

Assessing Current and New Methodologies on Valuation

Introduction

Alternative investment firms, including private equity, have often used simple methodologies for describing carried interest values with the shorthand of carry dollars-at-work. While this approach often works well for like-for-like funds, as firms expand into other investment strategies with differing timelines and return expectations, it becomes difficult to compare values. At a minimum, a more nuanced approach is required to account for carry differences across strategies.

One approach is to address carry dollars similarly to how stock options are valued. Option valuation models, such as Black-Scholes, can approximate the present value of carry, recognizing differences in timelines and return expectations. More advanced iterations could address vesting, hurdles, and other factors. This perspective can be useful in comparing values across investment strategies and funds. It also allows carried interest to be more accurately communicated alongside traditional annual compensation.

Carry Dollar Definition

Carry dollars-at-work describes a dollar basis upon which investment gains can be generated. The carry dollar value is not an actual projection of future value or expected return, but rather, the investment gain that would be realized if invested in the fund. If an individual has \$1 million in carry dollars, that individual would realize \$500,000 if the investment returned 50% and \$1,000,000 if the investment returned 100%.

As compensation experts for the financial services industry, we are frequently asked about carried interest. Our clients increasingly need to value and aggregate awards and understand how they fit in the broader context of all-in economics.

We have found treating carried interest like stock options is helpful to adjust for duration, expectations, volatility, terms, and risk.

Carry Dollar Benefits

Carry dollars are easily understood and communicated. Often firms and professionals use the simple message of: “if our fund produces a 2x return, then your \$X carry dollars-at-work will be worth \$X in the future.”

Firms are communicating an investment basis, not how the carry is valued. There is no explicit consideration of timeline, investment return profile, hurdles, taxes, or present value. Not surprisingly, participants consider these factors loosely and recognize carry dollars should be discounted significantly.

Carry Dollar Limitations

Carry is clearly different than other compensation components. This makes it difficult to determine “all in” economics, including traditional compensation and carried interest.

Exhibit A: Illustration of In-Year Economics (Present Value in Each Year)

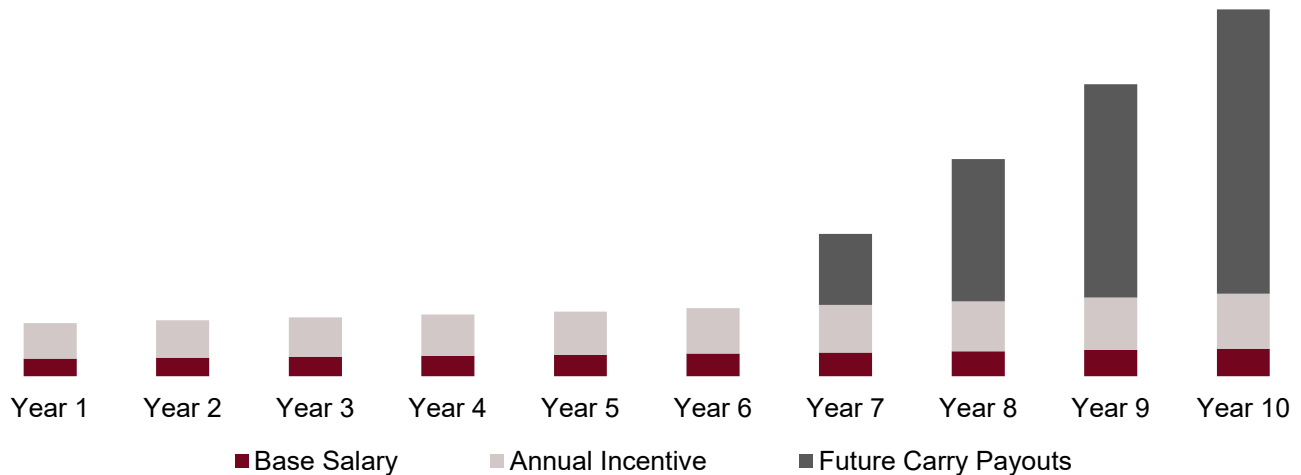


Exhibit Notes: Illustrative cash flows show timing differences between traditional compensation and carry. Existing approaches do not address this issue.

Base salary, annual incentives, and deferred compensation are well understood. Whether delivered in cash and / or other vehicles with moderate vesting, these amounts are all communicated as in-year awards. (See Exhibit A)

Conversely, carry dollars are in economic terms an investment basis communicated upfront, but may or may not result in a payout after 7 to 10 years. This is why most firms communicate annual compensation and carried interest separately. It is difficult to appropriately aggregate carry alongside traditional compensation. Simple adjustments to account for these differences are usually unsatisfactory. (See Exhibit B)

Private markets and alternatives have often had strong performance with high exit multiples and large fundraises. The frequently expressed 2X return has often been achieved which masks the shortcomings of dollars-at-work, but this should not be expected to continue going forward.

Existing Carry Adjustment Approaches

One common approach is the annualization of dollars-at-work to recognize investment period / fundraising cadence. While this does not account for timing issues, present value, or risk, it does provide a year-by-year view. One example is to annualize over a period (i.e., 4 years) to reflect the expected time between fundraises. Another example is to annualize over the investment period (i.e., 5 years). This provides a clear view of the carry dollars “earned” annually. In reality carry payouts occur much later and can extend as far out as 10 years / the end of the fund. (See Exhibit D)

Existing Carry Approaches

- Carry Allocation Percentage
- Total Carry Dollars-at-Work
- Annualized Carry Dollars-at-Work

None adjust for present value or risk

Exhibit B: Comparison of Potential Carry Payout vs. Total Dollars-at-Work

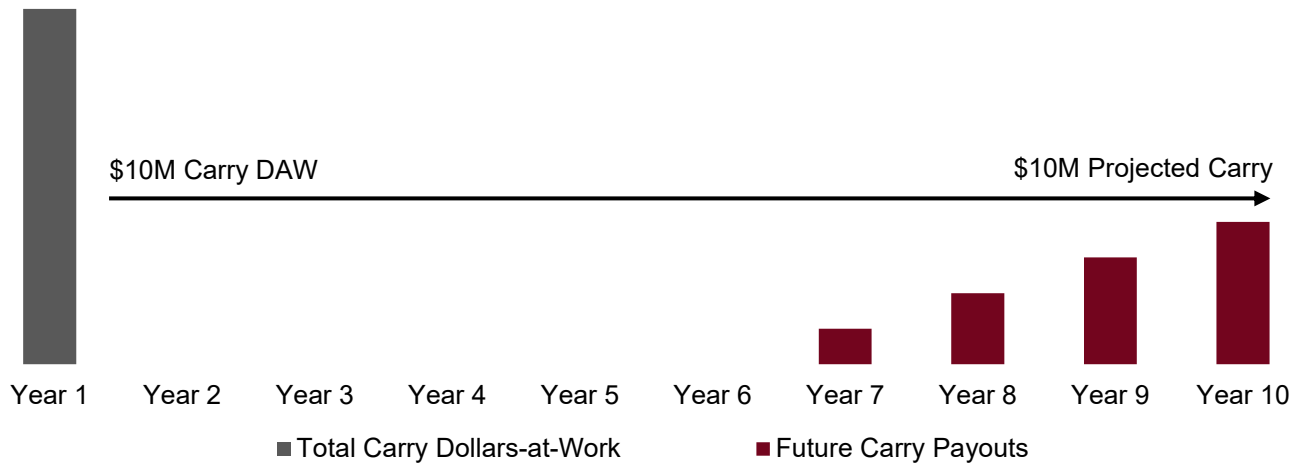


Exhibit Notes: Timing mismatch between carry dollars and estimated future payouts. Projected carry is shown on a present value basis in each future payout year, but no discount is applied to dollars-at-work in the current year.

There have been attempts to convert other types of compensation to carry dollars as the multi-strategy model becomes more prevalent. For example, options can be communicated as carry dollars. This is helpful in creating firm-wide vehicles with similar payout structures, but by converting options to a carry equivalent, the downsides of carry dollars still exist.

Options can be described as “option dollars-at-work” because economically, stock options and carried interest function in similar ways and include similar variables. Both have long and un-

certain time horizons (i.e., 7 to 10 years), no exercise value at grant, value only above a set strike price, and vesting.

The value of carry dollars-at-work is the gain on investment. If the fund does not perform, then the carry will not pay out, but the participant will also not lose any money. Similarly, a stock option only pays out if the underlying stock increases in value.

Option dollars-at-work are determined by multiplying the number of options by the underlying

Exhibit C: Comparison of Options Valuation Methodologies

<u>Black-Scholes Calculation</u>		<u>Dollars-at-Work Calculation</u>	
Share Price	\$100	Share Price	\$100
Options	100,000		x
Strike Price	\$100	Options	100,000
Volatility	20%	Total Value	\$10M (Dollars-at-Work Equivalent)
Expiration	7 Years		
Dividends	0%		
Risk-Free Rate	3.90%		
Total Value	≈\$3.3M (Present Value)		

Exhibit D: Comparison of Potential Carry Payout vs. Annual Dollars-at-Work

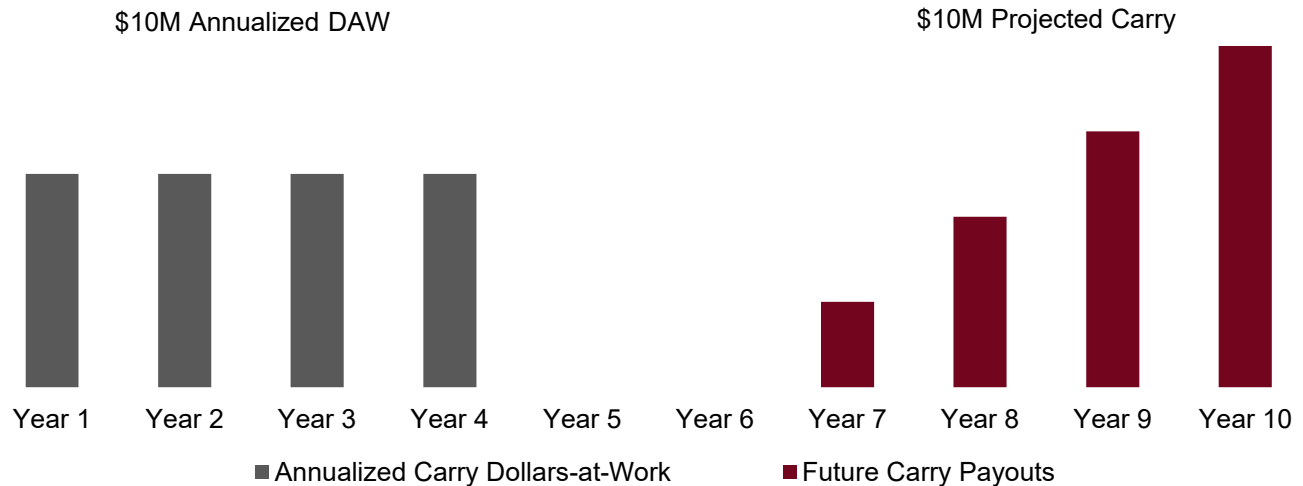


Exhibit Notes: Annualizing carry dollars-at-work smooths the large upfront impact of total carry dollars-at-work but does not address present value

stock price. For instance, if an award consists of 100,000 options in a stock trading at \$100, the participant has \$10,000,000 in option dollars-at-work. If the stock price increases by \$10 (or 10%), the gain would be \$1,000,000 (10% of the option dollars-at-work). (See Exhibit C)

Valuing Carry Dollars using Black-Scholes

By extension, if options can be denoted as a carry equivalent, then carry can be denoted as an option equivalent. The Black-Scholes inputs for carry are the same as traditional options: current price, strike price, timeframe, volatility, dividend rate, and risk-free interest rate, but to value carry, the inputs need to be refined and will vary by fund and strategy.

Additional adjustments can be made to account for hurdles and catch-up rates. Conceptually, hurdles and catch-up rates are similar to the strike price of an out-of-the-money option, except that carried interest increases quickly above the hurdle until full catch-up is achieved.

This approach can be used across investment strategies with carried interest. The end result is

a realistic carried interest value that allows better comparisons to traditional compensation. It also allows firms to evaluate carry values across different strategies. (See Exhibit E)

Additional Uses

By understanding the current value of carry awards, firms will be able to more accurately determine all-in economics across traditional compensation and carried interest.

This valuation concept could also be helpful as firms hire experienced professionals. A deeper understanding of how carry values differ firm-to-firm and strategy-to-strategy will help firms structure and price carry buyouts.

Additional Uses

- Calculating All-In Pay (Cash + Carry)
- Framing Competitive Buyout Offers
- Understanding Relative Value by Fund

JOHNSON ASSOCIATES, INC.

Exhibit E: Potential Carry Value converted to Present Value Equivalent

≈\$3.5M Carry Present Value (Black-Scholes)

\$10M Projected Carry

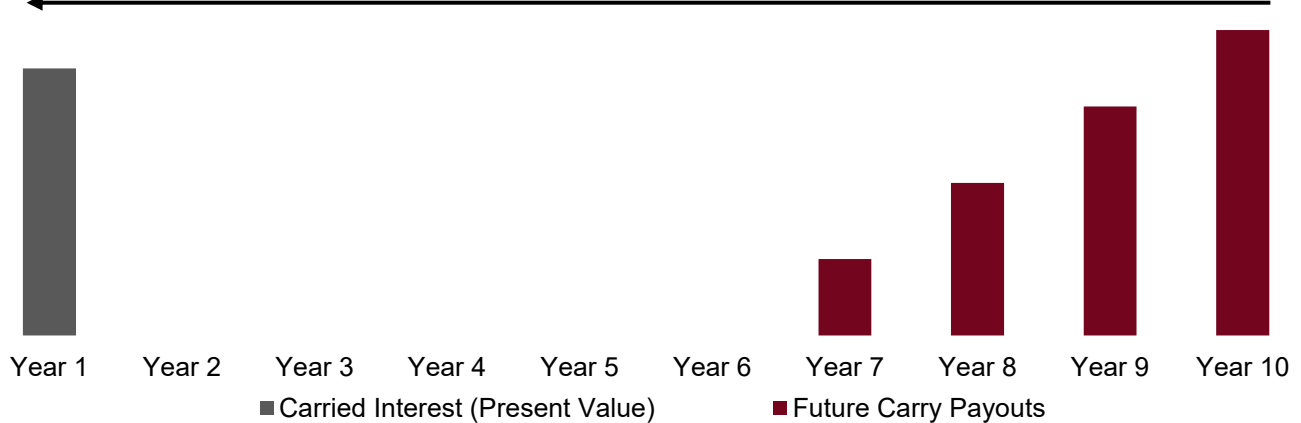


Exhibit Notes: Nuanced application of Black-Scholes model to carried interest allows for accurate present value calculations to compare against cash compensation on like-for-like basis

As firms invest across multiple strategies, employers need to understand how carry values vary by strategy. By determining the present value of carry for each fund, comparisons will be more easily understood.

Potential Complications

Black-Scholes requires different inputs than the standard carry dollar methodology. Many are straightforward to adapt for carried interest, but some variables are less readily available. Inputs such as current price, dividend rate, and risk-free interest rate are easily adapted. However, volatility and time to expiration must be estimated. Volatility is difficult to calculate given the frequency at which underlying investments are valued. Time to expiration is dependent on the fund strategy and may also vary with the waterfall structure. Existing resources on private investment volatility and a firm’s understanding of its own investment strategies should be sufficient in estimating these variables.

Accounting for strike price requires the most nuance. The strike price in stock options is analogous to a hurdle rate in carried interest, but with

one key difference - exercisable value increases at a linear rate for stock options, but carried interest has hurdles and catch-up rates, leading to a non-linear band of outcomes to account for. This complicating factor requires a nuanced methodology on option pricing.

Black-Scholes Variables for Carried Interest

Straightforward Variables

- Current Price
- Dividend Rate
- Risk-Free Interest Rate

Complicated Variables

- Volatility
- Time to Expiration
- Strike Price (hurdles / catch-ups)

Additional Factors

- Capital Gains Tax Treatment
- Illiquidity Discount

Exhibit F: Summary Cross Comparison of Three Approaches

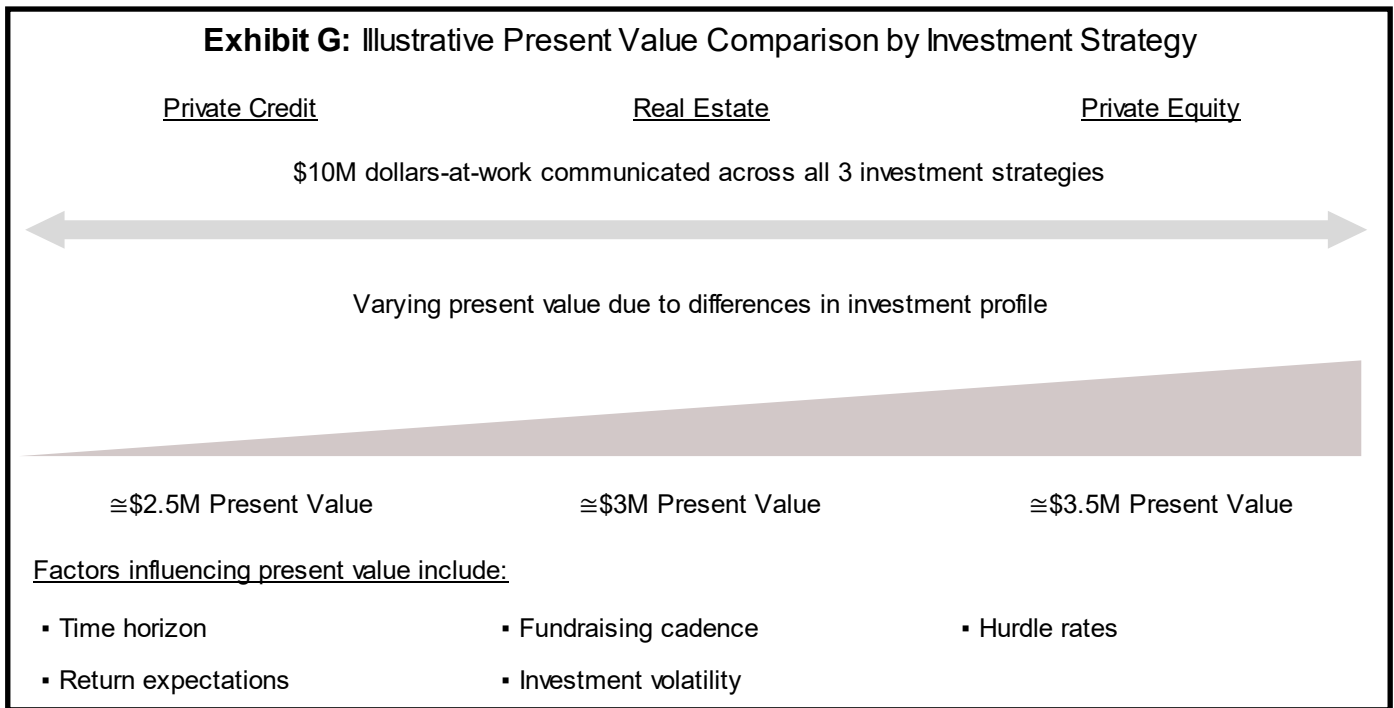
<u>Total Carry Dollars-at-Work</u> (See Exhibit B)	<u>Annual Carry Dollars-at-Work</u> (See Exhibit D)	<u>Black-Scholes Calculation</u> (See Exhibit E)
\$10M award value	\$10M award value	≅\$3.5M award value
Upfront award	Annualized over 4 years	Upfront award
Linked to future values	Linked to future values	Present value calculation
Overinflated value	Overinflated value	Realistic value
No timing adjustment attempted	No timing adjustment attempted, but value smoothed over time	Acknowledges timing issues and other variables

There are other factors that need to be considered – the concept of an illiquidity discount, which theoretically reduces the value of carry awards, and the different capital gains tax treatment of carry, which increases values.

Due to different fundraising cadences and grant frequency, carry participation in multiple overlapping funds must be accounted for when annualizing value. This challenge exists in the carry dollars-at-work model as well.

When communicating combined “all in” economics, it is important to understand how firms will account for fundraising results above or below targets. Firms will have to decide if fundraising variations will impact traditional compensation to counterbalance carry and vice versa.

Exhibit G: Illustrative Present Value Comparison by Investment Strategy



Conclusion

While the simple carry dollars-at-work shorthand has advantages, it is less useful in isolation as firms continue to increase in size, scale, and complexity. Using Black-Scholes (or a similar model) to value carried interest thoughtfully will result in more realistic values across strategies and will enable a wider range of uses. At a minimum, it provides a supplemental approach with more refined and accurate calculations.

If you would like to discuss this topic further, please contact us at info@jaiconsulting.com or (212) 221-7400.