

Girls from privileged old-money families have their much-ballyhooed coming out at a party called a debutante ball. Most people don't get invited to these hoity-toity events, but every investor can get access to a different sort of cotillion: the initial public offering (IPO) of a privately-held company. Let's see how we can use different quantitative methods to determine the filing price range of an IPO so we can decide whether this ball is worth attending.



A debutante ball in the Victorian era.

The *enterprise value method* uses EBITDA as a measure of a company's value, and is best for use in valuing firms that fit these criteria: a high cash burn rate; reliance on high R&D expenditures to drive product value; no reported earnings; or high leverage. We start by finding two comparable publicly traded companies that trade within a range of where we feel our target firm ought to trade. We then divide the total market capitalization of the company at the high end of this trading range by its EBITDA to find the high end EBITDA multiple, and do the same for the low end firm to get the low end EBITDA multiple. Next, we multiply our target firm's EBITDA by each of these multiples to find a high and low end estimate of its total enterprise value (TEV). Subtracting net debt from TEV gives us public equity value (PEV), and subtracting a standard IPO selling discount from PEV gives us an IPO PEV for both the high and low ends of our estimate. Finally, we divide each of these IPO PEVs by the number of pre-offer shares outstanding to find the implied share price at both the high and low ends of the filing price range.

The next method we'll consider is the *discounted cash flow (DCF) method*, which works best in valuing acquisitions of firms that have regular cash flows, dependable gross revenue streams, and tangible assets aplenty. We start by finding firms comparable to our target firm that have been acquired recently; we will divide their total acquisition prices by their EBITDAs to find both high and low exit multiples. Now we turn to our target firm: we sum the NPV of its terminal value and the NPVs of its historical and projected free cash flows (discounted at an appropriate WACC), and multiply the result by our high and low end exit multiples. This gives us a high and low end private market TEV. We then subtract projected debt from each TEV to find a range for this firm's private equity value. Subtracting a market trading discount from this gives us high and low end public equity discount values, and we divide these by the number of pre-offer shares outstanding to find the high and low ends of the filing price range.

Our final method uses *market comparable firms*, and is useful in valuing almost any pre-IPO firm, especially those with mostly intangible assets or unproven revenue streams that would make our first two methods problematic. We start by finding companies in industry groups comparable to our target firm. We canvass sell-side analysts for their projections of those

companies' future P/E multiples and then find the mean forward-looking P/E multiple of the most comparable companies. We then make a subjective choice of an appropriate selling discount and subtract this discount from the median P/E multiple to get our target firm's estimated P/E multiple. Finally, we multiply this P/E multiple by the target firm's pro-forma EPS to find the midpoint share price of the filing price range.

The most meaningful tool is the market comparable method. This method is more versatile than DCF because it does not rely on acquisition data, which may not be readily available for a target firm's sector. Furthermore, it has a broader application than the enterprise value method because it does not rely on EBITDA, which favors firms in sectors that heavy research investments (tech, pharmaceuticals, etc.). Finally, using market comparable pricing gives the final numbers more credibility on road shows with other investment banks on the syndication team, since it uses the sell-side analyst community's forward-looking earnings projections and P/E multiples to set the filing price range. One variation of the market comparable method is to use buy-side analysts' estimates instead of sell-siders' forecasts. This can accelerate the preparation of the road show by getting initial indications of interest from those money managers most likely to subscribe to the IPO, but risks sidelining the other syndicate banks that need to confirm the road show's estimates with their own due diligence.