

MEMO

TO: Sarah Keene, Dominic Rowe and Hannah Loke, Russell McVeagh
DATE: 14 August 2018
FROM: James Mellsop and Kevin Counsell
SUBJECT: **Ingenico/Paymark: expansion model**

1. Introduction

1. In respect of the proposed Ingenico/Paymark merger, Verifone has submitted that the costs for an existing market participant to build new switching links are prohibitively high – see, for example, Verifone’s 4 May 2018 submission at [41], and its 1 August 2018 submission at [21(a)].
2. To test this, you have asked us to develop an “expansion model”, to assess the economics of building links for an existing market participant. Our model is relatively simple, and makes some assumptions that abstract from the complexities that might be faced by a market participant building new switching links. Nonetheless, its purpose is to provide a form of “sanity check” on the Verifone submissions.
3. We have filed similar models with the Commission in previous merger investigations, and it is our understanding the Commission has generally accepted the appropriateness of these models, and relied on them.¹
4. Confidential information in this document is identified by square brackets and shading, with
 - a. **Green** shading is information confidential to Paymark; and
 - b. **Blue** shading is counsel-only confidential information.

2. The model

5. Our model assesses the case for building links by an existing market participant, and for this we focus on Verifone (although it could be adjusted to consider the case for other market participants).
6. We assess the case for building links by first comparing Verifone’s costs if it were to continue to operate under the proposed wholesale arrangements with Paymark, against the costs that Verifone would incur if it were to build links to further banks. We analyse the case for Verifone building nine links, on the basis that the LOI (at [44.1]) states that links to the top ten issuers would cover 99% of transactions, and Verifone already has one link to ANZ. We interpret the Commission to be referring to switch-to-issuer (S2I) links here, and our focus is therefore on building nine links that would allow Verifone to process S2I transactions. We understand also from Paymark that the correct figure on the number of transactions processed is [], so we have used this in our modelling.

¹ Examples are the first (*Decision 725*, at [176-177]) and second (*[2015] NZCC 31*, at [188]) CWH/WSI wool scouring mergers, and the Pact/Viscount merger (*[2012] NZCC 11*, at [200-206]). As far as we can tell, the Commission adopted our models in each case, with some changes to the factual inputs.

7. Based on Paymark data, Verifone passed [] S2I transactions to Paymark under the existing wholesale agreement in the financial year ended March 2018.² We (conservatively) assume that these volumes do not change over the next [] years (which Paymark has advised is the economic lifetime of new links³), and calculate the wholesale access costs that Verifone would pay in each year on these volumes, based on a per transaction price (under the renegotiated contract⁴) of [] and a network access fee of []. Over [] years, at a discount rate of 10%, the net present value of these costs is [].
8. As the comparison, we consider the costs to Verifone if it were to build nine further S2I links to banks at a cost of \$1m per link. This figure is drawn from Verifone's 4 May 2018 submission at [41(a)], and is the high end of Verifone's range, of \$500k-\$1m per link. We note also that Paymark, Ingenico and the vendor banks have all submitted lower estimates for the cost to build a link,⁵ but to be conservative we will use the Verifone \$1m figure (although we also undertake some sensitivity testing). For nine links, Verifone would incur a capex cost of \$9m. We assume this occurs in year one of the analysis.⁶ Therefore from a cash flow perspective it is comparable to the [] referred to above.
9. We assume that Verifone could process [] of the [] transactions itself if it built these links, i.e., approximately [] transactions. Verifone would also incur some variable costs in processing the [] transactions through these links. Paymark has provided us with data showing variable transaction costs of [].⁷ Assuming Verifone would have the same variable costs as Paymark, it would incur annual variable costs of approximately [] in processing these [] transactions.
10. For the remaining [] of transactions, we assume that Verifone could pass these transactions to Paymark under a wholesale agreement, so would need to pay Paymark a wholesale price to carry this volume. We do not know what that price would be, but for modelling purposes we make the assumption that this is [] (which is []), and assume also a network access fee of []. Using this data we calculate that Verifone would incur wholesale access costs of [] per annum on this [] of transaction volumes.
11. Over [] years, at a discount rate of 10%, the net present value of the capex, variable costs and wholesale access costs would be [].
12. That is, there would be a difference of approximately [] in []-year net present value terms between Verifone's costs under the wholesale access scenario versus the building links scenario.
13. Suppose now that Paymark attempted to raise its switching price to banks and/or merchants. It would be profitable for Verifone to build the further nine links if it could win sufficient extra

² Sourced from the spreadsheet "Annex A NZCC 12 July RFI request Q5 (plus updated row for Annex L).xlsx", which has been filed with the Commission.

³ While the economic lifetime of new links is [] years, the physical lifetime may be longer than this. In any case, the use of this lifetime is conservative, and we present results later where we sensitivity test the results of our model to a longer lifetime.

⁴ But yet to be signed.

⁵ See Paymark's 3 August submission at [28], Ingenico's 3 August submission at [32.7], and the vendor banks' 3 August submission at [52].

⁶ We recognize that this may be a contested assumption, but it simplifies the analysis for modelling purposes (particularly given our intention is simply to provide a high-level sanity check of the Verifone claims). To assume any sort of lag in the build time could make the modelling relatively complicated, e.g., if one link is built over some initial time period, then some assumptions would need to be made about how many transaction volumes this would allow Verifone to process itself, and so on.

⁷ Assuming a volume loss of [].

merchants and transactions to earn a gross profit at least equal to that [] (assuming that Verifone continued with its existing price to banks and merchants). We assume that Verifone would earn the same per transaction gross margin as Paymark if Verifone carried its own traffic, of [] (calculated by taking Paymark's FY18 transaction revenue divided by the number of transactions it processed, less the variable transaction costs of []). From this, if Verifone processed approximately [] extra transactions per annum, then the revenue from those transactions would equate to [] in []-year net present value terms. That is, Verifone would need to win [] of the total [] STI transactions (excluding wholesale) that Paymark processed in FY18 to earn that gross profit of [].

14. Another way to look at this is to consider how many terminals Verifone would need to win to earn that gross profit. Based on Paymark's data, each terminal processes, on average, [] STI transactions per annum.⁸ Accordingly, Verifone could process [] extra transactions per annum by winning approximately [] terminals. At [] terminals per merchant (again, based on Paymark data),⁹ it could achieve this by winning approximately [] (average) merchants.
15. While we have only focussed on STI transactions in this analysis, we understand that Verifone would also be able to process switch-to-acquirer (STA) transactions if the links that it built were dual-purpose links (for both STI and STA transactions).¹⁰ Alternatively, Verifone may be able to reach a wholesale agreement with Payment Express, which we understand already has S2A links with ASB, BNZ, and Westpac.¹¹ For this Verifone would need to incur an additional wholesale cost, but would also receive some offsetting revenue, which would change the relative economics of the number of transactions that Verifone would need to win, although we have not sought to quantify this.
16. Even if, after having built the nine links, Verifone still only had a single S2A link to ANZ, those [] merchants would need to be ANZ-acquired merchants, of which we estimate there are approximately [].¹² Verifone already has connections to about [] of those, which leaves approximately [] from which Verifone could draw the [] merchants.
17. These figures are also likely to be an overstatement i.e., the number of transactions/merchants that Verifone needs to win to earn that gross profit of [] are likely to be less than the transactions/merchants figures presented above. This is because Verifone would win transactions by winning merchants, from which it would also earn revenue by charging a merchant administration fee. It would also earn revenue on any additional S2A transactions that it processes.
18. Verifone might also be able to achieve this same volume increase by winning the business of one or two large merchants with multiple terminals. Indeed, because Verifone already has a relationship with some merchants through its terminal business, this may make winning the switching business of these merchants easier. Examples of large merchants that currently use Paymark's switching services, but also have a large volume of Verifone terminals, are shown in

⁸ Using [] transactions across [] billed terminals.

⁹ [] billed terminals and [] merchants.

¹⁰ []

¹¹ As noted in the Vendor Banks' response to the Letter of Issues, 3 August 2018, at [50(b)]

¹² Paymark serves approximately [] merchants, and has a switching market share of about [] (by transaction volume, Clearance Application at [97(a)]), so as an approximation there are around [] merchants in total. ANZ's share of transaction volumes is approximately [] (based on data provided to NERA by the vendor banks), which (again to a rough approximation) suggests it may acquire for around [] merchants.

Table 1 below.¹³ For each of these merchants, Paymark processed in excess of [] transactions for the year to 30 April 2018, so if Verifone were to win any one of these merchants then it would earn that gross profit of [] calculated above. In fact, of Paymark’s merchants, [] put transactions in excess of [] through Paymark’s switch in the year to 30 April 2018.

[]

19. From the above analysis, if Verifone won the switching business of any of [], then it would earn that gross profit of [] calculated above.

3. Sensitivity tests

20. We have also undertaken some sensitivity testing of this analysis, with the results presented in Table 2 (relative to the base case results calculated above).
21. We have considered first how the results would change if the capital cost to build each link was the lower point in the range Verifone presented, of \$500,000 per link. At this capital cost, we find that the difference between wholesale access and building links is [] – the (net present value) cost to build and operate nine links would be [] (compared to the [] for wholesale access), so Verifone would [].
22. We have also tested the relative costs if Verifone were to build links to only the three other acquirer banks (given that it already has a link to ANZ), which the Commission notes in the LOI (at [44.1]) would cover 88% of transactions. Under these assumptions (and reverting to the base case capital cost of \$1m per link), the difference between wholesale access and building links is [].
23. As a further sensitivity, we considered how the results would change if Verifone’s variable costs were 20% higher than Paymark’s (with all other assumptions as in the base case). This increases the difference between the present value of wholesale access costs versus the cost to build links, although only to a limited extent.
24. We also tested the use of a []-year economic lifetime of the assets, which results in a [] difference between wholesale access and building links. The intuition for this result is that the wholesale access costs are incurred regularly over a longer time period, but since the building links costs are (predominately) all incurred upfront, it is more likely that Verifone would incur greater costs over a longer period in the wholesale access scenario.
25. Finally the results do not appear to be overly sensitive to the choice of discount rate – a 15% discount rate increases the number of transactions that Verifone would need to win to [].

Table 1: Results of sensitivity testing

Sensitivity tested	Difference between NPVs of wholesale access and building links scenarios	Number of transactions needed to earn gross profit of NPV difference
Base case (as above)	[]	[]
Lower capex cost to build links, \$500k	[]	[]

¹³ These are merchants that are connected to Paymark’s switch, and as such their transactions are additional to the [] transactions processed under the wholesale agreement with Verifone.

Build links to acquiring banks (excl ANZ) covering 88% of transactions	[]	[]
20% increase in variable costs	[]	[]
[] economic lifetime of links	[]	[]
Discount rate of 15%	[]	[]
