

Please see the textual explanation of the above sections listed on the following pages.

IOI Tear Sheet Users' Guide

Erik Kobayashi-Solomon

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Option Strategy Table

B / S	P / C / S	Strike	Exp.	Premium
BUY	Call	37	JAN '15	(\$1.65)
SELL	PUT	30	SEP '13	\$1.35
Net Credit (Debit)				(\$0.30)

Figure 2

This table is a simple, tabular listing of the option strategy highlighted in the Tear Sheet. The example in Figure 2 highlights a strategy of buying a “Diagonal”—a bullish position that sells short-tenor puts to subsidize long-tenor calls. The puts are sold at a strike price of \$30 and the calls purchased at a strike price of \$37. The cash inflows from the sold put mostly offset most of the cost of the call option, leaving a net outlay of \$0.30 / share. The abbreviations in the table have the following meanings:

Abbreviation	Meaning	Note
B / S	Buy / Sell	Options can either be bought or sold to gain or accept exposure, respectively.
P / C / S	Put / Call / Stock	Some of the strategies Tear Sheets will involve transacting in several options or overlaying a stock with an option or options (as in this example) and some will involve only buying or selling a single option. As such, this table can have one or more rows in it.
Strike	Strike Price	See Glossary for a definition of Strike Price.
Exp.	Expiration month	Listed options expire on a date specified by the exchange. Most listed options expire on the third Saturday of a month, with the intrinsic value of expiring contracts determined by reference to the closing price of the stock on the previous day.
Premium	Premium (and / or price paid for a stock)	Premium is the amount one must pay to buy an option or the income one receives from selling an option on a per share basis. In a strategy involving buying a stock (e.g., a “Covered Call”), we will list the price of the stock in this column.

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Tear Sheet Title

IOI Tear Sheet : Oracle (ORCL)

Bullish "Long Diagonal" Position

Data as of 25 June, 2013

Figure 3

The first line of the title gives the name of the stock and its ticker. The second line of the title specifies if the highlighted position is "bullish" or "bearish"; it also gives the common name for the option position (e.g., "Long Call", "Covered Call", etc.). The third line specifies the date on which the option and stock price data was drawn and the publishing date of the Tear Sheet.

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Valuation vs. Option Market graph

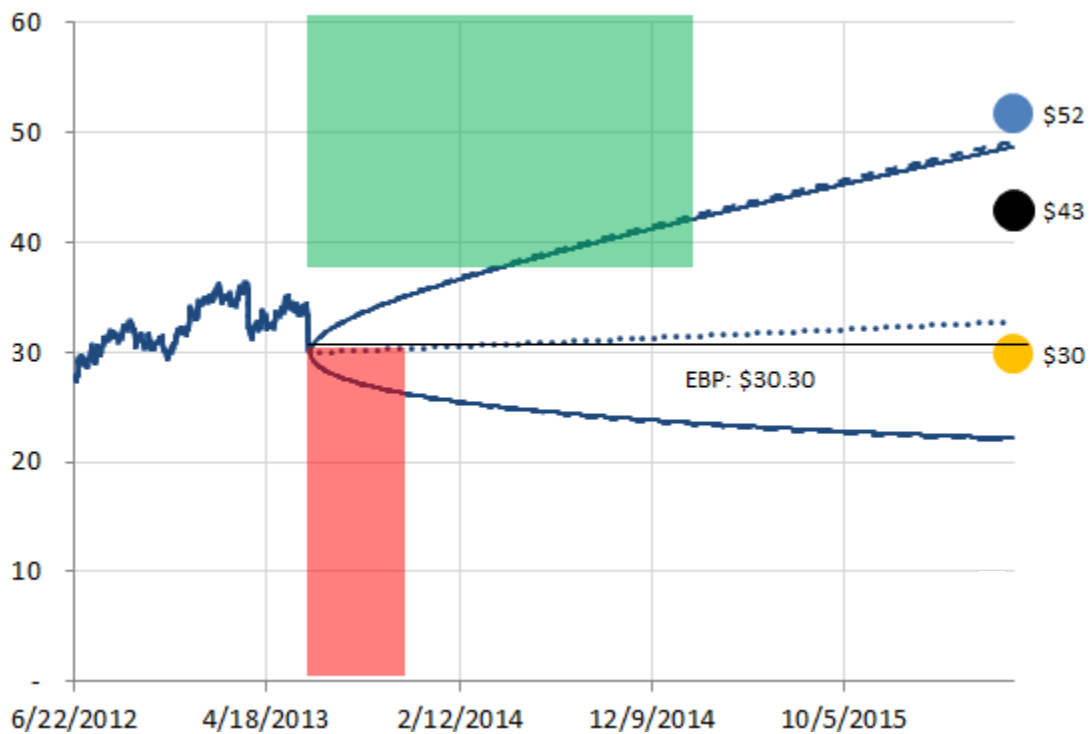


Figure 4

This is the quintessential IOI graph showing the following elements:

- 1) Historical price of the underlying stock over the past year of trading.
- 2) Conical section indicating the option market's expectations for the future price of the stock.¹
- 3) Best, worst, and most likely case valuations based on IOI's fundamental analysis of the company.

¹ In this diagram, you can see two conical sections. The outer cone, with the dotted line, represents the "ask vol" and the solid line the "bid vol." The fact that the dotted line is outside of the solid one indicates that the ask price is higher than the bid price, and means that the range of possible stock price outcomes as seen by sellers is wider than that seen by buyers. For an explanation of the conical section, please see [this article](#).

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- 4) Shaded region showing the area of exposure for the option strategy. Green shading signifies gaining exposure through purchase of a contract; red shading signifies accepting exposure through the sale of a contract; gray shading indicates a cancellation of exposure.
- 5) Break-even line. For bullish strategies, we will use the term "Effective Buy Price (EBP)" and for bearish ones, "Effective Sell Price (ESP)". In this case, the stock price is \$28.94 and the seller receives \$2.55 in premium, so the EBP is $(\$28.94 - \$2.55 =) \$26.39$.

An intelligent investor has an edge when the market price of a stock is significantly different than its intrinsic value range or when the range foreseen by the option market is much wider than that of its intrinsic value range. In the above example, the option market's range of outcomes is much wider than what we believe the uncertainty of the firm is on a fundamental basis.

A close analysis (discussed more in the explanation of Section 7 below) tells us that while we see the possibility of a worst case valuation of \$20 / share (as shown on this chart), this scenario is in fact much less probable than ones at \$28 / share and \$38 / share. Because our effective buy price is less than these two likely values, we have an edge in our investment—the risk / return balance is tilted in our favor.

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IOI Take & Drivers

IOI's Take

ORCL's business is set up to feed its largest and most profitable business: software updates. The market is overly concerned about growth and hardware profitability. We model modest growth and think hardware weakness is immaterial. Great bullish opportunity. Overvalued downside and undervalued upside.

Drivers

Revenues	Growth mainly due to acquisitions. Organic growth in mid-single digits supported by software upgrades.
Economic Profits	Consistently in mid- to upper 20% margin levels supported by high switching costs. 80% of profits from new software (15ppts) and software updates (65ppts). Op leverage on software updates increased greatly after SUN purchase in 2010. Ellison is right: SUN was a great buy. Those worried about hardware segment are crazy.
Investment Efficacy	Acquisitions are consistently adding value to shareholders. Project mid-term growth faster than GDP
Balance Sheet	No material hidden assets / liabilities.

Figure 5

These sections provide a brief overview of the investment thesis (IOI's Take) and the drivers to the IOI valuation (Drivers). Fundamental valuations hinge on three factors: 1) how fast will revenues likely grow in the near term (3-5 years), 2) how efficient will the firm be in converting those revenues to profits in the near term, and 3) how much medium-term (3-10 years) growth can be expected based on the firm's opportunities for investment (we call this factor

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“Investment Efficacy”). In some cases, a company can have “hidden” assets or liabilities (e.g., real estate recorded at the low historical cost, underfunded pension) that may affect the valuation as well—we mention those here as well, and factor them into our valuation.

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Valuation & Return table

Valuation & Return	IOI Conviction Rating: High		
	Low	Likely	High
Stock Fair Value (\$)	30	43	52
Stock Return (%)	0	43	73
Option Period Return (%)	-100	1,900	4,900
Option Annual Return (%)	0 (3yr)	171	268

Figure 6

This is a tabular display of the valuations shown in the Valuation vs. Option Market graph. We have separated out the stock return (calculated on the basis of the market price for the asset as of the date on the Tear Sheet) for each of the cases.

Option returns are a bit more difficult to represent because of the effects of time value. The figures listed here assume that the stock price moves to the listed valuation exactly at the expiration of the option.

IOI investment time horizons are three years. As such, annualization for an unsuccessful investment is done on a three-year basis.

In addition to the tabular display, we also list an IOI conviction rating.

Rating	Approximate Chance of at Least Breaking Even
Very High	>90%
High	60% - 90%
Moderate	50%-60%
Low	20%-50%
Very Low	<20%

A basket of low conviction bets can be a useful investment tool if one does not allocate too much capital to them, so we will highlight both low and high conviction bets in our Tear Sheets. In general, low conviction bets are expected to show a much higher potential profit than a high conviction one.

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Valuation Metrics

Valuation Metrics

	Projection Avg		Historical Median	
	Worst	Best	5-year	10-year
Revenue Growth (%)	3	5	4	16
Profit Margin (%)	22	30	27	26
Med-term Growth	GDP	GDP+6ppt	Moderate	High

Figure 7

This table shows both actual historical and projected values for the three key drivers of corporate valuation. Revenue growth and profitability are assessed for the near term (usually 3-5 years) and medium-term growth for a period of varying lengths depending on the particulars of the company being analyzed. IOI uses a three-stage valuation model that consists of 1) an explicit forecast of near-term economic conditions, 2) an optional high-growth period for companies likely to grow more quickly than the general economy, and 3) a terminal value based on the likely growth of the economy at large. In the case of investments in mature businesses, we may forego the inclusion of the high-growth stage, analyzing the short-term cash flows followed by the stage three “terminal” growth factor.

We compare our projected averages to historical medians, since median gives a better indication of central tendency than does average when there are large outliers.

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Valuation vs. Stock Market graph

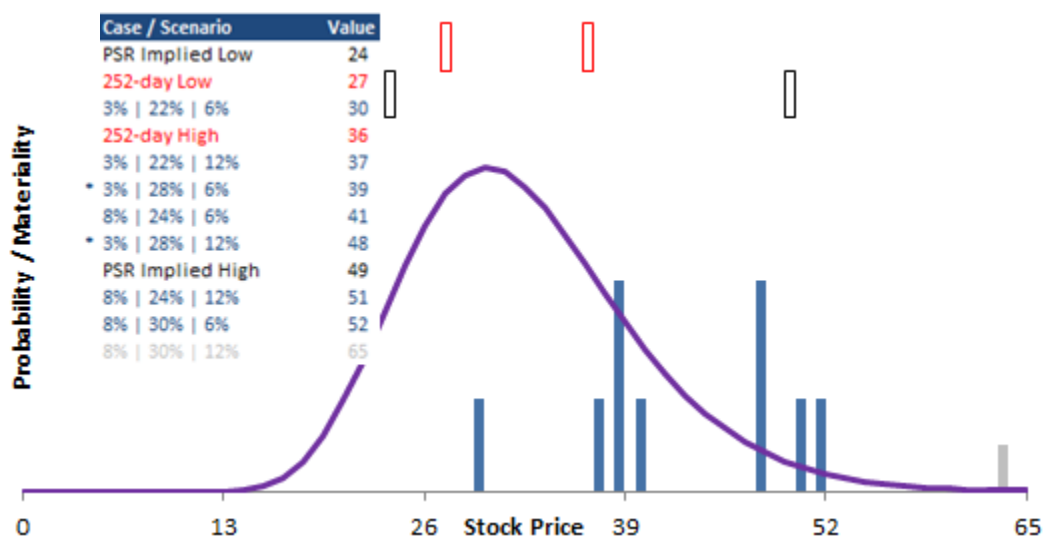


Figure 9

This graph shows the relationships between four valuation / market elements:

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- 1) IOI valuation scenarios (blue and gray bars)
- 2) High- and low price range for the stock over the last year (red bars)
- 3) Stock price range implied by overlaying historical price-to-sales ratios (PSR) on IOI's best and worst case revenue scenarios.
- 4) Option market's probability distribution (purple curve)

The table shows the numerical values of the IOI valuation scenarios, the high and low stock prices, and the stock prices implied by the PSR. All scenarios IOI considers as having a material chance of occurring are shaded in blue and the height of the bars is relatively high. All scenarios IOI considers as not having a material chance of occurring are shaded in gray and the height of the bar is relatively low. The most likely scenario or scenarios (associated with values of \$39 and \$48 here) are identified by an asterisk next to the row on the table and by the tallest blue bars on the graph.

IOI valuation scenarios are identified according to the following convention:

Near-term Revenue Growth | Near-term Profitability | Medium-term FCF growth

Taking this into consideration, we can translate the entry listed as "3% | 28% | 6%" as identifying the scenario assuming 3% year-over-year revenue growth and 28% profitability for the stage one valuation period and an 6% growth in free cash flows in the stage 2 valuation period.

The purple curve shows the price range considered most likely by the option market. For a lognormal curve, the point on the curve representing the "expected" value lies a bit to the right of the peak of the curve. As such, by looking at the purple curve, you can see the range of stock prices for Apple that the option market considered most likely when these data were drawn.

At IOI, we believe that attempting to make too fine a distinction between the probabilities that various scenarios will occur is an exercise in false precision. The height of the blue and gray bars is therefore not proportional to IOI's perceived probability of a stock price being realized in the marketplace. Tall blue bars simply mean "most likely"; shorter blue bars simply mean "material chance of occurrence"; short gray bars simply mean "immaterial chance of occurrence".

Conclusion

Any document rich in information will necessitate some time and effort to fully understand. If you have questions or comments about Tear Sheet calculations or IOI valuation methodology, please feel free to contact us at Erik@IntelligentOptionInvestor.com.