Public version

Ingenico/Paymark: review of the Commission's letter of issues

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1. Introduction and conclusions

1.1. Introduction

1. We have been asked by Russell McVeagh, counsel to the vendor banks, to review the Commerce Commission's letter of issues dated 11 July 2018 in respect of the proposed Ingenico/Paymark merger ("the LoI").

2. Confidential information in this document is identified by square brackets and shading:

   a. Green shading is information confidential to Paymark;

   b. Yellow shading is information confidential to Ingenico;

   c. Blue shading is counsel-only confidential information – it is either marked confidential in the Commission's LoI or in submissions to the Commission, or is based on information from each vendor bank that has been aggregated together so should not be shown to any party (including the vendor banks).

1.2. Conclusions

3. Paymark faces a variety of competitive and countervailing pressures. These are strongest in respect of switch-to-acquirer (S2A) switching, although they also exist in respect of switch-to-issuer (S2I) switching. Even if we define a narrow S2I switching market (which we doubt is appropriate) and characterize Paymark as the sole existing provider in that market, it is important to note that S2I switching is just an input into certain payment mechanisms that face material competitive constraints, and for which there is a lot of innovation occurring. Therefore Paymark (and the merged entity):

   a. Is not able to exercise market power over S2I switching; and

   b. Has an incentive to *promote* competition and innovation at the complementary terminal level, not foreclose it. Otherwise Paymark/the merged entity would increase the risk of demand for the switch declining, and being bypassed by technologies not requiring access to a switch.

4. Payment mechanism innovation also threatens revenues of the banks. Accordingly the banks are incentivized to ensure the Paymark switch and complementary terminals market are as competitive as possible. If that system is not competitive and innovative, there is a risk that consumers will shift to payment mechanisms that bypass not just the switch, but also the banks.

5. Therefore the merger of Ingenico and Paymark would not lead to vertical foreclosure. In fact, it would lead to pricing and innovation efficiencies. In a vertical merger, firms have an incentive to lower price and increase quality. The appropriate assessment is therefore not only one of whether the merger would lead to vertical foreclosure (we think it would not), but even if it did, whether the detriment of that foreclosure would come close to the level of pro-competitive benefits of the merger.

2. Relationship between Paymark, banks and merchants

6. We think it is useful to start by describing the economic relationships between Paymark, banks and merchants, because these reveal the incentives on these players. In particular, we set out in this section how theory and evidence suggest the banks have an interest in switching and terminal fees to merchants being competitive.

7. In section 6 we explain why Paymark (and the merged entity) has an interest in the terminal market being competitive.

8. This section also provides context for the market definition section of our report (section 3).
9. Paymark provides a component (being the switch) of certain competing payment systems (e.g., proprietary EFTPOS, scheme debit, credit, cash).[1]
10. Payment card systems are a common example of a "two-sided market", with card-using consumers at one end, and merchants at the other. Consumers benefit from using a card only when a sufficient number of merchants accept it, and merchants only benefit from accepting a card when sufficient consumers hold it.[2] The demand of the two sides is balanced through payment structures within these platforms, such as interchange fees, merchant fees, and cardholder rewards.
11. The payment structure of EFTPOS, including Paymark's charges, needs to be understood in the context of its original design, which was to reduce "the high cost associated with processing cash and cheque payments" (MBIE, [65]).[3] Given the bank ownership of Paymark, it seems reasonable to assume this was a bank initiative.
12. Accordingly, we cannot really think about the markets Paymark operates in without also thinking about the broader payment chain. While Paymark is only directly connected to merchants and the banks, card using consumers are also beneficiaries and affected by Paymark's actions.
13. Paymark's primary customers are the banks:
    a. [ ] of Paymark's revenue comes from transaction revenue, of which the main source is the banks;[4] and
    b. While Paymark does collect a fixed charge from merchants (the merchant administration fee, MAF), this accounts for just [ ] of revenue, and Paymark's contracts with merchants are always three-way, i.e., Paymark, the merchant and the acquiring bank.
14. Furthermore, a switch and the connected terminals are complementary to the banks' products – the lower the price and higher the quality of the switch and terminals, the higher the demand for the banks' services. Therefore it is in the banks' interests for the switching and terminal markets to be competitive.
15. These features are reflected in the existing Paymark pricing structure, i.e., a variable charge to the bank, and a (relatively minor) fixed charge to the merchant. In other words, either merchants or the banks (or both) must be sensitive to a variable merchant charge or a material fixed merchant charge.

3. Market definition

16. The discussion in section 2 of our report has important implications for market definition. In particular, application of the market definition SSNIP test needs to be cognisant of the two types

[1] Koulayev et al (2016) use U.S. data to show that when debit cards become more expensive to adopt or use, consumers will substitute debit with cash, cheque and credit cards in retail settings. Sergei Koulayev, Marc Rysman, Scott Schuh, and Joanna Stavins (2016). "Explaining adoption and use of payment instruments by US consumers". *The RAND Journal of Economics*, 47(2), 293-325. Zinman (2009) shows that debit cards are a strong substitute for credit cards as the price of credit cards increases. Jonathan Zinman (2009), "Debit or credit?", *Journal of Banking & Finance*, 33(2), 358-366.

[2] See Richard Schmalensee (2002), "Payment systems and interchange fees", *The Journal of Industrial Economics*, 50(2), 103-122; and Jean Charles Rochet and Jean Tirole (2003), "Platform competition in two-sided markets", *Journal of the European Economic Association*, 1(4), 990-1029.

[3] Ministry of Business, Innovation and Employment (2016), "Retail payment systems in New Zealand: Issues Paper", October.

[4] Based on Paymark's revenue data for the financial year (ended 31 March) 2018, provided to NERA.

of customers that Paymark has (banks and merchants), the incentives of those customers, and the payment structure.

17. While the LoI does not explicitly recognize the matters discussed in section 2, the importance of Paymark having two types of customers is implicitly recognized by the LoI, e.g., in the following statement [18.1, emphasis added]:

    If it were easy for **merchants and/or banks** *to move customers from payment types that use S2I to those that use S2A, then Paymark's ability to foreclose rival terminal suppliers may be limited. Verifone and Payment Express could compete against Paymark for switching services through offering S2A processing only.*

18. We agree with the Commission's logic here, although for the reasons discussed in section 5 of this report, we think the constraints on the merged entity's ability to foreclose rival terminal suppliers are even broader than just the ability to move customers from S2I to S2A.[5] However, at the moment we focus on this S2I to S2A point.
19. We think the Commission (at [20] – [21]) is underestimating the ability and incentives of the banks in particular to move customers from S2I to S2A cards, particularly in the wider market context of the innovation in S2A which is leading to increased demand for those products. We now explain these points.
20. There is already evidence of banks favouring other card types. In Figure 1 we plot Paymark data showing the share of transaction volumes on Paymark's switch, by card type, from FY13 to FY18. This data shows the share of transactions volumes from proprietary EFTPOS cards falling materially over this period, [ ]. The corresponding growth has been made up by transactions on cards that can be S2A-switched (whether or not they actually are).

Figure 1
[ ]

21. Data provided by the vendor banks is also corroborative of this trend. In the graphs below we have used data provided by ANZ, ASB, BNZ and Westpac (in their roles as acquiring banks) on the share of annual value (Figure 2) and share of volume (Figure 3) of card transactions, from 2014-2017 calendar years, and split into card present S2I transactions, card present S2A transactions, and card not present transactions. We also show card present S2A plus card not present in aggregate (the dotted line) on both graphs. Both graphs show an increase in the share of card present S2A transactions since 2014: from [ ] in 2014 to [ ] in 2017 by value, and from [ ] to [ ] over this period by volume.
22. Of note also is that the share of value of transactions that do not pass through the S2I switch, i.e., [ ].

Figure 2
[ ]

Figure 3
[ ]

[5] Also, Verifone can offer S2I services via its wholesale arrangements with Paymark.

23. Indeed, S2A cards have certain functional advantages over EFTPOS cards, particularly in respect of their ability to undertake online and other card-not-present transactions, and their contactless capability.[6]

24. We recognise that scheme debit cards may be S2I if swiped/inserted, but S2A if contactless, which suggests that issuing a scheme debit card *per se* does not necessarily imply a move to S2A. Indeed, we note from Figure 1 that the share of scheme debit S2I cards [ ]. However, the data above does show a strong historical trend towards S2A. Given that scheme debit cards provide the option to be S2A switched this suggests that the increasing issuance of scheme debit cards would be of concern to the merged entity.

25. In conclusion, the data analysed above illustrates the Commission has underestimated the ability and incentives of the banks in particular to move cardholders from S2I to S2A cards. In short (and in response to the Commission's quote at [18.1] of the LoI as noted above), the data indicates, in the context of the greater innovation and better user experience in STA, it *is* relatively easy for banks to move customers from S2I to S2A, and customers' revealed behaviour suggests they are supportive of this move.

26. Moreover, the Commission's focus on S2I transactions currently being a "large proportion" of payment transactions (e.g., at [20] and [21]) is misplaced. First, it is not the total volume of transactions that matters for market definition purposes, but the volume of transactions that would move from S2I to S2A in the event of a SSNIP. Second, market definition does not require all transactions/customers to move from S2I to S2A for the latter to be a constraint on the former, rather it requires just enough to make a price rise unprofitable. As we discuss in section 6 of this report, the merged entity is likely to be very sensitive to volume losses.

27. Another factor inconsistent with defining an S2I market is the payment structure discussed in section 2 of our report. In particular, the charge to merchants is independent of whether the switching is S2I or S2A – it is simply a fixed, monthly fee per terminal.

28. Regardless of how the market is defined, it is our view that Paymark is (and the merged entity would be) subject to competitive pressures in respect of all switching. The evidence discussed above suggests this pressure will come from a move from S2I to S2A, but the pressures are also broader than this, as we explain in section 5 of this report.

4. Efficiencies from the Ingenico/Paymark merger

29. A starting point for the analysis of the proposed Ingenico/Paymark transaction is that such vertical mergers are generally presumed to result in efficiencies. Church (2008) states that "on both theoretical and empirical grounds, the economic presumption is that vertical mergers are likely efficiency enhancing and good for consumers".[7] Similarly, Salinger (2015, p.552) states, in contrast to horizontal mergers where competitors have a mutual incentive to raise prices, "vertically situated firms generally have a mutual interest in lowering prices (which helps consumers)" (due to the elimination of double marginalisation, discussed below).[8] This view is

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[6] See Paymark's submission to the MBIE Retail payment systems in New Zealand Issues Paper, at [23].

[7] Jeffrey Church (2008), "Vertical Mergers", Chapter 61 in *Issues in Competition Law and Policy, Volume 2*, ABA Section of Antitrust Law.

[8] Michael A. Salinger (2015), "Vertical Mergers", in Roger D. Blair and D. Daniel Sokol (eds.), *The Oxford Handbook of International Antitrust Economics, Volume 1*, Oxford University Press, Oxford.

reflected in the non-horizontal merger guidelines of the US Department of Justice[9] and the European Commission.[10]

30. Despite this, the LoI only raises the possibility of the efficiencies from the merger in a concluding paragraph ([71.1]).

31. A key potential efficiency benefit from vertical integration is the elimination of double marginalisation. In the recent US District Court decision regarding the proposed AT&T/Time Warner merger, the Court referred to (and accepted) this as the "standard benefit of vertical integration".[11] In general, double marginalisation occurs when different firms in a vertical chain each add their own mark-up, resulting in a price that is too high and output that is too low relative to the optimal level.

32. In the present case, a similar issue arises from the complementarity between the switch and terminals. Absent vertical integration, each of Paymark and Ingenico will set its prices at the profit maximising level, taking into account how changes in those prices affect their own sales, but not taking into account the effect on sales of the complementary product. When the two firms merge, the merged entity can account for higher prices of the switch reducing demand for the terminal, and vice versa, and internalise this effect in its pricing decisions. The result is that the prices of both complements are lower with vertical integration than without.[12]

33. Vertical mergers also have the benefit of allowing for bundling, which is generally seen as efficient: for example, by allowing economies of scale/scope to be achieved, by lowering prices, or by expanding the market.[13] Despite this, the LoI appears to be considering bundling only from the perspective of its potential anti-competitive effects (at [61]).

34. These types of efficiencies are illustrated by Verifone and Payment Express both being vertically integrated into the provision of switching and terminal services. As is noted in the Clearance Application (Executive Summary, at [L]), there is also a global trend towards more vertically integrated payment providers.

35. Finally, Ingenico as an owner of Paymark is likely to have a clearer incentive to invest in the competitiveness of EFTPOS, compared to the banks as owners. We have already described in section 3 of our report the role of the banks in shifting cardholders to STA-capable cards, and we discuss in section 5 the banks' investment in payment mechanisms that bypass the switch. Ingenico will have an incentive to ensure the Paymark switch and the terminal market are competitive and innovative. We return to this in section 6 of our report.

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[9] The US DOJ recognizes that "non-horizontal mergers are less likely than horizontal mergers to create competitive problems" (although goes on to recognize they are "not invariably innocuous") (US DOJ Non-Horizontal Merger Guidelines, available at: https://www.justice.gov/atr/non-horizontal-merger-guidelines).

[10] The EC states that "[n]on-horizontal mergers are generally less likely to significantly impede effective competition than horizontal mergers" ("Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings", 2008/C 265/07 at [10]).

[11] *United States of America v AT&T Inc., et al*, civil case no. 17-2511, 12 June 2018, at p.38.

[12] For further discussion see Jeffrey Church (2004), "The Impact of Vertical and Conglomerate Mergers on Competition", Final report prepared for European Commission Directorate General for Competition, September.

[13] For a summary of the literature on the efficiency of bundling, see sections 7.3.2.1 and 7.3.2.2 of Massimo Motta (2004), *Competition Policy: Theory and Practice*, Cambridge University Press; and pp.598-599 of Dennis W. Carlton, Patrick Greenlee and Michael Waldman (2008), "Assessing the anticompetitive effects of multiproduct pricing", *Antitrust Bulletin*, 53(3), 587-622.

5. The competitive pressures on Paymark

5.1. Introduction

36. In the LoI the Commission considers whether the merged entity would have the ability to foreclose its rivals, through the possession of market power in the provision of switching services. The Commission considers that the merged entity would be likely to have such market power ([36]), including because:

    a. Verifone only offers an alternative to Paymark's switch for ANZ-acquired merchants ([38]), and in the Commission's view its ability to compete is constrained by its wholesale access arrangement with Paymark ([39]); and

    b. The Commission is not yet satisfied that the banks have sufficient countervailing power to protect merchants ([57.3]).

37. In our view, the Commission has underestimated the competitive pressures that affect Paymark now, and would continue to affect the merged entity. In this section of our report we start by documenting relevant pricing evidence. We then explain these competitive pressures on Paymark, being:

    a. The countervailing power of the banks (section 5.3);

    b. Verifone (section 5.4);[14] and

    c. The growth of online shopping (section 5.5).

38. Because the Commission has underestimated the competitive pressures that would affect the merged entity, the Commission has overestimated the ability of the merged entity to foreclose terminal rivals.

5.2. Reducing or static real prices over time

39. We understand that Paymark's switching fee charged to banks [ ].[15]

40. Furthermore, the banks have negotiated new services agreements with Paymark, [ ]. Among other things, these agreements [ ]. Accordingly the real fee will [ ].

41. Paymark's MAF has remained [ ] in real terms (from [ ] in 2008 to [ ] in 2018, an average annual real increase of approximately [ ] per annum) [ ] nominally – Figure 4 shows the MAF over the last decade in both nominal and inflation-adjusted prices.[16]

Figure 4
[ ]

42. While not definitive, this pricing is not suggestive of Paymark having market power, but is rather suggestive of a level of constraint.

43. We note that Verifone has argued (4 May 2018 submission, at [18(d)]) that Paymark has been "partially constrained" by its ownership by the vendor banks, who as shareholders could take

[14] As noted by the Commission ([18.1]), Payment Express also competes for S2A switching.

[15] Note that we have not analysed the impact of the [ ].

[16] Regarding other related merchant fees, [ ]

action against Paymark if it were to substantially increase its fees. The argument is that this constraint would be removed by the proposed merger.

44. In response, we note that the above analysis of Paymark fees to banks includes the [ ], i.e., the constraint in respect of the bank fees would remain post-merger.

45. Regarding the constraint in respect of the MAF, as already noted the banks have an incentive to keep this at a competitive level, because of the complementarity with the banks' own products, and that incentive will not change post-merger.

46. Moreover, if the Verifone argument were correct, it would imply that the vendor banks were willing to remove the "partial constraint" of their ownership, so as to face either increased fees from Paymark (e.g., if the argument is that these will increase after the current contracts expire) or reduced demand for their own banking products (e.g., if the argument is an increased MAF). This would seem unlikely. Rather, the banks' decision to sell Paymark implies they are comfortable that the combination of [ ] and the levers discussed in the next section of this report mean there would remain sufficient constraints on Paymark's pricing.

5.3. Countervailing power of banks

47. We have already explained why the banks have an incentive to keep Paymark's pricing at competitive levels. The available tools to do this (under the factual) include those discussed below.

5.3.1. Fixed price contracts

48. The banks have negotiated services agreements with Paymark. Among other things, these agreements [ ].

5.3.2. Issue S2A rather than S2I cards

49. As already discussed in section 3, the banks can exercise countervailing power by issuing more S2A cards, in respect of which there is more competition for Paymark's switching services. We have already discussed above the recent trend of banks and customers favouring S2A card types.

50. It is possible that the [ ]. However, if there is such an incentive, a similar incentive exists under the status quo (and the continued bank-owned counterfactual),[17] because the banks are the residual claimants on the profits of Paymark. Despite that incentive, the banks have continued to increase the use of S2A rather than S2I cards, demonstrating how powerful the incentives are on them to do this.

51. [ ], that S2A volume would be (even more) vulnerable to competition from rival switches. Therefore the merged entity would have an incentive to maximise the use of S2I cards, even now.

5.3.3. Encourage or facilitate development of payment mechanisms that bypass the switch

52. The banks could encourage or facilitate development of payment mechanisms that bypass the switch.

53. Three of the vendor banks, ASB, BNZ and Westpac, are currently working with Payments NZ on an application programming interface (API) pilot, a technology system allowing for easier digital transactions.[18] The Commerce and Consumer Affairs Minister Kris Faafoi has encouraged the

[17] [ ]

[18] See "How we're working to make life easier for Kiwis", Steve Wiggins, Payments NZ CEO, 23 March 2018, https://www.paymentsnz.co.nz/resources/articles/how-were-working-make-life-easier-kiwis/

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banks to accelerate this pilot for point-of-sale (POS) payments without a debit or credit card.[19] [ ].

54. Once again, it is noteworthy that the banks are doing this today, despite owning Paymark. The banks are under pressure to innovate in the payments space, because of the competitive pressure coming from non-bank sources. We return to this issue in section 6.

55. We also note that the [ ].

5.4. Verifone

56. Verifone's current market share of card present switching transactions is estimated at approximately [ ] (Clearance Application, at [98]). It therefore appears that Verifone's wholesale arrangements with Paymark enable Verifone to compete effectively for ANZ-acquired merchants.

57. We can use data supplied by the banks and Paymark to estimate Verifone's share of ANZ-acquired transactions. ANZ's data shows that (as an acquirer), ANZ had approximately [ ] card present and card not present transactions in 2017. Paymark's data shows that approximately [ ] of 2017 transactions were ANZ-acquirer transactions processed through Paymark's switch. We assume that the difference is processed through Verifone's switch, i.e., [ ]. [ ]

58. Verifone's wholesale arrangements with Paymark expire in 2019 (LoI at [39]). Paymark and Verifone have been negotiating new wholesale arrangements. Verifone states in its 4 May 2018 submission (at [35]) that [ ].

59. Paymark states that the proposed pricing reflects Verifone's credible bypass option.[20]

60. Regardless, what is most intriguing for present purposes [ ]. This suggests that:

    a. Competition for ANZ-acquired merchants "protects" the other merchants; and

    b. The countervailing power of the banks prevents price discrimination by Paymark. [ ].

61. Accordingly while Verifone can only compete directly for ANZ-acquired merchants, its competitive impact is broader than this. That is, Verifone's competition for ANZ-acquired merchants appears to constrain Paymark's pricing to all merchants, regardless of their acquirer, and this constraint will continue to hold for Paymark/the merged entity post-merger.

5.5. Growth of online shopping

62. To the degree it substitutes sales from POS, e-commerce is also likely to be increasing the pressure on Paymark. This is because virtually all e-commerce transactions are S2A, even those that may be S2I at POS.[21] Indeed, we understand that only [ ] are switched by Paymark.

63. The data underlying Figure 2 and Figure 3 above shows the growth of card-not-present transactions through merchants acquired by the vendor banks. From 2014-2017, card-not-present transactions have grown by [ ] in value and [ ] in volume. In 2017, card-not-present transactions made up about [ ] of all card transactions (by value) acquired through the major banks (and [ ] by volume).

64. Furthermore, mobile phone facilitated innovations may also blur the line between e-commerce and POS. While a consumer may be present at the POS, she may decide to pay via an app on her smartphone, bypassing the merchant's terminal equipment. We discuss these sorts of

[19] Hon Kris Faafoi, "Speech to Payments NZ Conference", 26 June 2018, https://www.beehive.govt.nz/speech/speech-payments-nz-conference-26-june

[20] Paymark's 7 June 2018 cross-submission.

[21] As noted in the Clearance Application (Figure one), all card-not-present transactions (of which e-commerce is a subset) are STA transactions.

technologies in the next section. Even technologies (such as ApplePay) that do not bypass the switch or terminal are familiarising consumers with alternatives to traditional card-based POS transactions. As consumers become more accustomed to such alternatives, there will be little change in behaviour required to shift towards API transactions that do bypass the switch, as and when API functionality is improved.

6. The merged entity's downstream incentives

6.1. Introduction

65. In the LoI the Commission expresses a concern (at [2]) that the merged entity may have an incentive to foreclose rival suppliers to Ingenico in the terminal market. The Commission states (at [66]) that the merged entity would have an incentive to foreclose if the margins it gains from additional sales of Ingenico terminals exceed the lost switching margins from those leaving Paymark's switch for a rival one, choosing to no longer use a terminal or making fewer transactions. The Commission suggests that the merged entity may not lose much switching margin because merchants that move to Verifone or Payment Express may still need to access Paymark's switch via the wholesale agreement, and the merged entity could increase the wholesale access price to foreclose Verifone and Payment Express from providing their service.

66. However, the merged entity's downstream incentives are both more complex than the Commission sets out, and related more broadly to the dynamic nature of the payments industry, as we discuss in the following sections.

6.2. Difficulties in applying vertical arithmetic

67. The Commission's framework for analyzing the merged entity's foreclosure incentives appears to be that of the economic tool of vertical arithmetic. In broad terms, vertical arithmetic considers the different options for downstream consumers that arise from the exercise of vertical foreclosure, and analyses how those options affect the payoffs of the merging upstream and downstream firms. Typically those options are for consumers to divert their purchases to the merged entity or a (non-foreclosed) rival, or "exit the market" altogether, and the limited scope of these options ensures a tractable calculation of the foreclosure incentives.

68. However, in our view the complexities in the present case would make vertical arithmetic extremely difficult to apply. If the merged entity were to foreclose Ingenico's rivals (or raise rivals' costs more generally) in the terminal market, it is likely that some merchants would opt for an Ingenico terminal. But a merchant would also have a number of other options for providing payment services to its customers, with varying effects on the merged entity's margins, each of which would need to be modelled. For example, a merchant could:

    a. Use Verifone and/or DPS Payment Express for switching. In this case Paymark would lose the MAF and earn a wholesale margin only;

    b. Move to an mPOS product (e.g., BNZ's PayClip product). In this case, Paymark would lose the (POS) switching revenue, but would receive some revenue back through its provision of mPOS switching services;

    c. Remain with Paymark and its existing terminal provider, but reduce the number of terminals used (if the merchant used more than one terminal to start with). This would reduce Paymark's profits from its MAF, and potentially a lower number of switched transactions;

    d. Promote the use of cash, send out invoices to final customers, or use some other payment method that does not require switching services or a terminal. In this case Paymark would lose switching revenue and potentially the MAF; and/or

e. Moving to online transactions. Paymark would lose the (POS) switching revenue, but may receive some of it back if it is the online switching provider for the particular merchant (which on the evidence discussed above, would be unlikely).

69. There may be other permutations as well. Because of these options and their differing effects on Paymark's margins, this would be quite a complicated vertical arithmetic to apply. Compared to a more standard vertical arithmetic analysis, in this case it would be very difficult to set out the algebra for these options and apply it in tractable manner so as to determine a simple relationship that sets out the merged entity's incentives for foreclosure.

6.3. Implications of the dynamic nature of payments technologies

70. However, the difficulties with the Commission's analysis are broader. The payments industry is a dynamic one, with lots of innovation occurring. Examples include Apple Pay, Android Pay, and services offered by specific banks such as ASB Virtual and ANZ's goMoney wallet (see the Clearance Application at [161] for further discussion of emerging payment technologies). Other digital wallet technologies are also relevant, such as Venmo[22] and Facebook Messenger – the latter offers payments services in the US, UK and France, and is expected to launch in Australia this year.[23]

71. Furthermore, as already discussed the Minister of Commerce and Consumer Affairs, Hon Kris Faafoi, is encouraging the extension of the bank-to-bank bill payment technology (which bypasses the switch) to POS transactions.[24]

72. The innovation in payment technologies in China is also apposite. Consumer payments in China utilize systems such as Alipay and WeChat, which can bypass the switch and terminals completely,[25] and use mobile phone apps to complete the transaction.[26] It was estimated that in 2016 about half of all consumer goods sold in China were through Alipay and WeChat,[27] and that "almost everyone in major Chinese cities is using a smartphone to pay for just about everything".[28] Alipay has been expanding its services into certain cities in the US, and it is expected that it will also expand more broadly.[29] Indeed, we understand from BNZ that it is currently involved in a pilot programme with Alipay (and Verifone) for it to enter the New Zealand market.

73. These innovative technologies are likely to affect the competitive position of the banks, as well as the switch and terminal providers. For example, it is noted that Facebook's large customer base and entry into payment systems in Australia "will have local banks…worried the Silicon Valley

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[22] https://venmo.com/

[23] "Facebook's Messenger payments looms over Australia's big banks", *Australian Financial Review*, 19 November 2017, https://www.afr.com/business/media-and-marketing/facebooks-messenger-payments-looms-over-australias-big-banks-20171117-gznknl

[24] See https://www.beehive.govt.nz/speech/speech-payments-nz-conference-26-june.

[25] If the cardholder generates the quick response technology on their device.

[26] Indeed, if these technologies do use a switch in New Zealand, we understand that Verifone and Payment Express both already have the required links, whereas Paymark currently does not.

[27] "Why China's Payment Apps Give U.S. Bankers Nightmares", 23 May 2018, https://www.bloomberg.com/graphics/2018-payment-systems-china-usa/

[28] "In Urban China, Cash Is Rapidly Becoming Obsolete", 16 July 2017, *New York Times*, https://www.nytimes.com/2017/07/16/business/china-cash-smartphone-payments.html

[29] It is noted that "So far, Alipay has said the expansion is meant to help Chinese tourists, and that it's focusing on cities they tend to visit. But few in the payments industry believe it will stop there" – "Why China's Payment Apps Give U.S. Bankers Nightmares", *op cit.*

giant will vacuum up their customers".[30] Similarly payments via Alipay or WeChat "can happen cheaply and easily without [banks]".[31]

74. In effect, Paymark is facing existential threats. Accordingly, the merged entity's incentives would actually be to foster innovation at the connected terminal level, not inhibit competition. Otherwise Paymark/the merged entity would increase the risk of demand for the switch declining, and being bypassed by technologies not requiring access to a switch.
75. Accordingly, the merged entity would not have an incentive to, e.g., make it harder for terminal rivals to obtain certification ([59.1] of the LoI) or harm rivals through bundling or tying ([61] of the LoI), because any of these or similar strategies would risk reducing demand for the switch.
76. The growth of S2A transaction values and volumes, as shown earlier in Figure 2 and Figure 3, is also relevant. This makes Paymark vulnerable to greater competition from Verifone and Payment Express.

[30] "Facebook's Messenger payments looms over Australia's big banks", *op cit.*

[31] Why China's Payment Apps Give U.S. Bankers Nightmares", *op cit.*

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