

Valuing management incentive units

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November 2019

Introduction

This white paper addresses the following matters related to management incentive units (MIUs):

- *Overview:* The definition of MIUs and how MIUs differ from other common forms of incentive compensation (e.g., stock options) in terms of design and accounting treatment
- *MIU valuation:* Valuation approaches for MIUs and areas of concern that RSM auditors and valuation specialists often review with their clients and clients' valuation specialists
- *Tax considerations:* The need to conduct MIU valuations for tax purposes because the value of MIUs for tax purposes is based on a standard of fair market value, which can be different from the financial-reporting fair value basis

Overview

What is a management incentive unit?

MIUs (aka restricted stock units, profits interests, profit-sharing units) are a form of equity compensation issued by private companies to employees, management, directors, consultants or investors. MIUs are used to reward or incentivize employees of partnerships or limited liability companies (LLCs). MIUs have become increasingly popular in recent years due to more companies selecting to be structured as LLCs.

Difference from capital interests

Capital interests are generally provided in exchange for capital investments or contributions; whereas, MIUs are generally provided in exchange for services as part of compensation. The primary difference between MIUs and stock options or other capital interests is that there is no pay-in to receive the interest. There is no up-front investment as is the case for preferred and common stock and there is no exercise price as is the case for stock options and warrants.

MIUs can have several potential features, including performance and (or) time vesting provisions, payoff hurdles and (or) targets and various payoff vehicles (e.g., participation in the profits and (or) distributions of a company). These features lead to accounting treatment and valuation issues that must be addressed by MIU issuers, their auditors and valuation specialists.

Accounting treatment

MIUs are classified as either equity or a liability largely depending on their settlement features. MIUs settled in equity are classified as equity, and MIUs settled in cash payments are classified as liabilities. For MIUs granted to employees and directors,¹ the accounting treatment relating to share-based payments falls under the Financial Accounting Standards Board's (FASB) Accounting Standards Codification (ASC) Topic 718, *Compensation – Stock Compensation*.²

Equity awards

The fair value of an equity award is determined on the grant date and recognized as compensation cost over the required service period. The service period frequently is the vesting period. The fair value of an equity award is not adjusted for changes in fair value over the service period.

Liability awards

A liability award initially is measured on the grant date at fair value, unless a private company elects to recognize the award based on its intrinsic value, and is then subsequently remeasured at each reporting period until settled. The liability is recognized with an offset to compensation cost over the required service period. After the required service is complete, any changes in the value of the liability are recognized immediately.

The key measurement difference between equity awards and liability awards is that the fair value of an equity award is only determined on the grant date; whereas, the fair value of a liability award (or intrinsic value, if elected) must be determined at each reporting date until the award is settled. That said, there are other factors that need to be considered subsequently for equity awards as detailed later in this white paper. A valuation specialist typically is involved in the valuation of both types of awards as of the grant date. For liability awards, it is common to involve a valuation specialist at each subsequent measurement date. Due to the complex nature of MIUs, it is recommended to request an appraiser that has prior experience with MIU valuation.

¹ Pursuant to Topic 718, a nonemployee director does not meet the definition of an employee. However, a nonemployee director acting in their role as a member of the board of directors is treated as an employee under Topic 718 if the director was elected by the employer's shareholders. This only applies to awards granted for services as directors. Upon adoption of ASU 2018-07, *Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*, Topic 718 will be applicable to both employee and nonemployee share-based payments issued to acquire goods and services to be used or consumed in a grantor's own operations.

² ASC 718-10-25-6 to 25-19 provide further details on the classification of share-based payments as equity or as a liability.

Why MIUs have to be valued

Depending upon whether it is probable that the vesting conditions will be met, the value of the MIUs, and the related compensation cost, is either recognized in the financial statements or disclosed as unrecognized compensation cost in the financial statement disclosures.³

A valuation should be performed when MIUs are issued or modified, or when there is a change in ownership. Typically, valuations performed within six months to one year prior to the valuation date are acceptable assuming the facts and circumstances have not changed materially. For liability awards, the MIUs need to be remeasured each reporting period until they are settled.

Issues seen in practice

As previously mentioned, retaining an appraiser to perform MIU valuations is recommended. However, companies are hesitant to engage external appraisers as the valuations can be expensive (given the modeling complexity) and are often only used for disclosure purposes in the footnotes to the financial statements (for example, if vesting is contingent upon a sale of the company). Management-prepared MIU valuations can present a variety of issues, such as:

- Using a static model (current value method, option pricing model) as compared to a dynamic model (Monte Carlo simulation or probability-weighted expected return method) when path dependent features are present
- Not properly reflecting all features of the MIUs, such as service and performance conditions that affect factors other than vesting, and market conditions
- Improper determination of and support for inputs, such as volatility, estimated holding period, participation thresholds, exercise price (for other derivatives) and hurdles

Additionally, companies issuing MIUs often assume that the securities have no value as of the grant date based upon their immediate liquidation value. However, unless the company expects imminent liquidation, that assumption does not align with U.S. generally accepted accounting principles (GAAP). A value of zero assigned to the MIUs would suggest no benefit in granting the units, and the implication that the company has issued worthless units is not consistent with the concepts of fair value or the underlying theory of granting the MIUs (which are typically a form of compensation). If they are worthless, why were they issued?

MIU valuation

Overview and comparison of methodologies

The first step in the valuation of an MIU is the determination of the company's equity value. The equity value is then allocated to the company's equity securities, inclusive of MIUs. Hybrid methods also are employed, which combine one or more methods in order to capture all features of a company's share classes. Security- and company-specific characteristics, including vesting terms, should be considered in determining the appropriate method. The following are the most commonly applied equity-allocation methods:⁴

³ From an accounting perspective, vesting conditions are captured based upon whether it is probable that the service and (or) performance condition will be met. If not probable, no compensation cost is recognized. Rather, the award, including the unrecognized compensation cost, is only disclosed in the financial statements. However, if it later becomes probable that the vesting criteria will be met (for example, there is a change in control), the company will have to recognize the award and the related compensation cost.

⁴ Additional details on each method can be found in the American Institute of Certified Public Accountants' (AICPA) Accounting & Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*.

- Current value method (CVM)
- Probability-weighted expected return method (PWERM)
- Option pricing method (OPM)
- Monte Carlo simulation and lattice models

CVM		
Overview	Advantages	Disadvantages
<ul style="list-style-type: none"> • Commonly referred to as the waterfall method • Determine a firm’s equity value and allocate to the various share classes using the current capital structure • Manner in which each share class exercises its rights and achieves its return is determined based on the equity value as of the valuation date • Limited use; appropriate in limited circumstances 	<ul style="list-style-type: none"> • Ease of use • Appropriate when a liquidity event or outcome is imminent • No assumptions regarding future 	<ul style="list-style-type: none"> • Cannot incorporate optionality (multiple scenarios or outcomes) and option payoffs • Not forward looking • Cannot account for path dependency⁵ • Cannot capture performance or market condition thresholds • Often implies zero value for the newly issued MIUs, which is inconsistent with incentive program goals
PWERM		
Overview	Advantages	Disadvantages
<ul style="list-style-type: none"> • Value of the interest determined based upon an analysis of future exit values under different potential outcomes (e.g., sale, merger, initial public offering [IPO], dissolution) • Explicitly accounts for proceeds realized through various outcomes • Probabilities assigned to each scenario based upon management expectations or historical trends • Often used as a hybrid with the more complex methods discussed next 	<ul style="list-style-type: none"> • Can explicitly incorporate multiple discrete scenarios and outcomes • Forward looking • Useful when company is close to exit and outcomes are reasonably predictable 	<ul style="list-style-type: none"> • Cannot incorporate all possible outcomes for future enterprise or equity value • Cannot account for path dependency or option-like payoffs • Complex to implement and difficult to estimate and audit outcomes and probabilities • Sensitive to subjective probability inputs for each of the various outcomes

⁵ Awards with market conditions, such as return multiples or price-per-share thresholds, are considered path dependent as defined in Topic 718. Market conditions can create path dependency because the number of MIUs vested may change based on observed returns or return multiples, absolute performance of the underlying stock, or relative performance compared to a benchmark index or peer group. Relative performance may require simulation of the company’s stock price and the benchmark index or peer group, with application of the correlation between the two. The CVM, PWERM, OPM and other models, such as the basic Black-Scholes model, assume a constant number of shares or units over the holding period, and as such, are not able to account for this path dependency.

OPM		
Overview	Advantages	Disadvantages
<ul style="list-style-type: none"> Each share class is treated as a series of call options with a claim on the equity value of the company Exercise prices determined based on the equity value in which the various share classes either: (a) receive a liquidation preference or (b) convert, in the case of preferred stock, or exercise, in the case of options and warrants Utilizes the closed-form Black-Scholes formula 	<ul style="list-style-type: none"> Forward looking Incorporates all possible outcomes for future enterprise or equity value While sensitive to implied volatility input, volatility is less subjective than outcome probabilities Appropriate when specific future liquidity events are too difficult to forecast 	<ul style="list-style-type: none"> Cannot account for path dependency Requires expertise to employ Can be time consuming
Simulation ⁶		
Overview	Advantages	Disadvantages
<ul style="list-style-type: none"> Applies geometric Brownian motion concepts utilizing software platforms or code Allows for customization of unique and (or) complex structures and unique and (or) complex MIU terms Value simulated through a holding period and allocated through a dynamic capital structure waterfall to various classes Large number of trials performed using software to identify a mean or expected value 	<ul style="list-style-type: none"> Forward looking Can account for path dependency and complex, dynamic capital structures Incorporates all possible outcomes for future enterprise or equity value Each simulation model is unique and completely customizable, depending on the specific facts and circumstances (e.g., if, then, else) 	<ul style="list-style-type: none"> Requires expertise to employ Requires specialized software Can be time consuming

Types of vesting criteria

MIUs commonly include the following types of vesting and exercisability criteria:

- Service conditions:* Require the holder to complete a specific period of service during which the holder remains employed by the issuer. Service conditions are not incorporated in the valuation analysis in determining the per-share fair value of the units at the grant date.
- Performance conditions:* A performance condition is related to an internal metric or event, such as an IPO. Examples include revenue or profit thresholds, growth rates or earnings per share, as well as

⁶ Lattice models are essentially discretized simulation models. They can incorporate all potential outcomes and path dependency and can be an appropriate valuation methodology if applied correctly.

the achievement of liquidity events. Performance conditions that affect vesting are not incorporated into the valuation analysis in determining the per-share fair value of the units at the grant date.

- *Market conditions:* A market condition is related to the market price (or value) of the entity's equity instruments. This may be based upon a specific per-share exit price, return multiple, internal rate of return (IRR) to senior classes, or relative stock price performance compared to a benchmark index or peer group. Market conditions should be incorporated into the valuation analysis when estimating the fair value of the award at the grant date.

Impact of vesting conditions

Performance and service conditions

Service and performance conditions that affect vesting should not be considered in the determination of fair value. However, it is important to note that performance and service conditions should be considered when a company is estimating the quantity of awards that will vest.

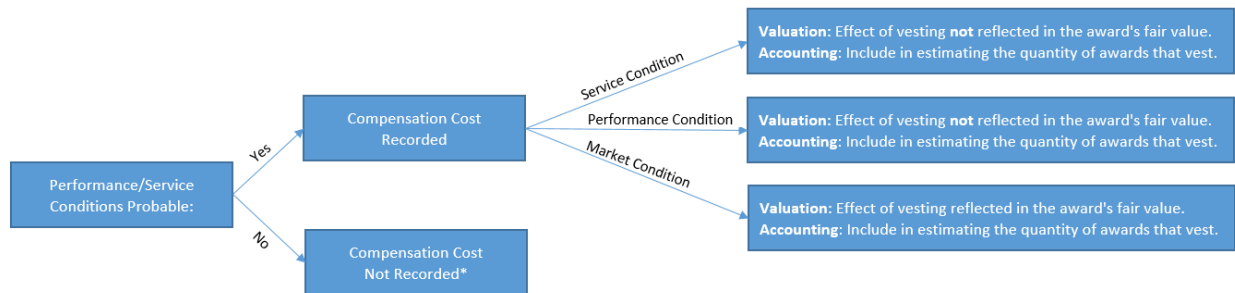
For service conditions, a company can either: (a) estimate the amount of expected forfeitures and recognize the net compensation cost over the service period or (b) elect to account for forfeitures as they occur, by recognizing the gross award over the service period and reversing the compensation cost for forfeited unvested awards when the actual forfeiture occurs. If the alternative is not elected, the estimated forfeitures should be reassessed at each reporting period. Under either alternative, compensation costs ultimately will be recognized based on the awards that actually vest at the end of the service period.

In regards to performance conditions, when a company concludes it is probable that the performance condition will be achieved, the company should recognize compensation cost for the awards over the requisite service period. No compensation cost would be recognized for an award if achievement of the performance condition is not probable. According to Topic 718, probable means that the future event or events are likely to occur. In practice, probable is generally interpreted as greater than a 70 percent likelihood that the event will occur. The company should assess the probability of vesting at each reporting period and make adjustments to compensation cost based on its probability assessment.

Market conditions

Similar to awards with performance and service conditions, compensation cost for an award with market vesting conditions is determined at the grant date and accrued over the service period. However, unlike an award with performance and service conditions, the effect of a market condition is reflected in the award's fair value. If a market condition is not met, there is no reversal of previously recognized expenses related to the MIU. Ultimately, an award with a market condition has a lower fair value than that of an identical award with only a service or performance condition. This is because the market condition is a restrictive feature that does not impact an identical award without this condition. The market condition is an additional hurdle that has to be met before a security can vest compared to its plain-vanilla counterpart, thus causing the lower value. For an award with market vesting conditions, it is recommended to request an appraiser that has prior experience with MIU valuation due to the complex nature of MIUs.

Workflow application



* It is still necessary to compute grant date fair values for disclosure purposes and for situations in which the probability assessment may change and recognition may become necessary. Similar to circumstances stated earlier, market conditions are incorporated into the valuation, whereas service and performance conditions are not.

Practice examples

Example 1

For example, consider two MIUs, a plain-vanilla MIU (MIU A) and an identical MIU with a market condition that requires a 10.0 percent IRR for a private-equity-group investor (MIU B). MIU A has the right to participate in the proceeds once the stock price is above the exercise price. However, the same does not occur for MIU B. Regardless of whether MIU B is in the money, the MIU does not have the right to participate in the proceeds and has no value (intrinsically) until the IRR condition is met. Once the IRR condition is met, MIU B is equivalent in value to MIU A.

This scenario highlights why modeling the market condition within the OPM framework is difficult. Generally, within the OPM framework, once a security is in the money, the security participates in the proceeds from that breakpoint forward. However, as noted earlier in this example, MIU B is equivalent in value once that IRR is met. Having MIU B participating in proceeds from the IRR breakpoint forward would cause a significant amount of value attributable to MIU B to be missed within the OPM framework. In this scenario, MIU B would require a catch up that would allocate value from the strike price to the IRR and enable it to be the same value as MIU A once the IRR is met. As a result, additional adjustments are required within the OPM framework, which can be difficult to structure. These adjustments also lack the specificity and transparency of more complex methods. This example illustrates why modeling MIU vesting criteria with a Monte Carlo simulation or a lattice model is preferred.

Alternatively, using a Monte Carlo simulation or a lattice model, the appraiser can simulate future equity exit values. If the IRR threshold is met, MIUs A and B both participate in the proceeds and are equivalent in value. If the IRR threshold is not met but the MIUs are in the money, only MIU A participates in the proceeds. Lastly, if the MIUs are out of the money, neither MIU A nor B participate. While each of these scenarios require path dependent modeling, no catch up or adjustment is required to capture this market condition. Monte Carlo simulations and lattice models include and are built with several if-then-or-else statements, which allow for multiple path scenarios depending on the future equity value.

Example 2

In this example, MIU B is identical to MIU A in Example 1, but with a market condition that 50 percent of the MIUs vest upon a 2.0-times return to a senior class and 100 percent of the MIUs vest upon a 3.0-times return to a senior class. In addition, within 2.0-times to 3.0-times return, the percentage of MIUs vesting is scaled and interpolated with the return, rounded to the nearest whole share. In this case, a 2.2-times return to the senior class would allow for 60 percent of the MIUs to vest. The OPM framework is unable to capture scaling features because a breakpoint is required for each possible outcome. It is not practical (or possible, at times) to incorporate all outcomes as breakpoints within an OPM. In this

example, the OPM is unable to properly capture the number of MIUs that vest if the senior class generates a 2.63-times return. A Monte Carlo simulation, on the other hand, can capture the return multiple to the senior class. The dynamic formulas in the model consider the simulated equity value, return thresholds and resulting percentage of MIUs that vest for each trial run.

Input assumptions

Application of the forward-looking models described earlier often involves similar inputs to those for the Black-Scholes model: (a) risk-free rate, (b) beginning stock price or equity value, (c) dividend yield and (d) if applicable, strike price or breakpoint. This is because all the forward-looking models (OPM, Monte Carlo simulation and lattice model) are based on a form of the Black-Scholes model. The following input assumptions also are found in all models and can materially impact the value conclusion:

- *Volatility:* Valuation specialists typically will gather historical equity volatilities for guideline public companies to identify a range or point estimate for the volatility input. Most commonly, the look-back period for historically observed volatilities is based upon the expected life of the security (e.g., MIU, option, warrant) (or holding period of the company). The selected volatility requires consideration of a company's capital structure as compared to comparable guideline public companies. Applying the market volatility of its peers and not adjusting the equity volatility for the company's capital structure is one of the most common mistakes. For publicly traded firms, observation of the company's historical volatility and the volatilities implied from observed prices for exchange-traded options may provide additional insight into market expectations for forward-looking volatility. In some cases, asset volatility is required if the company's equity value is negative (debt is greater than equity usually from accumulated losses with early-stage startups) or if enterprise value is utilized.
- *Term:* The term or holding period should be selected after consideration of the contractual expiration of the MIU, the vesting period of the MIU, past history of employee exercise terms and expectations for exit or liquidity events, such as a company sale or IPO. Note that considerations for the term can differ for an employee award versus a nonemployee award.

Discounts for lack of marketability (DLOM)

Because MIUs are typically restricted units, there may be an additional reduction in value associated with the units relative to the underlying units into which they vest or convert. DLOMs should be considered in the fair value of the securities derived from any of the models noted earlier. Restricted stock studies, pre-IPO studies and put-option analyses may provide useful data points in selecting the magnitude of the DLOM, but the selection also should incorporate company- and security-specific facts and circumstances.

Tax considerations

This white paper mainly discusses the fair value of MIUs as it relates to financial reporting in accordance with U.S. GAAP. It is important to note that tax implications also need to be considered upon issuance of MIUs. Depending on elections made, the value of MIUs can differ between U.S. GAAP and tax purposes. In certain situations, MIUs also can result in the recognition of deferred tax assets, reflecting differences in tax versus U.S. GAAP treatment.

It is recommended that MIU valuations be performed at least once per year (or more often, if there are significant changes to the company or its outlook) to capture any change in value. AICPA guidance and most auditors generally support use of a valuation performed within one year of the MIU issuance date to capture various MIU grant dates throughout the year.

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