



MARKET STOCK UNITS (MSUs)

Another Arrow in the Equity Compensation Quiver

By Terry Adamson, Jon Burg, Brett Harsen and James Lecher

Overview

Companies are continuing to look at new and more sophisticated types of equity that better support compensation objectives while increasing alignment with shareholder interests. In the current business environment, traditional equity vehicles are flawed. Stock options are highly sensitive to strike price and exercise timing, and are vulnerable to falling underwater, creating employee morale and retention issues. Time-based restricted stock, on the other hand, delivers value with minimal linkage to performance – vesting whether or not the company has been successful.

One alternative form of equity under consideration is the Market Stock Unit (MSU)¹. An MSU represents the grant of stock units such that the number of shares earned at maturity (or vest) is based on the ratio of the stock price at the maturity date to the stock price at the grant date. Generally, companies have been capping the potential payouts with ranges between 110% and 200% of a pre-defined target.

The MSU is not a panacea for every company's equity compensation challenges. While the payout formula can be designed to provide both upside leverage (like an option) and downside protection (like restricted stock) it is only based on *absolute stock price performance*. Today's corporate governance watchdogs have loudly criticized equity awards that deliver value without respect to how the company performs *relative to its peers or the market in general*. In most cases, Radford continues to recommend Relative Total Shareholder Return (TSR) plans over MSUs, however, MSUs may be a sufficient alternative for companies that cannot appropriately develop a comparator group. For more information on Relative TSR plans, please visit our comprehensive web portal at www.RelativeTSR.com.

Example:

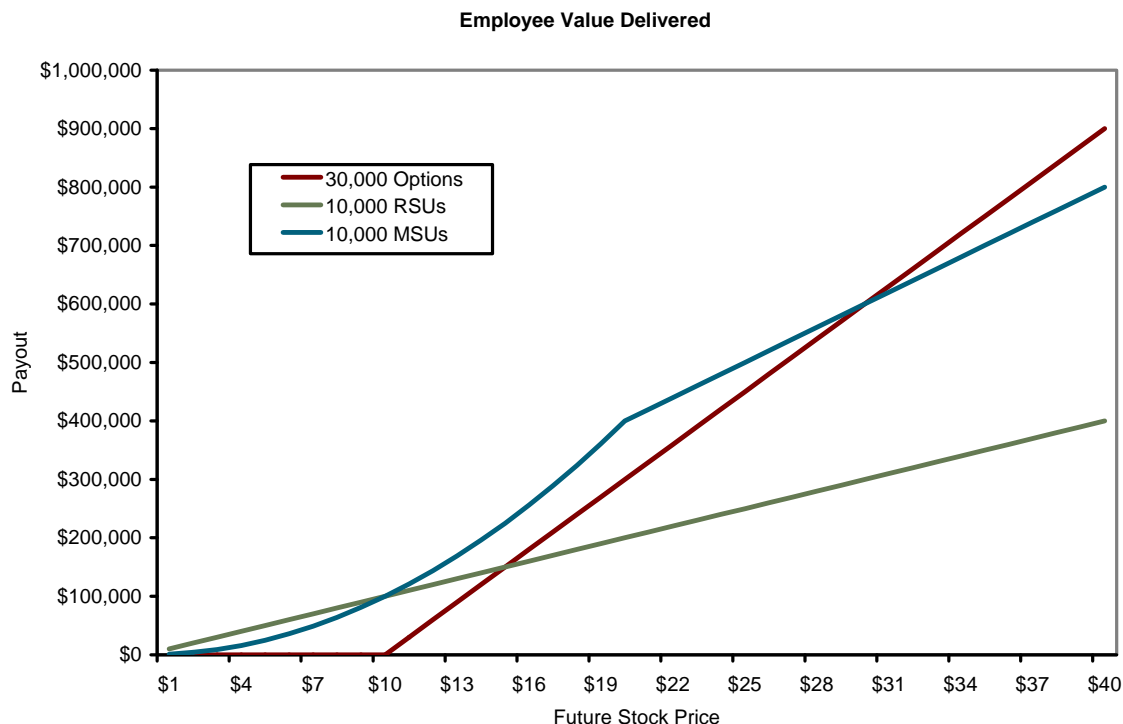
	Scenario 1 (appreciation)	Scenario 2 (depreciation)
Target MSU Award (A)	10,000	10,000
Stock Price at Grant (B)	\$20.00	\$20.00
Stock Price at Vest (C)	\$30.00	\$10.00
Payout Ratio (C/B)	150%	50%
Shares Earned at Vest (A x C/B)	15,000	5,000

Companies are continuing to look at new and more sophisticated types of equity

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In most cases, Radford continues to recommend Relative TSR plans over MSUs

The graph below outlines the value delivered to an employee holding either 30,000 traditional stock options; 10,000 time-based restricted stock units (RSUs); or 10,000 MSUs (with a 200% maximum cap on the MSU payout ratio).²



Only a handful of companies have publicly disclosed the use of MSUs

As of this writing, only a handful of companies have publicly disclosed the use of MSUs for their executive teams, including [Newmont Mining](#), [Xerox](#), and [CarMax](#) (click to access the SEC filings). This Radford Review summarizes how MSUs work and their accounting implications, and was created as a result of numerous inquiries about MSUs. Since the payout formula for the MSU is considered a “market condition” under ASC Topic 718 (formerly SFAS 123(R)), the awards will require binomial modeling or Monte Carlo simulation to determine the fair value for accounting cost accruals.

Accounting Valuation Background

The fair values of MSUs must be determined through either Monte Carlo simulation or binomial modeling. It is not possible to use a Black-Scholes model. A binomial model is recommended if the grant price is a spot rate as it is much simpler to use. However, if there is an averaging period to the grant price, it will most likely require Monte Carlo simulation. In the results below, we use a binomial model; we do not believe that a material difference in valuation would occur with an averaging period.

We have divided a Performance Period into 120 different measurement periods. At each of the 120 different possible terminal stock prices (S_i) at the end of the Performance Period with probability of occurrence equal (P_i), the fair value (FV) can be determined as follows:

$$FV = \frac{\sum_{i=1}^{120} S_i \times P_i \times \text{Min}(200\%, \frac{S_i}{G})}{(1 + RFR)^t}$$

Fair values of MSUs must be determined through either Monte Carlo simulation or binomial modeling

Note for the illustration on the previous page:

“RFR” represents the Risk-Free Rate, and “G” represents the Grant Price.

Comparable modeling can be used with Geometric Brownian Motion and Monte Carlo simulation, and would be required if there is an averaging period.

Accounting Valuation Results

The chart below summarizes the accounting fair value (stated as a percent of the face value of the underlying stock) for a four-year performance period with a 200% share cap. The table varies the expected volatility from 20%-80%, and the expected risk-free rate of return from 1%-6%. For example, if the volatility is 50% and the risk-free rate is 2%, the accounting cost of the award will be 146.3% of the face value of the company’s stock at the date of grant. Note that the Appendix at the conclusion of this Radford Review contains additional charts for one-year, two-year, three-year vesting (all with 200% caps), as well as four-year vesting with a 150% payout cap.

Chart 1 – Fair Value of Award as a Percent of the Face Value of the Underlying Stock

		200% Share Cap - 4 Year Performance Period						
		Expected Volatility						
		20%	30%	40%	50%	60%	70%	80%
Risk-Free Rate	1.00%	118.9%	128.8%	136.9%	144.0%	150.5%	156.2%	161.6%
	2.00%	123.1%	132.2%	139.7%	146.3%	152.3%	157.7%	162.8%
	3.00%	127.3%	135.6%	142.4%	148.5%	154.1%	159.2%	164.0%
	4.00%	131.5%	138.9%	145.1%	150.6%	155.8%	160.7%	165.2%
	5.00%	135.7%	142.3%	147.7%	152.7%	157.5%	162.1%	166.4%
	6.00%	140.0%	145.5%	150.2%	154.8%	159.2%	163.4%	167.5%

Accounting Cost Accrual

Since an MSU is considered a market condition, the probability of different payouts is considered in the initial grant date valuation. Using the example above, the 146.3% of face value considers the probability of 200% payouts as well as 0% payouts and everything in between. Regardless of the ultimate payout, there will be no reconciliation of the final expense based on the final number of MSUs earned at the vest date. MSUs provide for fixed and predictable accounting, accrued over the vesting period, just like traditional stock options.

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Footnotes

¹ The MSU has been introduced by the consulting firm, Frederic W. Cook & Co., Inc. More information on the MSU can be found in the recent article published in WorldatWork titled [A New Equity Device](#).

² A 3:1 ratio between options and RSUs or options and MSUs is a common exchange rate used to compare each vehicle for compensation planning purposes. However, this exchange ratio can vary from company to company. It is also important to note that accounting fair values may not be the same for RSUs and MSUs. RSUs are typically valued at 100% of the face value of the stock whereas MSUs typically exceed face value. For more information on accounting valuation, visit our web portal or contact a Radford consultant.

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About Radford

For more than 35 years, Radford has provided compensation market intelligence to the technology and life sciences industries. Global survey databases, which include 3.6 million incumbents, offer current, reliable data to nearly 2,000 clients. Leveraging Radford survey data, our thought-leading global Radford Consulting team creates tailored solutions for the toughest global business and compensation challenges facing companies at all stages of development. In addition to our consulting team, we also offer equity valuation assistance via Radford Valuation Services, and leading-edge market analyses and survey services with Radford Analytic Services. Radford's suite of surveys includes the Global Technology, Sales, and Life Sciences Surveys, as well as the US Benefits Survey. For more information on Radford, please visit <http://www.radford.com/>.

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Aon Consulting Worldwide is among the top global human capital consulting firms, with 2008 revenues of \$1.358 billion and more than 6,300 professionals in 229 offices worldwide. Aon Consulting works with organizations to improve business performance and shape the workplace of the future through employee benefits, talent management and rewards strategies and solutions. Aon Consulting was named the best employee benefit consulting firm by the readers of Business Insurance magazine in 2006, 2007, 2008 and 2009. For more information on Aon, please visit <http://www.aon.mediaroom.com>.

Appendix

Chart 2 – Fair Value of Award with One-Year Performance Period; 200% Payout Cap

200% Share Cap - 1 Year Performance Period								
	Risk-Free Rate	Expected Volatility						
		20%	30%	40%	50%	60%	70%	80%
	1.00%	105.1%	110.1%	115.8%	121.3%	126.2%	130.7%	134.8%
	2.00%	106.2%	111.2%	116.8%	122.2%	127.1%	131.4%	135.5%
	3.00%	107.2%	112.3%	117.9%	123.2%	127.9%	132.2%	136.2%
	4.00%	108.3%	113.4%	118.9%	124.1%	128.8%	133.0%	136.9%
	5.00%	109.4%	114.5%	119.9%	125.1%	129.6%	133.8%	137.6%
	6.00%	110.5%	115.6%	121.0%	126.0%	130.5%	134.5%	138.3%

Chart 3 – Fair Value of Award with Two-Year Performance Period; 200% Payout Cap

200% Share Cap - 2 Year Performance Period								
	Risk-Free Rate	Expected Volatility						
		20%	30%	40%	50%	60%	70%	80%
	1.00%	110.2%	118.2%	125.5%	131.8%	137.3%	142.6%	147.2%
	2.00%	112.4%	120.3%	127.2%	133.3%	138.7%	143.7%	148.2%
	3.00%	114.6%	122.3%	129.0%	134.8%	140.0%	144.9%	149.2%
	4.00%	116.9%	124.4%	130.8%	136.3%	141.3%	146.0%	150.1%
	5.00%	119.1%	126.4%	132.6%	137.8%	142.6%	147.1%	151.1%
	6.00%	121.4%	128.5%	134.3%	139.3%	143.8%	148.2%	152.1%

Chart 4 – Fair Value of Award with Three-Year Performance Period; 200% Payout Cap

200% Share Cap - 3 Year Performance Period								
	Risk-Free Rate	Expected Volatility						
		20%	30%	40%	50%	60%	70%	80%
	1.00%	114.9%	124.1%	131.9%	138.7%	144.7%	150.4%	155.5%
	2.00%	118.1%	126.9%	134.2%	140.6%	146.3%	151.8%	156.6%
	3.00%	121.4%	129.7%	136.6%	142.5%	147.9%	153.1%	157.8%
	4.00%	124.7%	132.5%	138.8%	144.4%	149.5%	154.4%	158.9%
	5.00%	128.1%	135.3%	141.1%	146.3%	151.0%	155.7%	160.0%
	6.00%	131.4%	138.0%	143.3%	148.1%	152.6%	157.0%	161.1%

Appendix (continued)

Chart 5 – Fair Value of Award with Four-Year Performance Period; 150% Payout Cap

		150% Share Cap - 3 Year Performance Period						
		Expected Volatility						
		20%	30%	40%	50%	60%	70%	80%
Risk-Free Rate	1.00%	110.1%	112.7%	114.9%	117.1%	119.5%	122.0%	124.3%
	2.00%	112.6%	114.6%	116.5%	118.3%	120.6%	122.8%	125.0%
	3.00%	115.0%	116.5%	118.0%	119.6%	121.6%	123.7%	125.7%
	4.00%	117.4%	118.3%	119.4%	120.8%	122.6%	124.5%	126.5%
	5.00%	119.7%	120.1%	120.9%	122.0%	123.6%	125.4%	127.2%
	6.00%	122.0%	121.9%	122.3%	123.1%	124.6%	126.2%	127.8%