Demystifying Intrinsic Value
Step by Step

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“The method to calculate intrinsic value is not a mystery and is freely available in the public domain”

Many people think that the way to make money in the stock market is to buy shares at one price and to sell them at a higher price over the following days or weeks. However, prices are unpredictable and are often influenced by the irrational activity of market participants - many of whom are either undisciplined investors or consistently irrational.

Trying to consistently second guess these people and the market, is futile. Sometimes you win and sometimes you lose.

Value investing is different because it is based on the concept that when you buy shares you are buying a piece of a business. Value investing works because it is founded on the notion that Price and Value are different concepts.

Every business has an intrinsic value derived from its return on equity (profitability) and its inherent business or investment risk. This value may show no resemblance to the current market price because the market is not always efficient or rational. It is a business’s fundamentals and its performance (historical and forecast) that creates the value.

In contrast it is the price that creates the opportunity.

Fortunately valuing a company is no more difficult than 10th grade algebra and below we have presented a complete worked example with Blackmore’s Limited. To protect and build wealth, investors need only adopt a sound framework and maintain a suitable temperament. Success over time requires a level head and the ability to think and act like an owner rather than a trader.

Price is what we pay and value is what we get.

Whether it is for a share in a company or for the groceries that we
purchase at our local Woolworths - value is what we receive. However, clearly whether we have received good value or bad value is easily observable at Woolworths. We can observe the price for the same goods at Coles!

However, in the stock market the price of BHP cannot be compared to say the price of RIO (or indeed anything else) to determine value. Rather to determine whether BHP is being offered at an attractive discount, can only be determined by comparing the price of BHP to a valuation of BHP.

Price is observable in the market place however we need to calculate intrinsic value.

As an example - suppose investors are following a listed company and its shares fall from $30 to $25. Should investors buy shares? What if the price falls further to $20 or even $15? When is the time right to buy?

It is the right time to buy a company’s shares only if you have conviction that intrinsic value is meaningfully above the price on offer. Investors can do this intuitively for groceries because of access to advertised pricing of the same goods. However, it is not so easy with shares where the market price oscillates minute to minute and day by day.

Indeed it is price volatility that suggests that the market is made up of many people who are continuously buying and selling for a range of reasons which are untold and often spurious. Obviously they cannot all be right and they cannot all be wrong. It is therefore incorrect to suggest that the market knows more about value than you do!

Having a view on intrinsic value gives you a strong competitive edge against other market participants. The development of intrinsic value - a history of great work.

For decades people have refined and revisited the process to calculate the intrinsic value of a business. The intellectual framework was set by Benjamin Graham in the 1930’s publication of ‘Security Analysis’ and it is still viewed today as the central text for investing. This was further developed in the 1960’s by James Walter in ‘Dividend Policy and Enterprise Valuation’ with Phillip Fisher adding meaningfully to the qualitative aspect of investing with his classic ‘Common Stocks and Uncommon Profits’.

Warren Buffett leveraging from Graham’s works and teachings gave us a marvelously simple valuation method to value businesses that distribute all of their profits in his 1981 shareholder letter. The final piece of the puzzle was refined by Richard Simmons, an Oxford MBA who gave us the method to value the growth part of a business.

Thus the concept of intrinsic value has been developed over decades with the intellectual rigor of some of the world's most successful investors.

Intrinsic Value is not a range - rather it is a precise measure based on the key inputs of required return and normalised owner earnings

Intrinsic value is not produced as a range of values, rather it is a relatively precise assessment based on the performance of a company and a view of its future sustainable profitability (normalised return on equity).

Intrinsic value is not static; for instance it changes at least twice a year as a company reports its half and full year results. Indeed, intrinsic value may change more frequently due to corporate events such as company guidance, acquisitions, buybacks and capital raisings. Intrinsic value however does not change with anywhere near the frequency that market price changes.

A future forecast of intrinsic value can be derived and it will capture the lift in value of a sound business. A sound business is simply one that grows in value over time due to the returns it generates on its retained earnings. It is the compounding of returns that distinguishes sound businesses from mediocre ones. It is the forecast of intrinsic value in one or
two year’s time that captures the compounding of value that accrues to owners over time.

Required Return is an assessment of risk

An important input in the derivation of intrinsic value is the rate of return that a rational investor requires to hold shares in a business. A share is a high risk asset as it cannot be redeemed. To compensate an investor for the higher risk, the returns from a share investment must be substantially higher than a government bond or a bank term deposit.

Risk is not measured by price volatility. Indeed price volatility gives an investor his opportunity. Risk is best thought of by asking a question: When investing this capital, will I preserve my purchasing power and achieve a sound additional return? The real risk when investing comes from misjudging intrinsic value, business quality, inflation and tax rates.

Thus the key components of required return are:

1. The risk free rate: For an investor to take their capital out of the safety of a bond to buy part of a business then he must demand a higher return than the risk free rate (defined as the 10 year Government Bond yield);

2. To the risk free return is added the equity risk premium. This premium is observable over time and it is the difference between the long bond yield and the equity market total returns. Equity investments are unsecured and have averaged between 5-6% above the long term bond yield for over a century in Australia.

3. Then a further risk margin is added based on Company specific risk factors. Investing in any particular business entails a large array of variables about the sustainably of the business performance and occasionally its industry. We consider that there are at least 20 variables that lead to our company specific required return component.

Thus, the required return is made up of the risk free rate (currently 4.25%), The equity risk premium (on average 6%) and the company specific return component. In our view the minimum required return for Australian equities is 11%. This rate applies to the strongest, highest quality companies with wonderful histories and prospects. For companies of poorer quality or short histories, the chances of disappointment are higher and the required returns are up to 16%+

Determining Intrinsic Value

First we need to ‘normalise’ the earnings of a company so as to create the economic picture an owner would see. This is akin to thinking of an investment in a company that is private. The owner receives dividends and determines the reinvestment of profit. Critically there is no public market for their shares.

In Australia, owner earnings must include the franking credits attached to dividends paid and this is defined as ‘grossed-up’ dividends. Franking credits are of immense value to investors and essential to be considered in a valuation. All Australian investors benefit from receiving franking credits at tax time in offsetting assessable tax or being refunded by the ATO.

Reported profits (earnings) need to be adjusted for nonrecurrent items such as changes in reserves (example foreign currency gains) and abnormal profits or losses (example asset sales). It is the correct derivation of normalised earnings that is crucial for deriving profitability (i.e. return on owner’s equity).

Normalised Earnings consists of:

| Grossed-up Dividends |
| Retained Earnings |
| Change in Reserves |
| - Abnormals |

Once we have the correct picture of earnings we
can calculate a key component of intrinsic value, Normalised Return on Equity (NROE). Often investors put too much focus on what comes out of a company in the way of profits and dividends rather than focusing on the capital that has gone into a company to produce the profits. The key is to consider both via the Normalised Return on Equity measure of profitability.

**NROE consists of:**

\[
\frac{\text{Normalised Earnings}}{\left[\text{Opening Equity} + \frac{\text{new net ordinary equity}}{2}\right]},
\]

Next, we require an appropriate Payout Ratio (PR). As many listed companies decide to pay dividends to their owners, we can determine the PR thus:

\[
\frac{\text{Grossed-up Dividends}}{\text{Normalised Earnings}}
\]

Once we have calculated our NROE and Payout Ratio we make an assessment of the sustainability of both by considering the industry and the company position. We now have the four variables that are the key to the valuation process.

**NROE**
The profitability of the business.

**Dividends (D)**
The proportion of profitability paid to owners as dividends. \((\text{NROE} \times \text{PR})\)

**Reinvested (RI)**
The proportion of profitability reinvested in the business to grow the business \((\text{NROE} \times (1 - \text{PR}))\) or \((\text{NROE} - \text{D})\).

**Required Return (RR):**
The return we need to become owners of the business.

StocksInValue’s approach to Intrinsic Value uses the combined Buffett & Simmons methods.

Businesses have both bond and growth characteristics. As such the intrinsic value of a company considers the Bond characteristics and the Growth characteristics of the business. Recognising this, the valuation approach has two components that are separated by the payout ratio. The Payout Ratio is important as it rewards the intrinsic value of businesses that have high NROE and can retain and compound capital at attractive rates. Conversely it punishes businesses that have low NROE and decide to retain capital at subpar rates of return.

The component parts leading to intrinsic value are:

**a. The Bond Component**

\[
\frac{\text{NROE}}{\text{RR}}
\]

and

**b. The Growth Component**

\[
\frac{\text{NROE}^2}{\text{RR}^2}
\]

These two components are next modified and summed to produce the ‘Equity Multiplier’.
Equity Multiplier

\[
\text{Equity Multiplier} = \text{Bond component} \times \text{payout ratio} + \text{Growth component} \times (1 - \text{payout ratio})
\]

Once the Equity Multiplier has been calculated, the final step is to multiply the Equity per Share for each share on issue by this multiplier.

The product of this calculation is the ‘Intrinsic Value’.

Finally and possibly most importantly, the buy, hold and sell decision.

The last part of the investment puzzle is to differentiate the businesses that are offered in the market below intrinsic value.

By seeking out those which have characteristics that you understand and which have bright prospects you will have an advantage over those many investors who merely buy on price. Further, holding these businesses until either price goes well above intrinsic value or their business prospects change, will over time result in significant and sustainable wealth creation.

A WORKED EXAMPLE OF INTRINSIC VALUE:
BLACKMORES LIMITED (ASX:BKL)

Normalised Earning ($M):
\[
= 27.3 + 8.2 + (-0.9) - 0
= 34.6
\]

NROE
\[
= \frac{34.6}{71.8 + (0/2)}
= \frac{34.6}{71.8}
= 48.2\%
\]

Adopted NROE: 49%

Payout Ratio (PR)
\[
= \frac{27.3}{34.6}
= 78.9\%
\]

Adopted PR: 80%

Other Ratios:
D = 39.2%
Ri = 9.8%
RR = 13.5%

StocksInValue’s approach using the Buffett / Simmons methods:

a. Bond Component = NROE / RR
\[
= \frac{0.49}{0.135}
= 3.630
\]

b. Growth Component = (NROE^2) / (RR^2)
\[
= \frac{0.49^2}{0.135^2}
= \frac{0.24}{0.018225}
= 13.169
\]

Adjusting for the Payout Ratio (PR):

i. Bond Component (for D)
\[
= 3.630 \times 80%
= 2.904
\]

ii. Growth Component (for Ri)
\[
= 13.169 \times (1 – 80%)
= 2.634
\]

Equity Multiplier is the sum of ‘i’ plus ‘ii’
\[
= 2.904 + 2.634
= 5.538
\]

Equity Per Share: $4.72

Intrinsic Value
\[
= $4.72 \times 5.538
= $26.14
\]