suggestion. Would subsidies help to lower prices effectively given the features of this market?

216. When subsidies are provided to consumers (e.g. vouchers which are only applicable for purchase of the targeted product), consumers have more purchasing power and hence are better able to afford the products, i.e., the effective prices they face are generally lower. However, manufacturers of the products also benefit from the subsidies as the demand for their products increase and they can set higher prices. The relative effects of subsidies generally depend on a number of factors, including the responsiveness of producers and consumers to changes in prices (i.e. the own-price elasticities of supply and demand), the form of the subsidy, the conditions attached to it, and how the subsidy interacts with other policies.

217. In particular, the elasticities of supply and demand would determine to what extent consumers benefit from the subsidies *vis-à-vis* manufacturers, i.e., the incidence of a subsidy. In a seller's market, consumer subsidies will be shifted onward to producers and vice versa.⁶⁹

218. Given CCS's finding that the market power enjoyed by the manufacturers is due to the brand loyalty displayed by consumers, CCS is of the view that a subsidy for consumers for Formula Milk will likely mean that most of the benefits of the subsidy will accrue to the manufacturers. Although parents may benefit from lower effective prices with the subsidy, manufacturers are likely able to increase the wholesale prices of their Formula Milk products in response to the higher purchasing power of consumers, thus driving up retail prices. Manufacturers may thus gain a larger incidence of the subsidy than parents. This is especially when price competition between manufacturers is not intense. It should also be noted that subsidies for Formula Milk would need to be considered alongside measures to encourage breastfeeding to ensure the latter is not compromised. General subsidies to defray the

⁶⁹ <https://www.iisd.org/GSI/effects-subsidies>.

costs of raising a child, while less salient in dealing with the issue of rising prices of Formula Milk, are likely to be more impactful and practical. However, this is a policy consideration which the relevant government agencies will need to consider.

Would price regulation help to lower prices?

219. Another suggestion which CCS has examined is price regulation of Formula Milk, for example, setting a price ceiling or maximum price for Formula Milk. While this may indeed help to lower prices for Formula Milk, it can be difficult to implement effectively. For example, we have seen that manufacturers regularly change packaging sizes and formulation and this may reduce the effectiveness of any imposed price cap as manufacturers respond to it using other metrics. This can result in the government having to police and enforce various aspects of Formula Milk, and not just pricing.

220. Furthermore, price regulation may have unintended consequences. Price controls by government or price recommendations by trade associations, binding or non-binding, harm the competitive process through the distortion of independent pricing decisions. A likely outcome is that sellers are motivated to cluster their prices around the recommended levels, irrespective of their individual business profiles such as costs, service standards and target customers.

221. In particular, recommendations of maximum prices can lead to a convergence of prices at or just below the maximum level. When producers believe that other competitors will adhere to the maximum price, they have the incentive to follow suit instead of cutting costs and prices where possible.

222. In some cases, price recommendations can lead to price fixing which is one of the most serious forms of anti-competitive behaviours and has been shown to result in significant over-charging, borne by customers.⁷⁰

Would more extensive restrictions on advertising and marketing help to lower prices?

223. As marketing expenditure is significant and rising, there have been calls to restrict marketing of Formula Milk. This can potentially help to encourage breastfeeding, and perhaps also reduce costs for manufacturers and in turn reduce prices.

224. As an example, the Marketing in Australia of Infant Formula: Manufacturers and Importers Agreement (“MAIF Agreement”), which is a voluntary self-regulatory code,

⁷⁰ See CCS policy position: <https://www.ccs.gov.sg/media-and-publications/policies-and-positions/ccs-position-on-price-recommendations>.

prohibits advertising and promotion of infant formula (i.e. up to 12 months) by manufacturers and importers directly to the public.⁷¹ The Australian Competition and Consumer Commission (“ACCC”) noted that recommendations by a scientific and technical advisory group convened by WHO include extending the restrictions to all products within the full scope of the WHO Code, including milk marketed as suitable for children aged up to two years.⁷² The rationale is that studies show that marketing of commercial complementary foods and beverages can mislead and confuse caregivers.⁷³

225. Similarly, a research report commissioned by the Commonwealth Department of Health and Ageing in Australia (“Department of Health”), while not recommending that the MAIF Agreement be extended to toddler milk (i.e. Stage 3 onwards), stated that consideration should be given as to how to best restrict manufacturers’ labelling of toddler milk drinks with product identifiers resembling those of infant formula labels. This is because marketing of toddler milk drinks (which is not covered by the MAIF Agreement) can potentially provide de-facto advertising for infant formula as consumers were not necessarily able to distinguish between infant formula and toddler milk drinks.⁷⁴ However, the Department of Health did not agree with this recommendation.⁷⁵ Furthermore, the same report noted that international approaches towards coverage of Formula Milk products in their implementation of the WHO Code varied.

226. CCS notes that marketing and advertising can impact a market in a variety of ways. Marketing and advertising can help to provide consumers with useful information about the products and help consumers to make choices. For example, a new entrant into a market with a better product can use marketing to improve consumer awareness of its beneficial features. However, brand or product specific marketing and advertising messages can also increase brand loyalty and increase the market power of the firms putting out those messages. Hence, while marketing and advertising costs add on to operating expenses of firms, many firms also see them as an “investment” to build up the brand and differentiate their products from their competitors.

227. In light of the above, CCS considers that the question of extending restrictions on advertising and marketing will need further study before determination on the

⁷¹ <http://registers.accc.gov.au/content/index.phtml/itemId/1188093/fromItemId/278039>.

⁷²

<http://registers.accc.gov.au/content/trimFile.phtml?trimFileTitle=D16+92879.pdf&trimFileFromVersionId=1197055&trimFileName=D16+92879.pdf>.

⁷³ <http://www.who.int/nutrition/events/stag-report-inappropriate-promotion-infant-foods-en.pdf>.

⁷⁴

[http://www.health.gov.au/internet/main/publishing.nsf/Content/1CA4794F9F834991CA257BF0001A8EBB/\\$File/Review%20of%20MAIF%20Agreement%20-%20Final%20Research%20Paper%20120613.PDF](http://www.health.gov.au/internet/main/publishing.nsf/Content/1CA4794F9F834991CA257BF0001A8EBB/$File/Review%20of%20MAIF%20Agreement%20-%20Final%20Research%20Paper%20120613.PDF).

⁷⁵ See <http://www.health.gov.au/internet/main/publishing.nsf/Content/review-effective-infant-formula>. However, no reason was provided by the Department of Health.

effectiveness of this course of action. Based on the current features of the Singapore market, CCS's view (subject to further study) is that any restriction on the level of marketing, for example in terms of advertising expenditure or outreach platforms, is unlikely to enhance price competition or lower prices in the immediate term. This is because CCS's findings indicate that the current demand for Formula Milk is likely to be inelastic as incumbents in the market already enjoy a certain level of branding and market power. Moreover, Formula Milk manufacturers may intensify advertising for other products and through other channels to circumvent additional restrictions. There may also be unintended consequences as potential new entrants may find it harder to increase awareness of their products with the additional restrictions on advertising and may be hampered from entering the market. While marketing is one of the strategies that manufacturers pursue for 'premiumisation', whether restricting marketing can reduce 'premiumisation' depends on the extent of the regulation required and the ability to enforce such regulations.

228. However, as mentioned in Recommendation 1, information asymmetry currently exists in the market. Thus, the marketing messages and content could have significant influence on consumer choice and behaviour. There is room for further study on the impact of such marketing messages and content on consumers to see if information asymmetry can be addressed.

XIII. CONCLUSION

229. CCS's inquiry has found that various features at different levels of the Formula Milk supply chain in Singapore have interacted to present potentially significant barriers to entry into the market for the supply of Formula Milk to consumers. Brand loyalty and preference for premium products exhibited by consumers has led to manufacturers pursuing more R&D and marketing to encourage early adoption and to drive the trend towards "premiumisation". This could have increased the cost of Formula Milk products and also increased the market power and ability of manufacturers to raise prices of Formula Milk products. New entrants may also find it challenging to gain brand awareness amongst new parents in the hospitals given the links between the milk rotation system and sponsorship of hospital activities, particularly in the private hospitals. Regulations governing labelling and import documentation may also inadvertently reduce the ability of parallel importers to enter the Singapore market to provide intra-brand competition.

230. As such, it is unlikely for any single one recommendation to address rising prices of Formula Milk. The three broad recommendations can complement each other to lower barriers to entry and to improve price competition in the market which in turn will allow consumers more choices at competitive prices.

Extracts of Food Regulations

Melamine

34B. No person shall import, sell, advertise, manufacture, consign or deliver —

- (a) any powdered infant formula containing melamine in excess of 1 ppm;
- (b) any liquid infant formula (as consumed) containing melamine in excess of 0.15 ppm; or
- (c) any food (other than powdered infant formula or liquid infant formula (as consumed)) containing melamine in excess of 2.5 ppm.

[S 493/2013 wef 01/08/2013]

Infant formula

252.—(1) Infant formula shall be any food described or sold as an alternative to human milk for the feeding of infants. It shall be a product prepared from milk of cows or other animals or both or from other edible constituents of animals, including fish, or plants and which have been proved suitable for infant feeding.

(2) Infant formula prepared in accordance with the directions on the label shall have an energy value of not less than 640 kcal and not more than 720 kcal per litre of the product ready for consumption.

(3) Infant formula shall contain per 100 kcal of intake the following:

- (a) not less than 1.8 g and not more than 4 g protein of nutritional quality equivalent to that of casein or greater quantity of other protein in proportion to its nutritional quality. The quality of the protein shall not be less than 85% of that of casein;
- (b) not less than 3.3 g and not more than 6 g fat and not less than 0.3 g linoleic acid in the form of glycerides;
- (c) not less than 75 mcg and not more than 150 mcg Vitamin A expressed as retinol;
- (d) not less than 40 and not more than 100 I.U. of Vitamin D;

[S 195/2011 wef 15/04/2011]

- (e) not less than 8 mg Vitamin C (ascorbic acid);
- (f) not less than 40 mcg Vitamin B1 (thiamine);

- (g) not less than 60 mcg Vitamin B2 (riboflavin);
- (h) not less than 250 mcg nicotinamide;
- (i) not less than 35 mcg Vitamin B6. Formulae with a higher protein content than 1.8 g protein/100 kcal shall contain a minimum of 15 mcg Vitamin B6 per gram protein;
- (j) not less than 4 mcg folic acid;
- (k) not less than 300 mcg pantothenic acid;
- (l) not less than 0.15 mcg Vitamin B12;
- (m) not less than 4 mcg Vitamin K1;
- (n) not less than 1.5 mcg Vitamin H (Biotin);
- (o) not less than 0.7 I.U. Vitamin E (d-tocopherol compounds) per g linoleic acid (or per g polyunsaturated fatty acids, expressed as linoleic acid) but in no case less than 0.7 I.U./ 100 kcal;
- (p) not less than 20 mg and not more than 60 mg sodium (Na);
- (q) not less than 80 mg and not more than 200 mg potassium (K);
- (r) not less than 55 mg and not more than 150 mg chloride (Cl);
- (s) not less than 50 mg calcium (Ca) and the Calcium: Phosphorus (Ca:P.) ratio shall be not less than 1.2 and not more than 2.0;
- (t) not less than 25 mg of phosphorus (P) and the Calcium: Phosphorus (Ca:P.) ratio shall be not less than 1.2 and not more than 2.0;
- (u) not less than 6 mg magnesium (Mg);
- (v) not less than 0.15 mg iron (Fe);
- (w) not less than 5 mcg iodine (I);
- (x) not less than 60 mcg copper (Cu);
- (y) not less than 0.5 mg zinc (Zn);
- (z) not less than 5 mcg manganese (Mn); and
- (za) not less than 1 mcg and not more than 5 mcg selenium (Se).

(4) For the purpose of calculating the number of kilocalories supplied by a food referred to in this regulation —

- (a) 1 g of any fat in that food shall be deemed to supply 9 kcal;
- (b) 1 g of any protein in that food shall be deemed to supply 4 kcal;
- (c) 1 g of any carbohydrate in that food shall be deemed to supply 4 kcal.

(5) Isolated amino acids may be added to infant formula only to improve its nutritional value. Essential amino acids may be added to improve protein quality, only in amounts necessary for that purpose. Only natural L-forms of amino acids shall be used.

(6) The following ingredients may be added to infant formula in order to provide substances ordinarily found in human milk and to ensure that the formulation is suitable as the sole source of nutrition for the infant or to provide other benefits that are similar to outcomes of populations of breastfed babies:

(a) Nucleotides listed below, provided that the total level of nucleotides (including added and endogenous nucleotides) shall not exceed 16 mg per 100 kcal:

- (i) Cytidine 5'-Monophosphate;
- (ii) Uridine 5'-Monophosphate;
- (iii) Adenosine 5'-Monophosphate;
- (iv) Guanosine 5'-Monophosphate; and
- (v) Inosine 5'-Monophosphate;

(b) Long chain (20 and 22 carbon atoms) polyunsaturated fatty acids (LCP) but their content shall not exceed —

- (i) 1% of the total fat content for n-3 LCP; and
- (ii) 2% of the total fat content for n-6 LCP (1% of the total fat content for arachidonic acid),

and the eicosapentaenoic acid (20:5 n-3) content shall not exceed that of docosahexaenoic (22:6 n-3) acid content;

(c) Galacto-oligosaccharides, long chain inulin and oligofructose produced from inulin, in an amount not exceeding a total level of 0.8 g per 100 ml;

(d) Polydextrose, in an amount not exceeding a total level of 0.2 g per 100 ml;

[S 493/2013 wef 01/08/2013]

(e) Bovine lactoferrin, in an amount not exceeding 100mg per 100ml.

[S 49/2016 wef 02/02/2016]

[S 195/2011 wef 15/04/2011]

(7) [Deleted by S 195/2011 wef 15/04/2011]

(8) [Deleted by S 195/2011 wef 15/04/2011]

(9) [Deleted by S 195/2011 wef 15/04/2011]

Infant milk formula or infant milk preparation

253. Infant milk formula or infant milk preparation shall be infant formulae prepared from cow's milk. It may have part or whole of its butterfat replaced by vegetable oils. It shall comply with the standards laid down for infant formula.

Labelling of infant formula

254.—(1) Every package of infant formula, other than infant milk formula, shall bear a label indicating the sources of protein. Such indication shall be printed immediately after the common name "infant formula" or any appropriate designation.

(2) There shall be printed on the label for infant formula —

- (a) directions as to the method of preparing the food;
- (b) the amount of energy and the number of grams of protein, fat and carbohydrate per 100 ml or other equivalents of formula prepared in accordance with the directions on the label;
- (c) the total quantity of each vitamin and mineral per 100 ml or other equivalents of formula prepared in accordance with the directions on the label;
- (d) a statement suggesting the amount of the prepared food to be given each time, and the number of times such amount is to be given per day; such statement shall be given for each month of the infants' age up to 6 months;
- (e) directions for storage and information regarding its keeping qualities before and after the container has been opened; and

- (f) information that infants over the age of 6 months should start to receive supplemental foods in addition to the formula.

TWELFTH SCHEDULE

Regulations 8A(1), 9B(1)(c) and (2)(c),
79(2), 248(1), 249(3) and 250(2)

FORM FOR NUTRITION INFORMATION PANEL

NUTRITION INFORMATION

Servings per package (here insert number of servings)*

Serving size: (here insert the serving size)*

	Per Serving* or	Per 100 g (or 100 ml)
Energy	kcal, kJ or both	kcal, kJ or both
Protein	g	g
Fat	g	g
Carbohydrate	g	g
(here insert the nutrients for which nutrition claims are made, or any other nutrients to be declared)	mcg, mg, g or other units of measurement as appropriate	mcg, mg, g or other units of measurement as appropriate

* Applicable only if the nutrients are declared on a per serving basis.

[S 493/2013 wef 01/08/2013]

[S 175/2012 wef 02/05/2012]

Sale of Infant Foods Ethics Committee Singapore Code of Ethics (“SIFECs Code”)⁷⁶

History of the SIFECs Code

1. The World Health Organization (“WHO”) advocates exclusive breastfeeding for the first six months of an infant's life as it provides all the energy and nutrients needed for growth, development and protection against infectious and chronic diseases.
2. To guide the marketing practices of the infant food industry as well as protect and promote the practice of breastfeeding in Singapore, the Ministry of Health (MOH) established the Sale of Infant Foods Ethics Committee, Singapore (“SIFECs”) in 1979. This Committee formulated and implemented the 'Code of Ethics on the Sale of Infant Foods in Singapore'. With the establishment of the Health Promotion Board (“HPB”) in 2001, the administration of the SIFECs was transferred from MOH to HPB. HPB continued to support the SIFECs to promote breastfeeding and to safeguard ethical standards amongst the infant food industry and the healthcare professionals. SIFECs is primarily made up of healthcare professionals and would decide if any label violated the Code of Ethics. In response to the Code of Ethics, the Singapore Infant Food Industry (“SIFI”) Self-Regulatory Committee, comprising Abbott Nutrition, Danone Asia Pacific Holdings, Friesland Campina Singapore, Mead Johnson Nutritionals, Nestle Singapore and Wyeth Singapore⁷⁷, was established to evaluate the marketing practices of the milk manufacturers.
3. In 1981, the 34th World Health Assembly adopted the WHO International Code of Marketing of Breast Milk Substitutes (“WHO Code”). The aims and the principles of the WHO Code were supported by a majority of countries, including Singapore. As both the SIFECs Code and the WHO Code work towards achieving similar objectives, Singapore decided to continue with the implementation of its own SIFECs Code, adjusting it to suit the local development situation. The SIFECs Code is regularly reviewed and updated so that it is in line with the World Health Assembly Resolutions. Since 1981, the SIFECs Code has undergone three revisions to keep up with the changing marketing practices in the infant food industry and consumer needs.

Aim, Functions and Objectives of SIFECs CODE

4. The aim of the SIFECs Code is to contribute to the provision of safe and optimum nutrition for infants, by protecting and promoting the practice of

⁷⁶ Sale of Infant Foods Ethics Committee Singapore (SIFECs) Code of Ethics, contributed by the Health Promotion Board (“HPB”), June 4, 2015 (<http://www.healthhub.sg/live-healthy/530/SIFECs%20Code%20of%20Ethics>).

⁷⁷ <http://apiycna.org/singapore/>.

breastfeeding, through the provision of guidelines to guide the marketing and distributing practices of breast milk substitutes in Singapore.⁷⁸

5. The SIF ECS Code serves as a working document for use by all who are involved in the promotion of childhood nutrition and the marketing and distribution of breast milk substitutes in Singapore. It provides guidelines on the appropriate marketing and distribution of breast milk substitutes. It affirms that the success of breastfeeding lies in public education. The healthcare system also plays an essential role in facilitating breastfeeding, and in ensuring that its workers or members are equipped with the necessary knowledge and skills to advise and guide mothers in breastfeeding practices.

6. The SIF ECS Code also recognises that there is a legitimate market for Formula Milk for Infants, which is formulated to provide an alternative, if breastfeeding is not possible. However, the sale and distribution of infant formulas should be carried out in such a way as to avoid competing with breast milk. Therefore, marketing of Formula Milk for infants, requires special attention.

7. The representatives from the infant food industry participate actively in the SIF ECS Code review process and they continue to ensure its implementation and monitoring. They have agreed to subscribe to and operate within the SIF ECS Code, and to submit their promotional, educational and product use instructional materials to be approved by the vetting committee of the SIF ECS.⁷⁹

Scope of the SIF ECS Code

8. The SIF ECS Code applies to the promotion, marketing and distribution practices of all defined breast milk substitutes, when marketed to be suitable for use as a partial or total replacement of breast milk. It also applies to information concerning the use of these products such as bottles and teats.⁸⁰

9. HPB considers the adherence to the SIF ECS Code as obligatory on the entire infant food industry operating in Singapore, regardless of whether the companies are signatories of the SIF ECS. Companies of the infant food industry are responsible for monitoring their marketing practices in order to ensure that they follow the guiding principles and aims of the Code. This will be supervised by the SIF ECS. They must

⁷⁸ Paragraph 1, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

⁷⁹ Introduction, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>). See also <http://apiycna.org/singapore/>.

⁸⁰ Paragraph 3, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

not only communicate the details of the Code to their company personnel, but also to the retailers, wholesalers and distributors.⁸¹

10. HPB recognises that cooperation from all the following sectors will be necessary for the successful implementation of the SIF ECS Code: the infant food industry, retailers, wholesalers and distributors, hospitals, medical and other allied healthcare professionals and government authorities. These sectors must be proactive in the promotion and implementation of the SIF ECS Code. In particular, institutions responsible for the education and training of healthcare professionals should incorporate the Code into their curricula in order to ensure awareness of its contents.⁸²

Informational and Education Materials⁸³

11. The infant food industry must ensure that informational and education materials provided on infant feeding are objective and consistent with guidelines of HPB.

12. Informational and education materials must not contain any pictures or text which idealise the use of breast milk substitutes. Terms such as “humanised” or “maternalised” must not be used in the materials. Materials must not compare Formula Milk for infants to breast milk or imply that infant milk formula is equivalent or superior to breast milk.

13. The materials must carry a notice that breast milk is the best for babies and exclusive breastfeeding is recommended by WHO for the first six months of life and, thereafter, infants should receive age-appropriate foods while breastfeeding continues for up to two years of age or beyond.

14. All nutrient claims must be evidence based and not supersede breast milk. The SIF ECS Code recognises the need for continuous research.

15. Materials can only be distributed through healthcare professionals. Company personnel can contact healthcare professionals to provide scientific and factual information on breast milk substitutes. Materials for distribution must not discourage breastfeeding or in any way imply that the products are equivalent or superior to breast milk. All informational and education materials on breast milk substitutes, within the scope of the Code, must be approved by the Vetting Committee of the SIF ECS.

⁸¹ Paragraph 10.1, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

⁸² Paragraph 10.3, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

⁸³ Paragraph 4, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

Changes in a can's packaging must only be communicated to healthcare professionals through a printed brochure approved by the Vetting Committee of the SIF ECS.

Infant Food Industry Practices⁸⁴

16. Company personnel must not, as part of their job responsibilities, provide advice or any type of educational services for pregnant women or parents of infants and young children. All advice on the use of breast milk substitutes can only be given by doctors, nutritionists/dieticians, nurses, voluntary consumers' group and breastfeeding specialists. Company personnel are to be excluded from speaking at, or organising public education events and/or parental counselling sessions on infant feeding. This includes doctors, nurses and nutritionists/dieticians in the company's employment. The infant food industry is not allowed to provide or fund mothercraft.

17. Sales and marketing personnel responsible for marketing and promoting breast milk substitutes must not have their sales incentive schemes tied to the volume of sales of these products. No financial inducements are allowed to be offered to hospitals, clinics and retail pharmacies.

18. Sponsors, organisers and all those involved in medical events/workshops/congressional meetings and symposiums may distribute detail aids for infant formulas. Distributors of these detail aids are encouraged to remind healthcare professionals that the detail aids are for their information only and should not be distributed or displayed to the public.

19. The infant food industry may sponsor medical events such as health talks and public forums only with the relevant professional bodies and societies as the main organisers. They cannot speak at these events, regardless of the content. They must also not employ or pay speakers to conduct such talks. Experts affiliated with the infant food industry should not speak at public events. Brand names and logos of companies within the infant food industry should not be featured in the presentation slides nor mentioned at these talks. Holding talks at the clinics of general practitioners and specialists are considered a violation of the SIF ECS Code.

20. Formula Milk for infants must not be sold online. The infant food industry should discourage retailers and other third parties from selling their Formula Milk for infants online or offer delivery services. Infant formulas sold at supermarkets must not have 'point of sale' materials such as shelf-talkers or be in a blockstack display. Formula Milk for infants must only be displayed within the allocated/normal shelf space.

⁸⁴ Paragraph 5, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

21. Ready-to-Feed (“RTF”) Formula Milk must only be used in hospital wards and must not be offered for sale to the public.

22. The infant food industry must not give discounts on the bulk purchase or provide any financial or material inducement, directly or indirectly, that would encourage such bulk purchases. This restriction applies to all sales channels including retail, institutional and online channels.

23. The infant food industry may sponsor healthcare professionals' attendance and participation in symposiums, congressional meetings and other medical/healthcare or education programmes. However, the sponsorship should be limited to the invited healthcare professional's meals and registration fees and, if event is held overseas, travel and accommodation costs.

Supplies to Hospitals⁸⁵

24. Breastfeeding is the preferred method of feeding in hospitals. In instances where the mother is unable to breastfeed, or the infant is unable to breastfeed, the use of Formula Milk must be decided by medical staff based on the infant's and mother's clinical condition. Bottles of pre-prepared milk should be treated as medications and should not be distributed and left on baby cots as a routine. Hospital staff should ensure that bottles of infant formula are kept in storage, out of sight of parents and visitors, to avoid the implication that anything other than breastfeeding is the preferred method of feeding in the hospital.

25. Donations of Formula Milk by the infant food industry may not be made to hospitals, with the exception of RTF Formula Milk for pre-term infants. Only healthcare professionals such as doctors and state registered nurses are entitled to order Formula Milk and at a special pricing which cannot be resold at a higher price.

Product Advertisement and Promotion⁸⁶

26. Direct advertising (including advertisements on the internet) to the general public is prohibited, except when the advertisements are approved by the Vetting Committee of the SIF ECS and/or targeted at healthcare professionals.

27. The infant food industry cannot organise point-of-sale promotions to induce sales at the retail level. These include price-off offers and discount coupons.

⁸⁵ Paragraph 6, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

⁸⁶ Paragraph 8, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

28. The infant food industry can mention certain nutrients on their websites and also link to peer-reviewed scientific references (with links to the full paper). However, the websites must not provide links to the products, use terms like 'smart', 'intelligent' and 'intellectual potential' or other such terms that imply or create a belief that the products are equivalent or superior to breastfeeding.

Labelling Requirements⁸⁷

29. The labelling cannot imply that the products are superior to breast milk. All product information should appear on labels as part of the milk can and not in the form of can inserts or attachments (e.g. stickers, shelf-talkers).

30. Can labels can only provide information on the appropriate use of the product and not instructions or illustrations which encourage progression to follow-on formulas, or interfere with the promotion of breastfeeding. Violation of this article will entail immediate removal of the product off the shelf without a grace period.

31. Can labels must carry a prescribed notice stating that breast milk is the best for babies and recommended by WHO to be exclusive for the first six months. Can labels must carry the term 'Important Notice', under which, the following information must be printed in letters, not less than 1.5 millimetres in height:

“Breast milk is the best for babies. The World Health Organisation recommends exclusive breastfeeding for the first six months of life. Unnecessary introduction of bottle feeding or other food and drinks will have a negative impact on breastfeeding. After six months of age, infants should receive age-appropriate foods while breastfeeding continues for up to two years of age or beyond. Consult your doctor before deciding to use infant formula or if you have difficulty breastfeeding.”

⁸⁷ Paragraph 9, Sale of Infant Foods Ethics Committee Singapore (SIF ECS) Code of Ethics, contributed by HPB, 4 June 2015 (<http://www.healthhub.sg/live-healthy/530/SIF ECS%20Code%20of%20Ethics>).

Formula Milk Products Sold in Singapore by Major Manufacturers

S/N	Manufacturer	Products	Product Type
1	Abbott	Similac Infant Similac Follow On Gain Stage 3 Gain Stage 4 Grow 3+ Grow 6+ Grow RTD Isomil 1 Isomil 2 Isomil 3 Total Comfort 1 Total Comfort 2 Total Comfort 3 Similac Reduce Spit Up Similac Human Milk Fortifier Similac Neosure Similac Special Care Alimentum Pediasure Powder Pediasure Liquid Glutarex Propimex Prophree	Starter Milk Follow on Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Specialty Milk
2	Danone	Dulac Dupro Dugro Mamil Gold Step 1 Mamil Gold Step 2 Mamil Gold Step 3 Mamil Gold Step 4 Mamil Gold Step 5 Mamil Gold Soy 1 Mamil Gold Soy 2 Mamil Gold HA 1 Mamil Gold HA2 Mamil All in One	Starter Milk Follow on Milk Growing-Up Milk Starter Milk Follow on Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk Growing-Up Milk
3	FrieslandCampina	Friso Gold 1 Friso Gold 1 RTF Friso Gold 2 Friso Gold 3 Friso Gold 4 Frisolac Comfort Frisolac Soy	Starter Milk Starter Milk Follow on Milk Growing Up Milk Growing Up Milk Specialty Milk Specialty Milk
4	Mead Johnson	Enfagrow A+ Enfalac A+ AR Enfalac A+ HA Enfamil A+ AR Enfamil A+ Gentlelease	Growing Up Milk Starter Milk Starter Milk Follow Up Milk Specialty Milk

		Enfamil A+ Post discharge Enfamil A+ Stage 1 Enfamil A+ Stage 2 Enfamil A+ Stage 2 Gentlease Enfamil A+ Stage 3 Gentlease Lactofree Nutramigen Prosobee	Specialty Milk Starter Milk Follow Up Milk Specialty Milk Specialty Milk Specialty Milk Specialty Milk Specialty Milk
5	Nestle	Lactogen 1 Lactogen 2 Lactogen 3 Nan AL110 Nan Gro3 Nan HA Nan Kid 4 Nan Lactose Free Nan Pro 1 Nan Pro 2 Nan Sensitive	Starter Milk Follow On Milk Growing Up Milk Specialty Milk Growing Up Milk Specialty Milk Growing Up Milk Specialty Milk Starter Milk Follow On Milk Specialty Milk
6	Wyeth	S26 Gold S26 Progress Gold S26 Promil Gold S26 Promise Gold S26 Picky Eater Gold S26 Gold Nursoy	Starter Milk Growing Up Milk Follow On Milk Growing Up Milk Specialty Milk Specialty Milk