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Demystifying Hypothetical Liquidation At Book Value

Though the HLBV concept is fairly straightforward, implementing the methodology in the context of a given partnership structure can be challenging.

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In the renewable energy industry, the primary method for determining book accounting earnings and related allocations for partners in flip financing deals – called the hypothetical liquidation at book value (HLBV) – remains a continued source of confusion. In some cases, developers and tax equity investors enter into partnerships and begin to address the following challenging questions of how to account for their earnings only after the deal is closed:

- What method should be used for a partnership where ownership interests flip?
- What is the HLBV methodology?
- How is it applied within the context of the rules governing the partnership? and
- Which unfortunate analyst is going to perform the modeling work?

Even though the modeling remains a daunting task, the basic principles are relatively straightforward. However, demystifying HLBV requires the understanding that the HLBV method and the rules that define the partnership are two separate methodologies. Then, answering the questions becomes simpler.

Why HLBV?

In typical partnership structures when book accounting earnings are to be determined, the accountant first identifies the partner holding the majority interest. In this case, the majority partner is identified as the partner with the majority risk of liabilities, or as the majority beneficiary of the business rewards. However, for the case of a partnership flip structure in which the majority/minority interests flip based on a yield target, an alternative approach is required.

Most renewable energy projects are funded by a "flipping" structure – or pre-tax after-tax partnership structure. The general form of such a partnership is an arrangement between a tax equity partner and a sponsor partner wherein the tax equity provides the majority of the equity. The typical structure provides for a tax-free cash sweep to the sponsor returning some or all of the sponsor's equity contribution in the initial years of the project operations.

Other than for this sweep, the tax equity receives a majority (e.g., 99%) of cash and income until the tax equity achieves a predetermined after-tax yield. At that point, the shares will flip, such that the tax equity becomes a minority share (e.g., 5%).

The economic impact of uncertain operational results or even a sale can trigger a reversal (i.e., flip) in majority ownership, creating ambiguity over who holds the majority position. This uncertainty will become more apparent in the following investigation of the manner in which HLBV impacts the flip.

Due to this ambiguity of majority ownership, HLBV is the method commonly used in the renewable energy industry. However, HLBV is not the only method – International Financial Reporting Standards (IFRS) are sometimes used in the U.S. for firms not based in the U.S. There is also a movement within the U.S. to adopt IFRS.

HLBV Basics

As mentioned previously, the HLBV methodology is relatively straightforward. Complexity is introduced when the method is applied within the context of the business rules that define a partnership flip structure. Many practitioners mix the two and have a misconception that HLBV changes for each deal.

The HLBV methodology follows three basic steps:

- sell the business,
- follow-the-cash, and
- calculate book earnings.

Sell the business.

The first step in the HLBV methodology is to liquidate the business – hypothetically – at book value and calculate any taxable gain on the sale.

By definition, liquidation at book accounting value does not create any additional book accounting gain or loss. In other words, if the business were to be sold in the market at its current value on the accounting books of the partnership, the gain would be net zero. Thus, the aggregate net earnings of the business to date are the same in the case of the hypothetical liquidation scenario as it is in the base real-world scenario to date.

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Contrary to book accounting earnings, however, the liquidation typically creates a taxable gain. Most deals use accelerated depreciation (e.g., five-year modified accelerated cost-recovery system) and bonus depreciation methods that lower tax basis faster than book value – accounting books. This difference creates a hypothetical taxable gain per the liquidation scenario, which is especially large in the early years.

One other item to point out is that liquidation closes out all the various book balances. So, it is clear that after liquidation is complete, the business book balance and each partner's book balance are zero. This fact will make it easy to determine appropriate book earnings allocations to the partners once it is clear what happens with the cash.

Follow the cash.

Given the ambiguity in majority ownership, HLBV uses a follow-the-cash approach by posing the question, "What would happen with cash if the partnership were liquidated at current book value?" As a result, the next step is to allocate the taxable income from the hypothetical sale to the partners and liquidate the partnership in accordance with each partner's capital account. Typically, this is where the confusion begins, as the HLBV methodology, partnership deal structure and corresponding tax effects (e.g., capital accounts) come together.

HLBV must, for example, account for triggering of the flip yield and/or the amount of cash sweep to be realized. Tax consequences outside of capital accounts (e.g., Sec 731 gain) may also play a role to the extent that such effects impact the flip yield. There may also be special income allocations stipulated in the partnership agreement that only apply in the liquidation scenario.

Thus, the specifics of HLBV calculations can differ from one partnership deal to another to the degree of the difference in the partnership agreements themselves. Such differences, however, are independent of the fundamental HLBV concept itself. They merely reflect the need to follow what would really happen with cash in a liquidation scenario.

Calculate book earnings.

Once the amount of cash that each partner would realize in the liquidation is known, the final step is to calculate each partner's book earnings. This step requires calculating the current period allocation of earnings to each partner to equal aggregate net cash received by each partner less the cumulative total of (pre-tax) earnings allocated in prior periods.

This process works because, as noted earlier, the liquidation zeroes the books of the business as well as the books of each partner. (If this fails to be true, it implies an error in accounting for the business as a whole, not the HLBV.)

Exceptions may exist

The general principle of HLBV requires that even though the liquidation is hypothetical, the logic must match reality. As a result, special circumstances may be encountered when triggering a liquidation that was not accounted for in the original model.

Using solar as an example, energy tax credits (ETCs) vest over five years. Thus, liquidation in the first five years would trigger recapture of unvested ETCs. In some cases, such recapture might be ignored, depending on whether or not the inclusion of ETC recapture would inappropriately skew the allocation of book earnings to the partners. On the other hand, if the agreement indemnifies for ETC recapture, the answer would most certainly be to include the recapture for HLBV purposes.

The point is that HLBV calculations should track the hypothetical liquidation based on the dictates of the partnership agreement, the tax code and events that would be triggered (e.g., debt pay down). Exceptions, if any, should be based on a sound assessment that – following reality – would lead to an inappropriate allocation of earnings.

Engaging the analyst

Though the HLBV process is not difficult to comprehend, it is difficult to model and keep updated. In spreadsheet-based models, calculating book accounting earnings using HLBV requires the partnership structure rules to be replicated in the portion of the model handling the HLBV calculations. It would be more reliable to have a single implementation of the partnership structure, but in spreadsheets, it has not been feasible. In some modeling environments, this duplication problem can be avoided, because the base partnership model can be directly invoked to simulate HLBV.

The replication effort is required because the follow-the-cash step in HLBV requires liquidating in accordance with the partner's capital account, which follows the logic from the partnership structure.

This modeling exercise is difficult and time-consuming both to model initially and to maintain and use. It may not be immediately obvious, but a seemingly simple change to the partnership structure will require additional changes to ensure the HLBV model follows the cash according to the partnership agreement. Analyzing liquidation at each booking date is also a nontrivial exercise that can take a very long time to run, even with the most sophisticated spreadsheet models.

Though the HLBV concept is fairly straight forward, implementing the methodology in the context of a given partnership structure can be challenging. Understanding the basic steps of the HLBV methodology and keeping them separate from the partnership structure will keep the process in proper perspective. NWP

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