There’s Math for That! Delta Value and the Constructive Sale Rules

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Date : January 9, 2014

Thomas J. Brennan, *Law and Finance: The Case of Constructive Sales*, **Ann. Rev. Fin. Econ.** (forthcoming 2013) available at SSRN.

Tom Brennan’s recent paper, *Law and Finance: The Case of Constructive Sales* explains that constructive sale guidance and case law fail to take account of volatility. To fix the omission, Brennan explains, use the delta value of the constructive sale transaction relative to the underlying asset to determine how close the transaction is to a sale. Reg writers, take note.

When do you own something, or more to the point, when have you sold it? In tax terms this presents the question of realization. And on it turns income tax planning’s central tenet: defer the payment of tax as long as possible. Preferably until the angel of death arrives with the gift of stepped-up basis, expecting only the small tip of possible estate tax liability.

Judicial tests for ownership in tax cases carefully plod through a bundle-of-sticks analysis. Attributes like title and voting are balanced by an acknowledgment of the core importance of economic rights. Nevertheless, financial derivative transactions that rearrange ownership attributes like Legos can allow a seller to retain enough attributes to persuade a court that a sale has not occurred, while substantially offloading the economic exposure of owning the underlying asset.

The 1995 short sale by Estee Lauder of her family company’s stock, believed not to produce taxable gain under traditional ownership analysis, preceded the 1997 enactment of the constructive sale statute at Internal Revenue Code Section 1259. The statute provides a powerful tool to the government to label synthetic sales, or almost-sales, as realization events that require taxpayers to recognize all of the gain built into the underlying asset. Brennan takes the statute at face value, disregarding tangential considerations such as the possibility that permitting non-realization for constructive sales beneficially reduces lock-in, and proposes a fix to its application.

Brennan takes as his example the variable prepaid forward contract (VPFC) transactions held not to create constructive sales in Revenue Ruling 2003-7 and in a recent Tax Court and Tenth Circuit case, Anschutz Co. v. Commissioner. Others have contended that Section 1259 has not lived up to its potential because of the ruling’s “giveaway” to the financial industry. Brennan’s dissection reveals a key shortcoming: the failure to consider volatility.

In the ruling, Seller agrees to transfer to Purchaser formal ownership of a variable number of shares of publicly traded stock in three years’ time. Purchaser transfers to Seller an upfront payment. Seller agrees to transfer to Purchaser a payment in stock or cash in three years that accounts for some changes in the value of the stock. Seller does not retain any risk of loss below $20, the stock price at the time Seller and Purchaser enter into the VPFC transaction. Seller retains all of the potential for gain between $20 and $25 per share and 20% of the potential for gain above $25 per share. Seller also retains the right to dividends. The ruling does not mention the volatility of the value of the stock and/or the dividends. It simply concludes that Seller’s delivery obligation at the expiration of the contract has “significant variation.”

The court case involved VPFCs entered into by a corporation controlled by billionaire Philip Anschutz and coupled with loans of about 95% of the underlying shares to the counterparty. The counterparty paid the Anschutz firm about 80% of the shares’ initial value upfront, and the counterparty bore the economic downside and upside outside a band bounded at 100% and 150% of the initial value of the stock. In addition, the counterparty received the benefit of all of the dividend payments on the stock if the final price was below 100% or above 150% of the initial stock value, plus the benefit of a portion of the dividend payments if the stock value fell within the band.

Reasoning that the loan transferred physical possession, the right to transfer and other ownership attributes, the Tenth Circuit affirmed Tax Court Judge Goeke's decision that that a sale under common law principles had occurred with respect to the loaned shares. More importantly for Brennan's purpose, the Tax Court had also concluded that Section 1259 did not apply. The Tax Court decision referenced Rev. Rul. 2003-7 and noted the absence of other guidance. The constructive sale issue arose because Section 1259 would have taxed all of the stock's built-in gain instead of the appreciation described by the difference between the upfront payment and the basis of the transferred stock.

The VPFC transactions in the ruling and the case transfer more economic downside and upside if the volatility of the underlying stock is higher. On the facts of Rev. Rul. 2003-7, this is because there is a higher chance that a higher-volatility stock will land in the value ranges below $20 and above $25, where Seller has transferred all or most of the risk to Purchaser. Dividend volatility is also important. Congress and the New York State Bar Association identified the issue of volatility around the time of Section 1259's enactment. Brennan operationalizes it.

The financial tool that Brennan uses is called delta value. It is the first derivative of the value of the constructive sale transaction with respect to the value of the underlying asset. To calculate it, Brennan disaggregates a constructive sale transaction into its component parts, calculates a delta value for each, and then adds the delta values together. The formula for calculating delta value includes an input for volatility, which is higher if stock value or dividend payments are expected to have a wider variation.

If the value of the derivative transaction and the underlying asset move exactly in tandem, then the delta value equals one. The more they diverge, the lower the delta value. Assuming that a Seller in a VPFC transaction transfers upside and downside in a range outside a band right next to the original sale price, the delta value will be higher if volatility is higher. Brennan shows that in the Revenue Ruling 2003-7 case, the delta value of the VPFC with respect to an underlying stock, disregarding dividends, ranges from 0.465 to 0.806 for volatility inputs of 10% to 100%, respectively.

In other words, assuming that the underlying stock is volatile, the VPFC described in the transaction gets very close to a sale. And of course taxpayers would be more likely to agree to enter into a VPFC with respect to a volatile stock.

Dividend rights also affect delta value. Especially if dividends are volatile, a Seller's transfer of dividend rights to Purchaser, as in the Anschutz case, would increase the delta value. In a "base case" using data based on the Anschutz transaction and assuming that dividends are proportionate to stock value, Brennan calculates that the dividend term contributes 0.113 of a total delta value of 0.913.

Brennan suggests legislative or regulatory action. Representative Dave Camp's House Ways and Means Committee has shown interest in the taxation of derivatives, but this seems like an administrative job. The legislative history specifically "anticipated" Treasury regulations, and an expert administrative agency ought to be able to arrive at a good answer, especially if it figures out a way to make the financial industry work harder for its safe harbors.

Treasury could structure a process that (1) announces that Revenue Ruling 2003-7 requires clarification to account for volatility; (2) requests public proposals that use delta value or other methods to administer Section 1259 consistent with its stated purpose and legislative history; and (3) imposes length limitations and other "information filters" on submissions. Of course, Treasury still needs the smarts and the guts to make the right decision in the face of industry pressure. But the chances of success are better if the government frames the question.

Cite as: Susan Morse, *There's Math for That! Delta Value and the Constructive Sale Rules*, JOTWELL (January 9, 2014) (reviewing Thomas J. Brennan, *Law and Finance: The Case of Constructive Sales*, **Ann. Rev. Fin. Econ.**

(forthcoming 2013) available at SSRN),
http://tax.jotwell.com/theres-math-for-that-delta-value-and-the-constructive-sale-rules/.