Acquisitions of Potential Rivals in Digital/Tech: Valuation Analysis as Key Economic Tool - *PayPal/iZettle*

Antitrust authorities everywhere are increasingly concerned with so-called "killer acquisitions" – cases where an established incumbent buys up a small rival which might have the potential to become a major threat, in order to pre-empt a future challenge. Concerns around "potential competition" are relevant to mergers across all industries, but tend to be talked about most commonly in the tech/digital sector.[1]

Multiple commentators, most notably the recent "Furman Review" in the UK,[2] have argued that the scope for "false negatives" in merger review (i.e. clearances which should not have taken place) could be reduced by placing greater focus on the purchase price and underlying valuation methodologies for the acquisition. Facebook's purchases of both WhatsApp and Instagram for $19bn and $1bn respectively are often cited as examples where the purchase price should itself have been taken as evidence of competition concerns.[3]

But what does this mean in practice? What analysis can be conducted to go beyond an impression that an acquirer is paying "too much" for a nascent firm and might be motivated by a desire to knock out a potential competitor?

In this competition memo we provide an overview of the sorts of analysis that can be conducted to assess whether a given valuation raises competition concerns. In doing so we draw on our recent experience advising the Parties in PayPal/iZettle, which was unconditionally cleared by the CMA on 12 June and where an analysis of PayPal's valuation of iZettle at the time of purchase played a key role in the conclusion that iZettle was not of interest because it was on the verge of becoming a threat to PayPal's core online business.

Background on PayPal/iZettle

PayPal paid $2.2bn for iZettle, a significant sum for a firm founded in 2010 and which was yet to turn a consistent profit and, as has been reported, significantly more than the $1.1bn valuation iZettle expected to achieve at its planned IPO.

PayPal is of course a major payments company focussing on online payment services for small businesses. iZettle is a Swedish firm, focussing on providing card readers and supporting software to allow small merchants to accept face-to-face card payments. While the deal provided PayPal with promising offline capabilities to complement its online presence, it is easy to see why the CMA potentially worried that the deal would simultaneously eliminate future competition between the parties in their respective core businesses.

Valuation analysis was important to inform the assessment of two potentially concerning dynamic counterfactuals: one in which *iZettle* was to develop significantly to threaten PayPal's core business, and one in which *PayPal* would in turn become a more effective competitor in offline payments and address the ongoing decline of its own product PayPal Here.

In the end, the case turned on fairly conventional horizontal questions: the extent to which PayPal Here competed with iZettle, and the role played by both other new entrants (most notably SumUp) and the incumbent acquirers (most notably Worldpay and Barclaycard). The CMA however dismissed all 'Killer Acquisition' concerns early on, based significantly on our analysis of PayPal's valuation of iZettle. What can we learn from this for future cases?

Firm valuation: an overview

Any firm contemplating a significant acquisition will typically apply a number of valuation techniques. Most notably, firms will tend to use a Discounted Cash Flow (**DCF**) analysis alongside a **comparator analysis**.

DCF. A DCF analysis values a firm by considering the flow of profits it is expected to generate over its entire lifetime and then computing a "present value" of this stream of profits (discounting profits anticipated further in the future) to place a cash value on the firm. The Table below presents a simple example: the firm is anticipated to make £23m of cash flow (profits) over a five year period. However, because much of

[1] Although tech transactions have been the focus of policy debate, empirical evidence of so-called killer acquisitions is more established in pharmaceuticals. See Cunningham. Ederer and Ma. 2018. "Killer Acquisitions".

[2] One of the Furman panel's recommendations is that the CMA's merger guidelines be updated to "[Draw] attention to the evidential relevance of the transaction value relative to the market value and company turnover, and the importance of understanding the rationale for valuations which appear exceptionally high."

[3] As well as the Furman review, the recent report by Cremer et al for the European Commission raised comparable concerns stating that "The incumbent attempts to expand existing network effects, which make its services more valuable to both its users and those of the target, but also eliminate the risk that the target attracts away its users. This, and the concomitant raising of barriers to entry by combining the acquirer's and the target's positive network effects, *may well justify a high purchase price for a target with no or low turnover and a product or technology that the incumbent, in principle, possesses itself or could develop on its own"* (emphasis added).

these profits do not occur until later periods, the present value of these cash flows is only around £19m.[4] The discount rate will be specific to the firm and potentially specific to the investment, but is commonly proxied by the firm's cost of capital.

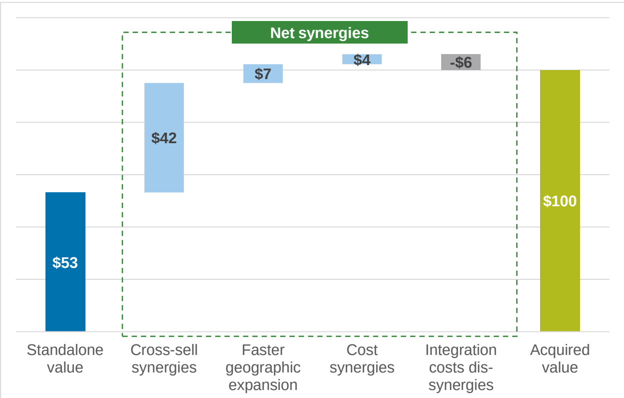
Simple example of a DCF analysis

Year	Anticipated Cash Flow	Discounted Cash Flow
2019	2.0	2.0
2020	4.0	3.7
2021	5.0	4.2
2022	6.0	4.6
2023	6.0	4.3
	Valuation	**18.8**

A valuation will generally break out the value of the flow of profits that would be anticipated to be generated by the target on a standalone basis before incorporating the additional profits generated by any merger-specific synergies on the cost or revenue side.

Theoretically, the value under the standalone case should correspond to the minimum price that the seller would be willing to accept (any lower and they would be better off keeping the asset for themselves); while the synergies case should correspond to the maximum that the purchaser is willing to pay (as any more would be paying more than the asset is worth).[5]

Example of valuation breakdown between standalone value and synergies



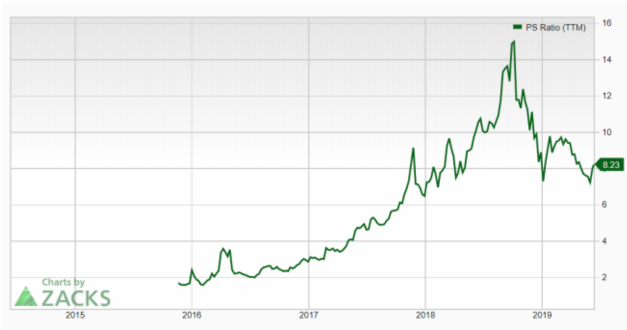
DCF models can be complex and rely upon multiple assumptions that are specific to the sector and companies involved: what is a likely level of growth for the industry and the target within it? What should be assumed about the progression of prices and margins with and without the transaction? What value can be placed on increased potential for cross-sale of products, accelerated R&D, or removal of duplicated assets? Frequently, the target firm will provide its own valuation model – a "management case" – which the purchaser may choose to take as a base for its analysis.

Each of these assumptions is of potential relevance for assessing the competitive impact of a transaction as is how the purchaser's assumptions compare to those of the seller and would be expected to be analysed as part of the merger assessment as it was in PayPal/iZettle. Before discussing this in detail, however, we set out the most common alternative valuation techniques.

Comparator based approaches. A more straightforward approach is to compute the purchase price for the target as a multiple of some other measure (e.g. annual revenue or earnings) and then looking at how these "multiples" compare with other firms. This can be achieved either by looking at the equivalent multiples for comparator firms that trade on public markets; or by looking at recent transactions.

For example, a natural comparator for iZettle would be the US-listed firm Square, a payments competitor to the merging parties. Revenue and earnings multiples for Square are freely available and can serve as a benchmark for the price paid to iZettle.[6]

Price to sales ratio for Square



By their nature comparator based analyses are less nuanced than DCF analyses. They do not generally allow for judgment calls or explicit assumptions (except in respect of which comparisons are conducted). As such, they provide a less rich laboratory for antitrust analysis.

What sort of questions might be raised about a firm's valuation?

Against this backdrop, what should a competition authority be looking for when assessing a firm's valuation and supporting analysis?

[4] This is a simplified example which assumes that the firm will simply cease to exist at the end of 2023. In reality, most DCF analyses model the next 5 or so years formally before assuming a "terminal value" based on, for example, flat revenue growth in subsequent years. This example is computed assuming a 9% discount rate.

[5] There are, of course, a number of reasons why a seller may accept less than the value under the standalone case or that a buyer may pay more than the synergies case. This framework should be understood as an initial starting point rather than entirely definitive.

[6] Strictly-speaking there are challenges to using price to sales ratios in respect of payments firms operating in different jurisdictions because US-based firms will generally have higher revenues per transaction as a result of higher interchange fees in the US vs. the EU. Adjusted comparators can be computed to account for this issue.

Is there an unexplained "X factor" which might represent a "market power premium"? A starting point (and one that has been raised in the context of Facebook's acquisition of Instagram and WhatsApp) is whether the purchase price can be rationalised with respect to fundamentals (i.e. is the payment for the firm consistent with its standalone value and plausible synergies or with amounts paid for other comparable firms)?

Detailed analysis of contemporaneous DCF analysis provides a way of testing this question directly because, by definition, DCF quantifies the fundamental value of the target. Analysis of that earlier work in the context of a merger review can provide a test of whether a price that is perceived to be "too high" is genuinely unexplainable such that it might reflect a "market power premium": that the incumbent is paying a share of its monopoly profits to deter or eliminate a potential entrant.

How does the price paid compare to other purchasers? A related question is whether the acquirer was willing to significantly outbid alternative potential purchasers. Again, this *might* be consistent with a sharing of monopoly rents.

However, this is where analysis becomes important: the fact that a purchaser is willing to pay more than other bidders may instead reflect that the scale of their existing business means that they have the most to gain in terms of potential synergies (and valuation analysis similar to that undertaken on PayPal can therefore also potentially help substantiate submissions on efficiencies).

Similarly, economic analysis can also help avoid missteps: care is required when one compares a firm's valuation with that obtainable via other exit options such as an Initial Public Offering (IPO). For example, an owner-manager contemplating selling his entire stake in a company in a private sale is likely to expect a valuation in excess of what they would expect at an IPO. This is because an owner will typically only sell a proportion of his stake at an IPO and it is typical for firms to appreciate significantly in early trading post-IPO.[7] As such, the anticipated value at IPO is likely to understate the value of a manager/owner's stake if they go down this route and hence they will be likely to expect a higher valuation from a private sale than they would in an IPO.

Does the DCF rely on significant changes to the original management case? As above, a seller will often provide a buyer with their own "management case" valuation to form a basis for negotiations. If a purchaser makes significant changes to the management case (e.g. by dramatically changing the revenue growth or investment expenditure anticipated in respect of specific business units or product lines) this might be indicative of a planned change in strategic direction, which in turn might have implications for the competitive assessment.

Analysis in the context of the merger review is important again here. A reduction in assumed revenue growth or a lengthening of time for a pipeline product to reach the market is *consistent with* an anticompetitive intent to shut down a potential competitor, but this is not the only possible explanation.

An alternative scenario, for example, would be that the seller's management case forecasts were unduly optimistic or exaggerated (perhaps with an intention to obtain a higher sale price) and that the alterations made by the buyer reflect a "return to reality" rather than any anticipated change in strategic direction.[8] This underlines that valuation models cannot be assessed in a vacuum: ex-post analysis as well as review of internal documents and discussion can shed light on why a given assumption was changed and whether it was due to benign or potentially anti-competitive reasons.

What proportion of synergies is being "paid out" by the purchaser? We explained above that the agreed price should fall somewhere between the standalone value of the firm and the value of the firm including merger-specific synergies.

A range of factors could determine where in this range the finally agreed price ends up (the presence of alternative firms that might be acquired instead, the possibility of alternative purchasers generating comparable synergies, or simply the negotiating skill of the parties to the transaction).

Nevertheless, it is reasonable for an authority to interrogate situations where a purchaser has been willing to "pay out" a large proportion of the synergies it anticipates generating from the transaction. At the very least, this indicates that the target firm's assets are not straightforward to replicate and may point to the purchaser foreseeing other benefits (such as the elimination of a potential competitor) from the transaction. This said, the complexity of deal negotiations precludes a hard and fast rule and the proportion of synergies paid out needs to be analysed and considered in the overall context of the transaction.

Does the DCF analysis rely upon "synergies" that are in fact consistent with anticompetitive effects? The considerations above all relate to *potential* competition concerns, but analysis of valuation can also shed light on more vanilla horizontal issues. If a deal valuation is underpinned by assumed price increases, investment reductions or suchlike then this may indicate competition concerns which would need to be offset by other evidence.

All of the above considerations arose in the PayPal/iZettle case. Ultimately, the CMA concluded that "*the consideration appeared justified by commercial valuation and calculations of synergies including increased sales volumes and cost savings. We saw no evidence that PayPal intended to shut iZettle or increase prices post-Merger*."

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[7] Statista reports that, on average, US IPOs experienced a 32% first day gain between 2008 and 2017. Far higher figures have been observed, particularly for technology firms.

https://www.statista.com/statistics/914701/first-day-gains-after-ipo-usa/

[8] The possibility of a seller "boosting" its figures to obtain a better price is more credible if the seller is a private company (public companies will have to provide management forecasts in the ordinary course of business and have a fiduciary duty to ensure these are accurate).

What are the drawbacks of valuation analysis?

Analysis of contemporaneous valuation is a worthwhile and informative exercise, but it is very much a complement, rather than substitute, to traditional merger assessment tools. In particular, there are a number of caveats to be borne in mind.

How to weight concerning assumptions in a valuation model with other forms of evidence? If a merger valuation relies on seemingly anticompetitive effects (e.g. price increases or investment reductions) then clearly this is a cause for concern, but is it definitive?

An assumed increase in prices post transaction self-evidently reflects a belief that such effects would be feasible post-merger. Clearly, such evidence would be an indication of a problem, but this should not supersede entirely other sources of evidence. If other sources of evidence (surveys, merger simulation, customer feedback etc.) showed no risk of price increases then this could in some circumstances trump an unfavourable valuation model. This would be particularly so if the model was created by junior staff or by third parties (e.g. investment bankers) with a potential incentive to introduce "revenue synergies" to provide an ex post justification for a valuation that had already been decided elsewhere in the organisation based on less rigorous analysis.

Furthermore, analysis of the economic context can rebut what appear to be, *prima facie,* assumptions of price increases. For example, one would be less concerned where assumed increases in average prices reflect product mix effects, integration of complementary products or anticipated quality improvements that might allow a firm to command higher prices.

What about valuations of targets with minimal (or even non-existent) revenues and profits? Although it was not profitable, iZettle's business generated tangible revenues and cash flow which leant itself to a formal DCF analysis and associated quantification of the synergies resulting from the transaction. This in turn permitted a thorough assessment of whether the payment made by PayPal was justified by fundamentals by conducting analysis of the sort set out above.

There are limits to applying this analysis where the firms being acquired do not yet generate meaningful revenues (WhatsApp and Instagram being obvious examples). In these circumstances, analysis would need to focus on revenue multiples and an assessment of whether there are plausible future cash flows or synergies that could explain the observed payment. While DCF analysis will not typically have been conducted at the time of valuation for such transactions it is critical in such contexts to analyse the likely monetisation strategy of the target firm going forward absent the transaction and whether the valuation is consistent with a material future constraint.[9]

Could increased scrutiny of merger valuation reduce its value as an evidential tool? A final risk is that reliance on valuation models could be subject to the so-called "Lucas critique": that, once this analysis becomes established in merger review, firms and their legal advisors could take increased steps to ensure that valuation models are purged of unfavourable assumptions that might raise questions or concerns.

While this is a possibility, it does not strike us as an over-riding concern. First, all of the traditional tools of merger assessment would remain. As a result, even if this consideration might reduce the informativeness of valuation analysis, it is still likely to deliver incremental data to inform an authority's decision. Second, greater compliance may lead to less informative (or 'whitewashed') contemporaneous documentation, but seems much less likely to affect the underlying valuation and the analysis undertaken to achieve this valuation: it seems hard to imagine that concerns over possible antitrust assessment of valuation would prevent firms from rigorously evaluating the attractiveness of potentially multi-billion dollar acquisitions

Conclusions

PayPal/iZettle was not a "killer acquisition", and the CMA's decision ultimately hinged on more conventional questions of horizontal competitive effects and whether *PayPal* (not iZettle) might have become a more effective competitor in the counterfactual.

However, the case provides a blueprint for how competition authorities are likely to interrogate valuation analyses when assessing potential competition concerns. It seems highly likely that these techniques will not be restricted to just digital markets or potential "killer acquisitions", but can be expected to play an increasing role in merger assessment more broadly.

This seems to us a reasonable and welcome development: while there are caveats and drawbacks to valuation analysis it is likely to serve as a useful complement to existing forms of evidence.

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9 This is an important conclusion of the recent Lear retrospective on CMA mergers in the technology space.