

Modeling Choices Impact Tax Equity Financing

Applying the myriad modeling options for partnerships under the U.S. tax code can improve deal-team competitiveness.

BY DENNIS MORITZ

It is 2 a.m. – do you know how the choices your analyst makes will impact your renewable energy deal? The partnership tax code, one of the most complex areas of the tax code, affects the majority of renewable energy financing deals and presents many modeling choices that can have a profound impact on deal economics. The complexity of the tax code and the variety of choices require more time to model and analyze than most deal teams can afford.

Given this time pressure and lack of information about the impact of different scenarios, the most common approach is often implemented. However, understanding these choices better and having the ability to analyze the impact on a deal can improve deal-team competitiveness and performance. To exemplify the risk and return impact of modeling choices, we examine four partnership tax code modeling choices and the impact of these choices on a deal in the following.

Example 1: Contributing versus selling assets into a partnership

Renewable energy project sponsors have typically completed some stages of their project before negotiating “partnership flip” financing. During the negotiation, the sponsor

and the tax equity partner need to decide how the partnership they form will assume the assets of the renewable energy development. The sponsor can either sell or contribute the assets to the partnership at fair market value (FMV). When a sponsor contributes assets rather than selling the assets, complexity increases greatly due to the requirements for implementing Internal Revenue Code Section (§) 704(c) regulations. (See “Concepts and Definitions.”)

Looking beyond model complexity, contributing assets may, in some situations, materially improve the economics of a deal. When a sponsor contributes assets at FMV in excess of the cost basis, benefits arise from de-

ferral of what might otherwise be immediate taxable gain on sale. In addition, asset contributions can add flexibility in achieving yield objectives. Although asset contributions can reduce the amount of cash a sponsor receives up front, sponsors that retain significant equity in the partnership generally find this reduction unimportant.

Case study example

We compared the economics of a renewable energy partnership structure under two scenarios:

- selling assets to the partnership and
- contributing assets to the partnership.

Table 1: Contributor Tax Payments

Years	I. Sale	II. Contribution	Difference	Cumulative Difference
1	\$3,405.64	\$349.75	\$3,055.88	\$3,055.88
2	\$235.97	\$910.37	\$1,146.34	\$1,909.54
3	\$150.45	\$541.88	\$692.32	\$1,217.22
4	\$99.22	\$320.69	\$419.91	\$797.31
5	\$94.88	\$284.17	\$379.05	\$418.26
6	\$71.96	\$184.50	\$256.46	\$161.80
7-21	\$33,398.93	\$33,560.73	\$161.80	\$0.00
Total	\$36,152.09	\$36,152.09	\$0.00	

Table 2

	I. Sale	II. Contribution
Asset Cost	\$190,260	\$180,260
Tax Investor		
After-Tax Flip Yield	6.00%	6.00%
After-Tax Yield	7.00%	7.00%
Equity	\$108,082	\$108,082
Sponsor (Contributor)		
Pre-Tax Yield	13.09%	13.09%
After-Tax Yield	10.40%	10.57%
Equity	\$82,178	\$72,178

Table 3

	I. Base Case (Remedial)	II. Traditional Method (Fixed Equity Share)	III. Traditional Method (Fixed Tax Investor Yield)
Tax Investor			
After-Tax Flip Yield	6.00%	5.50%	6.00%
After-Tax Yield	7.00%	6.68%	7.00%
Equity Share	59.96%	59.96%	55.62%
Sponsor			
Pre-Tax Yield	13.09%	13.09%	12.12%
After-Tax Yield	10.57%	10.79%	9.96%
Equity Share	40.04%	40.04%	44.38%

For the analysis, we assumed the tax investor has the same after-tax yield targets, independent of how the partnership acquires the asset. The sponsor and tax investor agree that the project FMV exceeds its construction cost of \$180 million by \$10 million. This incremental value can be realized in two ways, either through a purchase (gain on sale) or contribution (inside book-up).

In the asset sale scenario, the sponsor had an up-front taxable gain on sale of \$10 million. In the asset contribution scenario, the sponsor’s partnership capital account received a credit of \$190 million (\$180 million construction cost plus FMV book-up of \$10 million), as § 704(c) required the partnership to recognize the contribution at FMV.

With an asset contribution, the assets’ basis within the partnership (the “book basis” of \$190 million) was greater than the assets’ actual tax basis outside the partnership (\$180 million). Section 704(c) resolved this disparity between book and tax basis with income and deduction adjustments. (See Example 2 case study.) Income adjustments to the asset contributor essentially deferred the recognition of a gain on sale for the sponsor with no impact on the tax equity – as compared to an asset purchase. (See Table 1.)

This deferral represented the key difference between the asset sale and asset contribution scenarios. Rather than paying \$3.5 million in taxes at the beginning of the partnership (\$10 million gain on sale multiplied by

35% federal tax rate), the sponsor recognized the gain over seven years and used its cash distributions to cover the tax liability. This method created a 17-basis-point improvement in after-tax yield for the sponsor without affecting the yield of the tax equity partner. (See Table 2.)

Example 2: § 704(c) traditional versus remedial allocation methods

The prior case study implemented the § 704(c) remedial allocation method to resolve the disparity between the book and tax basis of the contributed assets. Section 704(c) allows a range of methods for resolving disparities between book and tax basis. The choice of method matters most when the partnership assigns the majority of the project economics to the non-contributing partner during the early years of the partnership, as is typical of renewable energy “flipping” partnerships.

The applicability of the anti-abuse rule (see “Concepts and Definitions”) will influence the method recommended by a tax attorney. Otherwise, structurers have the discretion to choose the method best suited to the partnership objectives. The following case study examines two commonly used methods: remedial and traditional.

Case study example

We revisited the asset contribution scenario described in the previous case study to explore differences in how the traditional and remedial methods resolved the \$10 million disparity between a property’s book and tax basis.

The remedial method used in the previous example had no net economic impact on the non-contributing partner relative to the asset sale scenario. With the traditional method, however, the tax investor received \$8 million more in income adjustments. Using the traditional method dragged down the after-tax yield of the tax investor by 50 basis points when the equity shares were frozen. However, the contributing

Table 4

	I. Base Case	II. Reduced Performance	III. Annual Flip	IV. Quarterly Flip	V. Continuous Flip
Years To Yield Flip	10.6712	10.6712	11.6712	10.921	10.7329
Date For Yield Flip	Jan. 1, 2019	Jan. 1, 2019	Jan. 1, 2020	April 1, 2019	Jan. 23, 2019
Tax Investor					
After-Tax Flip Yield	6.00%	5.93%	6.91%	6.21%	6.00%
After-Tax Yield	7.00%	6.94%	7.64%	7.13%	6.99%
Equity Share	56.78%	56.78%	56.78%	56.78%	56.78%
Sponsor					
Pre-Tax Yield	12.65%	12.60%	11.81%	12.40%	12.55%
After-Tax Yield	10.19%	10.15%	9.49%	9.98%	10.11%

Table 5

	I. Original Structure	II. Increased DRO Limit	III. Gross Reallocation Method
Reallocation Method	Net Reallocation	Net Reallocation	Gross Reallocation
Tax Investor After-Tax Yield	10.10%	10.10%	10.10%
Years In Deficit	7	12	6
Average Deficit	\$3,609K	\$5,249K	\$6,569K
Max. Deficit	\$6,150K	\$7,354K	\$10,000K
Sponsor After-Tax Yield	15.20%	22.80%	15.80%
Fire Sale Scenario			
Tax Investor After-Tax Yield	-1.47%	-6.21%	-1.75%
Liquidation Payment	\$867K	\$6,300K	\$0
Sponsor After-Tax Yield	0.03%	24.80%	1.04%

partner's pre-tax yield dropped by almost 100 basis points when we held the tax investor's yield constant. (See Table 3.)

Example 3: Periodic (e.g., annual) versus continuous yield-based flip

During the term of a renewable energy project, special allocation partnership structures flip partner equity positions to allow the tax equity investor to exploit tax benefits and the sponsor to secure a substan-

tial residual position. Partnership flip structures achieve these goals by allocating the lion's share of production tax credits and tax deductions to a tax investor during the early part of the project and dramatically changing (i.e., flipping) the shares of the cash and income flow during the latter part of the project, giving the lion's share to the sponsor.

It is not unusual for the tax equity partner to negotiate that this flip occur once the tax equity partner at-

tains a specified minimum after-tax yield. Defining a yield-based flip in shares, however, can be one of the most complex aspects of modeling a special allocations partnership. Because a flip dramatically shifts the flow of cash and income from one partner to another (e.g., a partner flipping from 99% down to 5% while the other flips from 1% up to 95%), the timing of the flip has a large impact on the economics of all partners.

After originating a deal and bringing a project online, a partnership model tracks actual results to calculate allocations of cash and income and determine the timing of the yield-based flip. Many models evaluate yield objectives periodically (e.g., annually, quarterly or monthly) as the continuous flip is more complex to model.

Imprecise flip timing provides a windfall to the tax equity partner at the cost of the developer due to the general delay of the flip relative to continuous flip timing. This delay shifts more cash and income and increases the tax investor's flip yield beyond the minimum expected by the tax investor. Even small variances between projected and actual operating performance can move the flip point a full period.

Case study example

In this case, we analyzed the economic impact of flip timing on the deal referenced in the previous case study examples by reducing operating performance slightly and calculating yields with both annual and continuous yield-based flips.

Using an annual yield-based flip, the reduction in operating performance delayed the flip by a full year. This delay increased the yield to the tax investor by 91 basis points and decreased the contributor's pre-tax yield by 84 basis points.

Using a continuous yield-based flip, however, the reduction in operating performance only delayed the flip date by 22 days. The tax contributor obtained exactly the required yield,

and the contributor only lost 10 basis points due to the lower revenues.

Continuous yield-based flips enable sponsors and tax equity investors to balance their objectives and avoid unpleasant surprises. Although this example considers annu-

al flips, similar, if less dramatic, results are still obtained when considering other periodicities (e.g., quarterly). (See Table 4.)

Example 4: Net versus gross income reallocations

Special allocation partnerships allow

disproportionate allocations of cash and income that can reduce a partner's capital account and create a deficit restoration obligation (DRO). In the event of partnership liquidation, a partnership agreement may be structured to obligate the tax investor to pay any DRO balance in cash to the part-

Concepts And Definitions

§ 704(c) regulations

Section (§) 704(c) regulations apply when a partner contributes assets into the partnership at a fair market value (FMV) different than the tax basis of the asset in order to regulate the possible shifting of tax consequences among partners. A contribution defers the tax consequences that might be associated with the built-in gain or loss (the difference between its basis and FMV at the time it is contributed to the partnership). Section 704(c) requires built-in gain or loss to be eliminated over time through tax allocations that put the partners who contribute only cash to the partnership in the same (or similar) tax position as though the partnership had purchased contributed assets at FMV. Section 704(c) remedial, curative and traditional allocations methods are provided to resolve this disparity. The choice of method can affect economic results significantly.

Tax code requirements for respecting partnership allocations

Partnerships represent one of the more complex domains of the U.S. tax code. Implementing the regulations represents one of the key challenges associated with modeling and tracking partnerships. The partnership tax code places requirements on a partnership's allocations of income and loss involving substantial economic effect, capital accounts, liquidation, deficit restoration obligations, minimum gain and contribution of as-

sets. Some of the Internal Revenue Service regulations are complex, and their correct interpretation may require highly specialized tax counsel. The consequences of non-compliance with the tax code can be dire – destroying the economics of a deal.

Anti-abuse rule

The § 704(c) anti-abuse rule specifies that an allocation method is not reasonable if the contribution of property and the corresponding allocation of tax items are made with a view to shifting the tax consequences of built-in gain or loss among the partners in a manner that substantially reduces the present value of the partners' aggregate tax liability. Many tax lawyers have concluded that the remedial allocation method generally satisfies the anti-abuse rule.

Ceiling rule

Under the ceiling rule (Reg. § 1.704-3(b)(1)), a partnership cannot allocate more income, gain, loss or deduction to its partners for a taxable year with respect to a property than the total partnership income, gain, loss or deduction actually realized with respect to that property. For example, a partnership may not allocate more depreciation to a partner than may be claimed by the partnership, even though the partner may bear the capital account burden of a larger (book) allocation determined by the property's FMV upon its contribution. A partnership might be able

to remedy problems caused by the ceiling rule by using the remedial allocation method.

Deficit restoration obligation

A deficit restoration obligation (DRO) occurs when a partner's capital account balance plus its share of any minimum gain becomes negative. Many partnership agreements do not obligate partners to pay a DRO balance in cash to the partnership, but in many transactions, this obligation may be needed to support the tax code requirement for substantial economic effect.

DRO risk describes the potential cash payment a partner would have to make in the event of liquidation. In our case study example the event of a natural disaster that impairs a wind farm and forces a \$10 million fire sale in year eight required the tax equity partner to pay \$6.3 million into the partnership based on the then-DRO. A DRO limit specifies the extent to which a partner allows DRO balances. Increasing DRO amounts and duration can increase yield and DRO-related risk.

The gross income and expense reallocation method reduces a DRO by separately reallocating gross expenses and gross income between partners' capital accounts. The net income reallocation method is limited to reallocating only net income between partners' capital accounts to reduce a DRO. The net reallocation method requires less effort to model than the gross income and expense reallocation method. **NP**

nership to support the tax code requirement that allocations have substantial economic effect. To avoid capital account deficits, or to stay within DRO limits, income can be reallocated among partners using either net or gross income reallocation methods.

The net method requires less modeling to track income at the aggregate level, however, the gross method can provide superior economics by separately allocating gross income and expense to remedy a DRO quicker. This flexibility increases the likelihood of staying within DRO limits while increasing returns.

Case study example

Three structures for an \$83 million renewable energy asset with 23% leverage were modeled with different combinations of DRO limits and reallocation methods.

With a \$6 million DRO, the net reallocation method failed to support a feasible structure that satisfied the sponsor's economic objectives.

Increasing the DRO limit to \$10 million achieved the target yields but required 12 years to eliminate the DRO, an unacceptable risk to the tax equity partner. To underscore this risk, a hypothetical "fire sale" during year eight required a \$6.3 million liquidation payment by the tax equity partner.

Using the gross reallocation method, the DRO balance reached \$10 million, yet resolved within six years, and the sponsor's after-tax yield increased 60 basis points. In addition, the year-eight fire sale scenario required no liquidation payment. The gross reallocation method reduced the DRO risk and increased the likelihood of developing feasible deal structures. (See Table 5.)

Conclusion

The ability to optimally structure a deal and to compete more effectively often depends on specialized tax code knowledge and modeling sophistication. Knowing the right questions to ask a tax attorney is a strong first

step. Advanced modeling capabilities are a must. Developing models that include the structuring choices described in the case study examples requires a significant resource investment. Third-party partnership flip structuring and analysis applications offer a rapid and cost-efficient alternative approach to sourcing modeling capabilities. **SYIP**

None of this material should replace consultation with a tax attorney.

Dennis Moritz has been a principal with Advantage for Analysts LLC since its founding in 2004. His experience in financial analysis and modeling covers over 20 years in structuring partnerships and other forms of financing for power projects and asset finance. Prior to Advantage for Analysts, he was a senior analyst at Babcock & Brown, where he played a key role in developing the partnership structure now known as "PAPS." Moritz can be reached at den-