GOING OVER TO THE LIGHT: VANQUISHING THE DARK SIDE

Through this book, we have emphasized the importance of first principles in valuation and how they should guide us, when faced with questions. The dark side of valuation, as we have described it, takes different forms with different types of firms and the remedies we offer have also varied with each type. In this chapter, we pull together some of the core ideas that can allow us to combat the pull of the dark side. In the process, we will very quickly review the foundations of what we would like to portray as the right "light" side of valuation.

Enlightening Propositions

When confronted by uncertainty or missing information, we are tempted to adopt loosed-backed rules of thumb and make inconsistent assumptions about growth, risk and cash flows. In this section, we will outline a few propositions that can guide us in making better judgments, when challenged, and result in better valuations.

Proposition 1: First principles matter

There are a few basic principles in valuation that we should never compromise on, no matter what the counter arguments are. An analyst who argues that firms can grow forever without reinvesting is violating a first principle, as is one who says that risk does not matter in determining value. Lest this be seen as a sign of rigidity, we would hasten to add that we should always be willing to compromise on and accept better tools, and be open to alternative estimates for inputs into value. Thus, the capital asset pricing model is a tool for estimating risk, which we should be willing to adapt, modify or even abandon, if the data so directs us. The beta that we come up with for a firm, in the context of measuring risk, is an estimate and there should be no one approach that dominates. In summary, then, we will remain steadfast in our belief that risk should affect value, open to new developments when it comes to models for estimating that risk and always be on the lookout for better and more consistent estimates of beta or other risk parameters.

Proposition 2: Pay heed to markets but don't let markets determine your valuations.

Many of the companies that we are called upon to value are traded in financial markets and have a market price. Without making any judgments about markets or their

efficiency, we believe that there is valuable information in how the market is pricing assets. In fact, our estimates of riskfree rates, in chapter 6, and equity risk premiums, in chapter 7, came from financial markets – the pricing of the treasury bond for the first and the level of the equity indices in the latter. When valuing a company, it therefore behooves us to pay attention to the market price for three reasons:

1. The information we extract from markets on implied growth rates, risk and cash flows can be used to improve our valuation.
2. Ultimately, we make money, not from our intrinsic values, but from the market price moving to those intrinsic values. Thus, we need to understand why market prices may deviate from value and how they will adjust over time.
3. Warren Buffett is fond of the adage of Mr. Market, where we, as long-term intrinsic value investors, try to take advantage of an unpredictable and unstable market that goes from under pricing to over pricing securities.

At the same time, paying too much attention to markets (and prices) can lead to paralysis, since there is always an alternative set of assumptions under which the market price is justified.

When valuing companies, we face a balancing act, where use market inputs for some numbers (riskfree rates, equity risk premium, market weights for debt and equity in the cost of capital) and argue that the market is wrong on other dimensions. To preserve sanity and derive reasonable values for companies, we have to decide early on in a valuation, which inputs we will accept market inputs on, and which ones we will contest the market consensus. In chapters 6 and 7, we argued that when valuing individual companies, we should accept the market consensus on riskfree rates and equity risk premiums and focus our attention or estimating the earnings and cash flows of the company. In chapter 14, when valuing an oil company, we made a case for using market consensus prices for oil prices (obtained from either the spot or the forward and futures markets) and limiting our valuation to how much oil the company would produce and its cost structure.

As a general rule, the areas where you choose to accept the market wisdom and the points at which you deviate will depend on two key variables. The first is in the competitive advantages you see yourself having as an analyst and where you think these

advantages will generate the biggest payoff. If your edge is in forecasting macroeconomic movements and oil prices, you will replace the market prices with your own and leverage your edge to generate better valuations. If, on the other hand, your biggest strength is in assessing the internal strengths of a company, you should not be expending resources on estimating macro parameters. The second factor is your "job description". If your job is to assess the value of individual companies and not to assess the overall market or commodity prices, you will be doing yourself and your clients a disservice by letting your views on macro economic variables seep into your company valuations.

Proposition 3: Risk matters

It is true that considerable resources have been invested both in academia and practice in coming up with models to assess risk and derive expected returns. It is also true that these models often make assumptions about the real world that do not withstand close scrutiny. In the capital asset pricing model, for instance, we assume no transactions costs and private information to derive the relationship between expected returns and betas. Analysts, looking at these models, find themselves in disagreement with the assumptions and that is perfectly understandable, but jumping from that disagreement to a conclusion that risk does not matter in value is not.

Risk affects value, no matter which approach you use to derive that value. In discounted cashflow models, the risk is manifested either in the discount rate or in a risk-adjusted cash flow (which is more than just an expected return). In relative valuation, firms that are riskier should trade at lower multiples of earnings, revenues and book value than firms that are safer. If there is one lesson that we should take away from the last few decades of examining risk, it is that all risks are not equal. Some risks affect only a firm or a few firms, whereas other risks have consequences for a wider subset of firms and for the overall market. When assessing risk for valuation, it is therefore imperative that we first identify the marginal investors in a firm and look at risk through their eyes. If the marginal investor is diversified, the only risks that should affect value are the market or macro risks that cannot be diversified away. In contrast, though, if the marginal investor is undiversified or only partially diversified, we should be looking at the much broader

set of risks that include firm specific risks. In chapter 9, this was the insight we used to derive total betas and costs of equity for entrepreneurs (who tend not to be diversified) and venture capitalists (who are only partially diversified).

Risk can also be categorized based into continuous risk, i.e. risk that affects cash flows and value continuously over time (interest rate risk and exchange rate risk, for example) and discrete or discontinuous risk, i.e., risk that may lie dormant for long periods but affect value significantly when it occurs (the risk of default and nationalization, for instance). We argued that continuous risk is best captured in discount rates, whereas discrete risk is more easily measured by assessing both the probability and the consequences of the event occurring. We used the latter technique the values of young, growth companies and distressed companies for survival risk and emerging market companies for nationalization risk.

As we build in risk into valuation models, it is also important that we adopt the following practices:

1. Isolate the risk effects: Rather than let risk pervade all of the inputs into a valuation, the effects of risk should be in one or two variables. Thus, the effect of emerging market risk is captured in the country risk premium but does not affect risk free rates, betas or cash flows. There are two reasons why this is a good practice. The first is that it prevents the double or triple counting of risk. The second is that it allows for more transparency. Thus, those who use the valuation can assess the risk adjustment made and decide whether they agree with it or not; if they disagree, it is relatively simple to make the change and re-estimate value.
2. Be consistent: When valuing firms, especially growth firms or firms in trouble, we have to recognize that the firm's risk profile will change over time and adjust the risk parameters accordingly. With growth firms, for instance, the high discount rates we use in the early years (reflecting the risk in those years) have to come down as growth declines. In almost all of the valuations that we have presented in this book, the betas and discount rates that we use for the terminal value reflect this judgment.

Proposition 4: Growth is not free and is not always value adding.

If there is a theme to our discussions of growth across the chapters, it is that growth is not free. Ultimately, the expected growth in earnings and cash flows in a company have to come either from new investments or improved efficiency. The latter is finite growth – there is a limit to how efficient you can become as a firm – whereas new investment growth is long term. This is the reason why growth in the terminal value computation is estimated purely from new investments in every valuation done in this book.

It is also critical to remember that growth by itself is not always a plus for a company, since the value added by growth is a function of the quality of the investments that generated that growth. That is the reason that we have focused so intensely on excess returns, estimated by comparing the return on capital to the cost of capital or the return on equity to the cost of equity, in our assessments of growth. A firm that grows by investing in new assets that generate a return on capital equal to its cost of capital will become larger over time but will not add value to its investors. A firm that grows by investing in poor investments, i.e., the return on capital (equity) is less than the cost of capital (equity) will become less valuable over time, even as it grows. In fact, a key test of managers is whether they are able to generate high excess returns, while reinvesting significant amounts back into the business.

In the context of relative valuation, we may not be directly focused on excess returns but we should pay attention to them. Thus, if two companies are expected to deliver the same expected growth in earnings in the future, the company that has the higher excess returns accompanying this growth should be valued more highly.

Proposition 5: All good things come to an end.

In addition to looking at the value added or destroyed by growth, we often have to make estimates of future growth rates for companies. In making this assessment, there are two key variables that we have to pay attention to. The first is the scaling effect. As companies become bigger, it becomes more and more difficult for them to keep delivering the excess returns and growth rates that they used to in the past. Thus, it is almost a certainty that a firm that has grown 100% a year for the last 3 years will grow at

a slower rate in the next 3 years. With young growth companies, in chapter 9, we reflected this reality by lowering expected growth rates in revenues and earnings as we move through time. The other is competition. When firms are successful, they attract attention, which in turn leads to imitation and increased competition. While firms may be successful in keeping this competition at bay for extended periods (using legal and business tools), it will inevitably chip away at profitability and growth.

One way we reflected the inevitability of declining growth was by assuming that all firms, no matter how highly regarded they might be, eventually become stable growth firms (at which point we estimate a terminal value). We captured the effects of competition over time by pushing the margins of individual firms to the industry average and the returns on capital (equity) towards the cost of equity (capital).

Proposition 6: Watch out for truncation risk

In conventional discounted cash flow valuation, we value firms as going concerns, with cash flows continuing into perpetuity, often growing each year. While this may not be an unreasonable assumption for some firms, the reality is that most firms do not make it. Many young firms run out of cash, some mature firms become the targets of leveraged acquisitions and most distressed firms end up defaulting on debt (and going out of business). The optimism that underlies discounted cash flow valuation can lead us to over estimate the value of firms, where the risk of not making it (truncation risk) is high.

In the chapters where we looked at firms across the life cycle, we argued that the risk of truncation is greatest for firms at either end of the life cycle – very, young growth companies and declining or distressed companies. With these firms, we adopt a two-step approach to valuation. In the first, we assume that the firms would not only survive but also revert to good financial health over time, and value them on that basis. In the second, we estimate the likelihood that they would not survival and the values that we would assign the firm and equity, in the event of failure. Our final estimate of value is a weighted average of the two numbers.

Proposition 7: Look at the past but think about the future.

One of the conundrums we face in valuation is that almost all of the data that we have available is about the past, some of its reflecting the history of the company being

value (past financial statements, betas etc.), some of it the sector (industry average margins and returns on capital) and some of it relating to macroeconomic variables (interest rates, exchange rates and stock returns), but all of the forecasts we have to make, though, are in the future. While there is little that we can about this in most cases, there are some simple rules that we can follow to minimize the damage:

1. Do not be wedded to the past:
2. Trust in mean reversion, but watch out for structural breaks and changes:

Proposition 8: Draw on the law of large numbers

Estimates are not facts.

One pass at the data, rather than multiple passes

Bigger samples versus smaller samples

Use statistical tools for improving estimates

Proposition 9: Accept uncertainty and deal with it.

Uncertainty not from the model but from the real world

- Adding more detail
- More complex models

Ask what if questions or do simulations but for the right reasons.

- Garbage in, garbage out
- Don't double count risk

Accept uncertainty as a given. You can only estimate value with error

Proposition 10: Convert stories to numbers.

Every story affects a number

Every number should have a story behind it

Stories should not have arbitrary premiums/discounts attached to them.